Linux

1. Etc/os-release

```
cat etc/os-release #Command to the os version and which os we a
```

2. Switch to root

```
sudo -i # to make sure check is there hashtag symbol at term
```

3. To access root directory

```
sudo -i
cd /
```

4.Uptime

```
uptime #command to read how long a system is running.
#It will tell us how many user are logged in and load average.
```

5.To Check ram size

```
free -m # to check the ram size .
```

Vim-editor Commands

```
# To make file using Vim
vim <file-name>
#To insert inside the file
press i
#To insert inside the file one line downward
press o
#To write the content inside the file
```

```
press esc # To enter the command mode
press : # to enter extended mode
press w # To write the file content inside the fiel
# make sure at the end the command should be like :w
#To Save and exit from the vim editor
press esc # to enter the command mode
press :# to enter extended mode
press q # to save and exit from the file
# make sure at the end the command should be like :q
#To write and save at same time
press :wq
#To overide if you dont want to save
press :q!
#To add line numbers
:se nu # command add line numbers if we have large file
#To go to last line
press shift+g
#To go to first line
press gg
#To copy the content of the file
go to line number you want to copy type yy
#To copy multiple line.
count how many line you want to copy the press
number of line yy
example 4 yy # 4 here is mentioning 4 line to copy line of curre
#To paste the Contect of the file
go the line where you want to paste the line line if up press Ca
or downwards press p.
#To delete or cut
press dd # this commands delete and cuts at same to time so
# by pressing p you can paste anywhere you want.
to delete multiple line
count the line and type number of line and dd
example 117 dd
#To undo the changes
press u
```

```
#To search the content in the file
make sure you are in command mode
and type /keywordtosearch
```

Types of FIles

- - means regular file

- file filename # to give file type or details of file

- c means character file like mouse

- b for block file like ssd or harddisk

- To sort the file with timestamps type ls -lt

- To reverse the order type ls -ltr

- To check the history of the commads type type history

Filter and IO redirections

1.grep

```
grep keyword filetosearchfrom
grep firewall anaconda.cfg
grep -i firewall < anaconda-ks.cfg #as linux is case sensitive
keyword like firewall Firewall
grep -i firewall * # * here means in all the file of the direct
# directory
grep -iR firewall *# R here make grep command to search inside
grep -R SELINUX /etc/*
grep -vR firewall * #-v wil make sure to not search the keyword
```

2.less

an editor like vim u can search same as vim by / keyword

3 .more

also editor

4.head

```
give first 5 lines

also head -nooflinefirstone you want to read filename

head -20 anaconda.cfg
```

5.tail

```
give last 5 line of the files

tail -f filename # it gives real time changes of the files
```

Log file

```
cd /var/log # log file path

system log files are at messages
```

User details

```
cat /etc/passwd
```

Find

```
find /etc -name host*
find / -name host*
updatedb
locate keyword
```

Users and Group

1. File which has user info

   a. cat /etc/passwd

   ```
   vagrant:x:1000:1000::/home/vagrant:/bin/bash
   user :passwd:userid:groupid:homedirectory:shell
   ```

2. Group info file

   ```
   vagrant:x:1000:vagrant
   group :  :groupid : userofthegroup
   ```

3.To add User

```
useradd name useradd ansible
 useradd jenkins
 useradd aws
```

4.To create a group

```
groupadd name
 groupadd devops
```

5. To add user to specific group

   ```
      usermod -aG devops ansible
   or directly edit /etc/group
   devops:1004:ansible,aws,jenkins
   ```

6. To change the password of the user

```
passwd ansible
passwd aws
passwd jenkins
```
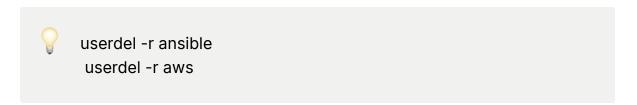
7. To shift a specific user

```
su - ansible
su - aws
su -jenkins
```

8. TO Check how many files are open by the user

```
lsof -u username
```

9. To Delete an User

💡 userdel -r ansible
    userdel -r aws

10. To Delete a group

```
groupdel devops
```

File Permissions

1. To see the file permission of the file

```
- => filetype l=link,d=dir
r=read
w=write
```

```
x=execute
rwx=> user
r-x=>group
r-x=>others
-rwxr-xr-x. 1 root root 44664 Aug 22 07:48 /bin/login
                               user group
-rw-------. 1 root root 2027 Oct 10 14:05 anaconda-ks.cfg
drwxr-xr-x. 2 root root    6 Dec  7 18:06 devops
-rw-------. 1 root root 1388 Oct 10 14:05 original-ks.cfg
-rw-r--r--  1 root root  185 Dec  8 01:06 sysinfo.txt
```

2. To change the ownership of the file or dir

```
chown -R ansible:devops /opt/devopsdir
-R for recusive
you can use this without -R
chown ansible:devops /opt/devopsdir
```

3. To change permission of the user or group on the file

```
u,g or o for user,group and other
+ - or = for grant ,deny or set
r w or x for read ,write and execute
```

4. To remove permission from group or user or others

```
   chmod o-x /opt/devopsdir/
     chmod o-r /opt/devopsdir/
```

5. To add permission to group or user or others

```
chmod g+w /opt/devopsdir/
```

Sudo

1. To change the sudo permission of the user

```
Type visudo
In visudo file go to 100 line where root user is add just mal
ansible ALL=(ALL)        NOPASSWD: ALL
#here NOPASSWD To make sure ansible get root
#user acess without password
```

2. To add a file in sudoers.d directory

```
directory /etc/sudoers.d
touch devops
%devops ALL=(ALL) NOPASSWD: ALL
```