**Commands**

Linux is mainly interacted through command line interface. We do have GUI. However, CLI is most efficient. In addition, the commands are case sensitive.

If if you have not installed Windows Subsystem for Linux in your machine, Please use - <https://bellard.org/jslinux/vm.html?url=alpine-x86.cfg&mem=192>

Or <https://linuxcontainers.org/lxd/try-it/>

Or <https://copy.sh/v86/?profile=linux26>

Or for testing the shell scripts <https://www.tutorialspoint.com/execute_bash_online.php>

1. **pwd** – Print Working Directory
2. **ls** – List of files and folders
   * **ls –l** – Long list
   * **ls -r** - List in reverse
   * **ls -lr** – Long list in reverse
   * **ls –t** – List of files and folders sorted by timestamp.
   * **ls – ltr** – List of files and folders in reverse sorted by timestamp.
   * **ls –a** – List of files and folders including the hidden ones.
   * **ls-al** - Long List of files and folders including the hidden files.
3. **clear** – Clear screen/ terminal display
4. **man –** Manual command
   * used to fetch the manual of the linux commands.
   * Ex, **man ls** – Diplay’s manual page of ls.
5. **cd**- change directory
   * cd .. – Go back to the previous directory
   * cd / - Go to root dir
   * cd <folder name> - Go to the specific folder
6. **mkdir** – Create directory

ex: **mkdir test\_dir** – It creates the folder named test\_dir

1. **rmdir** – Remove directory

ex: rmdir test\_dir – It removed the folder names test\_dir

1. **cp-** Copy command

ex: **cp /home/test/file1.txt /home/test2/file2.txt** – copied file1 content to file2

1. **mv-** move command and also used as rename command

ex: **mv /home/test/file1.txt /home/trail/file1.txt** – Moving the file

**mv /home/test/file1.txt /home/test/file2.txt –** Renaming the file.

1. **rm-** remove files or directories.
   * **rm -r or R** is used or recursive removal
   * **rm -f** is used for forceful removal (Irrespective of state of file)

* **rm -i** is used for prompting before every removal. By using **Y** to remove and **N** to skip.
* **rm -dir** removes empty directory’s
* **rm -v** displays what all are removed.

Ex: **rm filez.txt** – removes filez.txt file.

1. **touch –** Used to create the dummy files with the given name

ex : touch test.txt – It creates the text.txt without ant content.

1. **cat –** This command used to display the contents of a file and used to concatenate the multiple files.

ex: **cat file1.txt -** displays the contents of the file1.txt file.

1. **vi –** Vi is an editor program. It’s used to create and write content(program/text) into a file.

ex: **vi sample.txt** – it opens an empty text file. We can write the content and save them by using specific vi commands.

* + **i** is used for inserting the test.
  + **Esc** is used to leave the text editing
  + **dd** is used for deleting the entire line
  + **x** is used to delete the text by char by char.
  + **:q!** is used to quit without saving
  + **:w** is used to save the text
  + **:wq!** Is used to save the text and quit from editor.

1. **more –** it is a command used to display the content for a file by the full screen at a time. By using the enter we can scroll down.
2. **less –** less is used to display the contents of a file**.** But, we can use up and down arrows to scroll.
3. **grep –** grep is a command used to search the text in files by using the string based patterns.

**Ex:** **grep “string” filename.txt**

* + **grep –i “string” filename.txt** – ignore case(lower/upper case) of the string in the file.
  + **grep –i “string” | grep –v “string2” filename.txt –** Display’s the file which is having the string and not having the string2.
  + **grep –c “string” filename.txt –** displays the count of the occurrences
  + **grep –L “string” \*.txt –** files without match
  + **grep –l “string” \*.txt –** files with match
  + **grep –e “string1” –e ”string2” filename.txt –** display’s the string1 and string 2 occurrences in the file.

1. **sort –** Sort is a command used to sort the contents of the file.

**Ex:** **sort filename.txt**

* + **-b**, --ignore-leading-blanks
  + **-d**, --dictionary-order

consider only blanks and alphanumeric characters

* + **-f**, --ignore-case

fold lower case to upper case characters

* + **-g**, --general-numeric-sort

compare according to general numerical value

* + **-i**, --ignore-nonprinting

consider only printable characters

* + **-M**, --month-sort

compare (unknown) < 'JAN' < ... < 'DEC'

* + **-h**, --human-numeric-sort

compare human readable numbers (e.g., 2K 1G)

* + **-n**, --numeric-sort

compare according to string numerical value

* + **-R**, --random-sort

shuffle, but group identical keys. See shuf(1)

