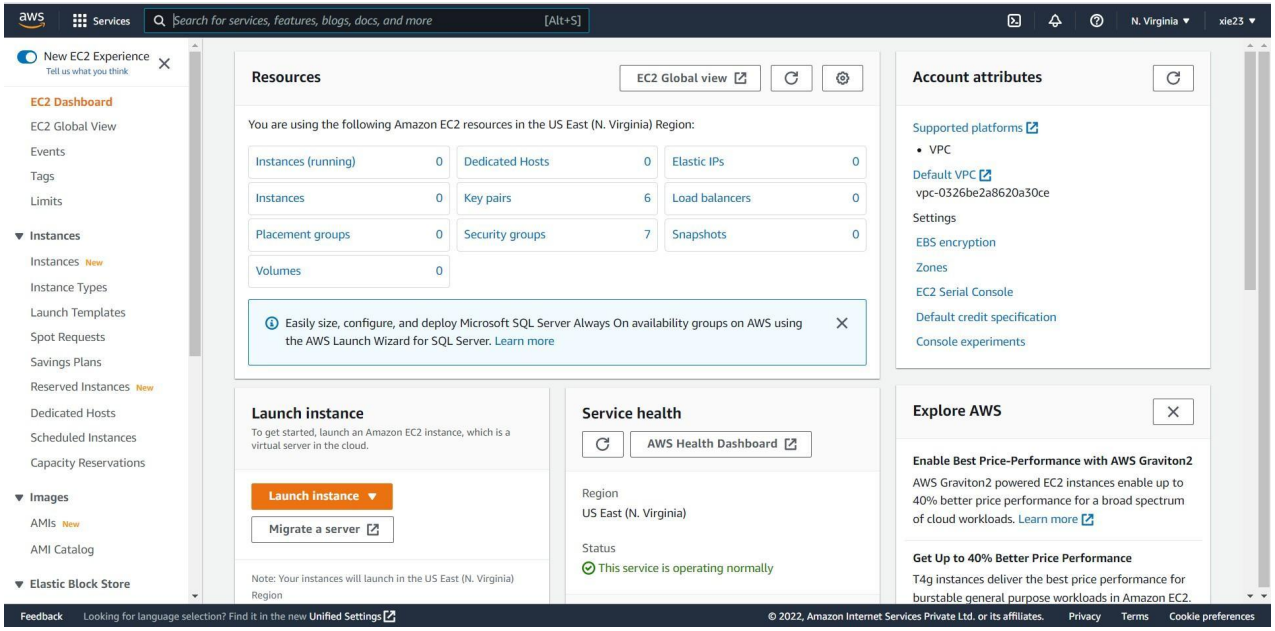
Experiment No.

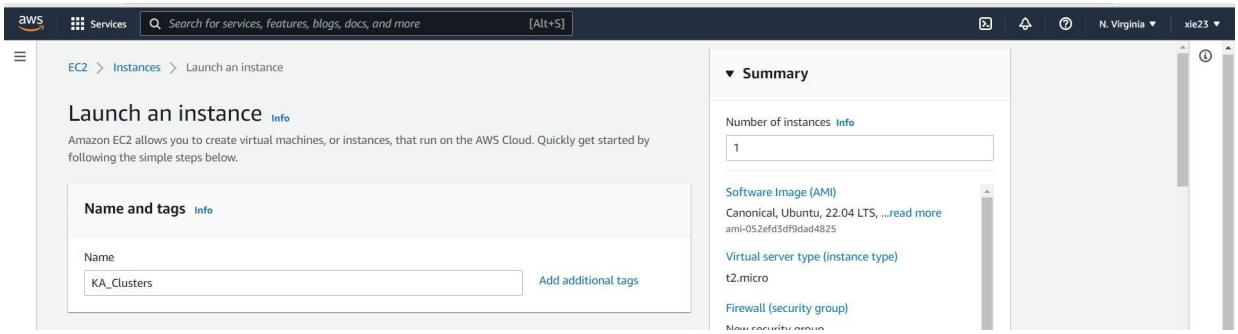
Steps & Screenshots:

Step1: Create a new Instance

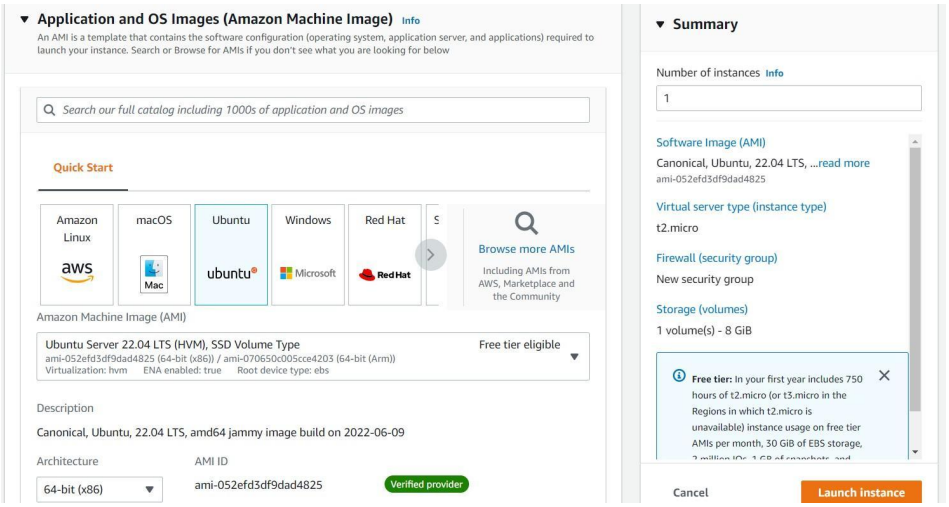
1. Goto EC2 console and click on Launch Instance



