Name : Kartik Jain TR : 2 Test 2

Q1 : 1. What is suid,sgid & sticky bit permissions. Explain in brief

ANS :

SUID is the Set User ID which is used to set on the file which allow only that file has to be excecuted with the permission on which file it has given. If SUID set on a file, it allows the file to be executed with the permissions of the file owner instead of the user executing it.

SGID is the Set group ID which set on a fole and it allows the file to be excecuted with the permission of the group. When we set this SGID on directory new files inherit the directory's group.

Sticky Bit : It is applied to directories to prevent users from deleting files owned by others.

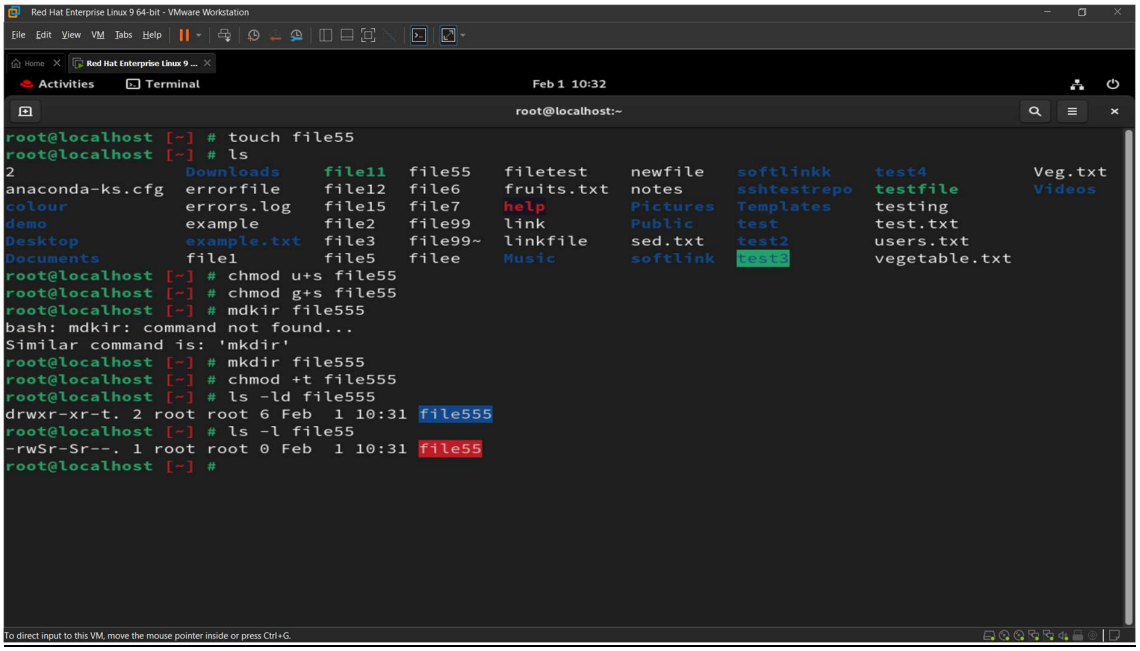
Commands :

chmod u+s filename # Set SUID

chmod g+s filename # Set SGID

chmod +t directory # Set Sticky Bit

ls -l # Check permissions



Q2 :

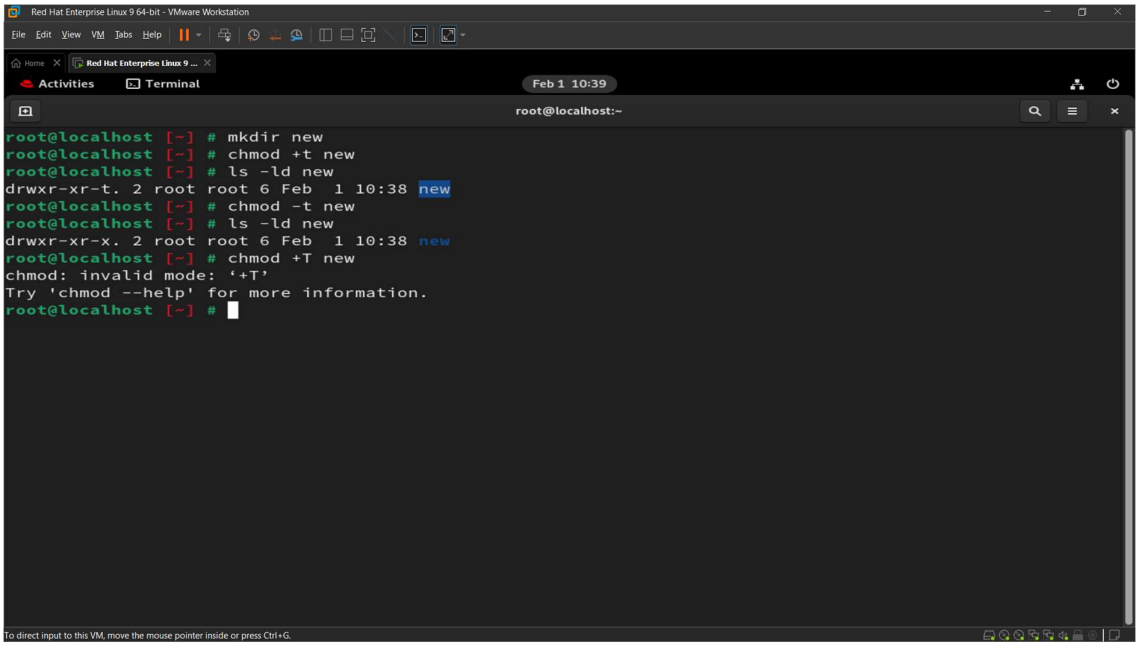
(A) The permission -rwSr--r-- represented in octal expression will be?

The Permission -rwSr—r— represented in octal will be 4644.

(B) What is the difference between t and T when applying thesticky bit Permission?

In the sticky bit (t) means the directory has to excecutable permissions for others and prevent users from deleting files owned by others.

In the sticky bit (T) means no excecutable permissions for others.



Q3 : 3. Create a collaborative directory "/common/admin" with the following characteristics:

(A) Group ownership of /common/admin is sysadmin.

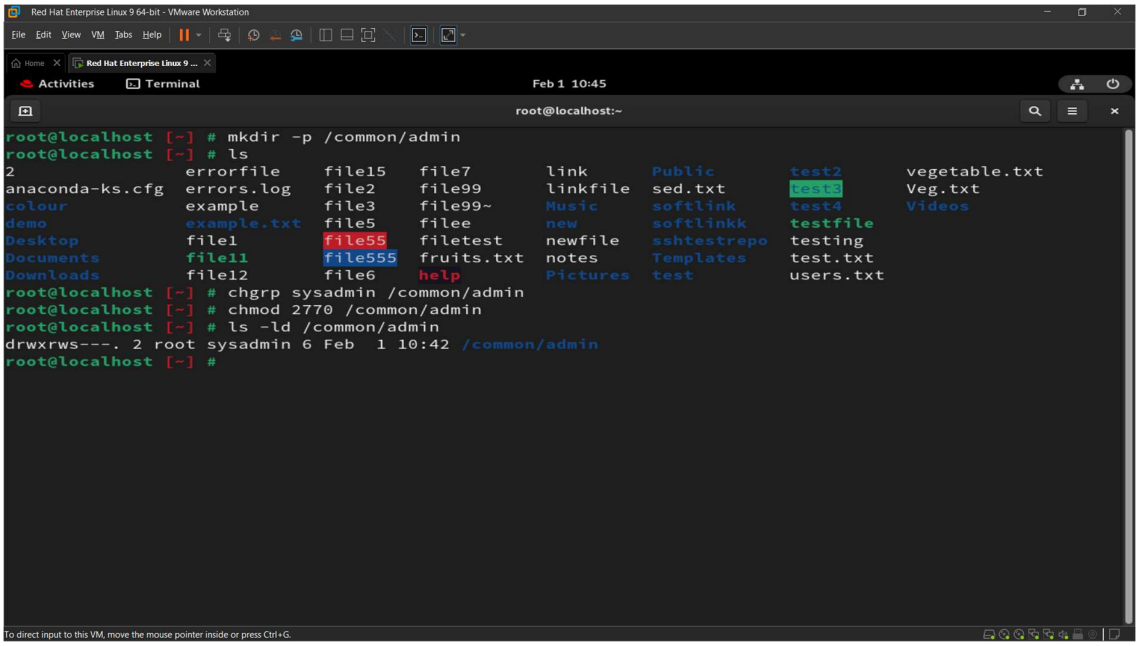
Command : # mkdir -p /common/admin

(B) The directory should be readable, writable, and accessible to members of sysadmin, but not to any other user.

Command : # chgrp sysadmin /common/admin

C) Files created in /common/admin automatically have group ownership set to the sysadmin group.

