



List of most commonly used Linux commands

1. **pwd (Print Working Directory)**

- **Explanation:** Displays the current directory path.
- **Syntax:** `pwd`
- **Example:**

```
$ pwd /home/user/documents
```

2. **ls (List)**

- **Explanation:** Lists files and directories in the current directory.
- **Syntax:** `ls [OPTION] [FILE]`
- **Example:**

```
$ ls -l total 24 -rw-r--r-- 1 user user 4534 Oct 1 14:25 file.txt drwxr-xr-x 2 user user
4096 Oct 1 14:20 directory
```

3. **cd (Change Directory)**

- **Explanation:** Changes the current directory.
- **Syntax:** `cd [DIRECTORY]`
- **Example:**

```
$ cd /path/to/directory
```

4. **touch**

- **Explanation:** Creates an empty file.
- **Syntax:** `touch [FILENAME]`
- **Example:**

```
$ touch newfile.txt
```

5. **mkdir (Make Directory)**

- **Explanation:** Creates a new directory.
- **Syntax:** `mkdir [OPTION] [DIRECTORY]`
- **Example:**

```
$ mkdir my_directory
```

6. **rm (Remove)**

- **Explanation:** Removes files or directories.
- **Syntax:** `rm [OPTION] [FILE]`
- **Example:**

```
$ rm file.txt
```

7. **cp (Copy)**

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- **Explanation:** Copies files or directories.
- **Syntax:** `cp [OPTION] [SOURCE] [DESTINATION]`
- **Example:**

```
$ cp file.txt backup/
```

8. **mv (Move)**

- **Explanation:** Moves or renames files or directories.
- **Syntax:** `mv [OPTION] [SOURCE] [DESTINATION]`
- **Example:**

```
$ mv oldfile.txt newfile.txt
```

9. **cat (Concatenate)**

- **Explanation:** Displays the contents of a file.
- **Syntax:** `cat [OPTION] [FILE]`
- **Example:**

```
$ cat file.txt
```

10. **less/more**

- **Explanation:** Allows you to view a file one screen at a time.
- **Syntax (less):** `less [FILE]`
- **Syntax (more):** `more [FILE]`
- **Example (less):**

```
$ less largefile.txt
```

11. **head/tail**

- **Explanation:** Displays the beginning or end of a file.
- **Syntax (head):** `head [OPTION] [FILE]`
- **Syntax (tail):** `tail [OPTION] [FILE]`
- **Example (head):**

```
$ head -n 10 file.txt
```

12. **grep (Global Regular Expression Print)**

- **Explanation:** Searches for patterns in files.
- **Syntax:** `grep [OPTION] "PATTERN" [FILE]`
- **Example:**

```
$ grep -i "search" file.txt
```

13. **find**





- **Explanation:** Searches for files and directories.
- **Syntax:** `find [PATH] [OPTION] [PATTERN]`
- **Example:**

```
$ find /path/to/search -name "file*"
```

14. **chmod (Change Mode)**

- **Explanation:** Changes file permissions.
- **Syntax:** `chmod [OPTION] [MODE] [FILE]`
- **Example:**

```
$ chmod 755 file.txt
```

15. **chown (Change Owner)**

- **Explanation:** Changes file owner and group.
- **Syntax:** `chown [OPTION] [USER]:[GROUP] [FILE]`
- **Example:**

```
$ chown user:group file.txt
```

16. **ps (Process Status)**

- **Explanation:** Displays information about running processes.
- **Syntax:** `ps [OPTION]`
- **Example:**

```
$ ps aux
```

17. **kill**

- **Explanation:** Terminates processes.
- **Syntax:** `kill [OPTION] [PROCESS_ID]`
- **Example:**

```
$ kill -9 1234
```

18. **top/htop**

- **Explanation:** Monitors system processes and resource usage.

19. **df (Disk Free)**

- **Explanation:** Displays disk space usage.
- **Syntax:** `df [OPTION]`
- **Example:**

```
$ df -h
```

20. **du (Disk Usage)**





- **Explanation:** Displays disk usage of files and directories.
- **Syntax:** `du [OPTION] [DIRECTORY]`
- **Example:**

```
$ du -h /path/to/directory
```

21. **date**

- **Explanation:** Displays the current date and time.
- **Syntax:** `date [OPTION] [+FORMAT]`
- **Example:**

```
$ date '+%Y-%m-%d %H:%M:%S'
```

22. **cal (Calendar)**

- **Explanation:** Displays a calendar.
- **Syntax:** `cal [OPTION]`
- **Example:**

```
$ cal
```

23. **wget**

- **Explanation:** Downloads files from the internet.
- **Syntax:** `wget [OPTION] [URL]`
- **Example:**

```
$ wget http://example.com/file.txt
```

24. **tar (Tape Archive)**

- **Explanation:** Archives files.
- **Syntax (create):** `tar -cvzf [ARCHIVE_NAME] [FILES/DIRECTORIES]`
- **Syntax (extract):** `tar -xvzf [ARCHIVE_NAME]`
- **Example (create):**

```
$ tar -cvzf archive.tar.gz /path/to/files
```

25. **zip/unzip**

- **Explanation:** Compresses and decompresses files.