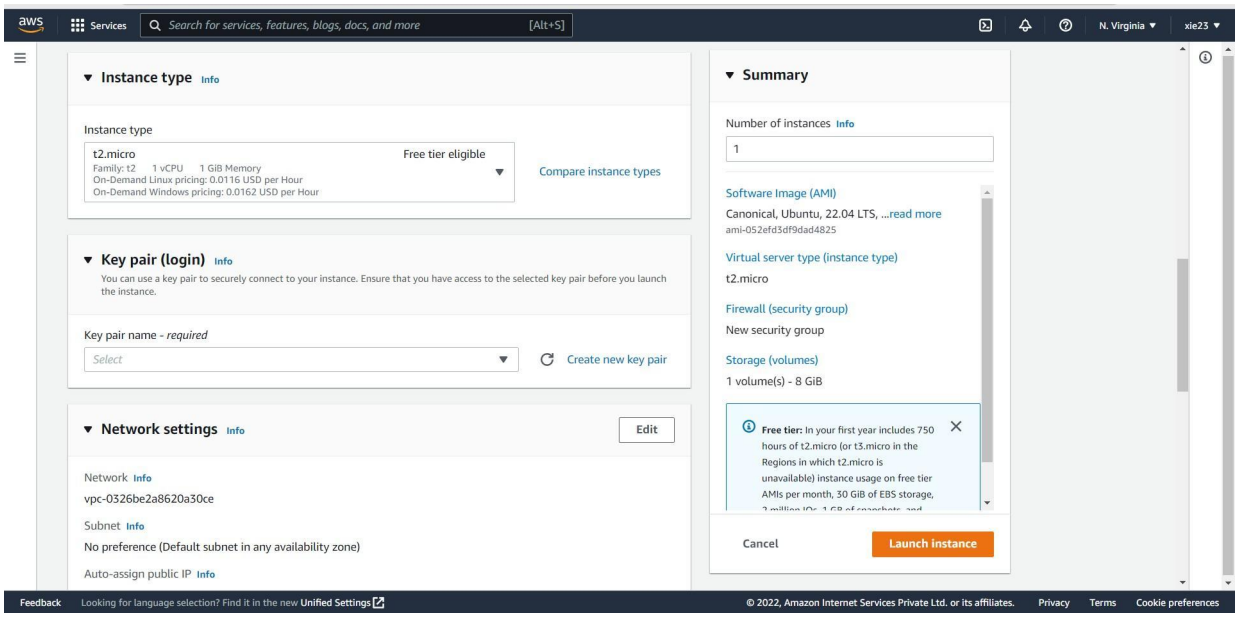
2. Give the name to your instance



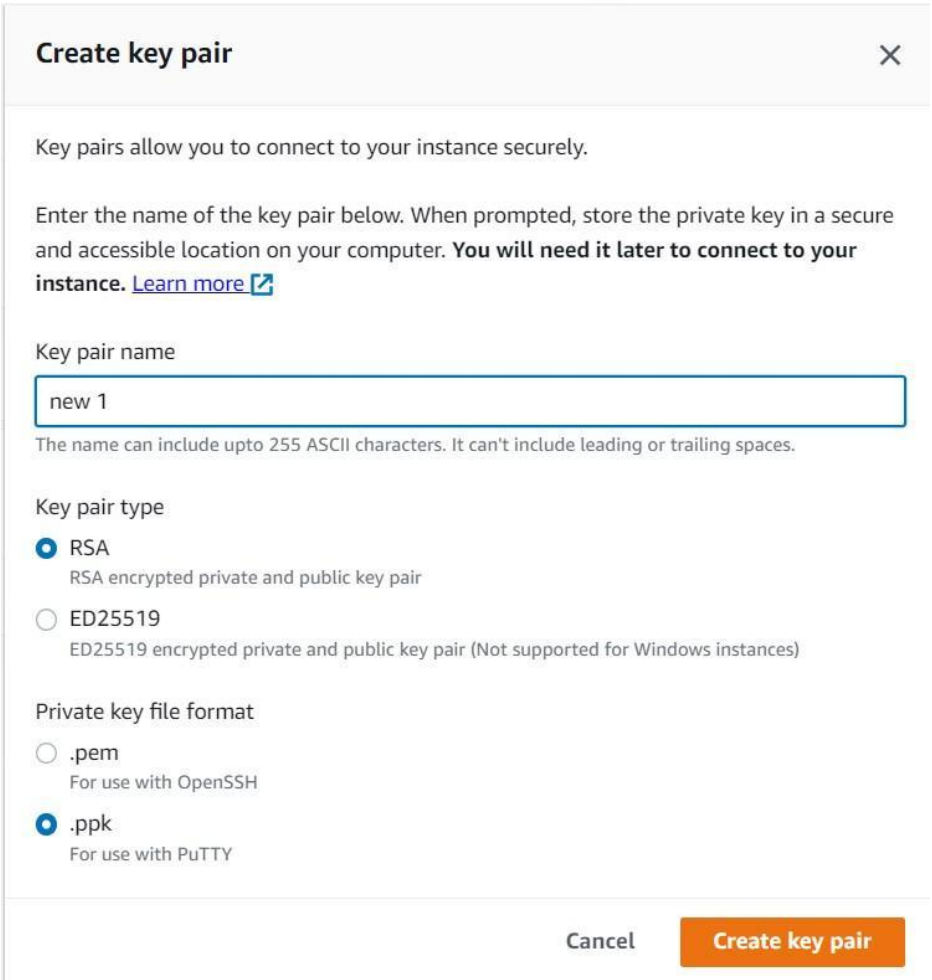
3. Choose Ubuntu OS


Application and OS Images (Amazon Machine Image) Info
An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below
Search our full catalog including 1000s of application and OS images
Quick Start
Amazon Linux
macOS
Ubuntu
Windows
Red Hat
Browse more AMIs
Including AMIs from AWS, Marketplace and the Community
Amazon Machine Image (AMI)
Ubuntu Server 22.04 LTS (HVM), SSD Volume Type
Free tier eligible
ami-052efd3df9dad4825 (64-bit (x86)) / ami-070650c005cce4203 (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs
Description
Canonical, Ubuntu, 22.04 LTS, amd64 jammy image build on 2022-06-09
Architecture
AMI ID
64-bit (x86)
ami-052efd3df9dad4825
Verified provider
Summary
Number of instances Info
1
Software Image (AMI)
Canonical, Ubuntu, 22.04 LTS, ...read more
ami-052efd3df9dad4825
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage,
Cancel
Launch instance

