

⌘ RHEL GUI instance in cloud.

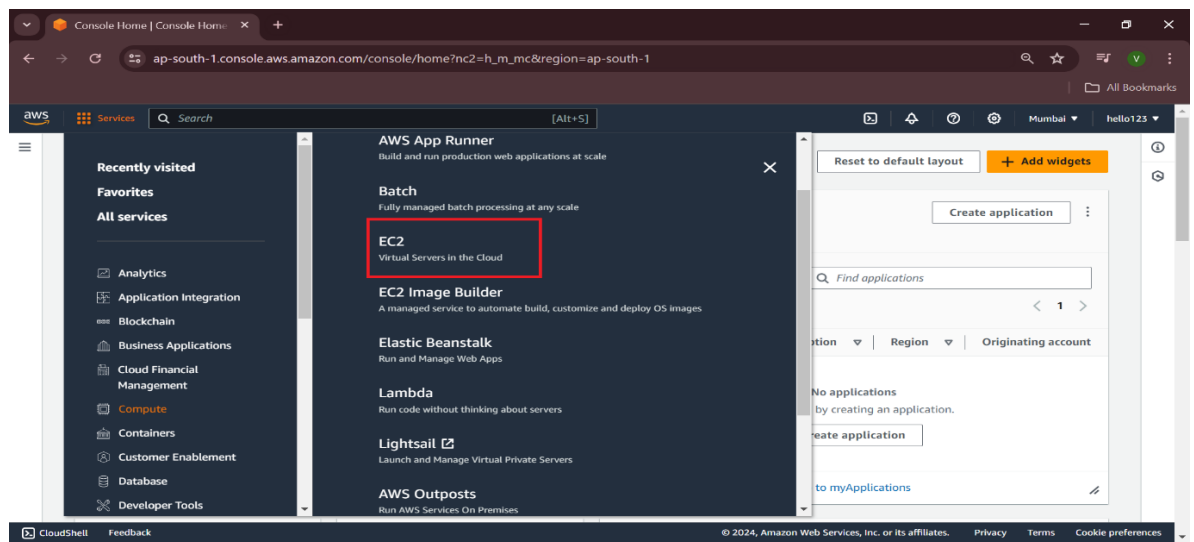
➤ Launching a RHEL Instance

1. Log in to AWS Management Console:

- Go to the [AWS Management Console](#).
- Sign in with your AWS credentials

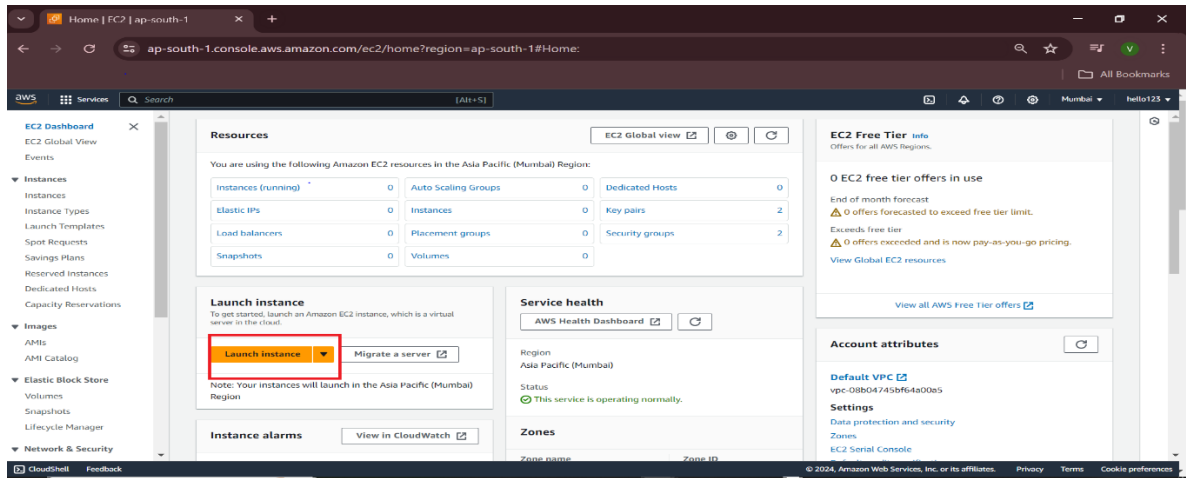
2. Open the EC2 Dashboard:

- In the Services menu, select EC2 under the "Compute" category.

