**FHS :** fully hirearchysystem, also called linux directory system

**Home :** users home directory

**Bin :** it stores thecommands that have been executed by the user

**Sbin :** it stores thecommands that have been executed by the super user

**Boot :** it contains boot images and boot files

**Dev :** it contains all the device files

**Etc** : it contains host specific system configuration files

**Lib** : it contains all the library files of the system

Mount :it is used for mounting process

**Opt :**it store all the file details of 3rd party when it installed

**Proc :** it used to see all the processing related files (hardware details)

**Srv :** it stores all the service related information provided by system

**Sys** :it stores any new changes that obtained while changing hardware

**Tmp :** it store temporary files and have access to all

**Usr :** it contain local system files

**Var :** it stores all the system services

**Network Commands:**

**netstat -tunlp** : to check the Active Internet connections ports

**netstat-tulpn :** display all active listening ports

**netstat-pnltu :** display all active listening ports

**tail -f** file name : to check the file logs ( to see the log files)

**pwd** : shows the present workpath

**ipaddr show :** ip address shown all network interface

**hostname-i :** ip address shown

**ifconfig :** ip address shown all network interface

**ping** hostname : it sends an echo request to establish a connection to server or pc

**ping**8.8.8.8 **:**to give ip address also, get the response

**ping** google.com : to give name also

ctrl+z : to stop the ping

**dig domain :** information of DNS

**host** google.com : to get the ip address of the google

**wget**url : to get a file from internet , give that file url

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**User& group commands:**

**Sudo-i** :login to root user

**Sudosu -** : login to root user

**Sudosu** : login to root user

**cat /etc/passwd :**  to see the list of users

**getentpasswd :** to see the list of users

**cat /etc/group :** to see the list of groups

**getent group :** to see the list of groups

**useradd**naveen : to create a user, usename Naveen

**userdel**naveen : to delete the user, username Naveen

**groupadd**bala **:** to add the group , group name bala

**usermod -a -G** balasai : to attach the group to user, bala is group. Sai is user

**groupdel**bala : to detach group , and delete the group , bala group

**id**sai : to get the sai user and group id numbers

Primary group we can’t delete

**su -** sai : login to new user sai

exit : exit from the user

**passwd** username : to give the password to the user

**sudopasswd**sai : to change the password of sai user, reset password

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**System commands:**

**uname :** display linux system info (os)

**uname-r** : to check the kernel version

**uname-a** : to see the linux info

**uptime :** to see the instance run time

**hostname** : to see the system name or private ip address

**hostnamectl set-hostname**naveen**:** to set the hostname to the system

**clear** : to clear the screen

ctr+l :to clear the screen

**hostname-i** : to show the private ip address

**last reboot** : to see the reboot history of the system

**date** : to see the present date and time

**cal :** to see the current month full calendar

**cal** 09 2022 **:** to see the September 2022 calender full ( cal month year)

**w** : to see the user login details

**who**  : to see the user name logged without details

**whoami :** to see present user login

**cat /proc/cpuinfo** :to show the cpu information

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**Hardware commands:**

**dmesg :** to see the bootup messages

**cat /proc/cpuinfo :** to see the cpu information

**cat /proc/meminfo : to see the memory information**

**cat /etc/os-release : to see the os flavor**

**lshw :** to see the system configuration details

yum install lshw –y : lshw is a package to install to see the hardware configuration

**lsblk :** to see the volumes attached to the instances

**fdisk -l :**to see the volume details in list

**free :**  to check the RAM used available storage details in kb

**free -m :**to check the RAM used available storage details in mb

**dmidecode :** to get the hardware information from the BIOS(Basic Input Output Standard)

**df :**to see the mounted systemspace in kb

**df -Th :** to see the mounted system space in mb

**df -h :**display free space on mounted system

**df -i :** display free inodes on file system

**du -sh :** display the current directory usage in kb/mb

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**File commands:**

**touch**naveen : to create a file , file name Naveen

**touch**a b c d : create multiple files (a b c d) in single command

**touch**file**{1..n} :**create series of files ( file1 file2..file10) , n we give no.of files we

need ( give the number)

**ls :** to list the files and directory in a present work path with name only

**ll :**to list the files and directory with detail information

**ls -al :** to list the all files include hidden files

**ls -ltrh :**  to show the recently added file to old file

**ls**a/b : we can get list b-directory files ( **ls** path and directory name)

**cat**filename : to see the content in the file or create a file

**more**filename : to see the content in the file or create a file( same as cat commd)

**cat>**filename : to write in the file

ctrl+d : to save the file cat command

**cat>>**filename : to write the data without override or merge the new data

**cp**file-1 file-2 : copying data from file-1 to file-2, confirm (y)

**cp**source file path destination path : copying file one path to another path

cp /root/naveen /home/ec2-user: source path file=/root/naveendestination path= /home/ec2-user