Command : # chmod 2770 /common/admin # SGID ensures new files belong to sysadmin



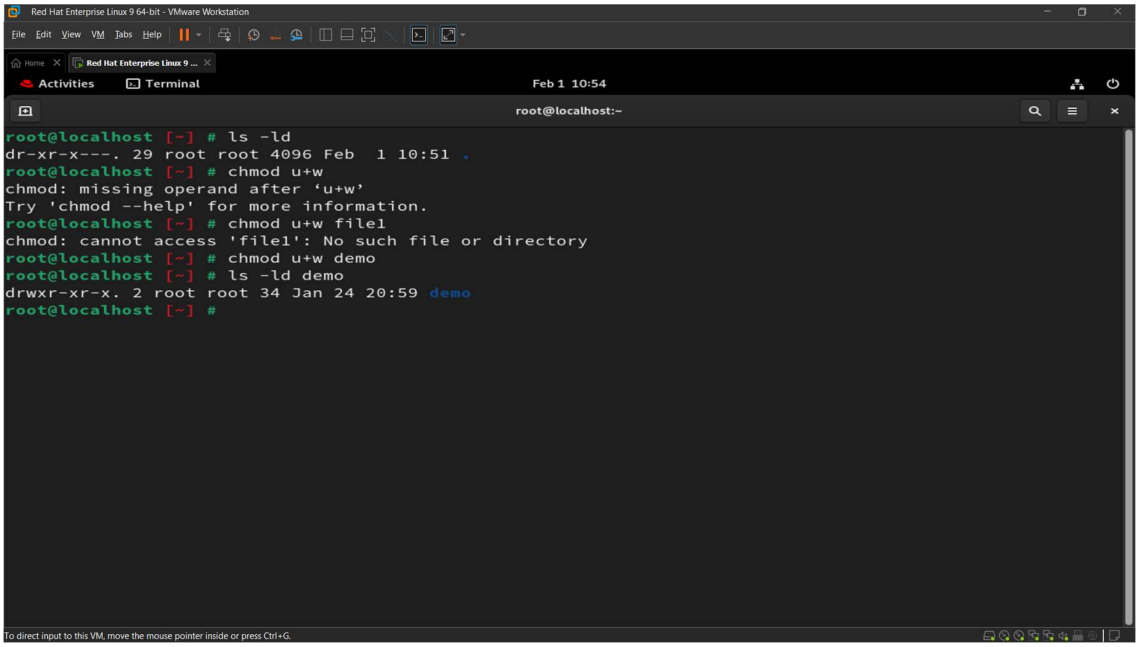
Q4 : A user is unable to rename a file in their home directory despite having full permissions on the file. What might be the reason for this issue?

Ans : If a user is not able to rename the file than the issue is likely due to insufficient write permission on the directory. The user must have write and excecute permission on the directory.

Commands to check :

ls -ld # Check home directory permissions

chmod u+w file1 # Grant write access



Q5 : . Difference between default ACL and recursive ACL. Write the command to set it.

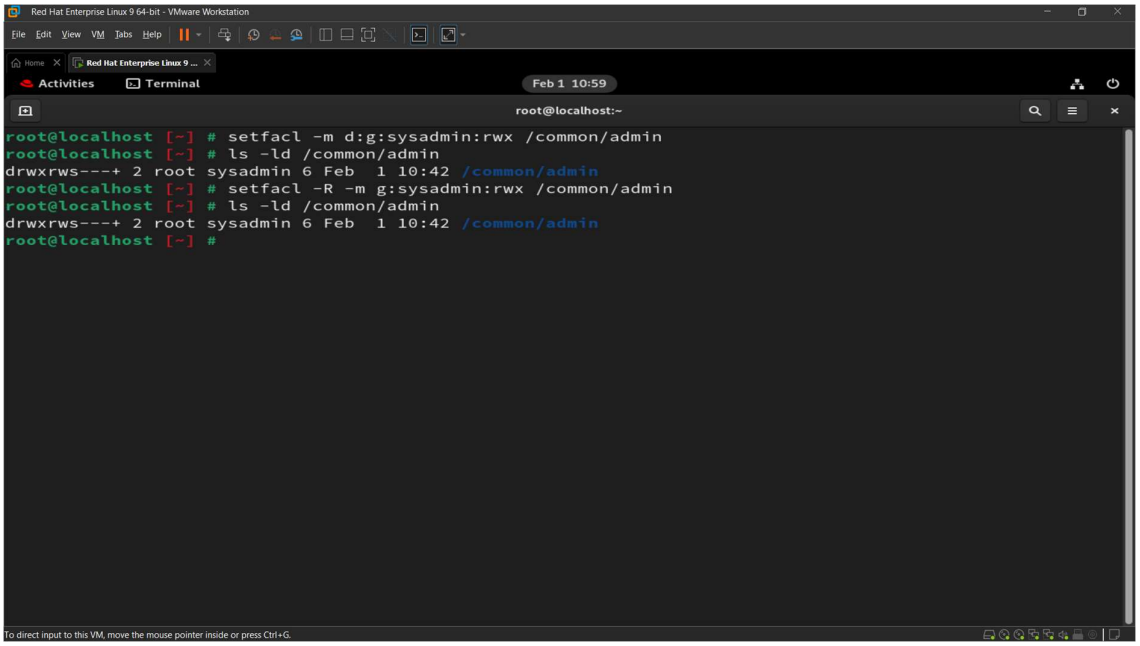
Default ACL : The main use of default ACL is ,it set the permission for future files in a directory.

Recurssive ACL : It is used to applies permission to all existing files.

Commands :

setfacl -m d:g:sysadmin:rwx /common/admin # Default ACL

setfacl -R -m g:sysadmin:rwx /common/admin # Recursive ACL

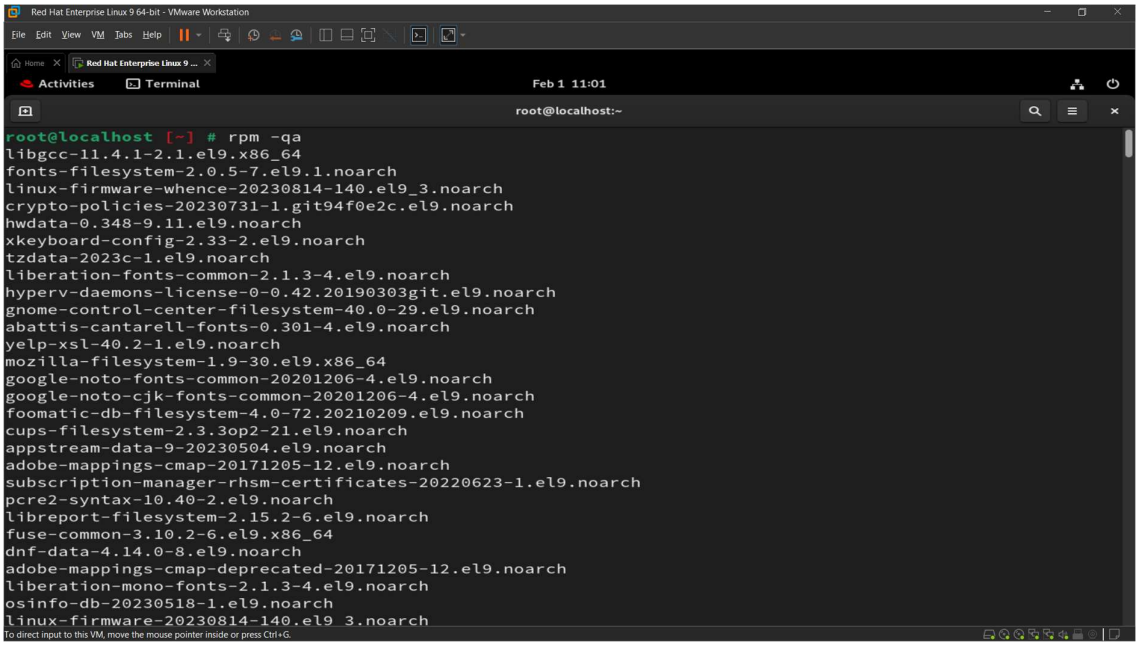


Q7.

(A) Which command lists all installed RPM packages on the system?