* + **-r**, --reverse

reverse the result of comparisons

1. **wc –** word count
   * **-c** – Print Byte counts
   * **–m** – Print character counts
   * **–l** – Print line counts
   * **–w** – Print the word counts
2. **cut -** remove sections from each line of files
   * **–b** – Select only these bytes
   * **–c** – Select only these characters
   * **–d** – By using specific delimiter we can cut specific text.
   * **–f** – is used to select the specific fields
   * **–s** - only delimited
   * **–z** – zero-terminated
3. **du** – Disk usage of set of files, recursively for directories.
   * **du** –a – option for printing all files including directories.
   * **du** –h – displays in human readable format.
   * **du** –c – displays total count.
   * **du** –d – to print sizes to till particular level.
   * **Du** –time –h to display sizes with timestamps.
4. **ln –** used to create links between files (shortcuts)
   * **ln original\_file.txt link\_file.txt –** it creates the link to the original file.
   * **ln –**v fine.txt file2.txt – used to identify with file is linked to with file.
   * **ln –**s original\_file.txt syml\_file.txt – it created the symbolic link.
5. **whoami –** to find current user id
6. **lpr –** used to print the files
   * **-# num-copies -** Specify the number of copies to print
   * **-E -** Encrypt the connection to the server
   * **-H server[:port] -** Connect to the named server and port
   * **-m -** Send an email notification when the job completes
   * **-o option[=value] -** Specify a printer-specific option
   * **-o job-sheets=standard -** Print a banner page with the job
   * **-o media=size -** Specify the media size to use
   * **-o number-up=N -** Specify that input pages should be printed N-up(1, 2, 4, 6, 9, and 16 are supported)
   * **-o orientation-requested=N -** Specify portrait (3) or landscape (4) orientation
   * **-o print-quality=N -** Specify the print quality - draft (3), normal (4), or best (5)
   * **-o sides=one-sided -** Specify 1-sided printing
   * **o sides=two-sided-long-edge** Specify 2-sided portrait printing
   * **-o sides=two-sided-short-edge -** Specify 2-sided landscape printing
   * **-P destination -** Specify the destination
   * **–q -** Specify the job should be held for printing
   * **-r -** Remove the file(s) after submission
   * **-T title -** Specify the job title
   * **-U username -** Specify the username to use for authentication
7. **hostname –** This command is used to find the hostname of the current machine and to set the hostname, etc..
   * **-a, --alias:** Displays the alias name of the host.
   * **-A, --all-fqdns:** Displays every FQDN (Fully Qualified Domain Name) of the computer.
   * **-b, --boot:** Always set a hostname.
   * **-d, --domain**: Display DNS domain name.
   * **-f, --fqdn, --long:** Display the FQDN.
   * **-F, --file:** Check a file to recover and display the hostname.
   * **-h, --help:** Print the help message as the output.
   * **-i, --ip-address:** Display the computer’s IP address.
   * **-I, --all-ip-addresses:** Display all of the computer’s network addresses.
   * **-s, --short:** Display the short version of the hostname.
   * **-v, --verbose:** Expand all output to verbose.
   * **-y, --yp, --nis:** Display the NIS domain name.
8. **echo –** It prints the texts that follows the “echo” command
9. **uname –** It is used to get the basic information about the OS.
10. **tar -** Command to extract and compress files in Linux
    * **-c :** Creates Archive
    * **-x :** Extract the archive
    * **-f :** creates archive with given filename
    * **-t :** displays or lists files in archived file
    * **-u :** archives and adds to an existing archive file
    * **-v :** Displays Verbose Information
    * **-A :** Concatenates the archive files
    * **-z :** zip, tells tar command that creates tar file using gzip
    * **-j :** filter archive tar file using tbzip
    * **-W :** Verify a archive file
    * **-r :** update or add file or directory in already existed .tar file
11. **head –** Displays the specific number of lines of the file from the top

**head –n <number of lines needed> <file name>**

1. **tail -** Displays the specific number of lines of the file from the bottom

**tail –n <number of lines needed> <file name>**

1. **diff –** this is used to find the difference between files

**diff <file1> <file2> -** used to find the diffrences between file1 and file2

1. **cmp –** This command used to check if the 2 files are identical or not

**cmp <file1> <file2> -** used to compare the files.

1. **passwd –** this command used for password related operations.
2. **useradd –** this command is used for adding users in linux
3. **chown –** this command is used to change the owner of the file or folder
4. **chgrp -** this command is used to change the group of the file or folder
5. **chmod -** this command is used to change the permissions of the file or folder
6. **su –** this is a switch user command

**su root** – used to login as a root user

1. **sudo –** used to execute command as another user
2. **service** – used to any service related operations
3. **logout** – used to to exit from login shell
4. **exit** – exits the shell
5. **kill** – it is used to kill the processes by the process id.

For more, please refer - <https://www.oliverelliott.org/article/computing/ref_unix/>

<https://morioh.com/p/b119c1c5d5d3>

<https://www.freecodecamp.org/news/the-linux-commands-handbook/>

<https://ss64.com/bash/>

<https://www.tecmint.com/linux-commands-cheat-sheet/>