**Linux Commands**

| **Linux Directory Commands** | | | |
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| **No.** | **Command** | **Description** | **Example** |
| **1.** | pwd | To get current working directory | pwd |
| **2.** | mkdir | To make new directory | mkdir new\_directory |
| **3.** | rmdir | To delete any directory | rmdir directory\_name |
| **4.** | ls | To display the list of contents in a directory | ls |
| **5.** | cd | To change directory | cd directory\_name,  cd .. |
| **6.** | touch | To create empty files. We can create multiple empty files by executing it once | touch test1.txt test2.txt |
| **7.** | cat | A multi-purpose utility in the Linux system. It can be used to create a file, display content of the file, copy the content of one file to another file, and more. | * cat > newfile.txt *(Type the content you want to add to the file, then press Ctrl+D to save and exit.)* * cat newfile.txt * cat sourcefile.txt > destinationfile.txt |
| **8.** | rm | To remove a file | rm demo1.txt demo2.txt |
| **9.** | cp | To copy a file or directory, we can use it to copy a file, copy a file to another directory, copy a directory (including its contents).  (The -r option is used to copy directories recursively, ensuring all files and subdirectories are copied.) | * cp sourcefile.txt destinationfile.txt * cp sourcefile.txt /path/to/destination/directory/ * cp -r sourcedirectory/ /path/to/destination/ |
| **10.** | mv | To move a file or a directory from one location to another location, rename a file, rename a directory | * mv sourcefile.txt /path/to/destination/directory/ * mv sourcedirectory/ /path/to/destination/ * mv oldname.txt newname.txt * mv olddirectoryname/ newdirectoryname/ |
| **11.** | rename | To rename files, useful for renaming a large group of files, batch rename files by adding a prefix, batch rename files by changing a pattern. | * rename 's/\.txt$/\.bak/' \*.txt *(to rename all .txt files to .bak in a directory)* * rename 's/^/new\_/' \*.txt *(file1.txt to new\_file1.txt, file2.txt to new\_file2.txt)* * rename 's/old/new/' \*old\* *(oldfile1.txt to newfile1.txt, oldfile2.txt to newfile2.txt)* |
| **Linux File Commands** | | | |
| **12.** | head | To display the first 10 lines of a file. | head demo1.txt |
| **13.** | tail | To display the last ten lines of the file. | tail demo1.txt |
| **14.** | tac | To display the file content in reverse order (from the last line). | tac demo1.txt |
| **15.** | more | It is quite similar to cat command, as it is used to display the file content. The only difference between both commands is that, in case of larger files, the more command displays screenful output at a time.  The following keys are used to scroll the page: (*ENTER key:* To scroll down page by line, *Space bar:* To move to the next page, *b key:* To move to the previous page, */ key:* To search the string.) | more demo1.txt |
| **16.** | less | It is similar to the more command. It also includes some extra features such as 'adjustment in width and height of the terminal.' Comparatively, the more command cuts the output in the width of the terminal. | less demo1.txt |
| **17** | zcat/zmore | To view the files compressed with gzip. | zcat file.txt.gz, zmore file.txt.gz |
| **Linux User Commands** | | | |
| **18.** | su | It provides administrative access to another user. In other words, it allows access of the Linux shell to another user. | su user\_name |
| **19.** | id | The [id](https://www.javatpoint.com/linux-id-command) command is used to display the user ID (UID) and group ID (GID). | id |
| **20.** | useradd | To add or remove a user on a Linux server. | sudo useradd new\_user |
| **21** | chmod | To change permission for a file or directory. | chmod u+rwx file.txt |
| **22.** | passwd | To create and change the password for a user. | sudo passwd new\_user |
| **23.** | groupadd | To create a user group. | sudo groupadd group\_name |
| **Linux Filter Commands** | | | |
| **24.** | cat | To filter a file, it is used inside pipes. | cat demo1.txt | tac | cat *(The content of demo1.txt is read by cat, reversed by tac, and then displayed by the final cat. The output is the lines of demo1.txt in reverse order.)* |
| **25.** | cut | to select a specific column of a file. The '-d' option is used as a delimiter, and it can be a space (' '), a slash (/), a comma (,), a hyphen (-), or anything else. And, the '-f' option is used to specify a column number. | * cut -d ' ' -f 2 file.txt * cut -d '/' -f 2 file.txt * cut -d ',' -f 3 file.csv * cut -d '-' -f 1 file.txt |
| **26.** | grep | The most powerful and used filter in a Linux system. The 'grep' stands for "global regular expression print." It is useful for searching the content from a file. Generally, it is used with the pipe. | cat demo1.txt | grep "search\_term"  *(To search for a term in all files within a directory: grep "search\_term" \*)* |
| **27.** | comm | To compare two files or streams. By default, it displays three columns, first displays non-matching items of the first file, second indicates the non-matching item of the second file, and the third column displays the matching items of both files. | comm demo1.txt demo2.txt |
