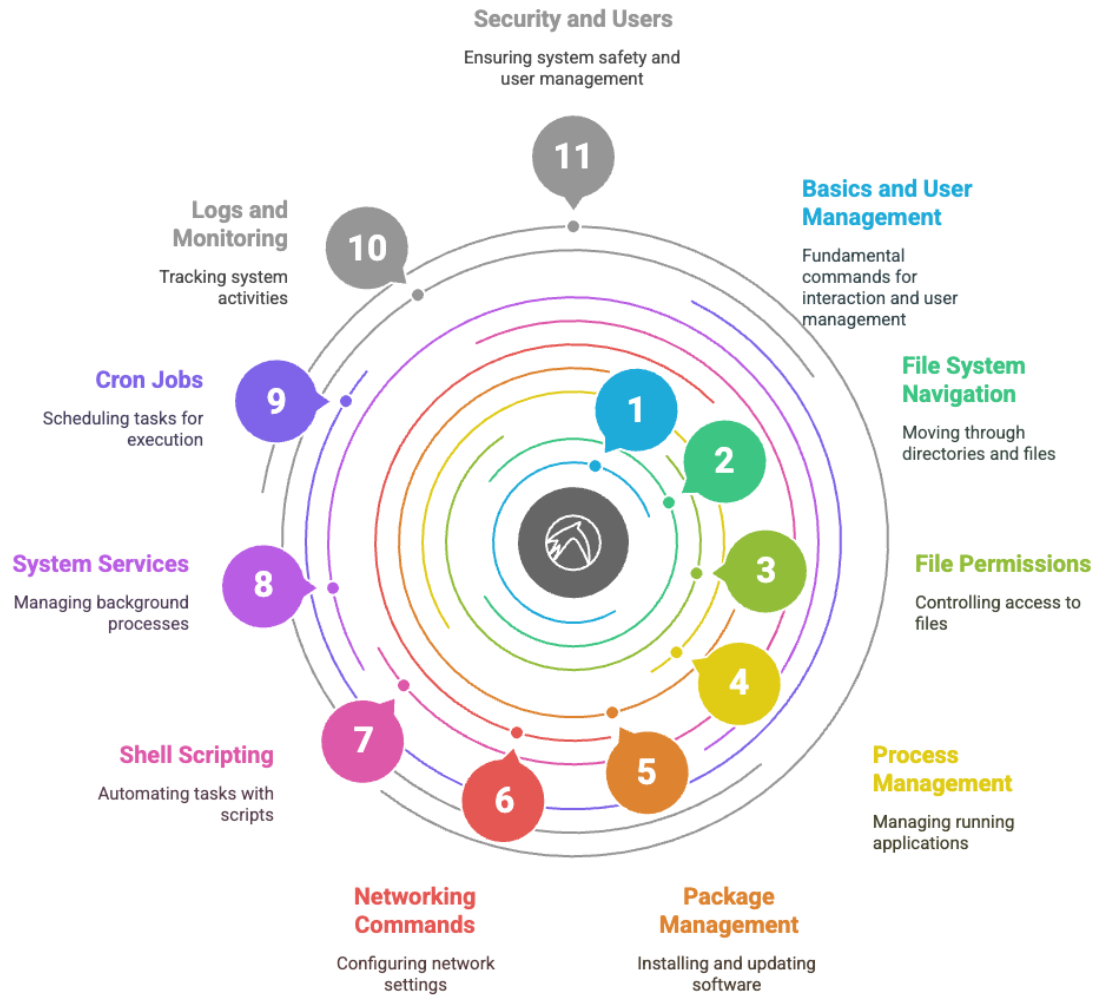


Linux Commands Cheat Sheet



1. Basic Commands:

Command	Description	Example
ls	List contents in the directory	ls -l
cd	Change the current working directory	cd /home/user
pwd	Prints current working directory	pwd
cp	Copy files or directories	cp file.txt backup.txt
mv	Move or rename files or directories	mv oldname.txt newname.txt
rm	Remove files or directories	rm file.txt
mkdir	Create a new directory	mkdir new_folder
rmdir	Remove empty directories	rmdir empty_folder
rm -rf	Force removes a directory	rm -rf directory_name
touch	Create an empty file or update timestamp	touch newfile.txt
clear	Clear the terminal screen	clear