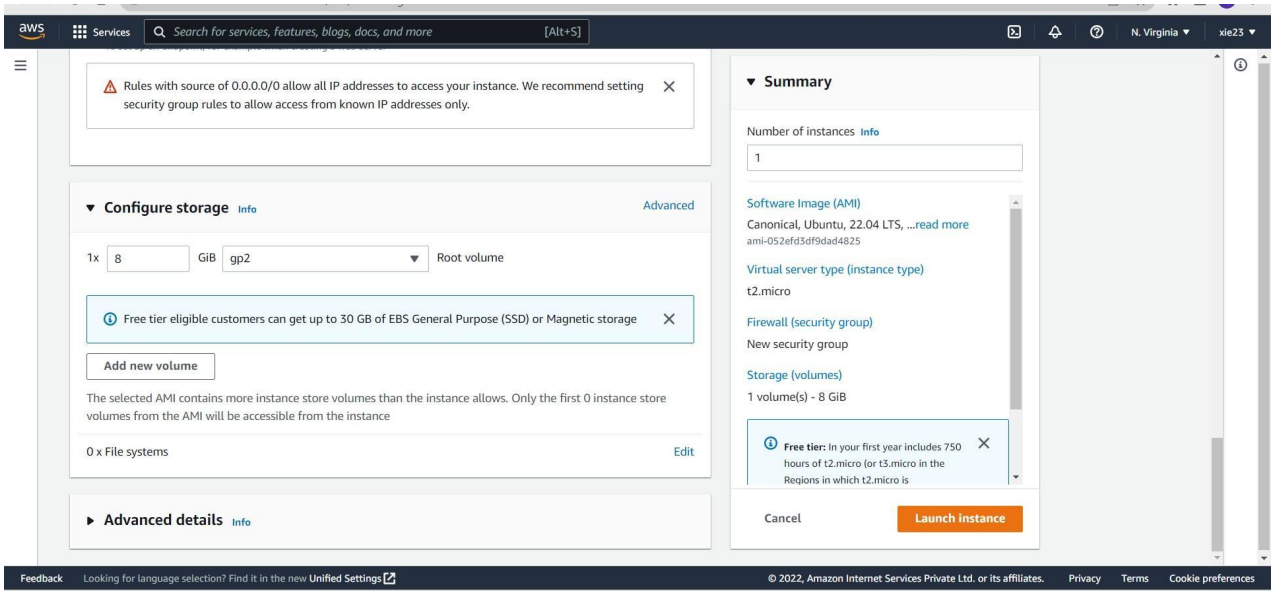
4. Click on Create new key pair



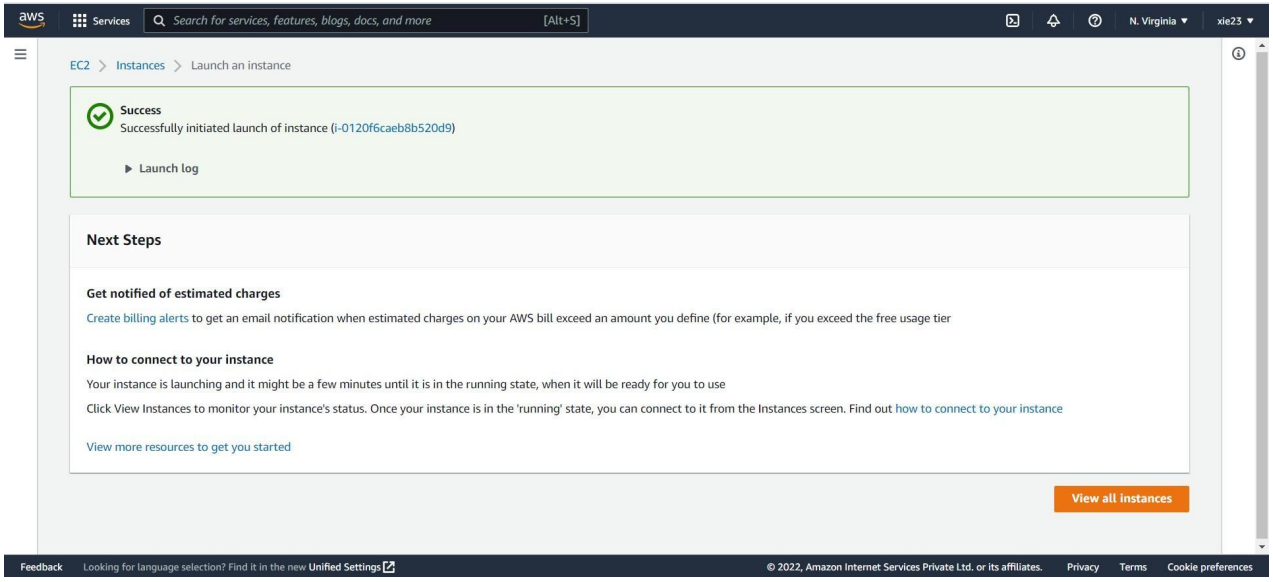
5. Give the Key pair name and select .ppk file format and then click on Create key pair



