LINUX COMMANDS CHEAT SHEET

System

uname	Displays system information: kernel version, machine type, and more.
uname -r	Displays the running Linux kernel's release version.
uptime	Shows current time, system uptime, users, and load averages.
hostname	Shows the system hostname
hostname -i	Displays the IP address of the current host.
last reboot	Shows last reboot times and durations in logs.
date	Displays the current date and time information.
timedatectl	Displays detailed system clock and time zone information.
cal	Displays a simple calendar of the current month.
w	Shows who is logged on and their activity.
whoami	Displays the username of the current user.
finger username	Displays information about a user named 'username'.

Hardware

dmesg	Displays messages from the kernel's ring buffer.
cat /proc/cpuinfo	Displays detailed information about the CPU.
cat /proc/meminfo	Displays detailed system memory usage information.
lshw	Lists detailed hardware configuration of the system.
lsblk	Lists information about all available block devices.
free -m	Shows system memory usage in megabytes.
lspci -tv	Displays PCI devices in tree format, verbosely.
lsusb -tv	Shows USB devices as a tree, verbosely.
dmidecode	Displays hardware information from system BIOS
hdparm -i /dev/sda	Displays information of disk /dev/sda.
badblocks -s /dev/sda	Checks /dev/sda for bad blocks, showing progress.

User Management

id	Displays the user's UID, GID, and groups.
last	Shows list of last logged-in users.
who	Displays who is currently logged in.
groupadd admin	Creates a new user group named admin.
adduser Sam	Creates a new user account named Sam.
userdel Sam	Deletes the user account named Sam.
usermod	Modifies properties of an existing user account.

File Commands

ls -al	Lists all files, detailed information, in long format.
pwd	Displays the present working directory's path.
mkdir dir1	Creates a new directory named dir1.
rm file1	Deletes the file named file1.
rm -f file2	Forcefully deletes the file named file2.
rm -r dir1	Recursively removes directory dir1 and its contents.
rm -rf dir1	Forcefully deletes directory dir1 and its contents.
cp file1 file2	Copies file1, creating or overwriting file2.
cp -r dir1 dir2	Copies dir1 to dir2, including subdirectories.
mv file1 file2	Renames or moves file1 to file2.
ln -s /path/to/file_name link_name	Creates symbolic link named link_name to file_name.
touch file1	Creates an empty file named file1.
cat > file1	Creates/overwrites file1, awaiting standard input.
more file1	Displays file1 content, paginating through output.
head file1	Displays the first ten lines of file1.
tail file1	Displays the last ten lines of file1.
gpg -c file1	Encrypts file1 with symmetric cipher using passphrase.
gpg file2.gpg	Decrypts file2.gpg, prompting for the passphrase.
wc	Counts words, lines, and characters in files.
xargs	Executes commands with piped or file-provided arguments.

Process Related

ps	Displays a snapshot of current processes.
ps aux | grep telnet	Displays running telnet processes with details.
pmap	Shows memory map of a process.
top	Displays dynamic real-time view of running tasks.
kill 1234	Terminates the process with PID 1234.
killall proc	Kills all processes named 'proc'.
pkill process-name	Terminates processes with the name.
bg	Resumes suspended jobs in the background
fg	Brings a suspended job to foreground
fg n	Brings job number 'n' to foreground.
lsof	Lists all open files and processes.
renice 19 PID	Changes priority of process with given PID.
pgrep firefox	Displays Process ID(s) for firefox processes.
pstree	Displays a tree of running processes.

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File Permission

chmod 644 /data/test.c	Sets the permissions of the file /data/test.c to be read/write for the owner, and read-only for the group and others.
chmod 755 /dir1	Assigns read, write, and execute permissions to the owner, and read and execute permissions to the group and others for the directory /dir1.
chown bob:devops filename	Changes file 'filename' ownership to 'bob' and 'devops'.
chown ownername:groupname directory	Change owner and group of the directory.

Network

ip addr show	Displays all network interfaces and their information.
ip address add 192.168.0.1/24 dev eth0	Assigns IP address 192.168.0.1 to interface eth0.
ifconfig	Shows network interfaces and their configuration.
ping host	Sends ICMP packets, measures round-trip time to "host".
whois domain	Retrieves and displays domain's registration information.
dig domain	Queries DNS, provides domain's DNS information.
dig -x host	Resolves IP address to hostname, shows DNS information.
host google.com	Performs an IP lookup for the domain name
wget file_path	Downloads file from specified path.
netstat	Displays various network-related information and statistics.

Compression / Archives

tar -cf backup.tar /home/ubuntu	Creates a tar archive of /home/ubuntu directory.
tar -xf backup.tar	Extracts files from "backup.tar" archive.
tar -zcvf backup.tar.gz /home/ubuntu	Creates compressed "backup.tar.gz" archive of "/home/ubuntu"
gzip file1	Compresses "file1" into "file1.gz", original is removed.

Install Packages

rpm -i pkg_name.rpm	Installs the package "pkg_name.rpm" using RPM Package Manager.
rpm -e pkg_name	Uninstalls the specified RPM package.
dnf install pkg_name	Installs the specified package using DNF.
pacman -S pkg_name	Installs the specified package using Pacman.

Directory Traverse

cd ..	Navigate to the parent directory.
cd	Changes the current directory to the user's home.
cd /mnt	Changes the current directory to "/mnt".

Install Source (Compilation)

./configure	Checks system compatibility and generates makefile for software installation.
make	Compiles code by following instructions in the Makefile.
make install	Installs compiled code into specified system locations.

Search

grep pattern file	Search for a given pattern within the file.
grep -r pattern dir1	Recursively searches for the specified "pattern" within the "dir1" directory and its subdirectories
locate file	Finds files named "file" using prebuilt database.
find /home -name index	Searches "/home" directory for files named "index" recursively.
find /home -size +10000k	Finds files over 10000k size in /home directory.

Login

ssh user@hostname	Initiates SSH connection to specified hostname.
ssh -p port_number user@hostname	Initiates SSH connection using specific port.
Connect to the host via telnet default port 23	Securely connect to the system via SSH default port 22
telnet host	Connect to the host via telnet default port 23.

File Transfer

scp file.txt remoteuser@remote_host:/remote/directory	Copies file.txt to remote host's specified directory.
rsync -a /home/ubuntu /backup/	Synchronizes content from source directory to destination directory,preserving attributes.
rsync -a /var/www/web/ user@remote_host:/backup/web_backup/	Synchronizes local directory to remote, preserving attributes.

Disk Usage

df -h	Displays human-readable disk space usage for all mounted filesystems.
df -i	Displays inode usage information for all mounted filesystems.
fdisk -l	Lists all partitions and their information on all drives.
du -sh /dir1	Displays summary of total disk usage size of /dir1, human-readable.
findmnt	Displays a list of all mounted filesystems and their properties.
mount device-path mount-point	Mounts the device at the specified filesystem mount point.