The command to list all installed RPM package on the system is (rpm -qa)

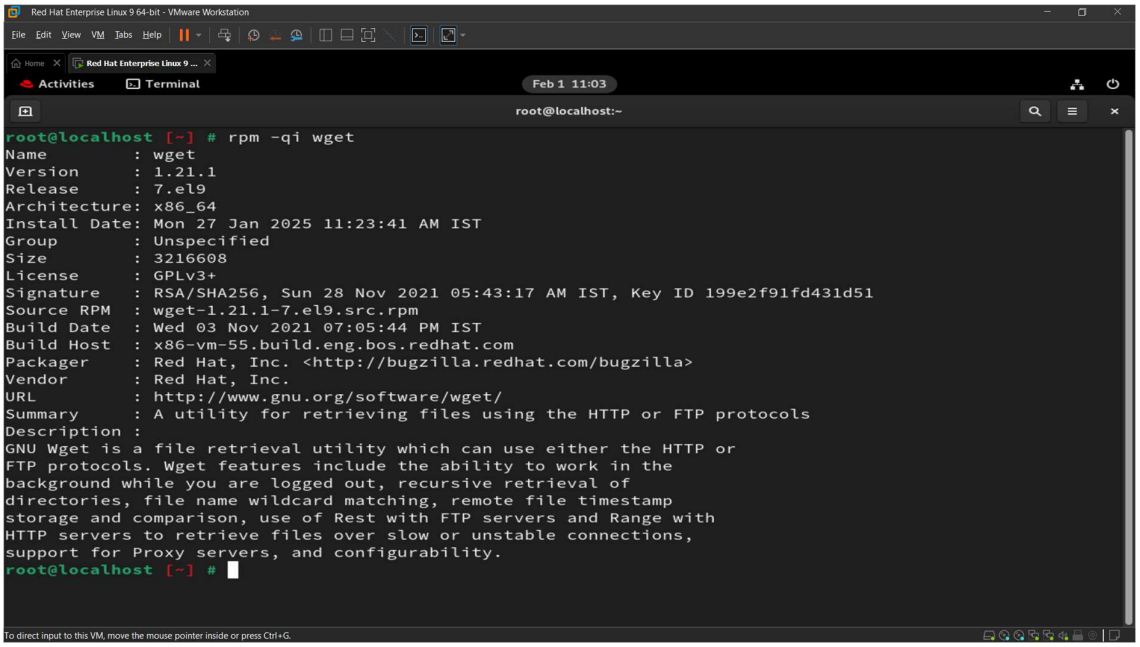
Command : rpm -qa



(B) Which command provides detailed information about an installed package, including its version and description?

Ans : The command which is used to provide the detailed information abut an installed package is (rpm -qi package-name)

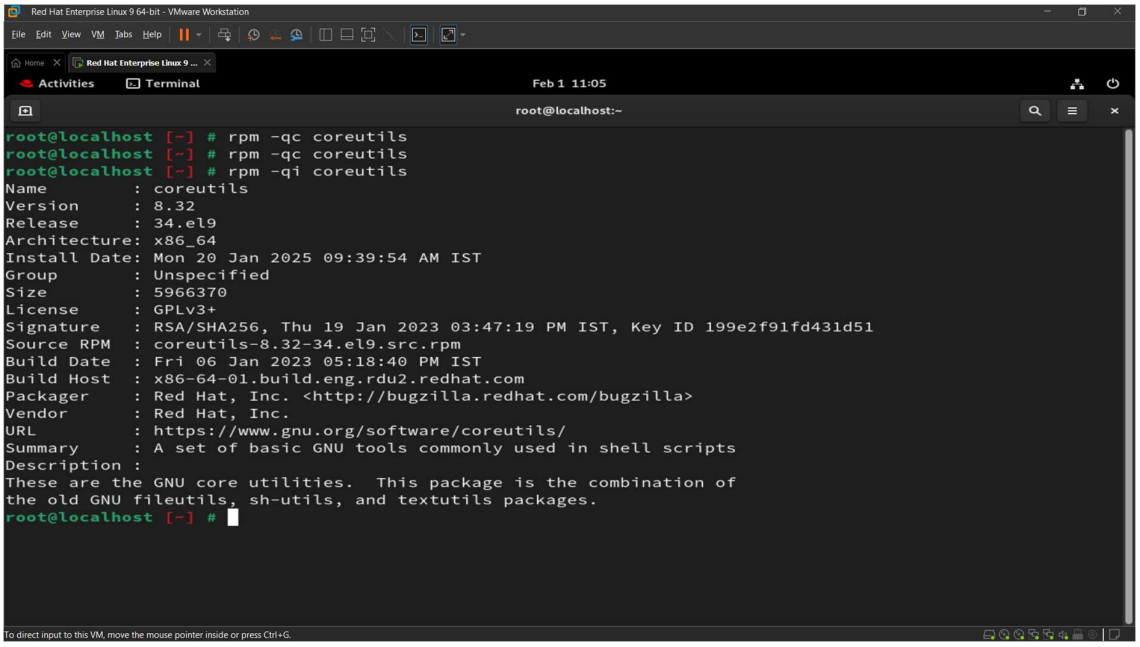
Command : rpm -qi wget



(C) Which command lists all configuration files of coreutils package?

Ans : The command which will list all confirgurations files of coreutils package is (rpm -qc coreutils**)**

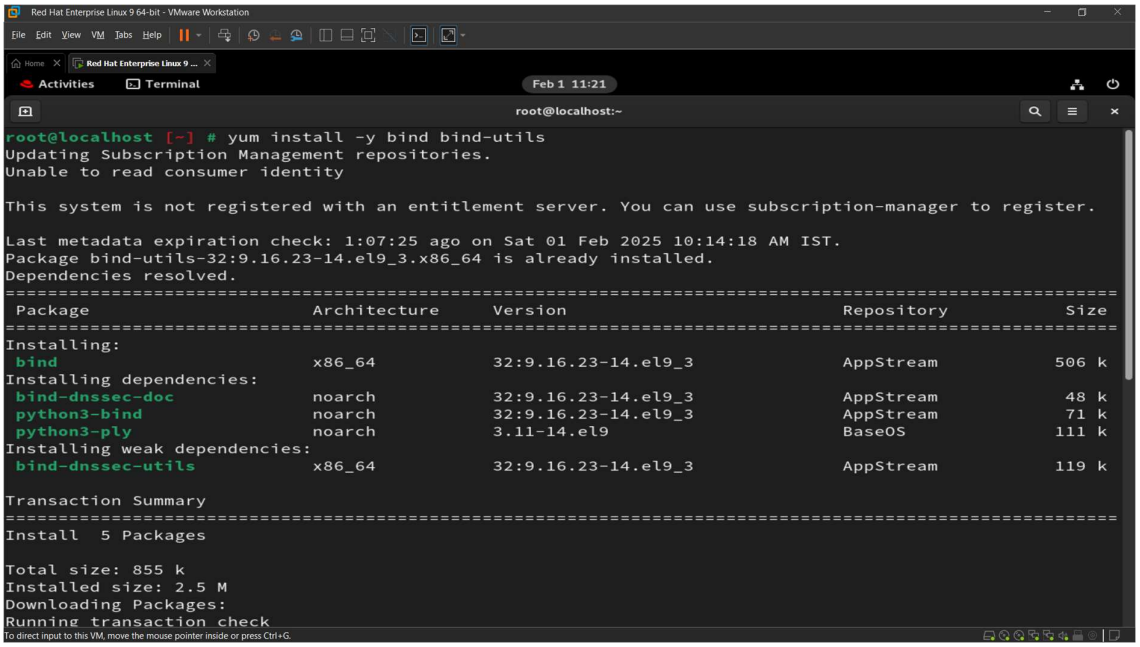
Command : rpm -qc coreutils

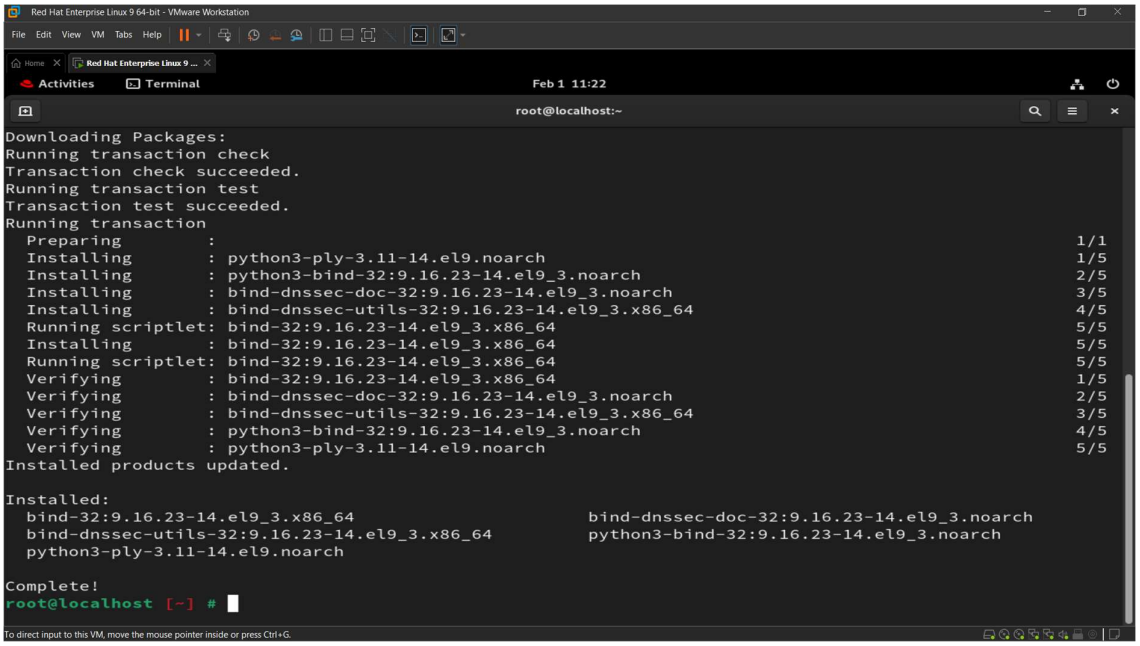


Q8 : (A) Install bind & bind-utils packages using yum.

