 **Linux Commands** Cheat Sheet

# Users and Groups

Modify user

information (add a user to a group).

sudo userdel [user\_name] Delete a user account.

Create a new user account through the adduser command interface.

Create a new user account.

Show user information.

Show which users

are logged in and their activity.

Display who is currently logged into the system.

Show the last system

logins.

See details about the active users.

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|  | **Keyboard Shortcuts** | |  |
| Ctrl + C | | Kill process running in the terminal. | |
| Ctrl + Z | | Stop the current process. The process can be resumed in the foreground with fg or in the background with bg. | |
| Ctrl + W | | Cut one word before the cursor and add it to the clipboard. | |
| Ctrl + U | | Cut part of the line before the cursor and add it to the clipboard. | |
| Ctrl + K | | Cut part of the line after the cursor and add it to the clipboard. | |
| Ctrl + Y | | Paste from clipboard. | |
| Ctrl + R | | Recall the last command that matches the provided characters. | |
| Ctrl + O | | Run the previously recalled command. | |
| Ctrl + G | | Exit command history without running a command. | |
| clear | | Clear the terminal screen. | |
| !! | | Run the last command again. | |
| exit | | Log out of the current session. | |
|  | **Searching** | |  |
|  |  | |  |
| find [path] -name  [search\_pattern] | | Find files and  directories that match the specified pattern in a specified location. | |
| find [path] -size [+100M] See files and directories  larger than a specified size  in a directory. | | | |
| grep [search\_pattern]  [file\_name] | | Search for a specific pattern in a file with grep. | |
| grep -r [search\_pattern] [directory\_name] | | Recursively search for a pattern in a directory. | |
| locate [name] | | Locate all files and directories related to a particular name. | |
| which [command] | | Search the command path in  the $PATH environment  variable. | |
| whereis [command] | | Find the source, binary, and manual page for a command. | |
| awk '[search\_pattern]  {print $0}' [file\_name] | | Print all lines matching a pattern in a file. See also the gawk command, the GNU version of awk. | |
| sed 's/[old\_text]/ [new\_text]/' [file\_name] | | Find and replace text in a specified file. | |

id

last

who

w

finger [user\_name]

sudo useradd [user\_name]

sudo adduser [user\_name]

sudo usermod -aG [group\_name] [user\_name]

sudo groupadd

[group\_name]

Add a new group.

sudo groupdel [group\_name]

Delete a group.

sudo [command]

su - [user\_name]

## SSH Login

sudo passwd [user\_name] or another user's

password.

Change the current user's

passwd

Generate SSH key pairs.

Connect to the host

using a particular port.

Securely connect to a host via SSH default port 22.

Connect to a remote host as a user via SSH.

chgrp [group\_name] [file/ Change file or directory

directory] group.

Switch the user account or become a superuser.

Temporarily elevate user privileges to superuser or root.

sudo groupmod -n Modify a user group

[new\_name] [old\_name] (change group name).

ssh [user\_name]@[host]

ssh [host]

ssh -p [port] [user\_name]@[host]

ssh-keygen

sudo service sshd start

Start SSH

server daemon.

sftp [user\_name]@[host]

telnet [host]

## File Permissions

chmod 766 [file\_name] Assign full permission to

the owner, and read and write permission to the group and others

(rwxrw-rw-).

chmod 755 [file\_name] Give read, write, and

execute permission to owner, and read and execute permission to group and others (rwxr-xr-x).

chmod 777 [file\_name] Assign read, write, and

execute file permission to

everyone (rwxrwxrwx).

Connect to the host via Telnet default port 23.

Interactive file transfer over encrypted SSH session

using SFTP protocol.

scp [file\_name] Securely copy [user\_name]@[host]:[rem files between local and ote\_path] remote systems via SSH.

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|  | **Directory Navigation** | |  |
| ls | | List files and directories in  the current directory. | |
| ls -a | | List all files and directories in the current directory (shows hidden files). | |
| ls -l | | List files and directories in long format. | |
| pwd | | Show the directory you  are currently working in. | |
| cd  cd ~ | | Change  directory to $HOME. | |
| cd .. | | Move up one directory  level. | |
| cd - | | Change to the previous directory. | |
| cd [directory\_path] Change location to a  specified directory. | | | |
| dirs | | Show current directory  stack. | |
|  | **Packages (Debian/Ubuntu)** | |  |
|  |  | |  |
| sudo apt-get install [package\_name] | | Install an APT package using the apt-get package utility. | |
| sudo apt install  [package\_name] | | Install an APT package using a newer APT package manager. | |
| apt search [keyword] | | Search for a package in the APT repositories. | |
| apt list | | List packages installed with APT. | |
| apt show  [package\_name] | | Show information about a  package. | |
| sudo dpkg -i [package\_name.deb] | | Install a *.deb* package with the Debian package manager. | |
| sudo dpkg -l | | List packages installed with dpkg. | |

