

LINUX COMMANDS SHEET

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BASIC LINUX COMMANDS

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Command	Options or operands	Description
man	<i>command</i>	Shows the manual for a command. We can refer the built in manuals for more information on any command
Directory Navigation and Modification		
pwd		Shows the present working directory
ls	<i>-a</i>	Lists all the files and directories in the current directory To view the hidden files also
	<i>-al</i> <i>xargs wc</i>	To view with detailed information Lists number of lines and words in each file in a directory
cd	<i>(path)</i>	Navigates to the directory in the given path
	<i>~</i>	Navigate to home directory
	<i>/</i>	Navigates to root directory
	<i>..</i>	Navigates to parent directory
mkdir	<i>dirname</i>	Creates a new directory with a given name
rm	<i>filename</i>	To delete a file
	<i>-r filename</i>	(recursively) Delete non-empty directories
	<i>-f</i> <i>filename(s)</i>	(force) ignore warnings Delete empty directories
	<i>-d</i> <i>filename(s)</i>	Delete empty directories
rmdir	<i>dirname</i>	Delete an empty directory (non-empty directories cannot be deleted)
mv	<i>file1 file2</i> <i>file1 path</i>	Rename a file or directory Move file or directory to given path

cp	<i>-r dir1 dir2</i>	Copy contents of dir1 to dir2 recursively
File Navigation and Modification		
touch	<i>filename</i>	Creates a new file with a given file name
head	<i>filename</i>	Shows the first 10 lines of a file
tail	<i>filename</i>	Shows the last 10 lines of a file
file	<i>filename</i>	View the type of a file
cp	<i>file1 file2</i>	Copy contents of file1 to file2 (same for directories)
cat	<i>filename</i>	Displays a file
	<i>> filename</i>	Creates a file
	<i>>> filename</i>	Add text at the end of a file
	<i>file1 > file2</i>	copy contents of file1 to file2
	<i>file1 >> file2</i>	Append contents of file1 at the end of file2
more	<i>filename</i>	Displays the contents of a file
wc	<i>filename</i>	Displays number of words, lines, bytes in a file
diff	<i>file1 file2</i>	Compares two files and displays their difference
cut	<i>-d[] -f[]</i> <i>filename</i>	d: delimiter, the symbol to separate column, f: number of fields Displays the given number of columns from a file
Searching		
grep	<i>pattern</i> <i>filename</i>	View the contents of a file that match a pattern

locate	<i>name</i>	Finds all files and directories related to a name
find	<i>[path]</i> <i>-name</i> <i>[string]</i>	Finds all the files beginning with a string in a given location
	<i>[path]</i> <i>-size</i> <i>[value]</i>	Finds all the files larger than a specified size in a given location
sort	<i>filename</i>	Sorts the lines of a file and displays .
	<i>-r filename</i>	Displays the sorted lines in reverse order
	<i>-c</i>	Checks if a file is already sorted or not
General		
clear		Clears the terminal
history		Shows list of all commands used in the current terminal session
cal		Shows the present month calendar
uptime		Displays how long the system has been running
ps		Shows currently running processes
top		Shows all active processes in interactive mode and more detailed information
pmap		Display processes in a tree hierarchy
exit		Exits the current terminal session
!!		Runs the previous command
date		Displays the current date and time
	<i>-set "string"</i>	Set the time described by a string
	<i>-d</i> <i>"today/string"</i>	Displays the date for a given string (today,yesterday)
timedatectl	<i>set-time</i> <i>"string"</i>	Displays all date and time details. Set the time to a given time
time	<i>command/</i>	Shows the time taken by the os to execute a

	<i>file</i>	command or file for different users: real, user, sys
bash	<i>filename</i>	Executes a shell file
sudo	<i>command</i>	Runs the command with high privileges. Executes a command as super user.
apt-get	<i>install name</i>	Install required packages using the apt installer
	<i>update</i>	Update all installed packages (give a name for a specific package)
	<i>remove name</i>	Removes a package
apt-cache	<i>search</i> <i>package_name</i>	Provides information about a given package, also displays packages related to a given name
apt	<i>install</i> <i>package</i>	Advanced version of apt-get, executes bot apt-get and apt-cache
[command] tee	<i>filename</i>	Stores the output of a command in a given file (also prints the output in the terminal)
	<i>-a filename</i>	Appends the output to a given file
	<i>filename</i> <i>>/dev/null</i> <i>filename </i> <i>command</i>	Stores the output in a file and hide the output on terminal forward the output to another command
kill	<i>pid</i>	Kills the process with a given process id
shutdown	<i>hh:mm</i>	Schedule a system shutdown at given time
	<i>now</i>	Shutdown the system immediately
free	<i>-h</i>	Display free and used memory
gpg	<i>-c filename</i>	Encrypt a file
	<i>filename.gpg</i>	Decrypt a file
shred	<i>-u file</i>	Overwrites a file several time and delete it (can't be recoverable)
	<i>-n number</i> <i>file</i>	Overwrite the file given number if times
tar	<i>-cf file.tar</i> <i>filename</i>	Compress/Archive a file .
		Extract an archive file
	<i>-xf file.tar</i>	Creates archive with given filename