Ans : To install bind and bind-utils we will use these commands :

Commands : yum install -y bind bind-utils





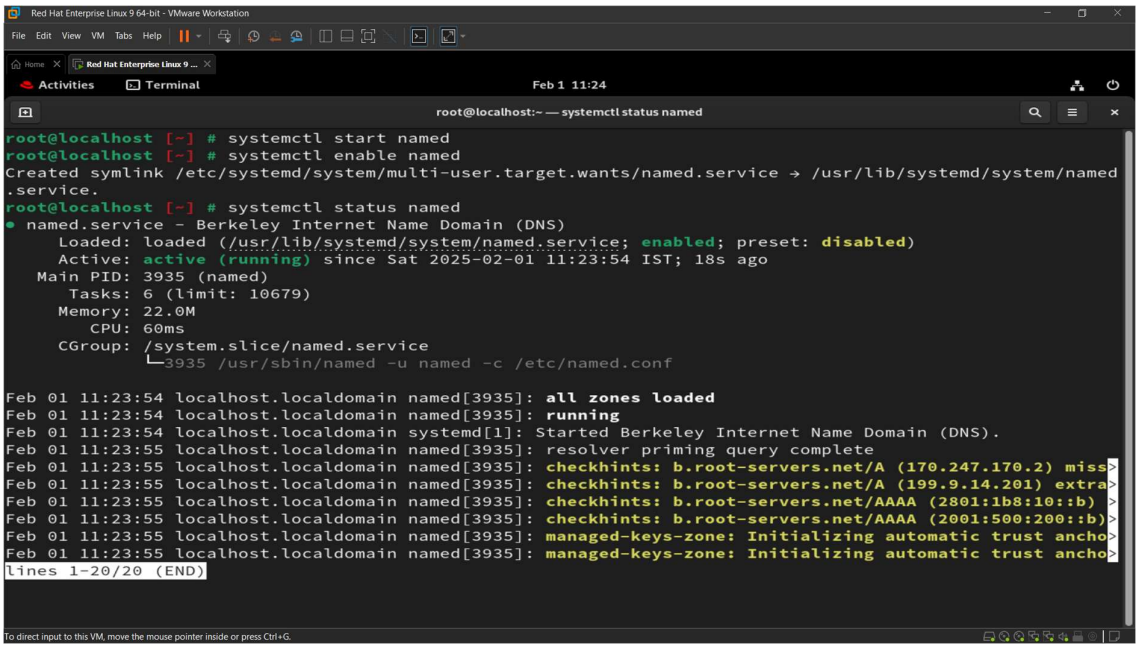
(B) Start & Enable it's service. (named.service)

Ans : To start and enable any the named service we will first start this service (named) and than we will enable it .

Commands :

systemctl start named

systemctl enable named

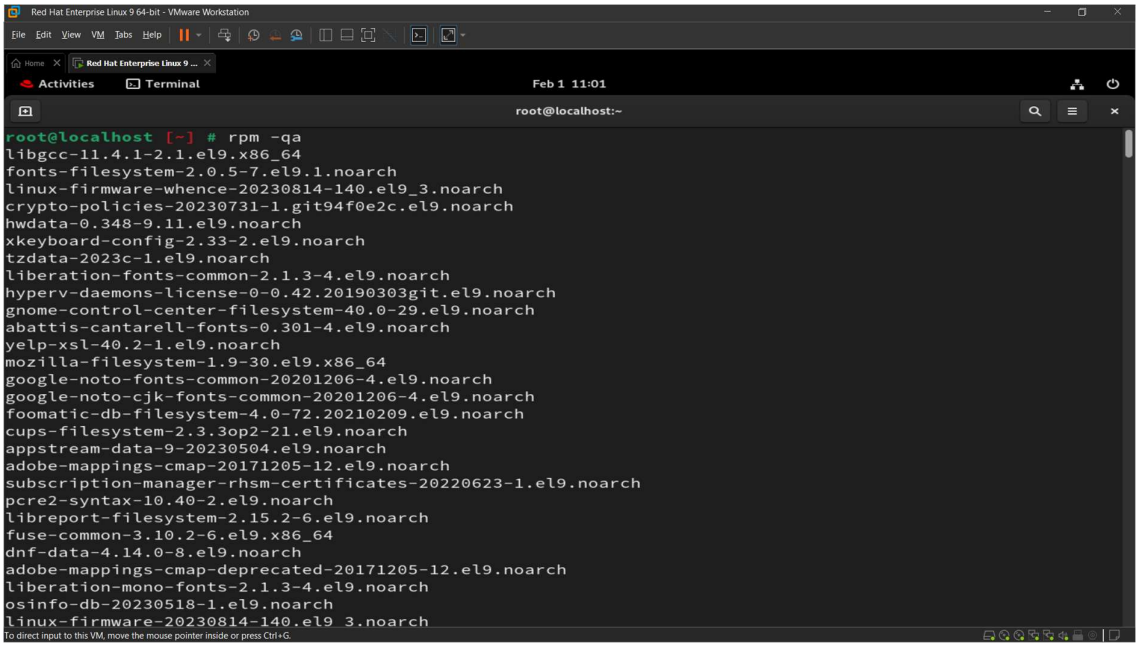


Q9 : What is the difference between dnf, yum, and rpm package management tools in RHEL- based systems?

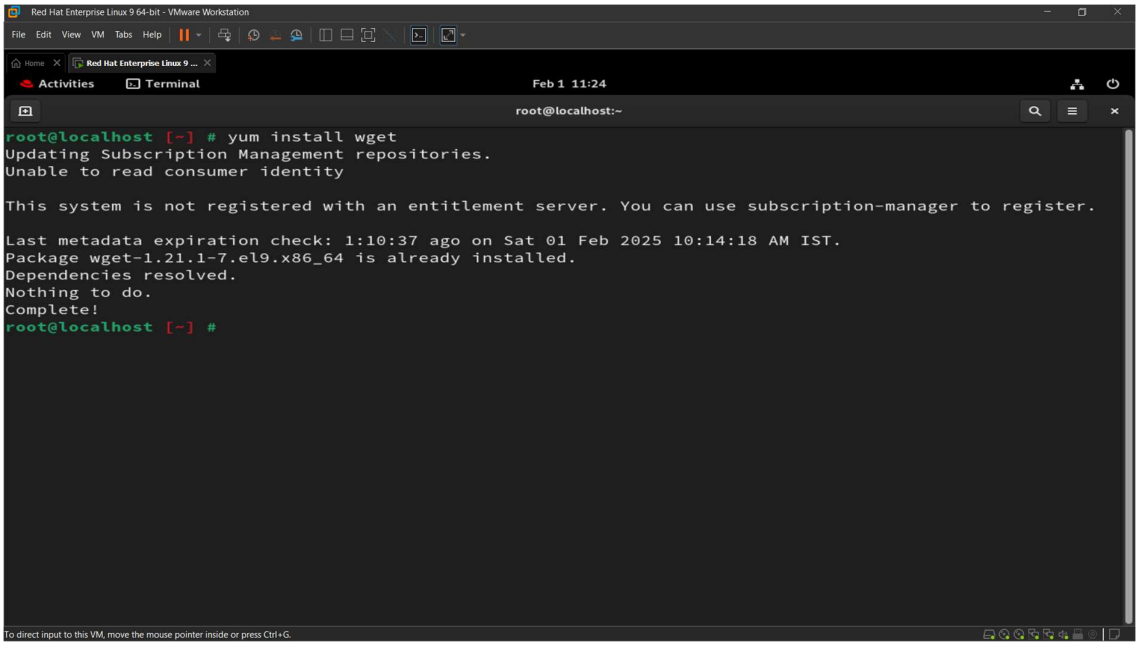
Ans :

RPM : Redhat Package Manager which is used to install any packages from the internet , but in RPM if we have to install any package so before that we have to install the dependency which is used for that service and even we have to set the path while installing that package .

Command : rpm -qa # command to check all package using rpm



YUM : It the yellow dog package which is used to install any package using yum command which is even fast in process and it is widely used in industry level.