2. User Management:

Command	Description	Example (sudo for elevated privileges)
useradd	Add a new user	sudo useradd testusr
groupadd	Create a new user group	sudo groupadd testgrp
adduser	Interactive script to add a new user	sudo adduser testusr
passwd	Change a user's password	passwd testusr
usermod	Modify a user account	sudo usermod -aG sudo testusr
deluser	Delete a user	sudo deluser testusr
userdel	Delete a user, home directory and mail spool	sudo userdel -r testusr
groupdel	Delete an existing user group	sudo groupdel testgrp
groups	Show groups of a user	groups testusrgrp
usermod -aG	Add user to a group	sudo usermod -aG sudo testusrgrp

whoami	Show current logged-in user	whoami
chage	Change user account aging information	sudo chage -l testusr
who	Show who is logged on	who
w	Show who is logged in and what they're doing	w
id	Show user ID (UID), group ID (GID), and groups	id testusr

3. File and Directory Management:

Command	Description	Example
find	Search for files in a directory hierarchy	find /home/testusr -name "*.txt"
locate	Find files by name	locate notes.txt
tree	Display directories in a tree-like format	tree directory_name
stat	Display detailed info about a file	stat file.txt
basename	Extract filename from a path	basename /home/testusr/file.txt
dirname	Extract directory from a path	dirname /home/testusr/file.txt
rsync	Remote file and directory synchronization	rsync -avz source/ destination rsync -avz -e ssh source/ user@remote:/destination/

4. File Permission & Ownership:

Command	Description	Example
chmod	Change file permissions for User, Group, and Others using numeric values: read (4), write (2), execute (1) .	chmod 755 script.sh
chown	Change file owner	sudo chown testusr:testusr file.txt
chgrp	Change group ownership	sudo chgrp testgrp file.txt
umask	Set default permissions for new files	umask 022

5. Process Management:

Command	Description	Example
ps	Display currently running processes	ps aux
systemctl	Control the systemd system and service manager	systemctl start service_name systemctl stop service_name systemctl restart service_name systemctl enable service_name systemctl disable service_name systemctl status service_name
top	Show real-time process activity	top
kill	Terminate a process by PID	kill -9 [PID]
kill all	Terminate processes by name	kill all firefox
htop	Interactive process viewer	htop
jobs	List background jobs	jobs
bg	Resume a job in the background	bg %1
fg	Bring a background job to the foreground	fg %1
shutdown	Shut down the system	shutdown -h now
reboot	Reboot the system	sudo reboot
poweroff	Power off the system	poweroff
init	Change the runlevel	init 0 – shutdown init 6 – reboot

6. Package Management:

Command	Description	Example
apt	Debian package manager tool	apt update
apt-get	APT package handling utility	apt-get install package_name apt-get update apt-get upgrade apt-get remove
yum	Red Hat package manager tool	yum install package_name yum update yum upgrade yum remove

7. Network Commands:

Command	Description	Example
ping	Test connectivity to a host	ping google.com
ifconfig	Configure network interfaces (deprecated)	ifconfig eth0
ip	Show/manipulate routing, devices, interfaces	ip a
netstat	Display network connections (deprecated)	netstat -tuln
traceroute	Trace the route packets take to a network host	traceroute google.com
nslookup	Query Internet name servers interactively	nslookup example.com
dig	DNS lookup utility	dig example.com
ss	Display socket statistics	ss -tuln
curl	Transfer data from or to a server	curl http://example.com
wget	Download files from the internet	wget http://example.com/file.zip
scp	Securely copy files between hosts	scp file.txt testusr@host:/tmp/
ssh	Secure shell access to remote machines	ssh testusr@192.168.1.10
ftp	File Transfer Protocol client	ftp ftp.example.com
nc	Network utility for reading and writing from network connections	nc -l -p 844

8. Disk Management:

Command	Description	Example
df	Show disk space usage	df -h
du	Show directory space usage	du -sh /home/testusr
fdisk	Partition table manipulator	sudo fdisk /dev/sda
mount	Mount a filesystem	mount /dev/sdb1 /mnt
umount	Unmount a filesystem	umount /mnt
fstab	File system table (configuration file for mounting file systems)	/etc/fstab

lsblk	List block devices	lsblk
blkid	Display block device attributes	blkid
parted	Manipulate disk partitions	sudo parted /dev/sda
mkfs	Create a file system on a device or partition	sudo mkfs.ext4 /dev/sdb1
fsck	Check and repair a Linux file system	sudo fsck /dev/sdb1

