

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.
lsuf	→	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.

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.

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.

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".