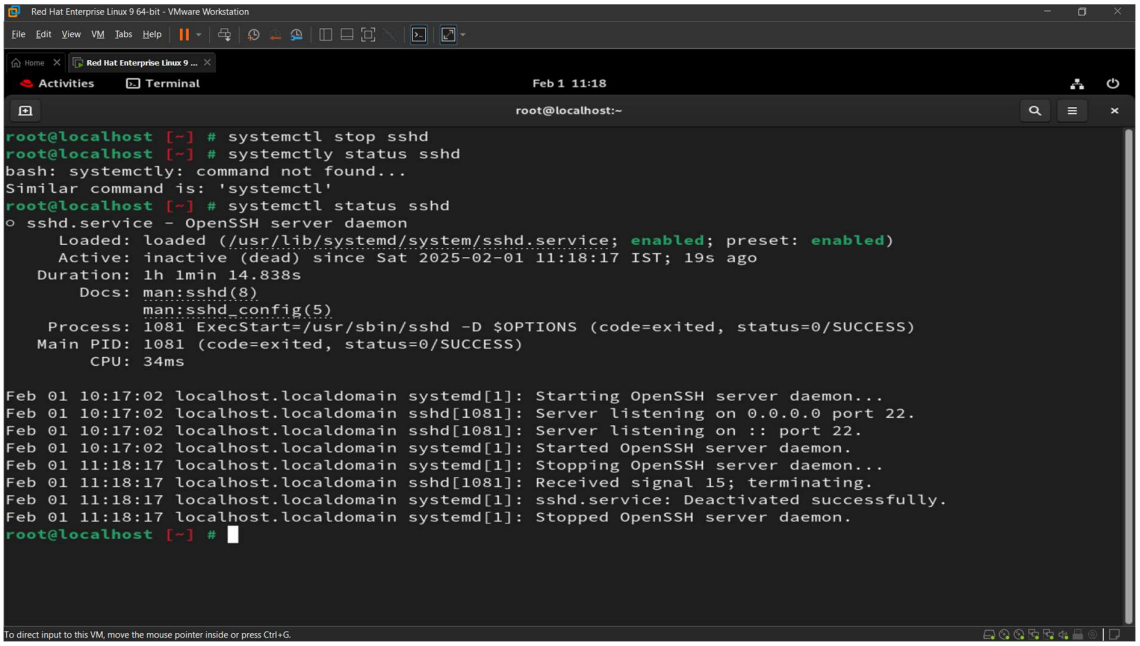
DNS : It is also a package manager which is used to install the package which is used to install and resolve dependency even more better than YUM.

Q10 :

A) What is the difference between systemctl stop and systemctl disable Commands?

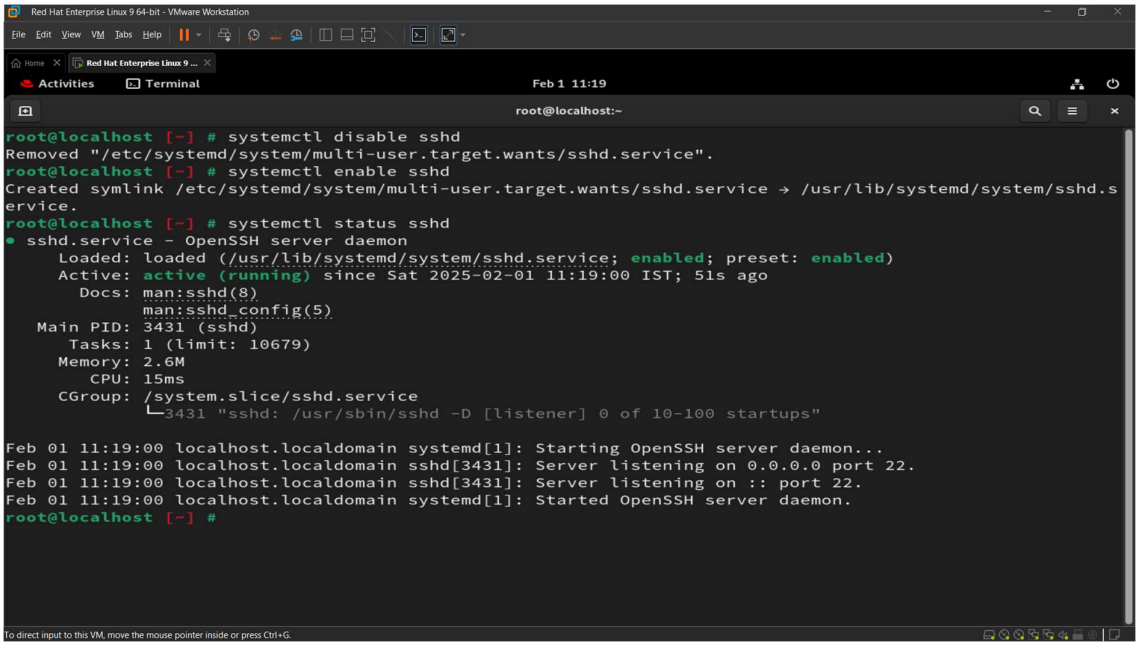
Systemctl stop : Its is used to stop the service temporary while using the linux rhel.

Command : systemctl stop sshd



Systemctl disable : It always prevent service from starting at boot

Command : Systemctl disable sshd

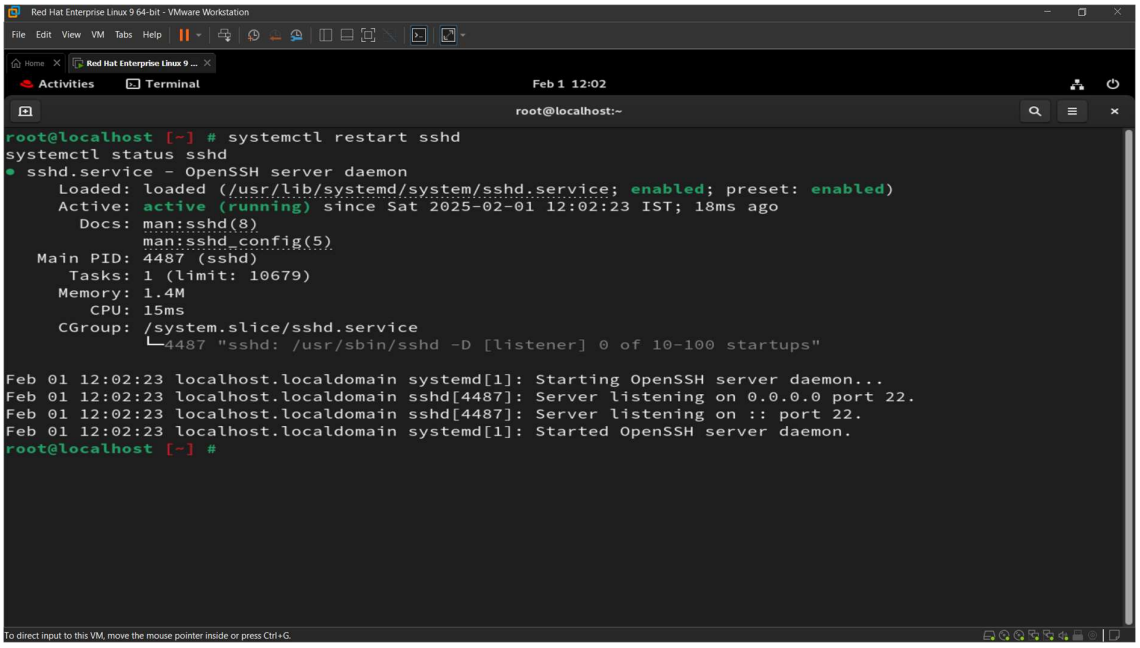


(B) Write the command to restart the sshd service and verify its status afterward.

Command:

systemctl restart sshd

systemctl status sshd



Q11 : 11. What are jobs. (Processes)

Ans : Jobs are the tasks which are running in the background or foreground while performing any task and some comman commands which we used to access jobs are bg,fg,jobs

Commands :

#jobs

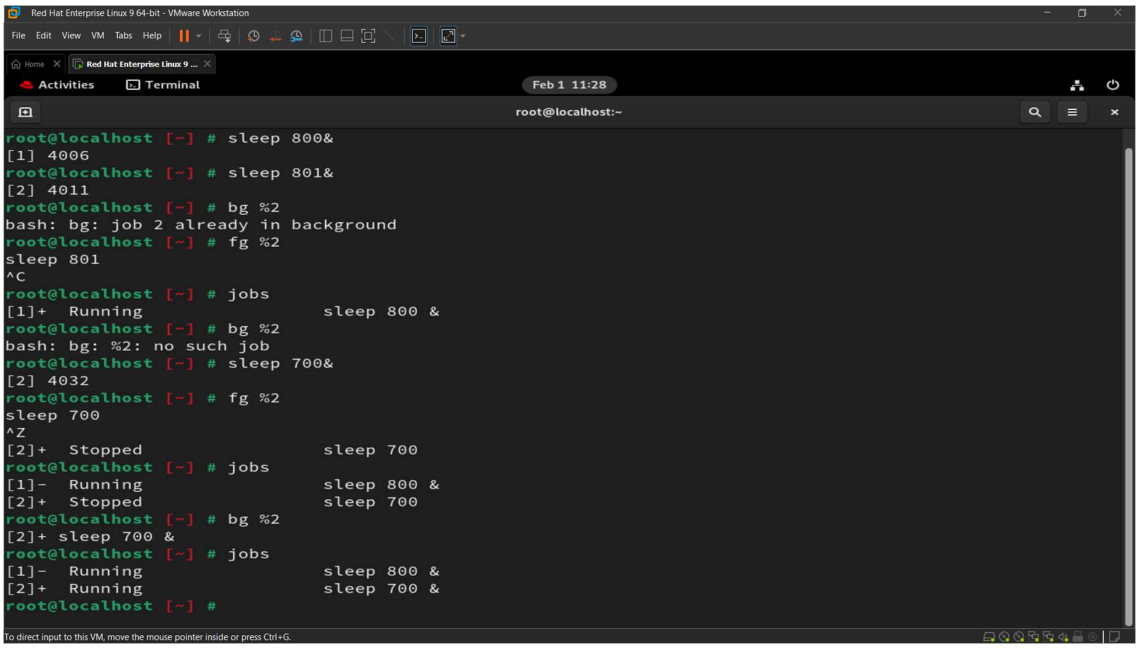
sleep 800&

fg %2

(Press CTRL + Z to stop)