9. System Monitoring & Performance:

Command	Description	Example
top	Real-time system monitoring	top
htop	Interactive system monitor	htop
vmstat	Report virtual memory stats	vmstat 1
iostat	CPU and I/O statistics	iostat
free	Show memory usage	free -h
time	Measure program running time	time
uptime	Show how long the system has been running	uptime
uname	Print system information	uname -a
hostname	Show or set the system's hostname	hostname
dmesg	Display boot and system messages	dmesg
lscpu	Display CPU architecture info	lscpu

10. Security & Permissions:

Command	Description	Example
sudo	Execute a command as root user	sudo apt install nginx
su	Switch to another user	su - testusr
visudo	Edit the sudoers file safely	sudo visudo
sudoers	Manage sudo access for users	sudo visudo -f /etc/sudoers
gpasswd	Administer group password	gpasswd -a testusr testgrp
ufw	Simple firewall utility	sudo ufw enable sudo ufw status

		sudo ufw allow [port] sudo ufw deny [port/service]
iptables	Configure packet filtering rules	sudo iptables -L

11. Help and Documentation:

Command	Description	Example
man	Display manual pages	man ls
info	Display command info in GNU format	info coreutils
--help	Show usage/help for a command	ls --help
whatis	Brief description of a command	whatis grep
apropos	Search the manual pages	apropos copy

12. Text Processing:

Command	Description	Example
cat	Concatenate and display files	cat file.txt
less	View file content one screen at a time	less file.txt
more	Basic pager to view file content	more file.txt
head	Show beginning lines of a file	head file.txt
tail	Show ending lines of a file	tail file.txt
grep	Search text using patterns	grep 'hello' file.txt
vi or vim	Advanced text editors	vi script.sh
sed	Stream editor for filtering and transforming text	sed 's/old/new/g' file.txt
awk	Pattern scanning and processing language	awk '{print \$1}' file.txt
cut	Remove sections from each line of a file	cut -d ':' -f1 /etc/passwd
sort	Sort lines of text	sort names.txt
uniq	Filter duplicate lines	uniq sorted.txt
tr	Translate or delete characters	tr 'a-z' 'A-Z' < file.txt
wc	By default, wc prints the number of lines, words and bytes in each file.	wc file.txt

13. Compression & Archiving

Command	Description	Example
tar	Used to create or extract archive files, Common flags include -c (create), -x (extract), -v (verbose), -z (gzip compression), and -f (specify archive file).	tar -cvzf archive.tar file.txt tar -xvzf archive.tar.gz
gzip	Compress files	gzip file.txt
gunzip	Decompress .gz files	gunzip file.txt.gz
bzip2	Compress files using bzip2	bzip2 file.txt
zip	Compress files into a zip archive	zip archive.zip file.txt
unzip	Extract files from a zip archive	unzip archive.zip

14. Scheduling & Automation

Command	Description	Example
cron	Daemon to execute scheduled commands	(Runs automatically in the background)
crontab	Manage cron jobs	crontab -e
at	Schedule a one-time job	echo 'shutdown now' at 10:00
batch	Run commands when system load is low	echo './script.sh' batch
sleep	Delay for a specified time	sleep 10s

15. System Monitoring:

Command	Description	Example
top	Real-time system monitoring	top
htop	Interactive system monitor	htop
vmstat	Report virtual memory stats	vmstat 1
iostat	CPU and I/O statistics	iostat
free	Show memory usage	free -h
uptime	Shows how long the system has been running	uptime

lscpu	Display information about the CPU architecture	lscpu
lsusb	List USB devices	lsusb
lspci	List PCI devices	lspci
lshw	List hardware configuration	sudo lshw
dmesg	Boot and system messages	dmesg less
journalctl	View logs collected by systemd journal	journalctl -xe
watch	Execute a command periodically, showing output in real-time	watch -n 1 free

16. Shell & Scripting:

Command	Description	Example
bash	GNU Bourne Again SHell	bash script.sh
sh	Basic shell interpreter	sh script.sh
source	Run a script in the current shell	source ~/.bashrc
./	Shortcut for 'source'	./script.sh
export	Set environment variables	export PATH=\$PATH:/home/testusr/bin
alias	Create command shortcuts	alias ll='ls -la'
read	Read user input	read name
echo	Display a line of text	echo 'Hello, testusr!'