100 USEFUL LINUX COMMANDS

BASIC NAVIGATION COMMANDS

- pwd – Print the current working directory

- cd – Change the directory

- ls – List directory contents

- mkdir – Create a new directory

- rmdir – Remove empty directories

- touch – Create a new empty file

- cp – Copy files and directories

- mv – Move or rename files

- rm – Remove files or directories

- cat – View file content

FILE PERMISSIONS AND OWNERSHIP

- chmod – Change file permissions

- chown – Change file ownership

- chgrp – Change group ownership of a file

- umask – Set default permissions for newly created files

- ln – Create hard and symbolic links

FILE VIEWING AND EDITING

- nano – Simple text editor
- vim – Powerful text editor
- less – View files with pagination
- head – View the first few lines of a file
- tail – View the last few lines of a file
- grep – Search for patterns in files
- find – Search for files and directories

FILE COMPRESSION & ARCHIVING

- tar – Archive files
- gzip – Compress files
- gunzip – Decompress files
- zip – Create compressed archives
- unzip – Extract compressed archives

PROCESS MANAGEMENT

- ps – List active processes
- top – Display real-time system processes
- htop – Interactive process viewer (if installed)
- kill – Terminate processes by PID
- killall – Terminate processes by name
- pkill – Kill processes based on name or other attributes
- bg – Resume a job in the background
- fg – Bring a job to the foreground
- nice – Set priority for a process
- renice – Change priority of running processes

DISK USAGE & SPACE MANAGEMENT

- df – Report file system disk space usage

- du – Estimate file space usage

- fdisk – Partition table manipulator

- mkfs – Create a filesystem on a partition

- mount – Mount a filesystem

- umount – Unmount a filesystem

NETWORKING

- ifconfig – Configure network interfaces
- ip – Show/manipulate routing, devices, and tunnels
- ping – Check connectivity to another networked device
- netstat – Display network connections and routing tables
- ss – Show active connections
- traceroute – Trace the route to a network host
- nslookup – Query internet name servers
- curl – Transfer data from or to a server
- wget – Download files from the web
- scp – Secure copy files between hosts
- ssh – Securely connect to a remote machine
- ftp – Transfer files using FTP

USER MANAGEMENT

- whoami – Show the current user
- who – Show who is logged on
- id – Show user and group IDs
- useradd – Create a new user
- usermod – Modify a user account
- userdel – Delete a user account
- passwd – Change user password
- groupadd – Create a new group
- groupdel – Delete a group

SYSTEM MONITORING & PERFORMANCE

- uptime – Show how long the system has been running

- dmesg – Display kernel messages

- free – Show memory usage

- vmstat – Report virtual memory statistics

- iostat – Report CPU and I/O statistics

- sar – Collect and report system activity information

- mpstat – Show CPU usage per processor

- iotop – Display I/O usage by processes

SYSTEM INFORMATION

- uname – Print system information
- hostname – Show or set the system's hostname
- lsb_release – Print distribution-specific information
- lscpu – Display CPU architecture information
- lsusb – List USB devices
- lspci – List PCI devices
- dmidecode – Show system hardware information
- top – Display active processes and system usage

PACKAGE MANAGEMENT (DEBIAN/UBUNTU)

- apt update – Update package lists
- apt upgrade – Upgrade installed packages
- apt install – Install a new package
- apt remove – Remove an installed package
- dpkg – Manage Debian packages manually

PACKAGE MANAGEMENT (RHEL/CENTOS/FEDORA)

- yum update – Update packages
- yum install – Install a new package
- yum remove – Remove installed packages
- rpm – Install, uninstall, and query packages

SCHEDULING AND AUTOMATION

- crontab – Schedule jobs to run at specified times
- at – Schedule a job to run once at a specific time
- systemctl – Control the systemd system and services
- service – Start, stop, and manage services

MISCELLANEOUS COMMANDS

- history – Display command history
- alias – Create a shortcut for a command
- man – Display the manual of a command
- echo – Display a line of text or variable value
- tee – Read from standard input and write to standard output and files
- shutdown – Power off or reboot the system
- reboot – Restart the system