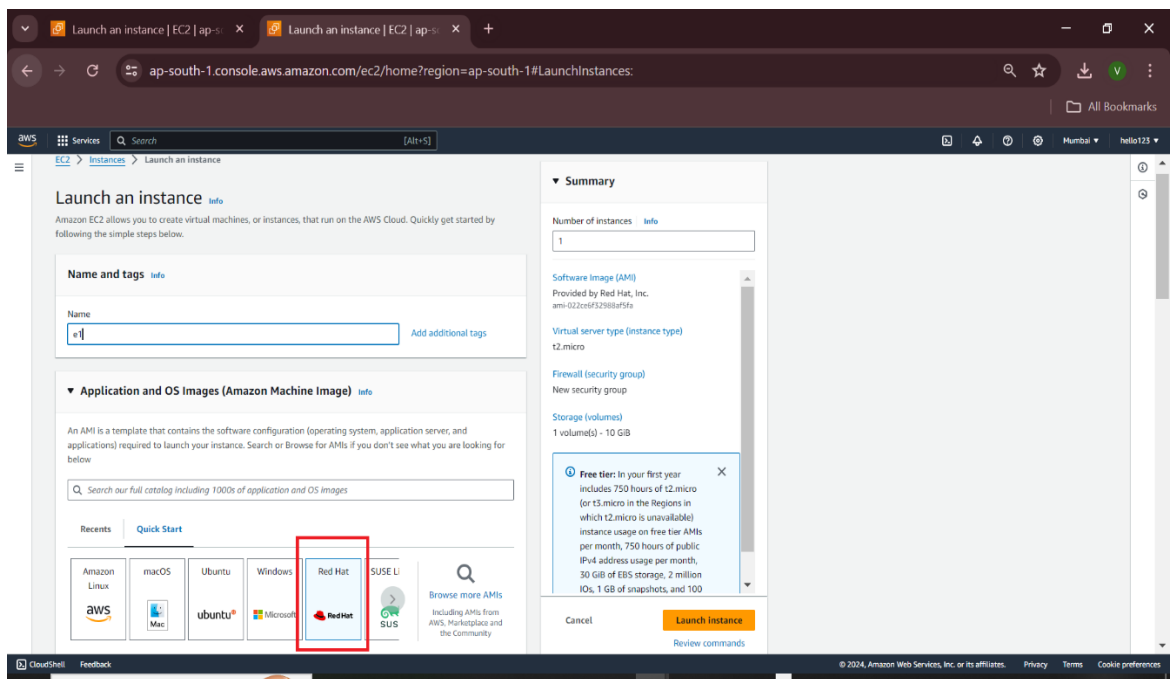


3. Launch an Instance:

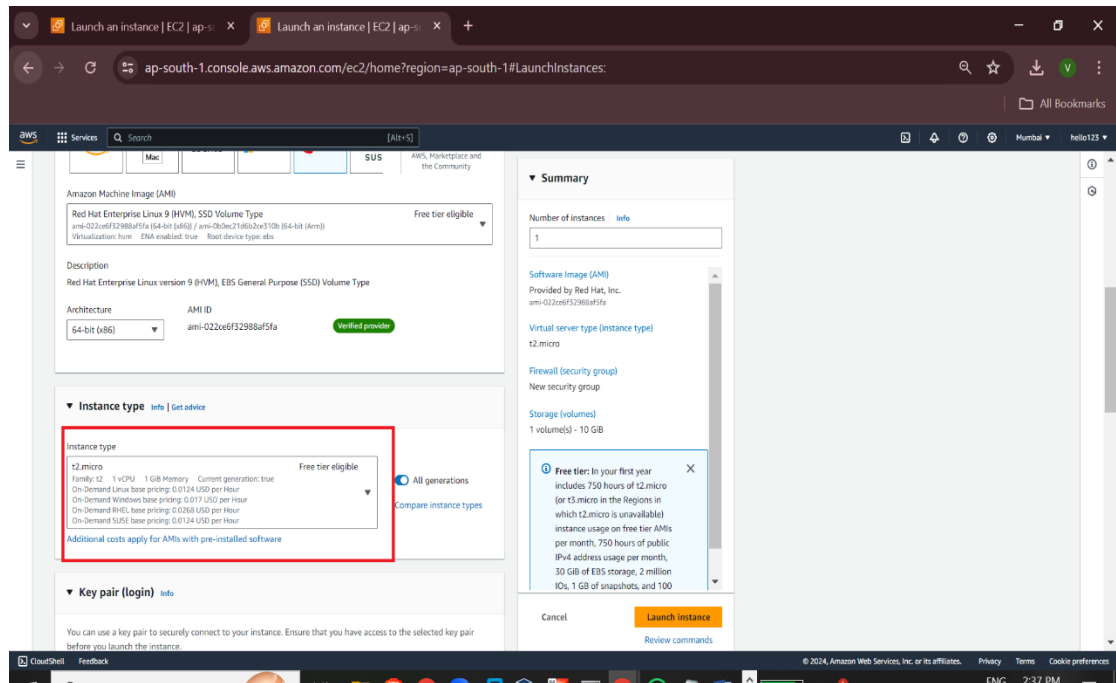
- Click the "Launch Instance" button.