	<i>-f</i> <i>-tf file.tar</i>	Displays contents of an archive
System User Information		
id		Displays details about the active users
who		Information about the current logged in user
w		Logged in users activity
adduser	<i>username</i>	Adds a new user
userdel	<i>username</i>	Delete a user
usermod	<i>-aG group</i>	To modify user information
	<i>user</i>	Add user to a group
chgrp	<i>group dir</i>	Change directory group
uname	<i>-r</i>	Display system information
	<i>-a</i>	Display kernel information
hostname	<i>-i</i>	Display system ip address
whoami		Displays current user username
cat	<i>/proc/cpuinfo</i>	Displays cpu information
	<i>/etc/passwd</i>	Displays the information about all the users
	<i>/etc/passwd cut -d: -f1</i>	Displays only the user names
	<i>/etc/group</i>	Displays details about user groups
getent	<i>-V</i>	Display system version (getent is get entries from system database)
	<i>passwd</i>	Display users information
	<i>group</i>	Display user groups information
Vi editor modes		
vi	<i>filename</i>	Opens the file in the terminal(creates a new file if not exist already)
Esc i v		Normal mode (default) Insert mode Visual mode (easy for copying)

r		Replace mode (to relace a word)
s		Command mode
Vi editor normal mode		
yy Nyy yiw		Copy the current line Copy n line from the current line Copy the current word
y%		Copy till the matching character (to copy text between matching brackets)
dd ndd d\$		Cut current line Cut n lines from current line Cut from the cursor to the end of the line
P p		Paste after the cursor Paste before the cursor
h l k j		Move one character left Move one character right Move one line up Move one line down
o \$		Goes to start of the line Goes to end of the line
Vi editor insert mode		
i		Insert mode, to start typing into a file
Esc+:q		To quit without saving
Esc+:w		Save and continue in the editor
Esc+:x or Esc+:wq		Save and quit
Esc + :u Esc + :U		Undo last action Undoes all latest changes on one line
Esc+:r or Esc+(Ctrl+r)		Redo action

Network related commands for linux :-
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COMMANDS	DESCRIPTION
ifconfig	This command is used to initialize an interface,configure it with an IP address.
ip	This command is the updated version of the ifconfig command.
tracert	This command is used to troubleshoot the network.
tracert	This command is used to detect the network delay.
ping	This command is used to check the network connectivity between 2 nodes.
netstat	This command is used to provide statistical figures for different interfaces which have open sockets, routing tables and connection information.
ss	This command is the alternative for netstat. It is a much faster and more informative command than netstat.
dig	This command is used to verify DNS mapping, MX records, host addresses, and all other DNS records etc.
nslookup	This command is used for DNS related queries.
route	This command is used to get the best possible path to send the packet across to a destination.
host	This command is used to display the domain name for an IP address and IP address for a given hostname.
arp	This command is used to see and add information to the kernel's ARP table.
iwconfig	This command is used to set and see the basic WI-FI details(like SSID and encryption)
hostname	This command is used to check and set the hostname of a system.
curl & wget	This command is used to download files from the internet by CLI. curl with option 'o' is to fetch files and wget is

	directly used.
mtr	This command is a mixture of ping and traceroute commands. This shows the continuous information of the packet sent with the ping time of each hop.
whois	This command is used to fetch all the information related to the website.
ifplugstatus	This command is used to check whether a cable is plugged into the network interface. {to use this first install it by using sudo apt-get install ifplugd }
iftop	This command is used to monitor traffic.
tcpdump	This command is used to capture the traffic which is passing through the network interface and displays it.
ip addr	This command is used to display IP addresses for all the interfaces.
nmcli	This command's output shows the link name, user identifier(UUID), type and device name.
dhclient	This command is used to both drop and then lease an IP address configuration from the DHCP(dynamic host configuration protocol) server
ethtool	This command allows system administration to configure network interfaces.
nmap	This command is used to scan for open ports on remote systems.
tcpdump	This command is used to intercept network traffic.
iperf	This command is used to provide valuable information about a network route.
ethtool	This command is used to view, setting speed and duplex of our Network Interface Card(NIC).
nmtui	This command is used to configure network settings and also used to manage network devices, create, modify
ufw	This command is used to enable/disable system firewall, add/delete/modify/reset packet filtering rules.

telnet	This command uses the Telnet protocol to communicate with the destination host.
whois	This command is used to get information about a website (like ownership details, registration etc) {to use this first we need to install it by using sudo apt install whois}
nload	This command is used to monitor your network bandwidth. {to use this first we need to install it by using sudo apt-get install nload}
w	This command is used to get a list of currently logged in users in the system. This also provides information like host, login time, idle time, JCPU.
mail	This command is used to send mail from the terminal. {to use this first we need to install it by using sudo apt-get install mailutils}
scp	This command-line utility allows us to securely copy files and directories between two locations.
ssh	This command is used to securely connect to a remote server/system.
ifstat	This command is used to read and monitor various network interface statistics like bandwidth usage, and so on
rsync	This command is used to transfer and synchronize files efficiently between two systems connected via a network
sftp	This command is used to access, transfer and manage files using secure file transfer protocol.
hping3	This command is used to invoke the hping utility.
tshark	This command is used to
socat	This command is used to establish two bi-directional byte streams and allows to transfer data between them very efficiently.
ftp	This command is used to download or upload files to/from remote hosts.
mailstats	This command is used to list the email statistics.
write	This command is used to send messages between different system users is crucial for multi-user systems.

getmac	This command is used to get mac address
nbtstat	This command is used to get mac address of remote computer

Security Commands

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Commands	Description
ls -l	We can use the -l (long format) option to have ls list the file permissions for files and directories.
netstat	This command displays various network related information such as network connections, routing tables, interface statistics, masquerade connections, multicast memberships etc.
sudo	sudo command temporarily elevated privileges allowing users to complete sensitive tasks without logging in as the root user
top	top command is used to show the Linux processes
chown	Change the owner of the file.
chmod	chmod command is used to change the access permissions of files and directories.