Linux Commands Handbook

1. File & Directory Management

ls - List directory contents

cd - Change directory

pwd - Print current working directory

mkdir - Create a new directory

rmdir - Remove an empty directory

rm - Remove files or directories

cp - Copy files or directories

mv - Move or rename files/directories

touch - Create an empty file or update file timestamps

stat - Show detailed file information

file - Show the file type

tree - Display directory structure as a tree

2. File Viewing & Editing

cat - View file contents

tac - View file contents in reverse

less - View file contents one screen at a time

more - View file contents one screen at a time (older version of less)

head - Show first N lines of a file

tail - Show last N lines of a file

nano - Simple text editor

vim - Powerful text editor

Linux Commands Handbook

gedit - GUI text editor

vi - Older text editor (precursor to vim)

3. File Search & Finding

find - Search for files/directories based on name, size, type, etc.

locate - Quickly find files using a database

updatedb - Update the locate command's database

which - Find the path of an executable

whereis - Locate binary, source, and man pages for a command

grep - Search text in files

egrep - Extended grep with more regex features

fgrep - Grep without regex (fixed string search)

ack - Fast text searching for code

rg - Extremely fast search through files

4. File Permissions & Ownership

chmod - Change file permissions

chown - Change file ownership
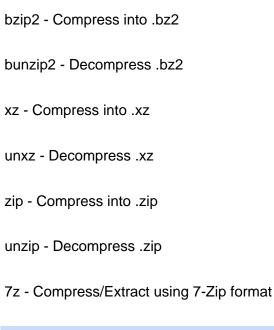
chgrp - Change group ownership

umask - Set default file creation permissions

5. File Compression & Archiving

tar - Archive files into .tar format

gzip - Compress files into .gz

gunzip - Decompress .gz files

Linux Commands Handbook

bzip2 - Compress into .bz2

bunzip2 - Decompress .bz2

xz - Compress into .xz

unxz - Decompress .xz

zip - Compress into .zip

unzip - Decompress .zip

7z - Compress/Extract using 7-Zip format

6. Process Management

ps - Show active processes

top - Real-time process monitoring

htop - Interactive process monitor

kill - Terminate a process by PID

killall - Kill processes by name

pkill - Kill processes by pattern

jobs - List background jobs

bg - Resume a job in background

fg - Bring a job to foreground

nice - Start process with priority

renice - Change process priority

7. System Monitoring & Info

uptime - Show system uptime

free - Show memory usage

df - Show disk space usage

du - Show disk usage of files/directories

vmstat - Show memory, CPU, and I/O stats

iostat - Show CPU and I/O statistics

sar - Collect and display system performance

dmesg - Show kernel log messages

uname - Show system info

hostname - Show or set hostname

lsblk - List block devices

blkid - Show block device UUIDs

lscpu - Show CPU info

lsusb - Show USB devices

lspci - Show PCI devices

8. Networking

ping - Test network connectivity

curl - Transfer data from or to a server

wget - Download files from the web

scp - Secure copy files between systems

rsync - Sync files between systems

ssh - Remote login to another machine

ifconfig - Configure network interfaces (deprecated, use ip)

ip - Show/modify IP addresses and routes

Linux Commands Handbook

netstat - Show network connections (deprecated)

ss - Show socket statistics

traceroute - Trace network path to a host

nslookup - Query DNS records

dig - Detailed DNS lookup

telnet - Connect to remote host (legacy)

ftp - Transfer files via FTP

9. Disk & Storage Management

mount - Mount a filesystem

umount - Unmount a filesystem

parted - Manage disk partitions

fdisk - Partition disks

mkfs - Create a filesystem

fsck - Check and repair filesystem

e2fsck - Check ext2/ext3/ext4 filesystem

tune2fs - Adjust filesystem parameters

10. User Management

who - Show logged-in users

whoami - Show current username

id - Show user ID and group info

adduser - Create a new user

useradd - Create a new user (low-level)

passwd - Change password

usermod - Modify user details

deluser - Remove a user

groupadd - Create a new group

groupdel - Delete a group

groups - Show groups for a user

11. Package Management

apt-get - Install, update, remove packages (Debian/Ubuntu)

apt - Newer APT frontend (Debian/Ubuntu)

dpkg - Install .deb files (Debian/Ubuntu)

yum - Install, update, remove packages (RHEL/CentOS/Fedora)

dnf - Newer Yum replacement (RHEL/CentOS/Fedora)

rpm - Install .rpm files (RHEL/CentOS/Fedora)

12. Text Processing

echo - Print text to terminal

printf - Format and print text

wc - Count words, lines, characters

cut - Extract fields from text

sort - Sort text

uniq - Remove duplicate lines

tr - Translate or delete characters

awk - Pattern scanning & processing

Linux Commands Handbook

sed - Stream text editor

13. Shell & Scripting

sh - Run shell commands

bash - GNU Bourne Again Shell

source - Execute script in current shell

alias - Create command shortcuts

history - Show command history

cron - Schedule recurring tasks

at - Schedule a one-time task

sleep - Pause execution for seconds

14. Miscellaneous Utilities

man - Show manual for a command

info - Show detailed command info

date - Show or set date/time

cal - Display a calendar

uptime - Show system running time

clear - Clear terminal screen

yes - Output a string repeatedly

watch - Run a command repeatedly