6. Click on Launch Instance

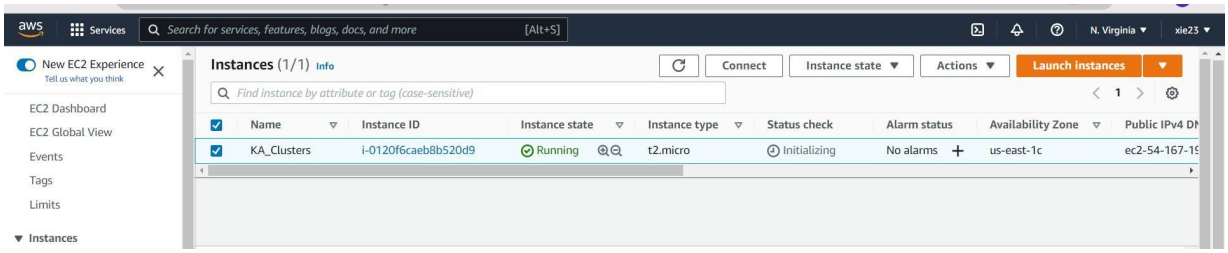


7. Successfully instance is launch

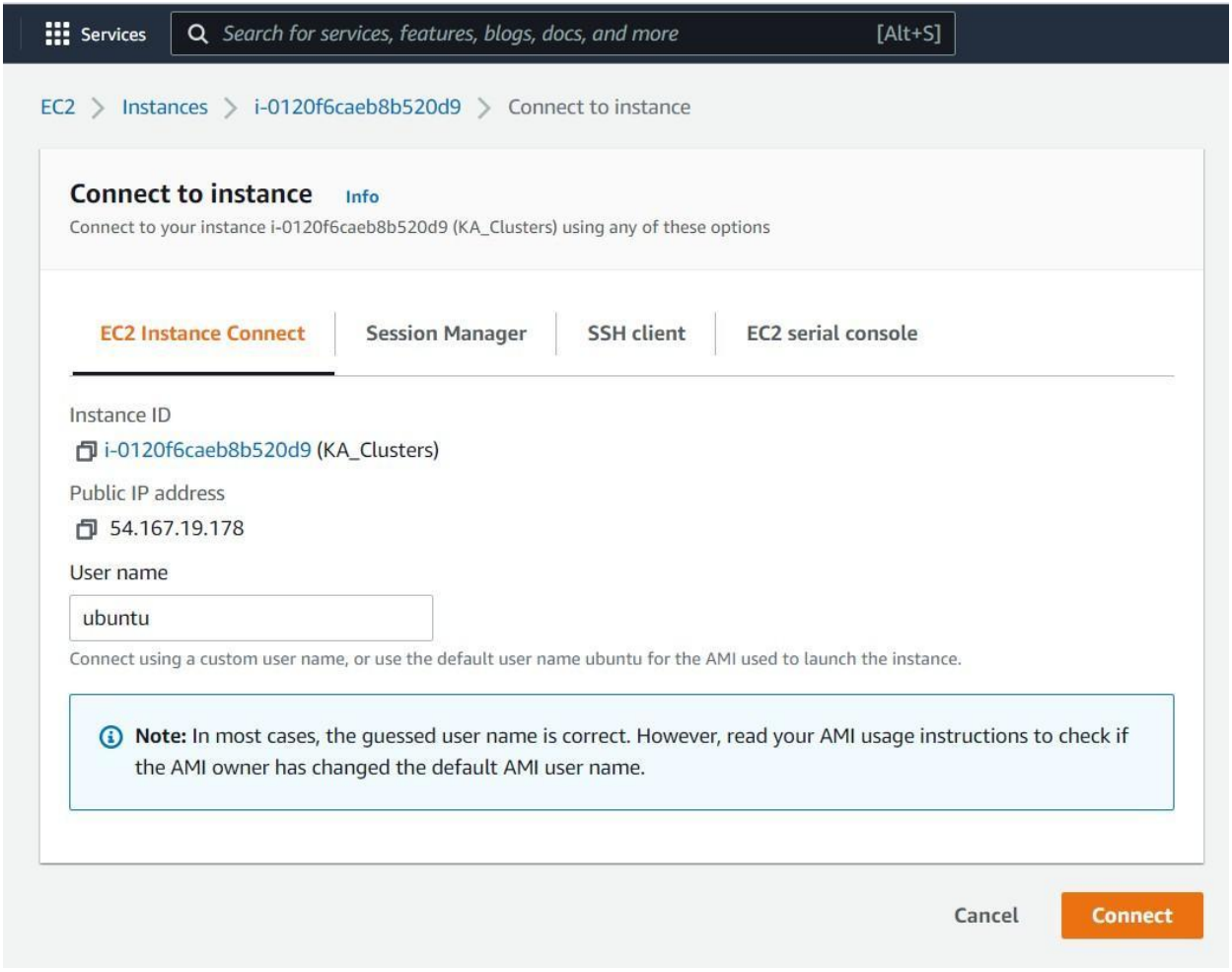


Step 2: Connection

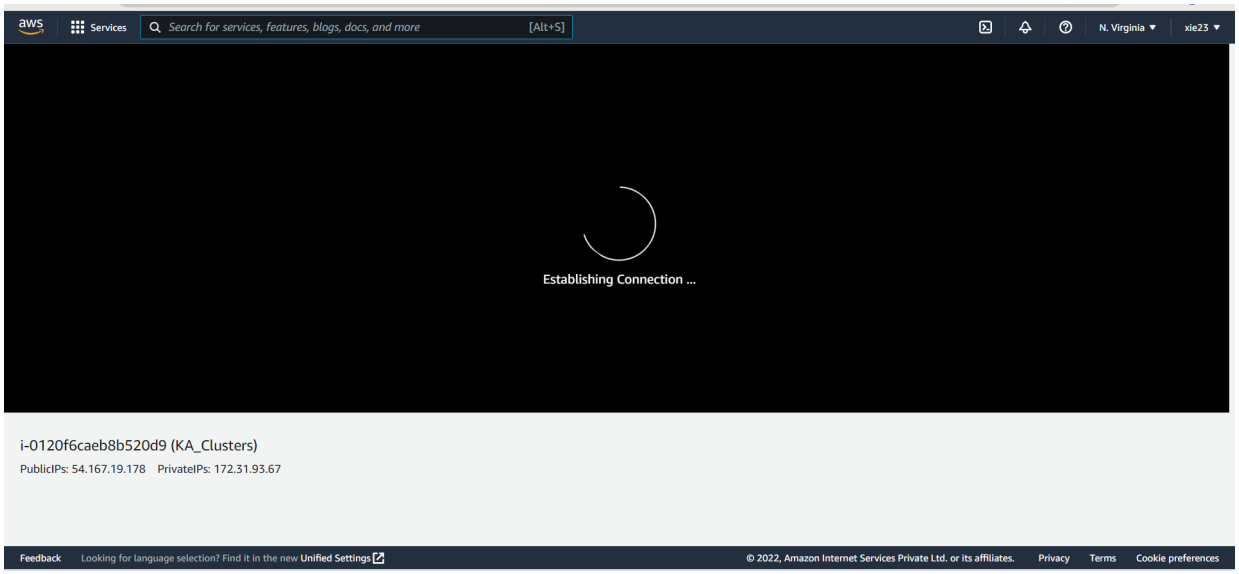
1. Goto Instances and select the newly created instance and then click on connect