26. **ssh (Secure Shell)**

- **Explanation:** Securely logs into a remote server.
- **Syntax:** `ssh [USER]@[HOSTNAME]`
- **Example:**

```
$ ssh user@hostname
```

27. **scp (Secure Copy)**

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- **Explanation:** Securely copies files between local and remote hosts.
- **Syntax (from local to remote):** `scp [FILE] [USER]@[HOSTNAME]:[DESTINATION]`
- **Syntax (from remote to local):** `scp [USER]@[HOSTNAME]:[FILE] [DESTINATION]`
- **Example:**

```
$ scp file.txt user@hostname:/path/to/destination/
```

28. sed (Stream Editor)

- **Explanation:** Performs text manipulation.
- **Syntax:** `sed [OPTION] 's/OLD/NEW/' [FILE]`
- **Example:**

```
$ sed 's/old/new/' file.txt
```

29. awk

- **Explanation:** Text processing tool for data extraction.
- **Syntax:** `awk '{print $1}' [FILE]`
- **Example:**

```
$ awk '{print $1}' file.txt
```

30. sort

- **Explanation:** Sorts lines of text files.
- **Syntax:** `sort [OPTION] [FILE]`
- **Example:**

```
$ sort -n file.txt
```

31. cut

- **Explanation:** Removes sections from lines of files.
- **Syntax:** `cut [OPTION] [DELIMITER] -f [FIELD] [FILE]`
- **Example:**

```
$ cut -d',' -f1 file.csv
```

32. tee

- **Explanation:** Redirects output to multiple files.
- **Syntax:** `command | tee [FILE1] [FILE2] ...`
- **Example:**

```
$ echo "Hello, World" | tee file1.txt file2.txt
```

33. df (Disk Free)

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- **Explanation:** Displays disk space usage.
- **Syntax:** `df [OPTION]`
- **Example:**

```
$ df -h
```

34. **who**

- **Explanation:** Shows who is logged on.
- **Syntax:** `who`
- **Example:**

```
$ who
```

35. **whatis**

- **Explanation:** Displays one-line descriptions of command functions.
- **Syntax:** `whatis [COMMAND]`
- **Example:**

```
$ whatis ls
```

36. **alias**

- **Explanation:** Creates a command alias.
- **Syntax:** `alias [ALIAS_NAME]='[COMMAND] [OPTIONS]'`
- **Example:**

```
$ alias ll='ls -l'
```

37. **jobs**

- **Explanation:** Lists background jobs.
- **Syntax:** `jobs`
- **Example:**

```
$ jobs
```

38. **ping**

- **Explanation:** Sends ICMP echo requests to a host.
- **Syntax:** `ping [OPTION] [HOST]`
- **Example:**

```
$ ping google.com
```

39. **ifconfig**

- **Explanation:** Configures network interfaces.
- **Syntax:** `ifconfig [INTERFACE] [OPTION]`
- **Example:**

```
$ ifconfig eth0
```





40. route

- **Explanation:** Views and manipulates the IP routing table.
- **Syntax:** `route [OPTION]`
- **Example:**

```
$ route -n
```

41. netstat

- **Explanation:** Displays network statistics.
- **Syntax:** `netstat [OPTION]`
- **Example:**

```
$ netstat -tuln
```

42. shutdown

- **Explanation:** Shuts down or reboots the system.
- **Syntax:** `shutdown [OPTION] [TIME]`
- **Example:**

```
$ shutdown -h now
```

43. reboot

- **Explanation:** Reboots the system.
- **Syntax:** `reboot`
- **Example:**

```
$ reboot
```

44. crontab

- **Explanation:** Schedules tasks to run at specified times.
- **Syntax:** `crontab [OPTION]`
- **Example:**

```
$ crontab -e
```

45. at

- **Explanation:** Schedules a one-time task.
- **Syntax:** `at [TIME] [OPTION]`
- **Example:**

```
$ at now + 1 hour
```

46. touch

- **Explanation:** Changes file timestamps.
- **Syntax:** `touch -t [YYYYMMDDHHMM.SS] [FILE]`
- **Example:**

```
$ touch -t 202210201200.00 file.txt
```

