**To make your linux server live for long time execute it**

sudo sysctl -w net.ipv4.tcp\_keepalive\_time=60 net.ipv4.tcp\_keepalive\_intvl=60 net.ipv4.tcp\_keepalive\_probes=5

**Basic Linux Commands**

1. pwd → present working directory.
2. hostname → machine name
3. ls or ll → list out the files
4. ll → long list
5. Login: username@ipaddress or username@hostname → password :

AD Username & Password (desktop username & Desktop password)

1. cd → change directory
   1. cd <empty> will redirects to users home directory

Ex: /home/ec2-user

/home/silksmitha

Ex: cd directory name or cd <path>

[ec2-user@vikas index]$ pwd

/home/ec2-user/index

[ec2-user@vikas index]$ cd /home/ec2-user/index

[ec2-user@vikas index]$ cd /

[ec2-user@vikas /]$ pwd

/

[ec2-user@vikas /]$ cd /home/ec2-user/index

[ec2-user@vikas index]$ pwd

/home/ec2-user/index

1. ls . or ll . → present working directory list of files
2. ls <path> or ll <path> required path directory files

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1. cd .. → navigate to previous directory
2. cat → to view the content in the file. (It will open the content of the file at a time even it is having 20 pages of information, it will open all 20 pages info at a time and at last it will shows only last page info)

less → used to open content in the file.(It will open the very first page and line by line we can read )

cat restart.sh (15 to 25)

1. When ever we need to verify logs, then we will use less command
2. touch → to create an empty file

Command: touch file1

**Scenario**:

If you created a file using the touch command named f1, after 10 min you created the same file f1 using touch what would happen?

Ans: The timestamp will be updated to the recent time and the content of the file won't change.

1. vi → to create a file with content → vi mode/ vi editor

Inorder to create a file with content to add or edit or modify we are using VI editor.

To save: :wq

To quit without saving: q!

Set number: set number

Delete: d<no of lines to be deleted in number>d

paste: p

Copy: y<no of lines to be copied in number>y

1. nano to create files.
2. rm -rf <filename> (arguments ⇒ r= recursively, f=forcefully)

Ex: rm -rf log.txt

rm -rf log\_17\_07\_2023\_service\*

1. Create a directory:

mkdir <directory name>

Ex: mkdir logs

mkdir logs\_backup

Remove dir: rmdir <directory name>

Ex: rmdir logs\_backup

1. **Appending: (adding)** 
   1. Single append >

→ we can redirect the output of anycommand to save in file

→ when we do the single append again and again the existing data will be replaced.

echo “vikas” > output.txt

* 1. Double append: >>

we can redirect the output of anycommand to save in file

→ when we do the double append again and again the existing data will be there and new data will be saved at the bottom of the file

1. Copy: a file or a directory (it will just replicate a file)

cp -r source destination (argument -r = recursively)

Ex: cp -r output.txt /tmp/

cp -r <directory> <destination>

1. move : It will permanently move the file

mv source destination

1. Use Case: Renaming → file or dir (mv, cp)
2. grep → to filter with a string

Ex: cat file | grep <string>

grep <string> filename

1. pipeline : |

Ex: cat address | grep -i Razole

I want to check how many times tomcat service connected successfully

1. wc (word count)

cat log | grep success | wc -l

1. log
2. Log providing

tomcat\_log

grep log 18\_07\_23\_16\_00\_00

—

(4:00 to 4:59)

(5:00 to 5:59)

18:00

grep 17\_07\_23\_16\_\* tomcat\_log

**Compressing logs:**

1. df -h (to check the filesystem disk usage how much free space it have and how much it was occupied)

Argument h= human readable

df -h

Filesystem Size Used Avail Use% Mounted on

devtmpfs 4.0M 0 4.0M 0% /dev

tmpfs 475M 0 475M 0% /dev/shm

tmpfs 190M 2.9M 188M 2% /run

**/dev/xvda1 8.0G 1.8G 6.2G 23% /**

tmpfs 475M 88K 475M 1% /tmp

tmpfs 95M 0 95M 0% /run/user/1000

1. What are the various file systems you know?

Ext3, Ext4, Ext2, XVDA

1. Within the files system to check the files disk usage

Command: du -h

du -sch \* | grep G

du -sch \* | grep G | head -10

1. head : to display only top 10 lines in the output of any command

**To compress large files:**

1. **gzip -v filename**

**Whenever we are using gzip, it will compress and remove the old file and it will create a new file with .gz extension.**

**filename.gz**

**gunzip -v filename.gz**

**(unzip the file)**

**→ Compressed files are moved to the archive server.**

1. sftp → SECURE FILE TRANSFER Protocal
2. Login: sftp username@ipaddress
3. put <filename> (what file you need to copy to archive server)
4. get <filename> (to fetch the required file)

→ **server less login authentication**

(parent server → child server)

parent server:

ssh-keygen -t rsa

cat id\_rsa.pub (copy)

→ child server:

cd .ssh

vi authorized\_keys (below of the content you need to copy the parent public key)

Now you are able to login without a password.

1. tar (to compress further than gzip)

tar -cvzf <filename.tar.gz” <filename>

Untar

tar -xvzf <file.tar.gz>

**Whenever we are using tar, it will compress and maintain the old file also.**

**Port validation:**

1. **netstat**

**(to check the ports)**

**(al the ports which are listing and which are closed**

**Process: (An application or A service which is in running state)**

1. **ps to check the running process**
2. **ps -ef (to check all running process)**

**UID PID PPID C STIME TTY TIME CMD**

**User id process id when it was started command**

**root 1 0 0 06:59 ? 00:00:00 /usr/lib/systemd/systemd --switched-root --system --deserialize 32**

1. **ps -ef | grep httpd**
2. **systemctl status httpds**
3. **systemctl stop httpd**
4. **systemctl start httpd**
5. **netstat -tulpn | grep <port no>**

**ps**

**systemctl**

**netstat**

1. **kill -9 <pid> (hardkill)**
2. **kill -3 <pid> (soft kill)**

**—**

**cpu , memory → high usage alerts**

**top : gives the cpu and memory usage**

1. **top**
2. **free -m**

**—---------------**

1. **find**

**find <path> -name <name of THE REQUIRED FILE>**

**Ex: find / -name \*hydera\***

**01\_07\_23**

1. **locate**

**locate sample.txt**

1. **ip a:**
2. **ifconfig**

**By using the above two commands, we will find the management ip (Public IP) and Internal IP or Private IP address.**

1. **chmod**

* **rw- r-- r--**

**It’s not recommend to change the properties of any file**

**read 4**

**write 2**

**Execute 1**

**NO permissions 0**

**Chmod 777 filename (full permissions)**

1. **curl: check url**

**Inorder to validate the connectivity of** any service, then we will use curl.

curl -v url or ip address:port

1. ping
2. Traceroute
3. who
4. whoami
5. who am i