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|  | **Disk Usage** | |  |
| df -h | | Check free and used space on mounted systems. | |
| df -i | | Show free inodes on  mounted file systems. | |
| fdisk -l | | Display disk partitions, sizes, and types with the command. | |
| du -ah | | See disk usage for all files and directories. | |
| du -sh | | Show disk usage of the  current directory. | |
| mount | | Show currently mounted file systems. | |
| findmnt Display target mount  point for all file systems. | | | |
| mount [device\_path] Mount a device.  [mount\_point] | | | |
|  | **Packages (Universal)** | |  |
|  |  | |  |
| tar zxvf [file\_name.tar.gz] cd [extracted\_directory]  ./configure make  make install | | Install software  from source code. | |
| sudo snap install [package\_name] | | Install a Snap package. | |
| sudo snap find [keyword] | | Search for a package in the Snap store. | |
| sudo snap list | | List installed Snap  packages. | |
| flatpak install [package\_name] | | Install a Flatpak package. | |
| flatpak search [keyword] | | Search for a Flatpak  application in repositories. | |
| flatpak list | | List installed Flatpack packages. | |

chown [user\_name] [file\_name]

**Packages (Red Hat, CentOS, Fedora)**

[user\_name]:[group\_nam group ownership of a file.

e] [file\_name]

Change the owner and

chown

List all packages installed with YUM.

Find a package in the YUM repositories based on the provided keyword.

Install a package using the YUM package manager.

Change the ownership of a file with chown command.

sudo yum install [package\_name]

yum search [keyword]

yum list installed

# Files

mkdir [directory\_name] Create a new directory.

rm [file\_name]

Remove a file.

rm -rf [directory\_name] Recursively remove a

directory without requiring

confirmation.

rm -r [directory\_name] Remove a directory

recursively.

cp [source\_file]

[destination\_file]

Copy the contents of one file to another file.

cp -r [source\_directory] Recursively copy a

[destination\_directory] directory to a second

directory.

mv [source\_file] [destination\_file]

Move or rename files or directories.

ln -s [path]/[file\_name] Create a symbolic link to a

[link\_name] file.

touch [file\_name]

Create a new file.

cat [file\_name]

Show the contents of a file.

cat [source\_file] >> [destination\_file]

Append file contents to another file.

head [file\_name]

Show the first ten lines of a file.

tail [file\_name]

Show the last ten lines of a

file.

more [file\_name]

Display contents of a file page by page.

less [file\_name]

Show the contents of a file

with navigation.

nano [file\_name]

Open or create a file using the nano text editor.

vi [file\_name]

vim [file\_name]

Open or create a file using the Vi/Vim text editor.

gpg -c [file\_name]

Encrypt a file.

gpg [file\_name].gpg

Decrypt an encrypted *.gpg* file.

wc -w [file\_name]

Show the number of words, lines, and bytes in a file.

ls | xargs wc

List the number of lines/ words/characters in each file in a directory.

cut -d [delimiter]

[file\_name]

Cut a section of a file and print the result to standard output.

[data] | cut -d [delimiter] Cut a section of piped data

and print the result to standard output.

shred -u [file\_name]

Overwrite a file to prevent

its recovery, then delete it.

diff [first\_file]

[second\_file]

Compare two files and display differences.

source [file\_name]

Read and execute the file

content in the current shell.

[command] | tee Store the command output

[file\_name] >/dev/null in a file and skip the

terminal output.

# System Management

uname -r

Show system information via uname command.

uname -a

See kernel release information.

uptime

Display how long the system has been running, including the load average.

hostname

View system hostname.

hostname -i

Show the IP address of the

system.

last reboot

List system reboot history.

date

See current time and date.

timedatectl

Query and change the system clock.

cal

Show current calendar

(month and day).

w

List logged-in users.

whoami

See which user you are

using.

finger [user\_name]

Show information about a particular user.

ulimit [flags] [limit]

View or limit system

resource amounts.

shutdown [hh:mm]

Schedule a system shutdown.

shutdown now

Shut down the system immediately.

modprobe [module\_name]

Add a new kernel module.

dmesg

Show bootup messages.