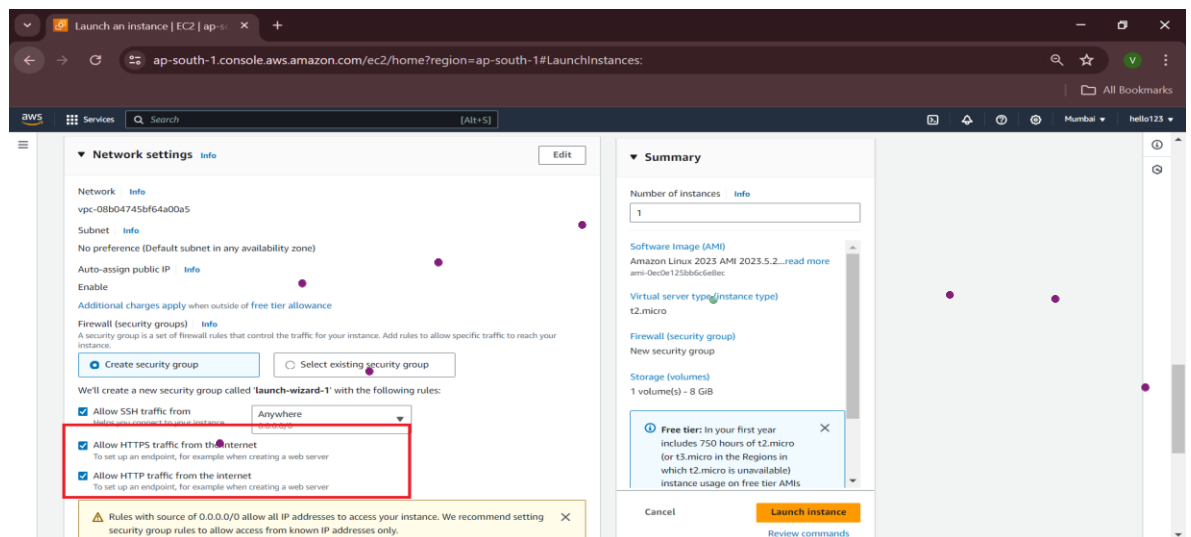
- Choose an Amazon Machine Image (AMI) from the list.
 - Search for "RHEL" in the search bar and select the desired version.



- Select an instance type (e.g., t2.micro for free tier eligibility).

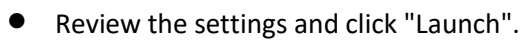


- Configure instance details, such as the number of instances, network settings, etc.



4. Review and Launch:

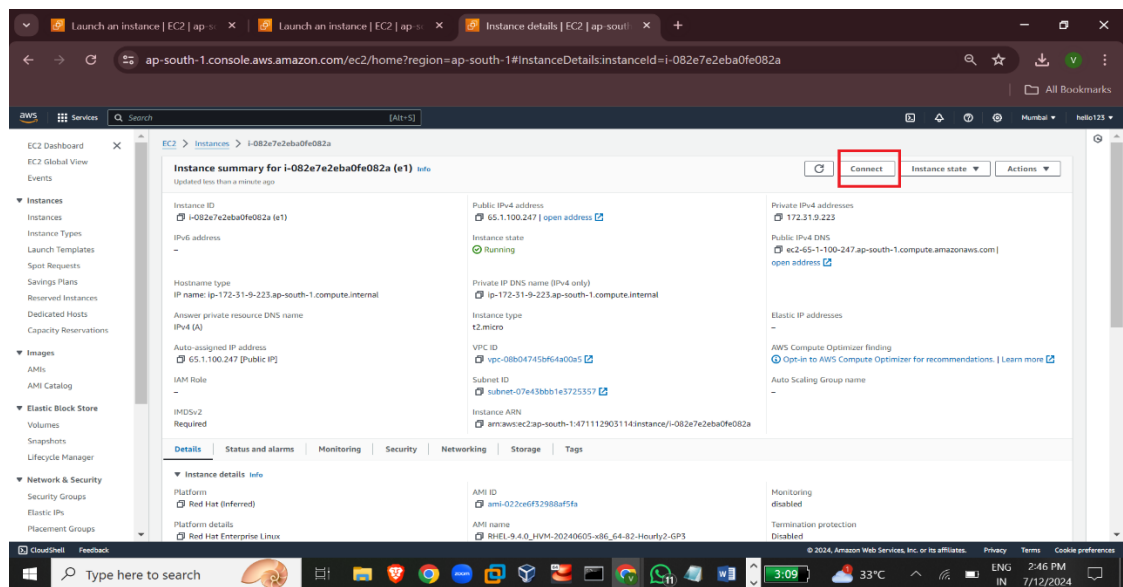
- Select an existing key pair or create a new one, then launch the instance



➤ Installing GUI on RHEL

1. Connect to Your Instance:

- Use an SSH client to connect to your RHEL instance.