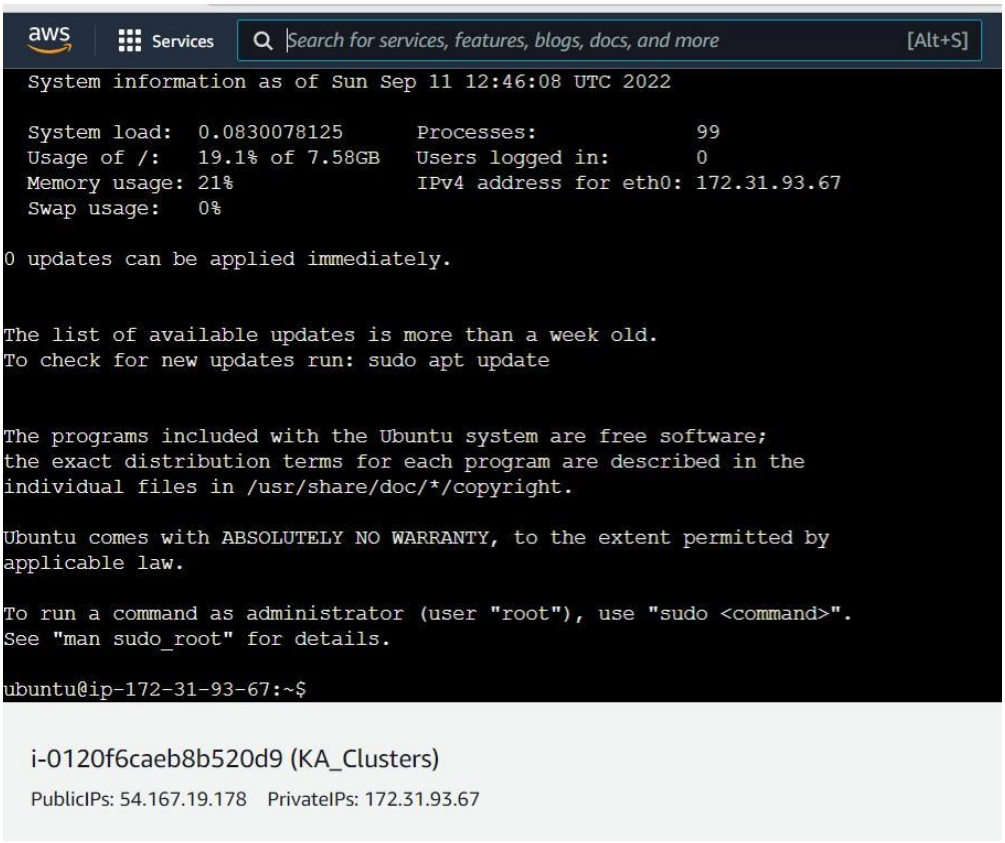


2. Click on Connect

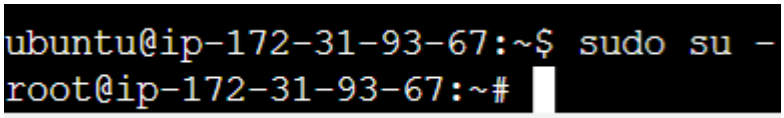


3. Establishing Connection

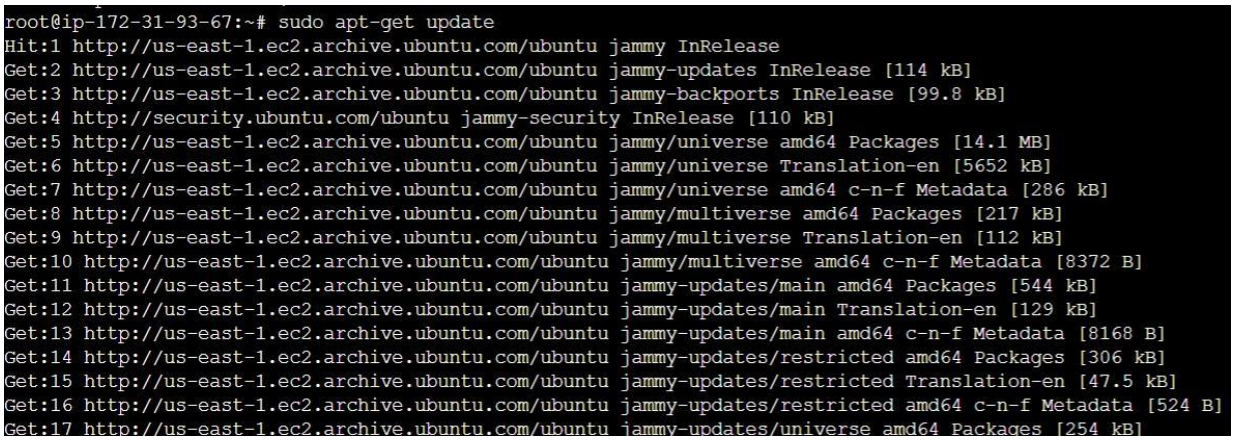




Step 3: Run the command " sudo su -" to goto root



Step 4: Install all the updates



Step 5: Install Docker and check its version

```
root@ip-172-31-93-67:~# apt install docker.io
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base pigz runc ubuntu-fan
Suggested packages:
  ifupdown aufs-tools cgroupfs-mount | cgroup-lite debootstrap docker-doc rinse zfs-fuse | zfsutils
The following NEW packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base docker.io pigz runc ubuntu-fan
0 upgraded, 8 newly installed, 0 to remove and 78 not upgraded.
Need to get 65.6 MB of archives.
After this operation, 283 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 pigz amd64 2.6-1 [63.6 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 bridge-utils amd64 1.7-1ubuntu3 [34.4 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 runc amd64 1.1.0-0ubuntu1 [4087 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 containerd amd64 1.5.9-0ubuntu3 [27.0 MB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 dns-root-data all 2021011101 [5256 B]
```

```
root@ip-172-31-93-67:~# docker --version
Docker version 20.10.12, build 20.10.12-0ubuntu4
root@ip-172-31-93-67:~#
```

Step 6: Enable Docker and then check docker status

```
root@ip-172-31-93-67:~# sudo systemctl enable docker
root@ip-172-31-93-67:~#