bg %2

jobs

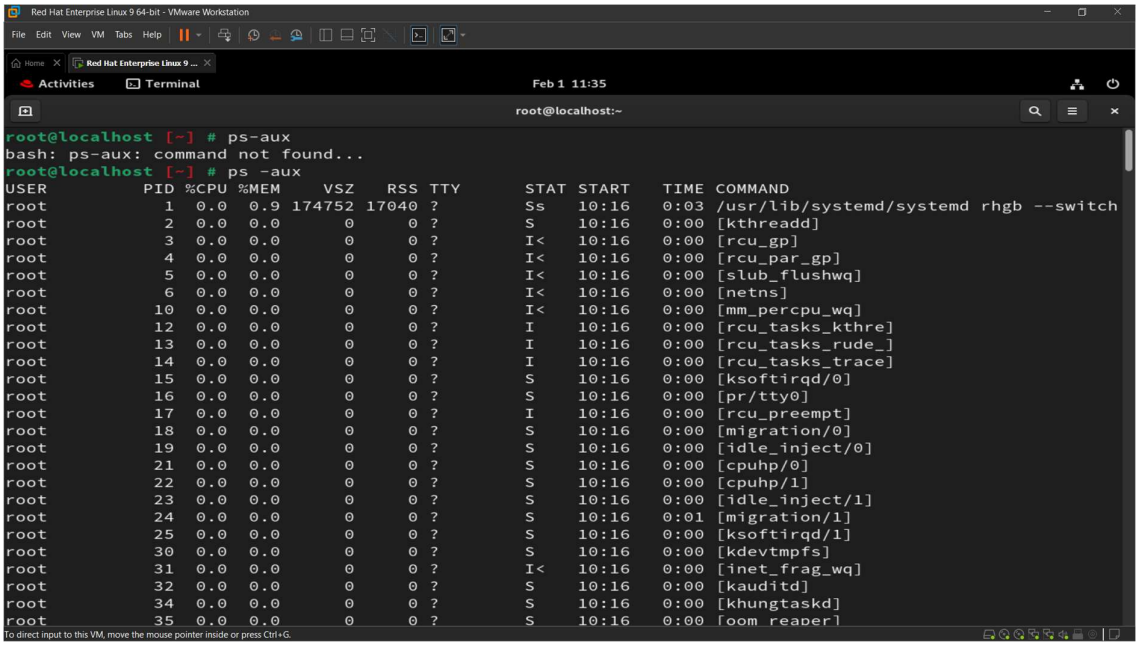


Q12 :

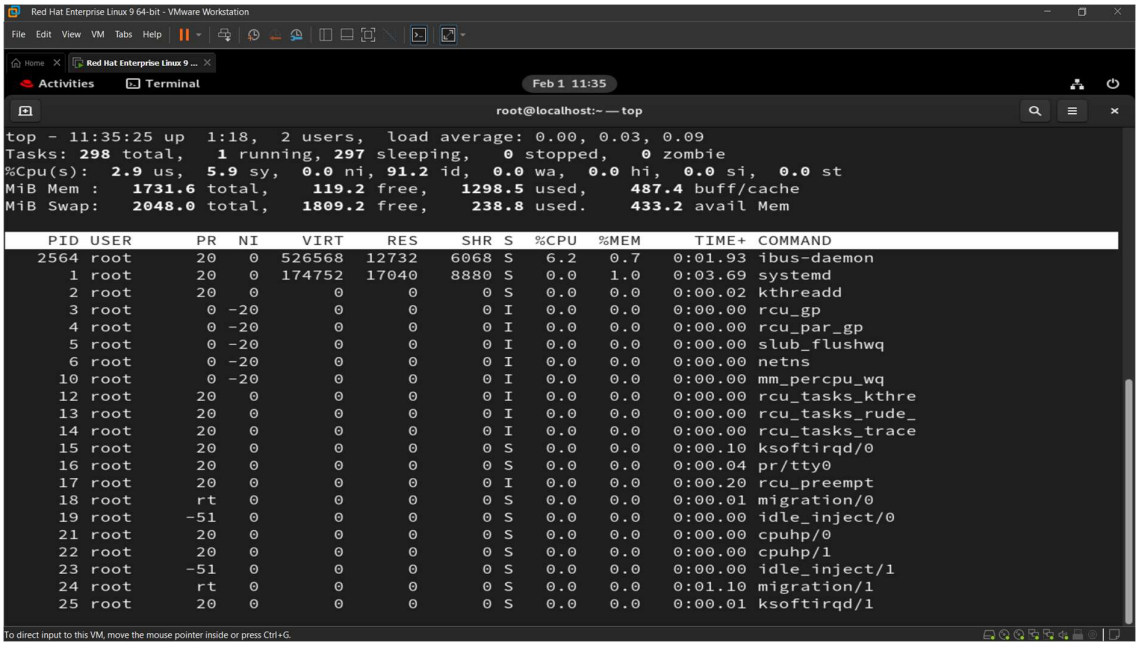
(A) What is the diffrence b/w ps -aux and top.

Ans :

- **ps -aux** is used to display a static snapshot of process and check which process are running in foreground and background.



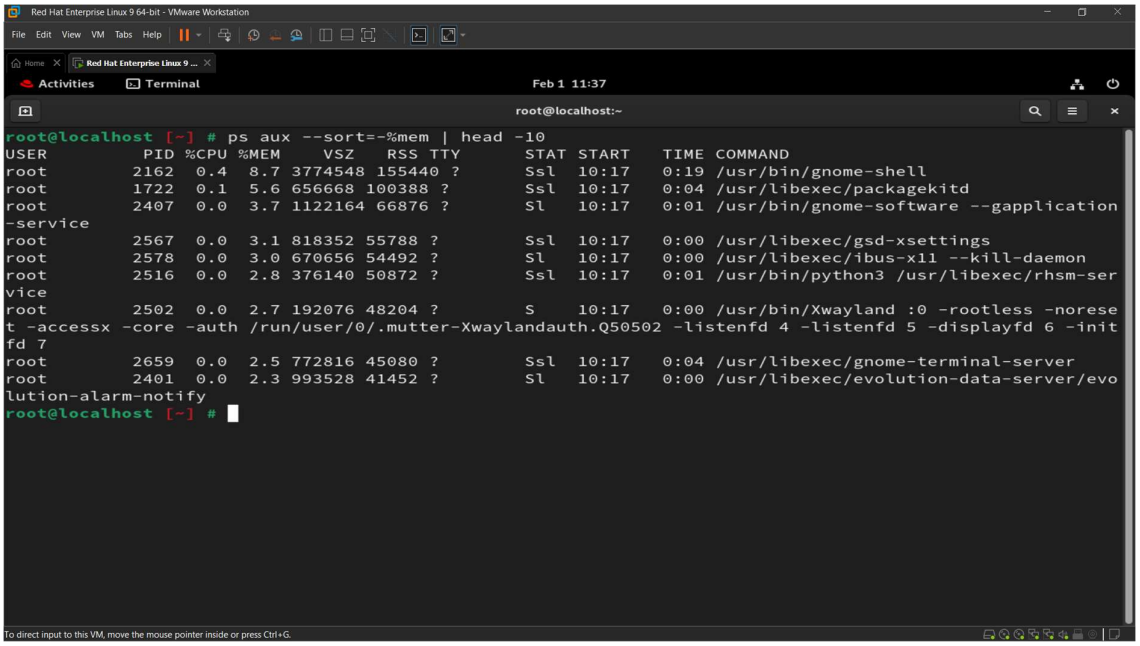
- **top** command is used to show the active running process which are updating or real time monitoring of the process while using the system.



(B) How to filter out processes by memroy utilization.

Ans : To filter out the process by memory utilization we will use ps aux which will give snapshot and use pipeline with head command to diplay top 10 process.

Command : ps aux --sort=-%mem | head -10



Q13 :

(A) What is the default signal to terminate a process.

Ans : The default signal to terminate a process it shows (SIGTERM (15))

(B) What is the signal to forcefully terminate a process.

Ans : The signal we receive while forecully terminating a process is (SIGKILL (9)).