| **28.** | sed | Also known as stream editor. It is used to edit files using a regular expression. It does not permanently edit files; instead, the edited content remains only on display. It does not affect the actual file. To replace a word in a file, replace all occurrences of a word in a file, Insert a line before a specific pattern, and append a line after a specific pattern. | * sed 's/oldword/newword/' file.txt * sed 's/oldword/newword/g' file.txt * sed '/pattern/i\New line before pattern' file.txt * sed '/pattern/a\New line after pattern' file.txt |
| **29.** | tee | quite similar to the cat command. The only difference between both filters is that it puts standard input on standard output and also writes them into a file, other usage: to write output to a file and display it on the screen, use tee in a pipeline, use tee to redirect output to multiple commands. | * cat demo1.txt | tee new\_demo.text | cat * echo "Appending this line." | tee -a output.txt * ls -l | tee filelist.txt, *(writes the output to filelist.txt, and also displays it on the screen.)* * echo "Data for multiple outputs" | tee >(cat > output1.txt) >(cat > output2.txt) *(writes "Data for multiple outputs" to both output1.txt and output2.txt while displaying it on the screen.)* |
| **30.** | tr | To translate the file content like from lowercase to uppercase. | cat file.txt | tr 'a-z' 'A-Z' |
| **31.** | uniq | To form a sorted list in which every word will occur only once. | sort demo1.txt | uniq |
| **32.** | wc | To count the lines, words, and characters in a file. | wc demo1.txt |
| **33.** | od | To display the content of a file in different s, such as hexadecimal, octal, binary, and ASCII characters. | * od -x file.txt * od -o file.txt * od -b file.txt * od -c file.txt |
| **34.** | sort | To sort files in alphabetical order. | sort demo1.txt |
| **35.** | gzip | To truncate the file size. It is a compressing tool. It replaces the original file by the compressed file having '.gz' extension. | gzip demo1.txt demo2.txt |
| **36.** | gunzip | To decompress a file. It is a reverse operation of gzip command. | gunzip demo1.txt demo2.txt |
| **Linux Utility Commands** | | | |
| **37.** | find | To find a particular file within a directory. It also supports various options to find a file such as byname, by type, by date, and more. | * find /path/to/directory -name "filename.txt" * find /path/to/directory -type d * find /path/to/directory -type f -mtime -7 *(This finds all files modified in the last 7 days)* * find . -name "filename.txt" *(“.” :- For current directory name)* |
| **38.** | locate | To search a file by file name. It is quite similar to find command; the difference is that it is a background process. It searches the file in the database, whereas the find command searches in the file system. It is faster than the find command. To find the file with the locates command, keep your database updated. | locate demo1.txt |
| **39.** | date | To display date, time, time zone, and more. | date |
| **40.** | cal | to display the current month's calendar with the current date highlighted. | cal |
| **41.** | sleep | To hold the terminal by the specified amount of time. By default, it takes time in seconds. | sleep 4 |
| **42.** | time | To display the time to execute a command. | time |
| **43.** | zcat | To display the compressed files. | zcat demo1.txt |
| **44.** | df | To display the disk space used in the file system. It displays the output as in the number of used blocks, available blocks, and the mounted directory. | df |
| **45.** | mount | To connect an external device file system to the system's file system. To mount a USB drive, mount an ISO file, mount a Network File System (NFS), mount a file system as Read-Only, mount a specific file system type, mount a windows CIFS/SMB share. | * mount /dev/sdb1 /mnt/usb *(This mounts the USB drive located at /dev/sdb1 to the directory /mnt/usb)* * mount -o loop /path/to/image.iso /mnt/iso * mount -t nfs 192.168.1.100:/sharedfolder /mnt/nfs * mount -o ro /dev/sdb1 /mnt/readonly * mount -t ext4 /dev/sdb1 /mnt/ext4 * mount -t cifs -o username=user,password=pass //192.168.1.100/shared /mnt/cifs |
| **46.** | exit | To exit from the current shell. It takes a parameter as a number and exits the shell with a return of status number. | exit *(After pressing the ENTER key, it will exit the terminal.)* |
| **47.** | clear | To clear the terminal screen. | clear *(After pressing the ENTER key, it will clear the terminal screen.)* |
| **Linux Networking Commands** | | | |
| **48.** | ip | An updated version of the ipconfig command. It is used to assign an IP address, initialize an interface, disable an interface. | ip a, ip addr |
| **49.** | ssh | To create a remote connection through the ssh protocol. | ssh user@remote\_host  *(This connects to remote\_host using the username user.)* |
| **50.** | mail | To send emails from the command line. | echo "This is the body of the email" | mail -s "Subject of the Email" recipient@example.com |
| **51.** | ping | To check the connectivity between two nodes, that is whether the server is connected. It is a short form of "Packet Internet Groper." | ping google.com |
| **52.** | host | to display the IP address for a given domain name and vice versa. It performs the DNS lookups for the DNS Query. | host google.com, host 8.8.8.8 |

**Reference:** <https://www.javatpoint.com/linux-commands>