- **Command:** `ssh -i "linux_key.pem" ec2-user@ec2-65-1-100-247.ap-south-1.compute.amazonaws.com`

2. Update the System:

Command: `sudo yum update -y`

The screenshot shows a MobaXterm terminal window with the command `sudo yum update -y` executed. The output indicates that the system is not registered with an entitlement server and lists the packages to be updated. The packages are categorized into 'Installing' and 'Upgrading'.

Package	Architecture	Version	Repository	Size
kernel	x86_64	5.14.0-427.24.1.el9_4	rhel-9-baseos-rhui-rpms	5.3 M
kernel-core	x86_64	5.14.0-427.24.1.el9_4	rhel-9-baseos-rhui-rpms	20 M
kernel-modules	x86_64	5.14.0-427.24.1.el9_4	rhel-9-baseos-rhui-rpms	39 M
kernel-modules-core	x86_64	5.14.0-427.24.1.el9_4	rhel-9-baseos-rhui-rpms	33 M
kernel-tools	x86_64	5.14.0-427.24.1.el9_4	rhel-9-baseos-rhui-rpms	5.5 M
kernel-tools-libs	x86_64	5.14.0-427.24.1.el9_4	rhel-9-baseos-rhui-rpms	5.3 M
openssh	x86_64	8.7p1-38.el9_4.4	rhel-9-baseos-rhui-rpms	466 k
openssh-clients	x86_64	8.7p1-38.el9_4.4	rhel-9-baseos-rhui-rpms	722 k
openssh-server	x86_64	8.7p1-38.el9_4.4	rhel-9-baseos-rhui-rpms	465 k
python-unversioned-command	noarch	3.9.18-3.el9_4.1	rhel-9-appstream-rhui-rpms	10 k
python3	x86_64	3.9.18-3.el9_4.1	rhel-9-baseos-rhui-rpms	29 k
python3-libs	x86_64	3.9.18-3.el9_4.1	rhel-9-baseos-rhui-rpms	7.8 M
python3-perf	x86_64	5.14.0-427.24.1.el9_4	rhel-9-baseos-rhui-rpms	5.4 M
rh-amazon-rhui-client	noarch	4.0.19-1.el9	rhui-client-config-server-9	46 k
selinux-policy	noarch	38.1.35-2.el9_4.2	rhel-9-baseos-rhui-rpms	53 k
selinux-policy-targeted	noarch	38.1.35-2.el9_4.2	rhel-9-baseos-rhui-rpms	6.9 M
shim-x64	x86_64	15.0-4.el9_3	rhel-9-baseos-rhui-rpms	476 k

Transaction Summary
Install 4 Packages
Upgrade 13 Packages
Total download size: 131 M
Downloading Packages:

3. Install GUI Packages:

- Install the GNOME desktop environment:

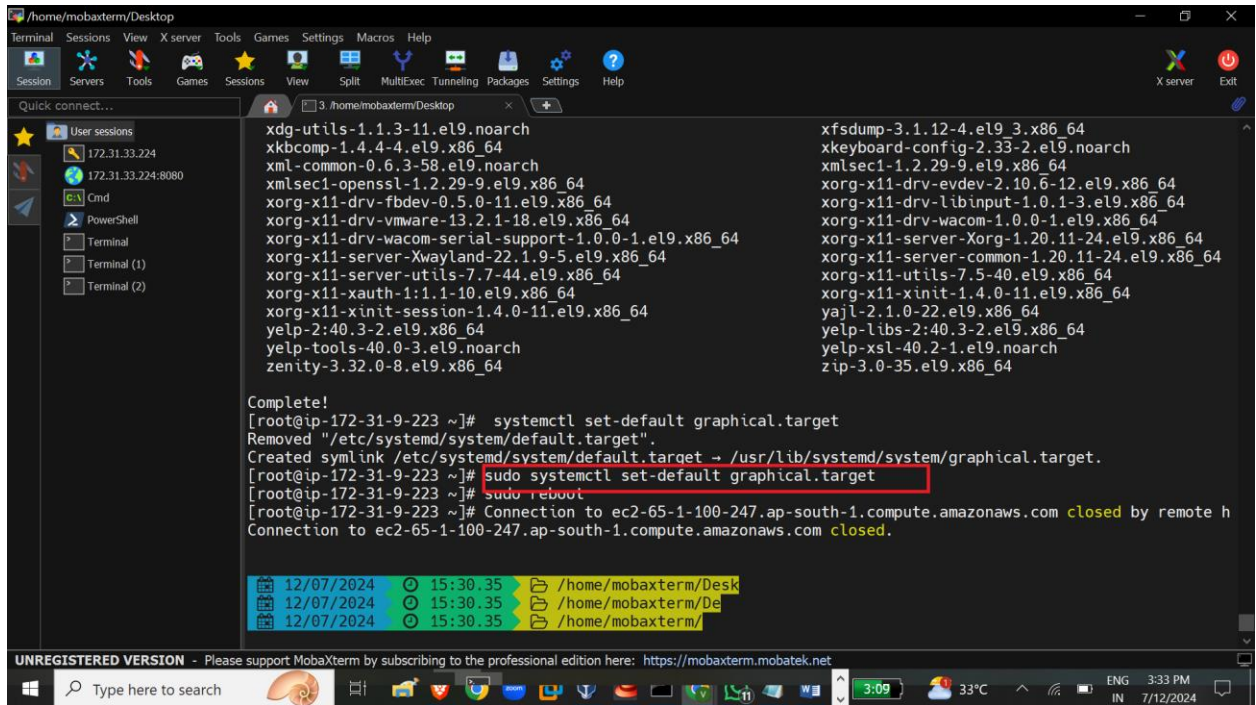
Command: `sudo yum groupinstall "Server with GUI" -y`