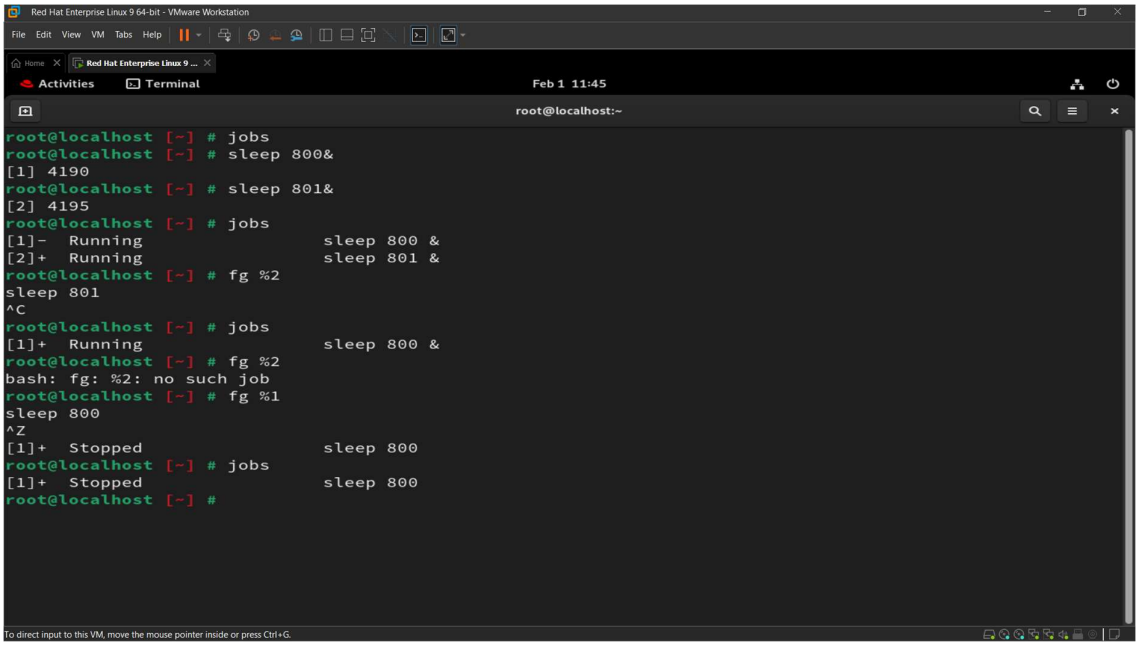
Q14 :

(A) Write shortcut keys to interrupt a process.

Ans : There are two shortcut keys while interrupting a process are :

CTRL + Z : Interrupt / Stop

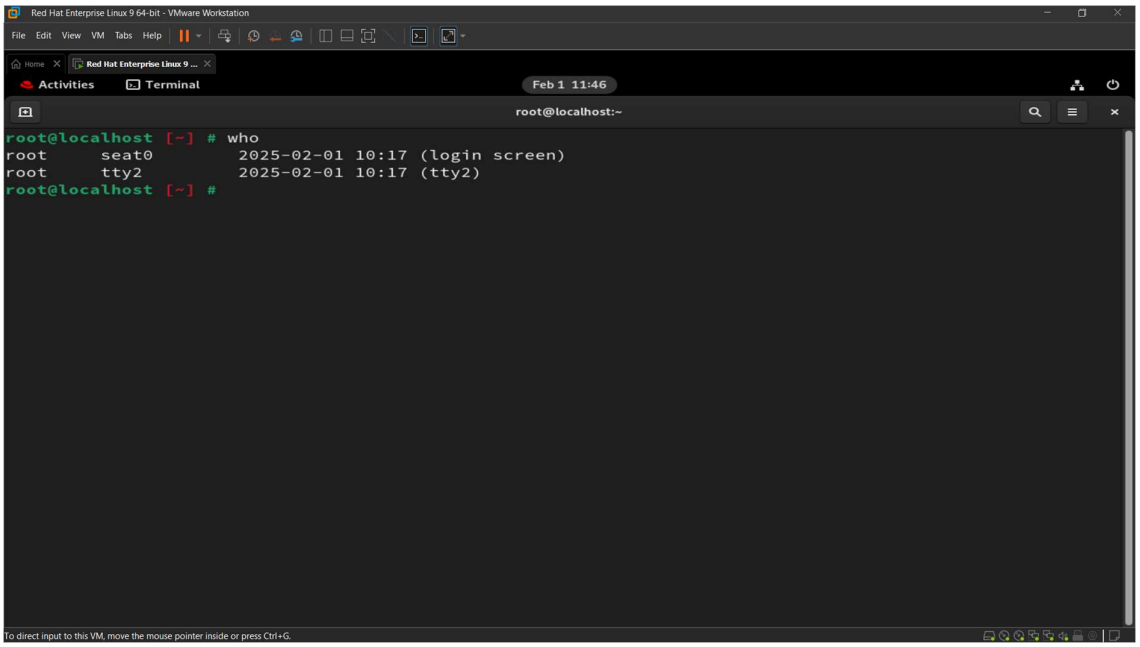
CTRL + C : Suspend



(B) How to display that how many users are logged into system.

Ans : To check how many users are logged into system we will use who command which tells the details who are logged into a system at a current moment.

Command : who



Q15 :

(A) What is zombie process.

Ans : A zombie process is a type of process that has completed execution but remains in the process table. It is very rear process which is seen while using the system.

(B) How to kill all process running by a particular user .

Ans : To kill all process of particular user we will use (pkill -u username) which will kill all the process of that user

Command :

useradd harsh

su – harsh

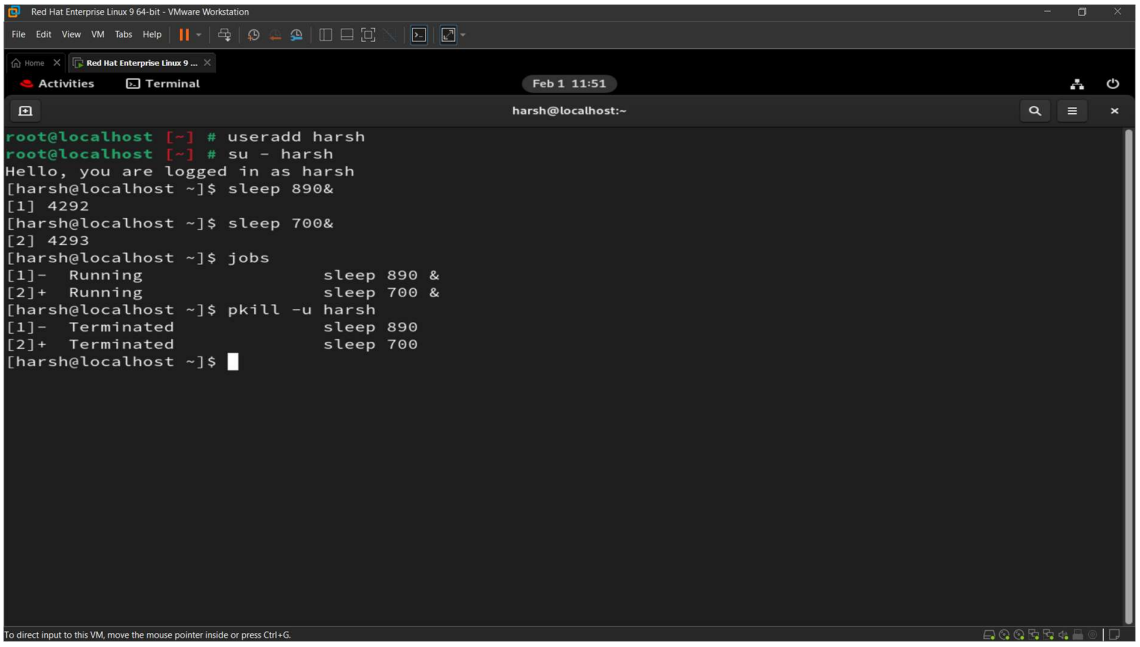
sleep 800&

sleep 801&

jobs

pkill -u harsh

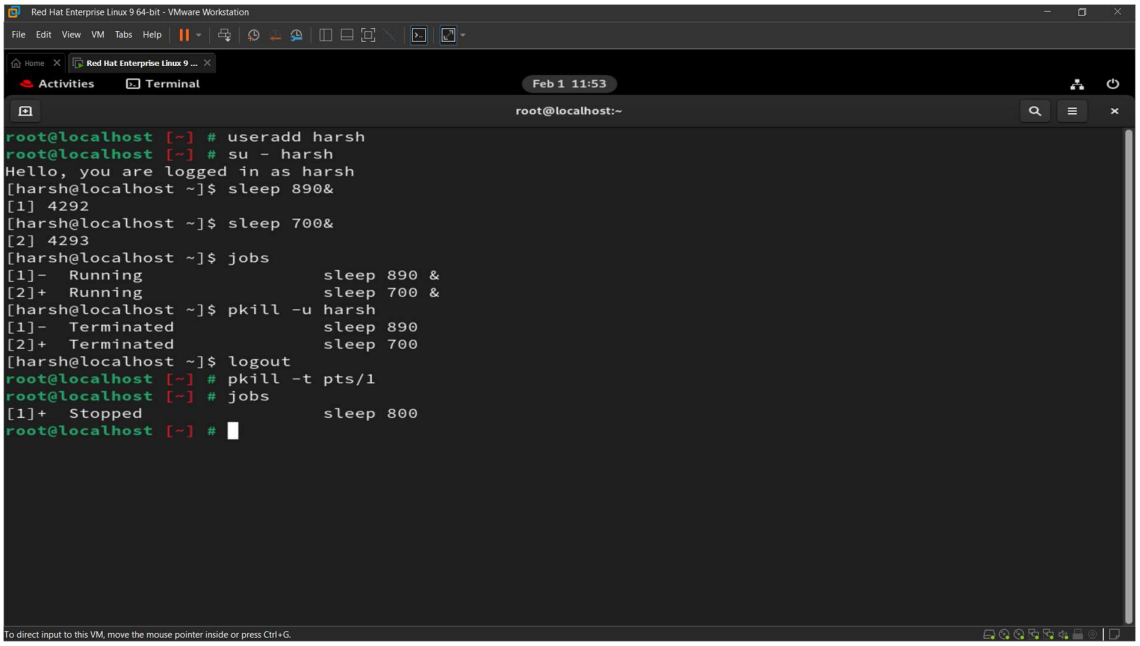
jobs



(C) How to kill all process running in a particular terminal .