```

```
root@ip-172-31-93-67:~# sudo systemctl status docker
● docker.service - Docker Application Container Engine
     Loaded: loaded (/lib/systemd/system/docker.service; enabled; vendor preset: enabled)
     Active: active (running) since Sun 2022-09-11 12:53:49 UTC; 3min 37s ago
TriggeredBy: ● docker.socket
       Docs: https://docs.docker.com
   Main PID: 2549 (dockerd)
      Tasks: 7
     Memory: 38.0M
        CPU: 269ms
     CGroup: /system.slice/docker.service
             └─2549 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

Sep 11 12:53:49 ip-172-31-93-67 dockerd[2549]: time="2022-09-11T12:53:49.356235070Z" level=
Sep 11 12:53:49 ip-172-31-93-67 dockerd[2549]: time="2022-09-11T12:53:49.356399659Z" level=
Sep 11 12:53:49 ip-172-31-93-67 dockerd[2549]: time="2022-09-11T12:53:49.356555442Z" level=
Sep 11 12:53:49 ip-172-31-93-67 dockerd[2549]: time="2022-09-11T12:53:49.426023858Z" level=
Sep 11 12:53:49 ip-172-31-93-67 dockerd[2549]: time="2022-09-11T12:53:49.705280711Z" level=
Sep 11 12:53:49 ip-172-31-93-67 dockerd[2549]: time="2022-09-11T12:53:49.799925454Z" level=
Sep 11 12:53:49 ip-172-31-93-67 dockerd[2549]: time="2022-09-11T12:53:49.880040777Z" level=
Sep 11 12:53:49 ip-172-31-93-67 dockerd[2549]: time="2022-09-11T12:53:49.880496977Z" level=
Sep 11 12:53:49 ip-172-31-93-67 systemd[1]: Started Docker Application Container Engine.
Sep 11 12:53:49 ip-172-31-93-67 dockerd[2549]: time="2022-09-11T12:53:49.919670674Z" level=
lines 1-22/22 (END)
```

