LINUX COMMANDS CHEAT SHEET

System

uname	=>	Displays Linux system information
uname -r	=>	Displays kernel release information
uptime	=>	Displays how long the system has been running including load average
hostname	=>	Shows the system hostname
hostname -i	=>	Displays the IP address of the system
last reboot	=>	Shows system reboot history
date	=>	Displays current system date and time
timedatectl	=>	Query and change the System clock
cal	=>	Displays the current calendar month and day
w	=>	Displays currently logged in users in the system
whoami	=>	Displays who you are logged in as
finger username	=>	Displays information about the user

Hardware

dmesg	=>	Displays bootup messages
cat /proc/cpuinfo	=>	Displays more information about CPU e.g model, model name, cores, vendor id
cat /proc/meminfo	=>	Displays more information about hardware memory e.g. Total and Free memory
lshw	=>	Displays information about system's hardware configuration
lsblk	=>	Displays block devices related information
free -m	=>	Displays free and used memory in the system (-m flag indicates memory in MB)
lspci -tv	=>	Displays PCI devices in a tree-like diagram
lsusb -tv	=>	Displays USB devices in a tree-like diagram
dmidecode	=>	Displays hardware information from the BIOS
hdparm -i /dev/xda	=>	Displays information about disk data
hdparm -tT /dev/xda	=>	Conducts a read speed test on device xda
badblocks -s /dev/xda	=>	Tests for unreadable blocks on disk

Users

id	=>	Displays the details of the active user e.g. uid, gid, and groups
last	=>	Shows the last logins in the system
who	=>	Shows who is logged in to the system
groupadd "admin"	=>	Adds the group 'admin'
adduser "Sam"	=>	Adds user Sam
userdel "Sam"	=>	Deletes user Sam
usermod	=>	Used for changing / modifying user information

File Commands

ls -al	=>	Lists files - both regular & hidden files and their permissions as well.
pwd	=>	Displays the current directory file path
mkdir 'directory_name'	=>	Creates a new directory
rm file_name	=>	Removes a file
rm -f filename	=>	Forcefully removes a file
rm -r directory_name	=>	Removes a directory recursively
rm -rf directory_name	=>	Removes a directory forcefully and recursively
cp file1 file2	=>	Copies the contents of file1 to file2
cp -r dir1 dir2	=>	Recursively Copies dir1 to dir2. dir2 is created if it does not exist
mv file1 file2	=>	Renames file1 to file2
ln -s /path/to/file_name link_name	=>	Creates a symbolic link to file_name
touch file_name	=>	Creates a new file
cat > file_name	=>	Places standard input into a file
more file_name	=>	Outputs the contents of a file
head file_name	=>	Displays the first 10 lines of a file
tail file_name	=>	Displays the last 10 lines of a file
gpg -c file_name	=>	Encrypts a file
gpg file_name.gpg	=>	Decrypts a file
wc	=>	Prints the number of bytes, words and lines in a file
xargs	=>	Executes commands from standard input

Process Related

ps	=>	Display currently active processes
ps aux | grep 'telnet'	=>	Searches for the id of the process 'telnet'
pmap	=>	Displays memory map of processes
top	=>	Displays all running processes
kill pid	=>	Terminates process with a given pid
killall proc	=>	Kills / Terminates all processes named proc
pkill process-name	=>	Sends a signal to a process with its name
bg	=>	Resumes suspended jobs in the background
fg	=>	Brings suspended jobs to the foreground
fg n	=>	Brings job n to the foreground
lsof	=>	Lists files that are open by processes
renice 19 PID	=>	Makes a process run with very low priority
pgrep firefox	=>	Find Firefox process ID
pstree	=>	Visualizing processes in tree model

File Permission

chmod octal filename	=>	Change file permissions of the file to octal
Example		
chmod 777 /data/test.c	=>	Set rwx permissions to owner, group and everyone (everyone else who has access to the server)
chmod 755 /data/test.c	=>	Set rwx to the owner and r_x to group and everyone
chmod 766 /data/test.c	=>	Sets rwx for owner, rw for group and everyone
chown owner user-file	=>	Change ownership of the file
chown owner-user: owner-group file_name	=>	Change owner and group owner of the file
chown owner-user:owner-group-directory	=>	Change owner and group owner of the directory

Network

ip addr show	=>	Displays IP addresses and all the network interfaces
ip address add 192.168.0.1/24 dev eth0	=>	Assigns IP address 192.168.0.1 to interface eth0
ifconfig	=>	Displays IP addresses of all network interfaces
ping host	=>	ping command sends an ICMP echo request to establish a connection to server / PC
whois domain	=>	Retrieves more information about a domain name
dig domain	=>	Retrieves DNS information about the domain
dig -x host	=>	Performs reverse lookup on a domain
host google.com	=>	Performs an IP lookup for the domain name
hostname -i	=>	Displays local IP address
wget file_name	=>	Downloads a file from an online source
netstat -pnltu	=>	Displays all active listening ports

Compression / Archives

tar -cf home.tar home	=>	Creates archive file called 'home.tar' from file 'home'
tar -xf files.tar	=>	Extract archive file 'files.tar'
tar -zcvf home.tar.gz source-folder	=>	Creates gzipped tar archive file from source folder
gzip file	=>	Compression a file with .gz extension

Install Packages

rpm -i pkg_name.rpm	=>	Install an rpm package
rpm -e pkg_name	=>	Removes an rpm package
dnf install pkg_name	=>	Install package using dnf utility

Install Source (Compilation)

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./configure
make
make install
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Search

grep 'pattern' files	=>	Search for a given pattern in files
grep -r pattern dir	=>	Search recursively for a pattern in a given directory
locate file	=>	Find all instances of the file
find /home/ -name "index"	=>	Find file names that begin with 'index' in /home folder
find /home -size +10000k	=>	Find files greater than 10000k in the home folder

Login

ssh user@host	=>	Securely connect to host as user
ssh -p port_number user@host	=>	Securely connect to host using a specified port
ssh host	=>	Securely connect to the system via SSH default port 22
telnet host	=>	Connect to host via telnet default port 23

File Transfer

scp file1.txt server2/tmp	=>	Securely copy file1.txt to server2 in /tmp directory
rsync -a /home/apps / backup/	=>	Synchronize contents in /home/apps directory with /backup directory

Disk Usage

df -h	=>	Displays free space on mounted systems
df -i	=>	Displays free inodes on filesystems
fdisk -l	=>	Shows disk partitions, sizes, and types
du -sh	=>	Displays disk usage in the current directory in a human-readable format
findmnt	=>	Displays target mount point for all filesystems
mount device-path mount-point	=>	Mount a device

Directory Traverse

cd ..	=>	Move up one level in the directory tree structure
cd	=>	Change directory to $HOME directory
cd /test	=>	Change directory to /test directory