Linux Commands Categorized Cheat Sheet

1. File & Directory Commands

ls: List directory contents

   Example: ls -l

cd: Change directory

   Example: cd /home/user

pwd: Print working directory

   Example: pwd

mkdir: Make directory

   Example: mkdir new_folder

rm: Remove file or directory

   Example: rm file.txt

cp: Copy files/directories

   Example: cp file.txt /tmp/

mv: Move or rename

   Example: mv old.txt new.txt

touch: Create empty file

   Example: touch file.txt

find: Search for files

   Example: find . -name "*.txt"

stat: Show file details

   Example: stat file.txt

2. Filter Commands

grep: Pattern matching

   Example: grep "error" log.txt

sort: Sort lines

  Example: sort names.txt

uniq: Remove duplicates

  Example: uniq data.txt

cut: Extract columns

  Example: cut -d',' -f1 names.csv

head: Show first lines

  Example: head -n 5 file.txt

tail: Show last lines

  Example: tail -n 10 file.txt

wc: Count lines/words

  Example: wc -l file.txt

3. Text Processing Commands

awk: Pattern scanning & processing

  Example: awk '{print $1}' data.txt

sed: Stream editor

  Example: sed 's/old/new/g' file.txt

tr: Translate characters

  Example: tr 'a-z' 'A-Z' < file.txt

cut: Cut parts of lines

  Example: cut -d':' -f1 /etc/passwd

paste: Merge lines

  Example: paste file1.txt file2.txt

xargs: Convert input to arguments

  Example: cat list.txt | xargs rm

4. Process Management

ps: Show processes

   Example: ps aux

top: Real-time process viewer

   Example: top

kill: Kill process by PID

   Example: kill 1234

killall: Kill by name

   Example: killall firefox

nice: Start with priority

   Example: nice -n 10 program

htop: Interactive process monitor

   Example: htop

5. Network Commands

ping: Test connectivity

   Example: ping google.com

ifconfig: Show network config

   Example: ifconfig

netstat: Network stats

   Example: netstat -tuln

curl: Transfer data

   Example: curl http://example.com

wget: Download file

   Example: wget http://example.com/file.zip

ssh: Connect to remote machine

   Example: ssh user@host

6. Permissions & Ownership

chmod: Change file permissions

  Example: chmod 755 script.sh

chown: Change ownership

  Example: chown user:user file.txt

umask: Set default permissions

  Example: umask 022

7. Archive & Compression

tar: Archive files

  Example: tar -cvf archive.tar file1 file2

gzip: Compress files

  Example: gzip file.txt

gunzip: Decompress gzip

  Example: gunzip file.txt.gz

zip: Create zip archive

  Example: zip archive.zip file.txt

unzip: Extract zip file

  Example: unzip archive.zip

8. Disk Usage

df: Disk space

  Example: df -h

du: Disk usage

  Example: du -sh folder/

mount: Mount device

  Example: mount /dev/sdb1 /mnt

umount: Unmount

  Example: umount /mnt

9. System Information

uname: Kernel info

  Example: uname -a

uptime: System uptime

  Example: uptime

free: Memory usage

  Example: free -m

hostname: Show hostname

  Example: hostname

whoami: Current user

  Example: whoami

10. Package Management (Debian/Ubuntu)

apt update: Update package lists

  Example: sudo apt update

apt upgrade: Upgrade all packages

  Example: sudo apt upgrade

apt full-upgrade: Upgrade with dependency removals

  Example: sudo apt full-upgrade

apt install: Install a package

  Example: sudo apt install curl

apt remove: Remove package (keep config files)

  Example: sudo apt remove nginx

apt purge: Remove package + config files

  Example: sudo apt purge nginx

apt autoremove: Remove unused dependencies

  Example: sudo apt autoremove

apt clean: Clear downloaded package files

  Example: sudo apt clean

apt autoclean: Remove outdated cache files

  Example: sudo apt autoclean

apt list --installed: List installed packages

  Example: apt list --installed

apt show: Show package info

  Example: apt show curl

dpkg -i: Install `.deb` manually

  Example: sudo dpkg -i vscode.deb

dpkg -r: Remove a package

  Example: sudo dpkg -r code

dpkg -l: List all installed packages

  Example: dpkg -l

dpkg -s: Show status of a package

  Example: dpkg -s curl

dpkg -L: Show installed files

  Example: dpkg -L curl

dpkg -S: Find package owning file

  Example: dpkg -S /usr/bin/ls