Step 7 : Curl

```
root@ip-172-31-93-67:~# curl -s https://packages.cloud.google.com/apt/doc/apt-key.gpg | sudo apt-key add
Warning: apt-key is deprecated. Manage keyring files in trusted.gpg.d instead (see apt-key(8)).
OK
root@ip-172-31-93-67:~#
```

Step 8: Add repository

```
root@ip-172-31-93-67:~# sudo apt-add-repository "deb http://apt.kubernetes.io? kubernetes-xenial main"
Repository: 'deb http://apt.kubernetes.io kubernetes-xenial main'
Description:
Archive for codename: kubernetes-xenial components: main
More info: http://apt.kubernetes.io
Adding repository.
Press [ENTER] to continue or Ctrl-c to cancel.
Adding deb entry to /etc/apt/sources.list.d/archive_uri-http_apt_kubernetes_io-jammy.list
Adding disabled deb-src entry to /etc/apt/sources.list.d/archive_uri-http_apt_kubernetes_io-jammy.list
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [114 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [99.8 kB]
Hit:5 http://security.ubuntu.com/ubuntu jammy-security InRelease
Get:4 https://packages.cloud.google.com/apt kubernetes-xenial InRelease [9383 B]
Get:6 https://packages.cloud.google.com/apt kubernetes-xenial/main amd64 Packages [58.4 kB]
Fetched 282 kB in 1s (519 kB/s)
Reading package lists... Done
W: http://apt.kubernetes.io/dists/kubernetes-xenial/InRelease: Key is stored in legacy trusted.gpg keyring
 for details.
root@ip-172-31-93-67:~#
```

Step 9: Install Kubeadm

```
root@ip-172-31-93-67:~# sudo apt-get install kubeadm kubelet kubectl
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  conntrack cri-tools ebtables kubernetes-cni socat
The following NEW packages will be installed:
  conntrack cri-tools ebtables kubeadm kubectl kubelet kubernetes-cni socat
0 upgraded, 8 newly installed, 0 to remove and 78 not upgraded.
Need to get 75.9 MB of archives.
After this operation, 310 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 conntrack amd64 1:1.4.6-2build2 [33.5 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 ebtables amd64 2.0.11-4build2 [84.9 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 socat amd64 1.7.4.1-3ubuntu4 [349 kB]
Get:4 https://packages.cloud.google.com/apt kubernetes-xenial/main amd64 cri-tools amd64 1.24.2-00 [12.3 MB]
Get:5 https://packages.cloud.google.com/apt kubernetes-xenial/main amd64 kubernetes-cni amd64 0.8.7-00 [25.0 MB]
Get:6 https://packages.cloud.google.com/apt kubernetes-xenial/main amd64 kubelet amd64 1.25.0-00 [19.5 MB]
Get:7 https://packages.cloud.google.com/apt kubernetes-xenial/main amd64 kubectl amd64 1.25.0-00 [9500 kB]
Get:8 https://packages.cloud.google.com/apt kubernetes-xenial/main amd64 kubeadm amd64 1.25.0-00 [9213 kB]
Fetched 75.9 MB in 2s (46.8 MB/s)
Selecting previously unselected package conntrack.
(Reading database ... 63966 files and directories currently installed.)
```

Step 10: Set on hold

```
root@ip-172-31-93-67:~# sudo apt-mark hold kubeadm kubelet kubectl
kubeadm set on hold.
kubelet set on hold.
kubectl set on hold.
root@ip-172-31-93-67:~#
```

Step 11: Check kubeadm version

```
root@ip-172-31-93-67:~# kubeadm version
kubeadm version: &version.Info{Major:"1", Minor:"25", GitVersion:"v1.25.0", GitCommit:"
a866cbe2e5bbaa01cfd5e969aa3e033f3282a8a2", GitTreeState:"clean", BuildDate:"2022-08-23T
17:43:25Z", GoVersion:"go1.19", Compiler:"gc", Platform:"linux/amd64"}
root@ip-172-31-93-67:~#
```