**mv**file-1 file-2 : moving data from file-1 to file-2 , file-1 is deleted or

Renaming the file-1 to file -2

**mv**source file path destination path: moving file with one path to another path with name

changing or without name changing

mv /root/file-2 /home/ec2-user/Naveen : source file path =/root/file-2

destinationpath=/home/ec2-user/Naveen

file-2 data saved in naveen file in ec2-user path and renamed

**rm**file-1 : to delete the file-1, confirm (y)

**rm-f** file-1 : to delete the file-1 without confirm

**rm -rf**file**{3..8} :** to delete the particular series of files

**ln -s** source file link name : to create link of particular file (soft link color change)

**ln -s file-1 /root/hgs ,: source file= file-1, link placed path=/root/link name=hgs**

**ln**file-1 f2 : create hard link of file-1 link name f2 ( color not change)

**head**file-1 : show the top 10 lines of the file-1

**tail**file-1 : show the last 10 lines of the file-1

**tail -**15**f** file-1 : show the last 15 lines of file-1,**( used for log files)**

**sed -n '**5**,**15**p'**file-1 : show the 5 to 15 lines only in file -1

**sed ‘=’** file-1 : it show the line number with content in file-1

**sed ‘**3**,**6**p’** digit : to show/print two times from line 3 to 6 in digit file

**gpg -c** digit : to encrypt the digit file data(**digit.gpg**)

**gpg -d** digit**.gpg** : decrypt the file digit.gpg, show the data in that file

**wc**file-1 : shows the data of **line word alphabets**  in the file-1

**the file start with . dot it is hidden file or folder**

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**Directory /Folder commands:**

**mkdir**dir-1 : to create a directory directory name=dir-1

**rmdir**dir-1 : to delete the directory directory name dir-1

**mkdir -p** a/b/c/d : create directory inside another directory

**cd**dir-1 : to enter into the directory

**cd .. :** one step back from current path

**cd**path/directory : directly enter into a particular path directory

**cd :** come to the root directory or starting point

**cd ~ :**come to the root directory or starting point

**rm**-**rf \* :** to remove all the files and directories in the space

**rm**-**rf**hg**\* :**  delete the name (hg) starting files and directories

**(\*) star indicates all**

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**vim commands:editer**

**vim**file-1 : to enter the vim editor of file-1

1. Command mode:work on command mode only

gg ( small letters) : go to the top of the line

**G**( capital letter) : go to the bottom of the line

**yy**( small letter) : copy the line

**p**(small letter) : paste the line

**6p** (small letter) : paste 6 times

**dd**(small letter) : to delete the line

**u**( small letter ) : undo the last action

**/**abc : to search (abc) word in that file ( white original)(yellow duplicate)

**:set number :** to see the line with number

1. Insert mode:

**i (**small letter) **:**  go to the insert mode

**esc(**escape button) : exit from the insert mode , enter into command mode

**I (**capital letter) : go to insert mode and curser come to starting of the line

**A (**capital letter) : go to insert mode and curser come to ending of the line

1. Save mode:work on command mode only

**:w :** to save the content

**:q :**  exit from the vim editor

**:wq :** to save and exit

**:q! :**forcefully exit ( not save any content)

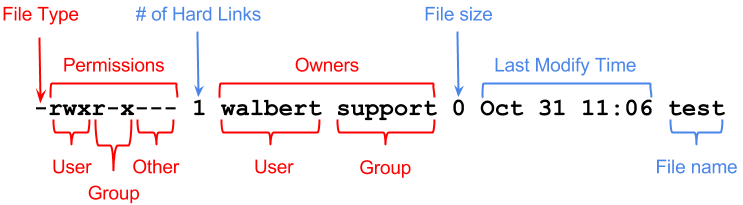
**:w!** : forcefully save the data

**:wq! :** forcefully save and exit

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**Permission commands:**





1. File types:

* **:** regular file

**b :** blocked file

**c :** character file

**d :directory**

**| :** pipeline

**L (**small letter) : link file

**Permission values**

**Read value = 4**

**Write value =2**

**Execute value=1**

**7 = read, write ,execute permission 6= read and write permissions**

**5=read and execute permissions 4=read only 0= no-permissions**

**3=write and execute permission 2= write only 1=execute only**

**chmod**764 filename : chane the file permission 7 for user, 6 for group, 4 for others

**chmod u=**rwx**,g=**rw**,o=**r f1 : another way of give permissions to file f1

owner permissions:

**chown**sai f1 : to change the owner user to f1 file, sai is user

**chgrp**sai f1 : to change the owner group to f1 file , sai is group

**chown** sai:ec2-user f2 : to change the owner at a time , sai is user, ec2-user is group, f2 is file

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**File compress/archive commands:**

**tar -cvf** f1**.tar** f1 : converting f1 file to f1.tar file

**tarxf** f2.tar : convert (f2.tar file to f2 file )

**gzip** f1.tar : convert (f1.tar to f1.tar.gz) gzip

**tar -xvf f1.tar.gz** : convert ( f1.tar/gz to f1 )

**find / grep commands:**

**grep**value filename : to search a value in particular file

**grep-v** value filename : to ignore a value and show remaining data in a file

**locate**naveen : find the all files and directory by a name Naveen

**process related commands:**

**ps : show the snapshort of active process**

**pstree : show process as a tree**

**pmap : show a memory usage map of process**

**top : show all running process**

**kill -9 pid number : to kill a process id**

**bg : list and resume stopped jobs in background**

**lsof : list files opened by process**

**yes>/dev/null& : increase the cpu load up to 100% usage**

**Keyboard shortcuts:**

**Ctrl+C : kill current process running in the terminal**

**Ctrl+Z : stop current process**

**Ctrl+y : paste from clip boars**

**Ctrl+G : exit command history without running a command**

**exit : logout of current session**