The screenshot shows a MobaXterm terminal window with the command `sudo yum groupinstall "Server with GUI" -y` executed. The output indicates that the system is not registered with an entitlement server and lists the packages to be installed. The packages are categorized into 'Installing group/module packages'.

Package	Arch	Version	Repository	Size
ModemManager	x86_64	1.20.2-1.el9	rhel-9-baseos-rhui-rpms	1.3 M
NetworkManager-adsl	x86_64	1:1.46.0-8.el9_4	rhel-9-baseos-rhui-rpms	37 k
NetworkManager-bluetooth	x86_64	1:1.46.0-8.el9_4	rhel-9-baseos-rhui-rpms	63 k
NetworkManager-config-server	noarch	1:1.46.0-8.el9_4	rhel-9-baseos-rhui-rpms	22 k
NetworkManager-wifi	x86_64	1:1.46.0-8.el9_4	rhel-9-baseos-rhui-rpms	86 k
NetworkManager-wwan	x86_64	1:1.46.0-8.el9_4	rhel-9-baseos-rhui-rpms	71 k
PackageKit	x86_64	1.2.6-1.el9	rhel-9-appstream-rhui-rpms	651 k
PackageKit-command-not-found	x86_64	1.2.6-1.el9	rhel-9-appstream-rhui-rpms	23 k
PackageKit-gstreamer-plugin	x86_64	1.2.6-1.el9	rhel-9-appstream-rhui-rpms	18 k
PackageKit-gtk3-module	x86_64	1.2.6-1.el9	rhel-9-appstream-rhui-rpms	17 k
abattis-cantarell-fonts	noarch	0.301-4.el9	rhel-9-appstream-rhui-rpms	368 k
alsa-ucm	noarch	1.2.10-2.el9	rhel-9-appstream-rhui-rpms	272 k
alsa-utils	x86_64	1.2.10-1.el9	rhel-9-appstream-rhui-rpms	1.2 M
at	x86_64	3.1.23-11.el9	rhel-9-baseos-rhui-rpms	69 k
at-spi2-atk	x86_64	2.38.0-4.el9	rhel-9-appstream-rhui-rpms	90 k
at-spi2-core	x86_64	2.40.3-1.el9	rhel-9-appstream-rhui-rpms	199 k
attr	x86_64	2.5.1-3.el9	rhel-9-baseos-rhui-rpms	65 k
avahi	x86_64	0.8-20.el9	rhel-9-baseos-rhui-rpms	310 k
avahi-tools	x86_64	0.8-20.el9	rhel-9-appstream-rhui-rpms	46 k
baobab	x86_64	40.0-3.el9	rhel-9-appstream-rhui-rpms	481 k
bash-completion	noarch	1.12.11-5.el9	rhel-9-baseos-rhui-rpms	459 k
bc	x86_64	1.07.1-14.el9	rhel-9-baseos-rhui-rpms	125 k
blktrace	x86_64	1.2.0-19.el9	rhel-9-appstream-rhui-rpms	153 k
bluez	x86_64	5.64-2.el9	rhel-9-baseos-rhui-rpms	993 k
bolt	x86_64	0.9.5-1.el9	rhel-9-baseos-rhui-rpms	196 k