**Network**

ip addr show

List IP addresses and network interfaces.

ip address add [IP\_address]

Assign an IP address to

interface eth0.

ifconfig

Display IP addresses of all network interfaces.

ping [remote\_host]

Ping remote host.

netstat -pnltu

See active (listening) ports with the netstat command.

netstat -tuln

Show TCP and UDP ports

and their programs.

whois [domain\_name] Display more information

about a domain.

dig [domain\_name]

Show DNS information about a domain using the dig command.

dig -x [domain\_name] Do a reverse DNS lookup

on the domain.

dig -x [IP\_address]

Do a reverse DNS lookup of an IP address.

host [domain\_name] Perform an IP lookup for a

domain.

hostname -I

Show the local IP address

nslookup [domain\_name]

Receive information about an internet domain.

# Processes

ps

List active processes.

pstree

Show processes in a tree-

like diagram.

pmap

Display a memory usage map of processes.

top

See all running processes.

htop

Interactive and colorful process viewer.

kill [process\_id]

Terminate a Linux process under a given ID.

pkill [process\_name]

Terminate a process under

a specific name.

killall [label]

Terminate all processes with a given label.

prgrep [keyword]

List processes based on the

provided keyword.

pidof [process\_name] Show the PID of a process.

bg

List and resume stopped

jobs in the background.

fg

Bring the most recently suspended job to the foreground.

fg [job]

Bring a particular job to the foreground.

lsof

List files opened by running

processes.

trap "[commands]"

[signal]

Catch a system error signal in a shell script.

Executes provided commands when the signal is caught.

wait

Pause the terminal or a Bash script until a running process is completed.

nohup [command] & Run a Linux process in the

background.

# Hardware Information

lscpu

See CPU information.

lsblk

See information about block devices.

lspci -tv

Show PCI devices in a tree-

like diagram.

lsusb -tv

Display USB devices in a tree-like diagram.

lshw

List hardware configuration

information.

cat /proc/cpuinfo

Show detailed CPU information.

cat /proc/meminfo

View detailed system memory information.

cat /proc/mounts

See mounted file systems.

free -h

Display free and used

memory.

sudo dmidecode

Show hardware information from the BIOS.

hdparm -i /dev/

[device\_name]

Display disk data information.

hdparm -tT /dev/ [device\_name]

Conduct a read speed test

on the device/disk.

badblocks -s /dev/

[device\_name]

Test for unreadable blocks on the device/disk.

fsck /dev/[device\_name] Run a disk check on an

unmounted disk or partition.

## Shell Commands

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|  | **File Compression** |  |
| tar cf [archive.tar] [file/ Archive an existing file or  directory] directory. | | |
| tar xf [archive.tar] Extract an archived file. | | |
| tar czf [archive.tar.gz] Create a *.gz* compressed  tar archive. | | |
| gzip [file\_name] Compress or  gunzip [file\_name.gz] decompress *.gz* files. | | |
| bzip2 [file\_name] Compress or decompress  bunzip2 [file\_name.bz2] .bz2 files. | | |
|  | **File Transfer** |  |
|  |  |  |
| scp [source\_file] Copy a file to a server [user]@[remote\_host]:[de directory securely. stination\_path] | | |
| rsync -a Synchronize the contents  [source\_directory] of a directory with a [user]@[remote\_host]:[de backup directory. stination\_directory] | | |
| wget [link] Download files from FTP or web servers. | | |
| curl -O [link] Transfer data to or from a server with various protocols. | | |
| ftp [remote\_host] Transfer files between local and remote systems interactively using FTP. | | |
| sftp Securely transfer between  [user]@[remote\_host] local and remote hosts  using SFTP. | | |

alias [alias- name]='[command]'

Create an alias for a command.

watch -n [interval-in- seconds] [command]

Set a custom interval to run a user-defined command.

sleep [time-interval] && Postpone the

[command] execution of a command.

at [hh:mm]

Create a job to be executed at a certain time (Ctrl+D to exit prompt after command).

man [command]

Display a built-in manual for a command.

history

Print the command history used in the terminal.

## Variables

declare [variable-name]= Declare a Bash variable.

"[value]"

export [variable\_name] Export a Bash variable.

"[variable\_name]=[value]" a variable.

Assign an integer value to

let

List the names of all the shell variables and functions.

set

Install a *.rpm* package from a local file.

sudo rpm -i

[package\_name.rpm]

Install a package using the DNF package manager.

sudo dnf install [package\_name]

yum info [package\_name] Show package

information for a package.

unset [variable\_name]

Remove an environment

variable.

echo $[variable-name] Display the value of a

variable.