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47. lsof (List Open Files)

- **Explanation:** Lists open files and processes.
- **Syntax:** `lsof [OPTION] [FILE]`
- **Example:**

```
$ lsof /path/to/file
```

48. nc (Netcat)

- **Explanation:** Network utility for reading/writing network connections.
- **Syntax:** `nc [OPTION] [HOST] [PORT]`
- **Example:**

```
$ nc -l -p 1234
```

49. scp (Secure Copy)

- **Explanation:** Securely copies files between local and remote hosts.
- **Syntax (from local to remote):** `scp [FILE] [USER]@[HOSTNAME]:[DESTINATION]`
- **Syntax (from remote to local):** `scp [USER]@[HOSTNAME]:[FILE] [DESTINATION]`
- **Example (from local to remote):**

```
$ scp file.txt user@hostname:/path/to/destination/
```





List of commonly used Linux commands for user account.

1. **useradd**

- **Explanation:** Creates a new user account on the system.
- **Syntax:** `useradd [OPTIONS] USERNAME`
- **Example:**

```
sudo useradd john
```

2. **passwd**

- **Explanation:** Sets or changes the password for a user account.
- **Syntax:** `passwd [USERNAME]`
- **Example:**

```
sudo passwd john
```

3. **userdel**

- **Explanation:** Deletes a user account from the system.
- **Syntax:** `userdel [OPTIONS] USERNAME`
- **Example:**

```
sudo userdel -r john
```

4. **usermod**

- **Explanation:** Modifies user account properties, such as the username and home directory.
- **Syntax:** `usermod [OPTIONS] USERNAME`
- **Example:**

```
sudo usermod -l newname oldname
```

5. **groups**

- **Explanation:** Lists the groups a user belongs to.
- **Syntax:** `groups [USERNAME]`
- **Example:**

```
groups john
```

6. **newgrp**

- **Explanation:** Changes the group of the current shell session.
- **Syntax:** `newgrp [GROUPNAME]`
- **Example:**

```
newgrp staff
```

7. **su (Switch User)**

- **Explanation:** Switches to another user account or the superuser.
- **Syntax:** `su [OPTIONS] [USERNAME]`

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- **Example:**

```
su - john
```

8. **sudo**

- **Explanation:** Executes a command with superuser privileges.
- **Syntax:** `sudo [OPTIONS] COMMAND`
- **Example:**

```
sudo apt-get update
```

9. **chown (Change Owner)**

- **Explanation:** Changes the ownership of files or directories.
- **Syntax:** `chown [OPTIONS] [OWNER]:[GROUP] FILE`
- **Example:**

```
sudo chown john:users file.txt
```

10. **chmod (Change Mode)**

- **Explanation:** Modifies file or directory permissions.
- **Syntax:** `chmod [OPTIONS] PERMISSIONS FILE`
- **Example:**

```
chmod 644 file.txt
```

11. **adduser**

- **Explanation:** Interactive command for adding a new user.
- **Syntax:** `adduser [OPTIONS] USERNAME`
- **Example:**

```
sudo adduser jane
```

12. **deluser**

- **Explanation:** Deletes a user account, along with their home directory and mail spool.
- **Syntax:** `deluser [OPTIONS] USERNAME`
- **Example:**

```
sudo deluser --remove-home jane
```

13. **passwd**

- **Explanation:** Changes the user's password.
- **Syntax:** `passwd [USERNAME]`
- **Example:**

```
passwd jane
```

14. **gpasswd**

- **Explanation:** Manages group password files.

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- **Syntax:** `gpasswd [OPTIONS] GROUP`
- **Example:**

```
sudo gpasswd -a john sudo
```

15. **usermod**

- **Explanation:** Modifies a user account.
- **Syntax:** `usermod [OPTIONS] USERNAME`
- **Example:**

```
sudo usermod -aG admin john
```

16. **id**

- **Explanation:** Displays user and group information for the current user or a specified user.
- **Syntax:** `id [USERNAME]`
- **Example:**

```
id john
```

17. **finger**

- **Explanation:** Displays information about a user.
- **Syntax:** `finger [USERNAME]`
- **Example:**

```
finger john
```

18. **who**

- **Explanation:** Lists the users currently logged into the system.
- **Syntax:** `who`
- **Example:**

```
who
```

19. **w**

- **Explanation:** Shows information about currently logged-in users and their activities.
- **Syntax:** `w`
- **Example:**

```
w
```

20. **groups**

- **Explanation:** Lists the groups a user belongs to.
- **Syntax:** `groups [USERNAME]`
- **Example:**

```
groups john
```