4. Set the Default Target to Graphical:

Command: `sudo systemctl set-default graphical.target`



The screenshot shows a MobaXterm terminal window with the following content:

```
xdg-utils-1.1.3-11.el9.noarch
xkbcomp-1.4.4-4.el9.x86_64
xml-common-0.6.3-58.el9.noarch
xmlsec1-openssl-1.2.29-9.el9.x86_64
xorg-x11-drv-fbdev-0.5.0-11.el9.x86_64
xorg-x11-drv-vmware-13.2.1-18.el9.x86_64
xorg-x11-drv-wacom-serial-support-1.0.0-1.el9.x86_64
xorg-x11-server-Xwayland-22.1.9-5.el9.x86_64
xorg-x11-server-utils-7.7-44.el9.x86_64
xorg-x11-xauth-1.1.1-10.el9.x86_64
xorg-x11-xinit-session-1.4.0-11.el9.x86_64
yelp-2:40.3-2.el9.x86_64
yelp-tools-40.0-3.el9.noarch
zenity-3.32.0-8.el9.x86_64

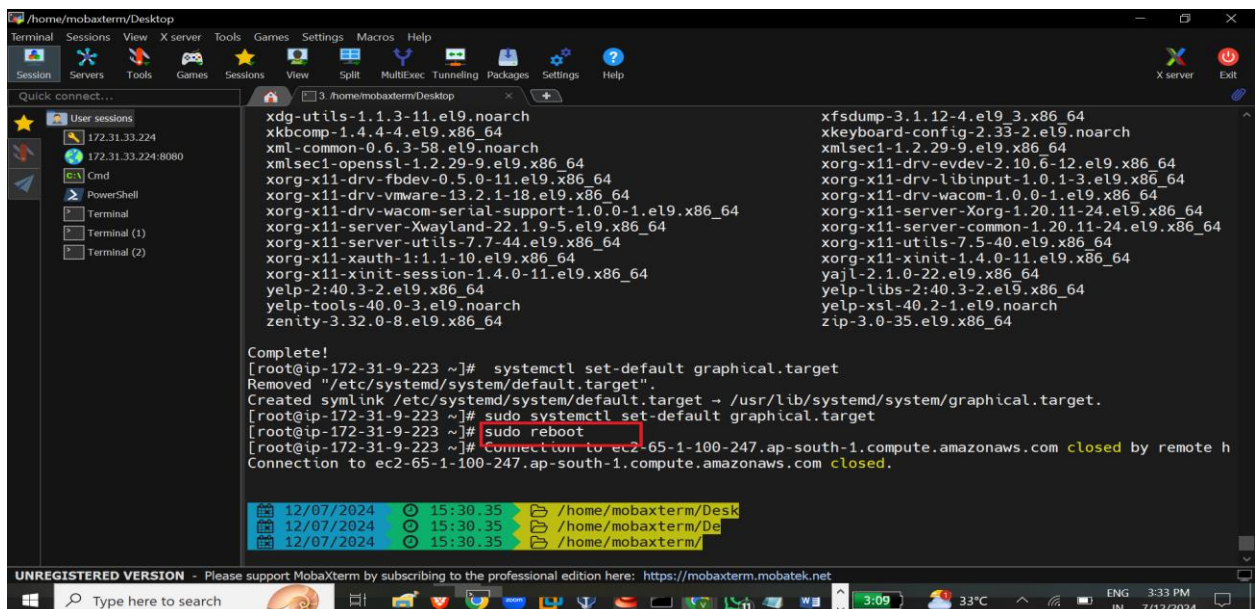
xfsdump-3.1.12-4.el9_3.x86_64
xkeyboard-config-2.33-2.el9.noarch
xmlsec1-1.2.29-9.el9.x86_64
xorg-x11-drv-evdev-2.10.6-12.el9.x86_64
xorg-x11-drv-libinput-1.0.1-3.el9.x86_64
xorg-x11-drv-wacom-1.0.0-1.el9.x86_64
xorg-x11-server-Xorg-1.20.11-24.el9.x86_64
xorg-x11-server-common-1.20.11-24.el9.x86_64
xorg-x11-utils-7.5-40.el9.x86_64
xorg-x11-xinit-1.4.0-11.el9.x86_64
yajl-2.1.0-22.el9.x86_64
yelp-libs-2:40.3-2.el9.x86_64
yelp-xsl-40.2-1.el9.noarch
zip-3.0-35.el9.x86_64

Complete!
[root@ip-172-31-9-223 ~]# systemctl set-default graphical.target
Removed "/etc/systemd/system/default.target".
Created symlink /etc/systemd/system/default.target -> /usr/lib/systemd/system/graphical.target.
[root@ip-172-31-9-223 ~]# sudo systemctl set-default graphical.target
[root@ip-172-31-9-223 ~]# sudo reboot
[root@ip-172-31-9-223 ~]# Connection to ec2-65-1-100-247.ap-south-1.compute.amazonaws.com closed by remote h
Connection to ec2-65-1-100-247.ap-south-1.compute.amazonaws.com closed.
```

The terminal window also shows a list of installed packages on the left and a status bar at the bottom indicating the connection is closed.

5.Reboot the Instance:

Comman: `sudo reboot`



The screenshot shows a MobaXterm terminal window with the following content:

```
xdg-utils-1.1.3-11.el9.noarch
xkbcomp-1.4.4-4.el9.x86_64
xml-common-0.6.3-58.el9.noarch
xmlsec1-openssl-1.2.29-9.el9.x86_64
xorg-x11-drv-fbdev-0.5.0-11.el9.x86_64
xorg-x11-drv-vmware-13.2.1-18.el9.x86_64
xorg-x11-drv-wacom-serial-support-1.0.0-1.el9.x86_64
xorg-x11-server-Xwayland-22.1.9-5.el9.x86_64
xorg-x11-server-utils-7.7-44.el9.x86_64
xorg-x11-xauth-1.1.1-10.el9.x86_64
xorg-x11-xinit-session-1.4.0-11.el9.x86_64
yelp-2:40.3-2.el9.x86_64
yelp-tools-40.0-3.el9.noarch
zenity-3.32.0-8.el9.x86_64

xfsdump-3.1.12-4.el9_3.x86_64
xkeyboard-config-2.33-2.el9.noarch
xmlsec1-1.2.29-9.el9.x86_64
xorg-x11-drv-evdev-2.10.6-12.el9.x86_64
xorg-x11-drv-libinput-1.0.1-3.el9.x86_64
xorg-x11-drv-wacom-1.0.0-1.el9.x86_64
xorg-x11-server-Xorg-1.20.11-24.el9.x86_64
xorg-x11-server-common-1.20.11-24.el9.x86_64
xorg-x11-utils-7.5-40.el9.x86_64
xorg-x11-xinit-1.4.0-11.el9.x86_64
yajl-2.1.0-22.el9.x86_64
yelp-libs-2:40.3-2.el9.x86_64
yelp-xsl-40.2-1.el9.noarch
zip-3.0-35.el9.x86_64

Complete!
[root@ip-172-31-9-223 ~]# systemctl set-default graphical.target
Removed "/etc/systemd/system/default.target".
Created symlink /etc/systemd/system/default.target -> /usr/lib/systemd/system/graphical.target.
[root@ip-172-31-9-223 ~]# sudo systemctl set-default graphical.target
[root@ip-172-31-9-223 ~]# sudo reboot
[root@ip-172-31-9-223 ~]# Connection to ec2-65-1-100-247.ap-south-1.compute.amazonaws.com closed by remote h
Connection to ec2-65-1-100-247.ap-south-1.compute.amazonaws.com closed.
```

The terminal window also shows a list of installed packages on the left and a status bar at the bottom indicating the connection is closed.

6. Verify GUI Installation:

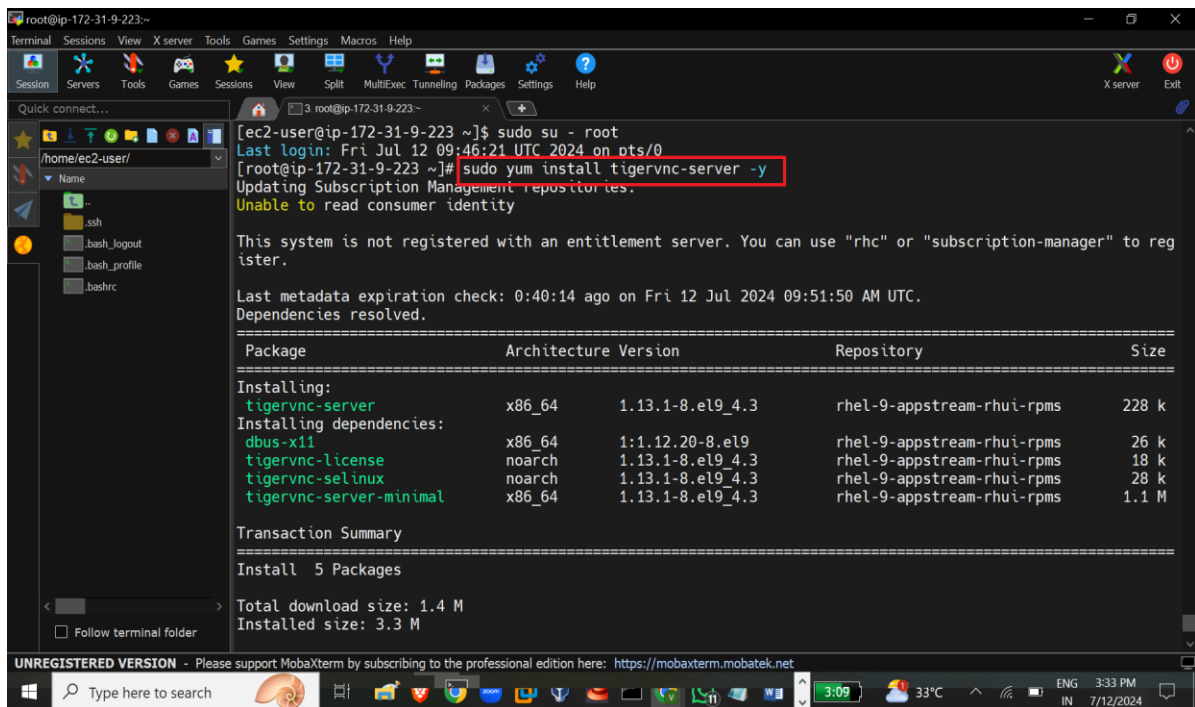
- After the reboot, the system should boot into the GNOME graphical interface.