Ans : To kill all the process in the terminal we follow thi command (pkill -t pts/1)

Command : pkill -t pts/1



Q6 : 6. You are required to configure the AlmaLinux 9 repository on your system using the following repository URLs: • AppStream: https://repo.almalinux.org/almalinux/9/AppStream/x86_64/os • BaseOS: https://repo.almalinux.org/almalinux/9/BaseOS/x86_64/os Before configuring the new repositories, ensure that all existing repositories are removed from the system.

Ans :

Commands :

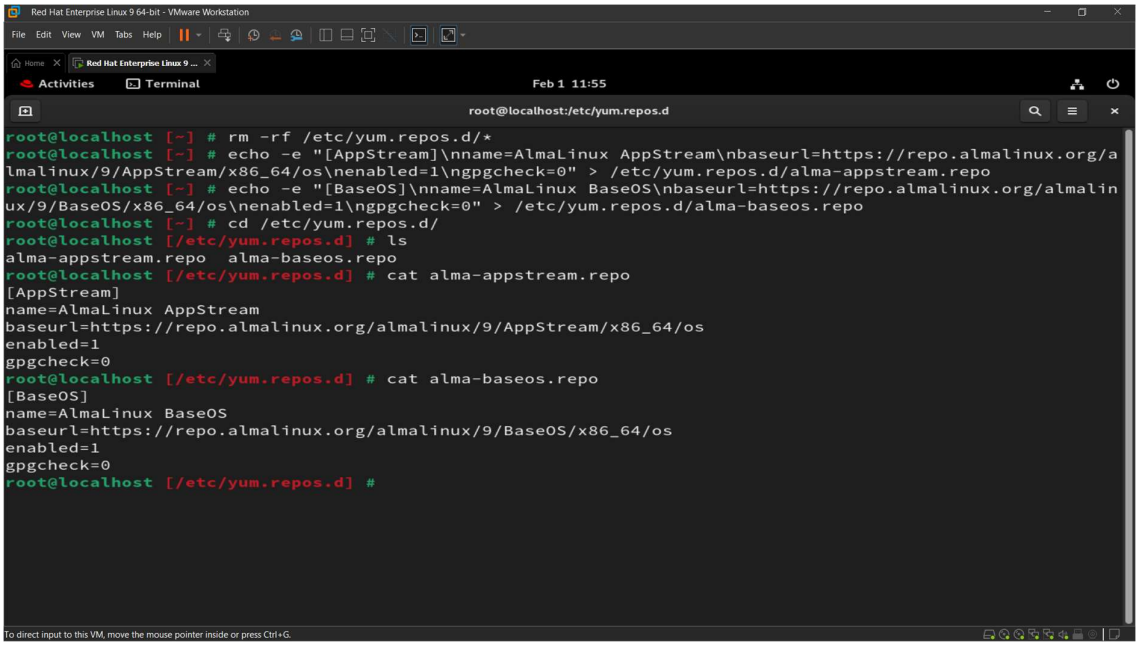
rm -rf /etc/yum.repos.d/*

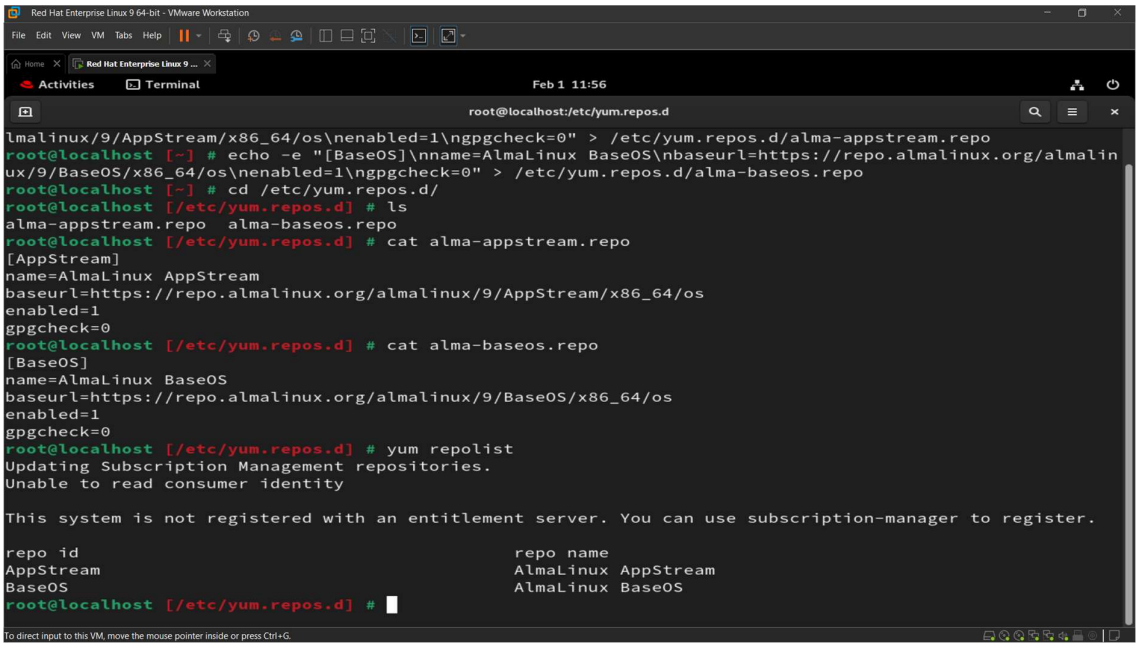
cd /etc/yum.repos.d/

vim /etc/yum.repos.d/alma-appstream.repo

vim /etc/yum.repos.d/alma-baseos.repo

yum repolist


Red Hat Enterprise Linux 9 64-bit - VMware Workstation
File Edit View VM Tabs Help
Activities Terminal Feb 1 11:55
root@localhost:/etc/yum.repos.d
root@localhost [~] # rm -rf /etc/yum.repos.d/*
root@localhost [~] # echo -e "[AppStream]\nname=AlmaLinux AppStream\nbaseurl=https://repo.almalinux.org/almalinux/9/AppStream/x86_64/os\nenabled=1\ngpgcheck=0" > /etc/yum.repos.d/alma-appstream.repo
root@localhost [~] # echo -e "[BaseOS]\nname=AlmaLinux BaseOS\nbaseurl=https://repo.almalinux.org/almalinux/9/BaseOS/x86_64/os\nenabled=1\ngpgcheck=0" > /etc/yum.repos.d/alma-baseos.repo
root@localhost [~] # cd /etc/yum.repos.d/
root@localhost [/etc/yum.repos.d] # ls
alma-appstream.repo alma-baseos.repo
root@localhost [/etc/yum.repos.d] # cat alma-appstream.repo
[AppStream]
name=AlmaLinux AppStream
baseurl=https://repo.almalinux.org/almalinux/9/AppStream/x86_64/os
enabled=1
gpgcheck=0
root@localhost [/etc/yum.repos.d] # cat alma-baseos.repo
[BaseOS]
name=AlmaLinux BaseOS
baseurl=https://repo.almalinux.org/almalinux/9/BaseOS/x86_64/os
enabled=1
gpgcheck=0
root@localhost [/etc/yum.repos.d] #
To direct input to this VM, move the mouse pointer inside or press Ctrl+G.


Red Hat Enterprise Linux 9 64-bit - VMware Workstation
File Edit View VM Tabs Help
Activities Terminal Feb 1 11:56
root@localhost:/etc/yum.repos.d
root@localhost [~] # cd /etc/yum.repos.d/
root@localhost [/etc/yum.repos.d] # ls
alma-appstream.repo alma-baseos.repo
root@localhost [/etc/yum.repos.d] # cat alma-appstream.repo
[AppStream]
name=AlmaLinux AppStream
baseurl=https://repo.almalinux.org/almalinux/9/AppStream/x86_64/os
enabled=1
gpgcheck=0
root@localhost [/etc/yum.repos.d] # cat alma-baseos.repo
[BaseOS]
name=AlmaLinux BaseOS
baseurl=https://repo.almalinux.org/almalinux/9/BaseOS/x86_64/os
enabled=1
gpgcheck=0
root@localhost [/etc/yum.repos.d] # yum repolist
Updating Subscription Management repositories.
Unable to read consumer identity
This system is not registered with an entitlement server. You can use subscription-manager to register.
repo id repo name
AppStream AlmaLinux AppStream
BaseOS AlmaLinux BaseOS
root@localhost [/etc/yum.repos.d] #
To direct input to this VM, move the mouse pointer inside or press Ctrl+G.