➤ Installing GUI on RHEL

1. Install and Configure a VNC Server (optional for remote GUI access):

- Install the TigerVNC server:

Command: `sudo yum install tigervnc-server -y`



```
root@ip-172-31-9-223:~
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help
Quick connect...
/home/ec2-user/
Name
ssh
.bash_logout
.bash_profile
.bashrc
[ec2-user@ip-172-31-9-223 ~]$ sudo su - root
Last login: Fri Jul 12 09:46:21 UTC 2024 on pts/0
[root@ip-172-31-9-223 ~]# sudo yum install tigervnc-server -y
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use "rhc" or "subscription-manager" to register.

Last metadata expiration check: 0:40:14 ago on Fri 12 Jul 2024 09:51:50 AM UTC.
Dependencies resolved.
=====
Package                                Architecture Version                                Repository                                Size
=====
Installing:
tigervnc-server                        x86_64    1.13.1-8.el9_4.3                        rhel-9-appstream-rhui-rpms              228 k
Installing dependencies:
dbus-x11                              x86_64    1:1.12.20-8.el9                        rhel-9-appstream-rhui-rpms              26 k
tigervnc-license                       noarch    1.13.1-8.el9_4.3                        rhel-9-appstream-rhui-rpms              18 k
tigervnc-selinux                       noarch    1.13.1-8.el9_4.3                        rhel-9-appstream-rhui-rpms              28 k
tigervnc-server-minimal                x86_64    1.13.1-8.el9_4.3                        rhel-9-appstream-rhui-rpms             1.1 M
Transaction Summary
=====
Install 5 Packages
Total download size: 1.4 M
Installed size: 3.3 M
UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: https://mobaxterm.mobatek.net
```

2. Set a VNC password:

command: `vncpasswd`


```
root@ip-172-31-9-223:~  
Terminal Sessions View X server Tools Games Settings Macros Help  
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help  
Quick connect...  
/home/ec2-user/  
Name  
ssh  
.bash_logout  
.bash_profile  
.bashrc  
Follow terminal folder  
Running scriptlet: tigervnc-server-1.13.1-8.el9_4.3.x86_64 5/5  
Verifying : dbus-x11-1:1.12.20-8.el9.x86_64 1/5  
Verifying : tigervnc-license-1.13.1-8.el9_4.3.noarch 2/5  
Verifying : tigervnc-selinux-1.13.1-8.el9_4.3.noarch 3/5  
Verifying : tigervnc-server-1.13.1-8.el9_4.3.x86_64 4/5  
Verifying : tigervnc-server-minimal-1.13.1-8.el9_4.3.x86_64 5/5  
Installed products updated.  
Installed:  
dbus-x11-1:1.12.20-8.el9.x86_64 tigervnc-license-1.13.1-8.el9_4.3.noarch  
tigervnc-selinux-1.13.1-8.el9_4.3.noarch tigervnc-server-1.13.1-8.el9_4.3.x86_64  
tigervnc-server-minimal-1.13.1-8.el9_4.3.x86_64  
Complete!  
[root@ip-172-31-9-223 ~]# Set a VNC password:  
bash: Set: command not found...  
[root@ip-172-31-9-223 ~]# vncpasswd  
Password:  
Password must be at least 6 characters - try again  
Password:  
Verify:  
Would you like to enter a view-only password (y/n)? y  
Password:  
Verify:  
Passwords don't match - try again  
Password:  
Verify:  
[root@ip-172-31-9-223 ~]#  
UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: https://mobaxterm.mobatek.net  
Type here to search 3:09 33°C ENG 3:33 PM 7/12/2024
```

3. Start the VNC server:

Command: vncserver

```
root@ip-172-31-9-223:~  
Terminal Sessions View X server Tools Games Settings Macros Help  
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help  
Quick connect...  
/home/ec2-user/  
Name  
ssh  
.bash_logout  
.bash_profile  
.bashrc  
Follow terminal folder  
bash: Set: command not found...  
[root@ip-172-31-9-223 ~]# vncpasswd  
Password:  
Password must be at least 6 characters - try again  
Password:  
Verify:  
Would you like to enter a view-only password (y/n)? y  
Password:  
Verify:  
Passwords don't match - try again  
Password:  
Verify:  
[root@ip-172-31-9-223 ~]# vncserver  
WARNING: vncserver has been replaced by a systemd unit and is now considered deprecated and removed in upstream.  
Please read /usr/share/doc/tigervnc/HOWTO.md for more information.  
xauth: file /root/.Xauthority does not exist  
New 'ip-172-31-9-223.ap-south-1.compute.internal:1 (root)' desktop is ip-172-31-9-223.ap-south-1.compute.internal:1  
Creating default startup script /root/.vnc/xstartup  
Creating default config /root/.vnc/config  
Starting applications specified in /root/.vnc/xstartup  
Log file is /root/.vnc/ip-172-31-9-223.ap-south-1.compute.internal:1.log  
[root@ip-172-31-9-223 ~]#  
UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: https://mobaxterm.mobatek.net  
Type here to search 3:09 33°C ENG 3:33 PM 7/12/2024
```

