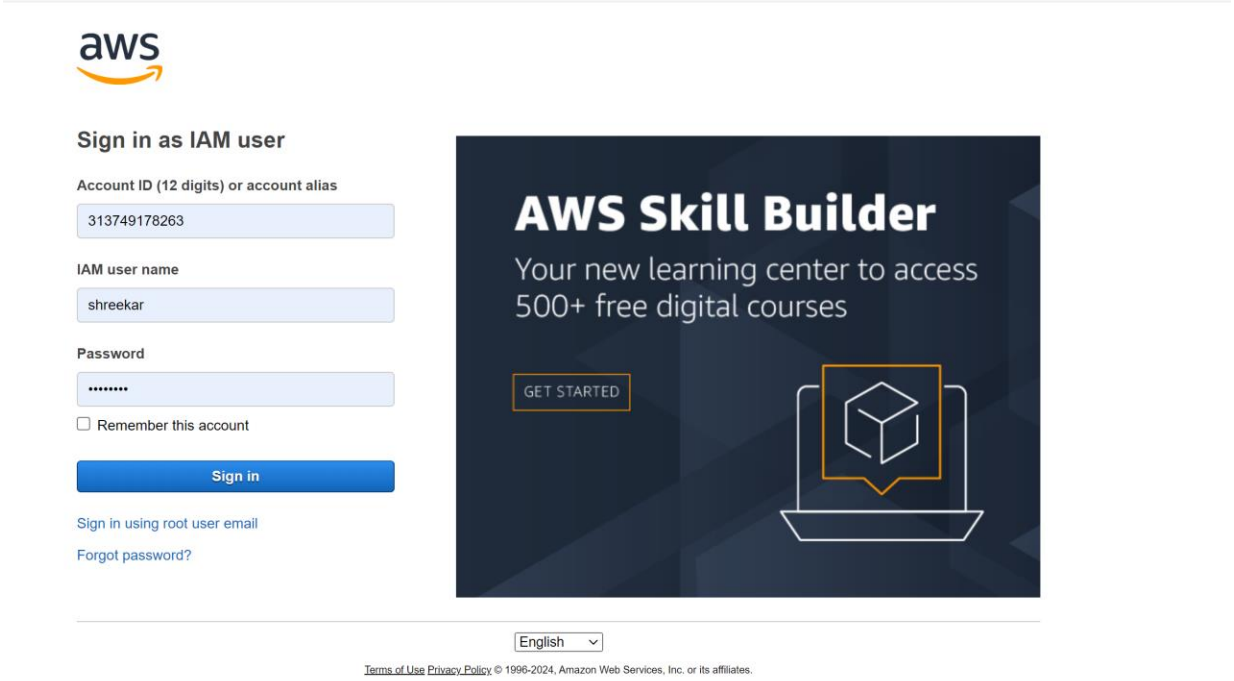
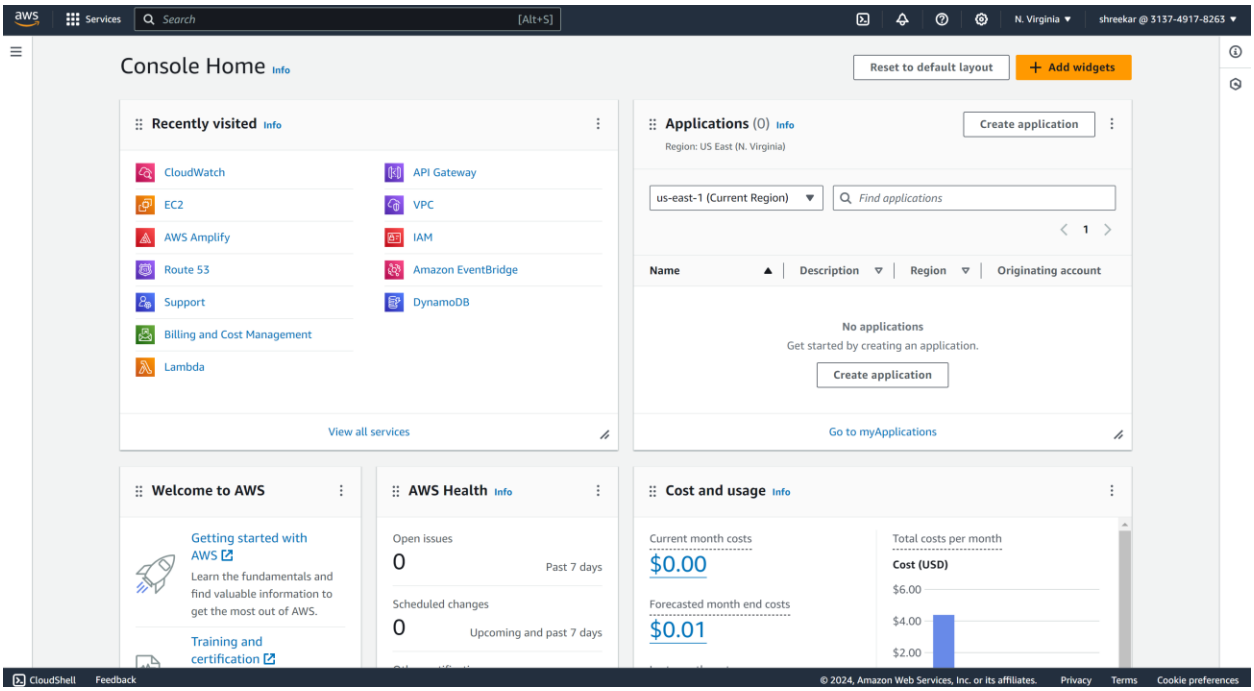
Playing with Amazon's EC2 - Shreekar Kolanu(017406493)

Assignment – 1

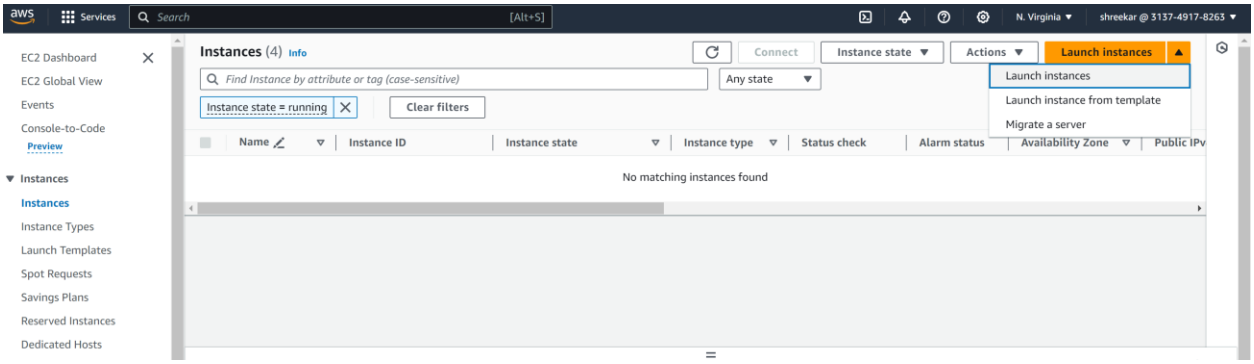
Step -1 : Login to AWS with IAM user always.



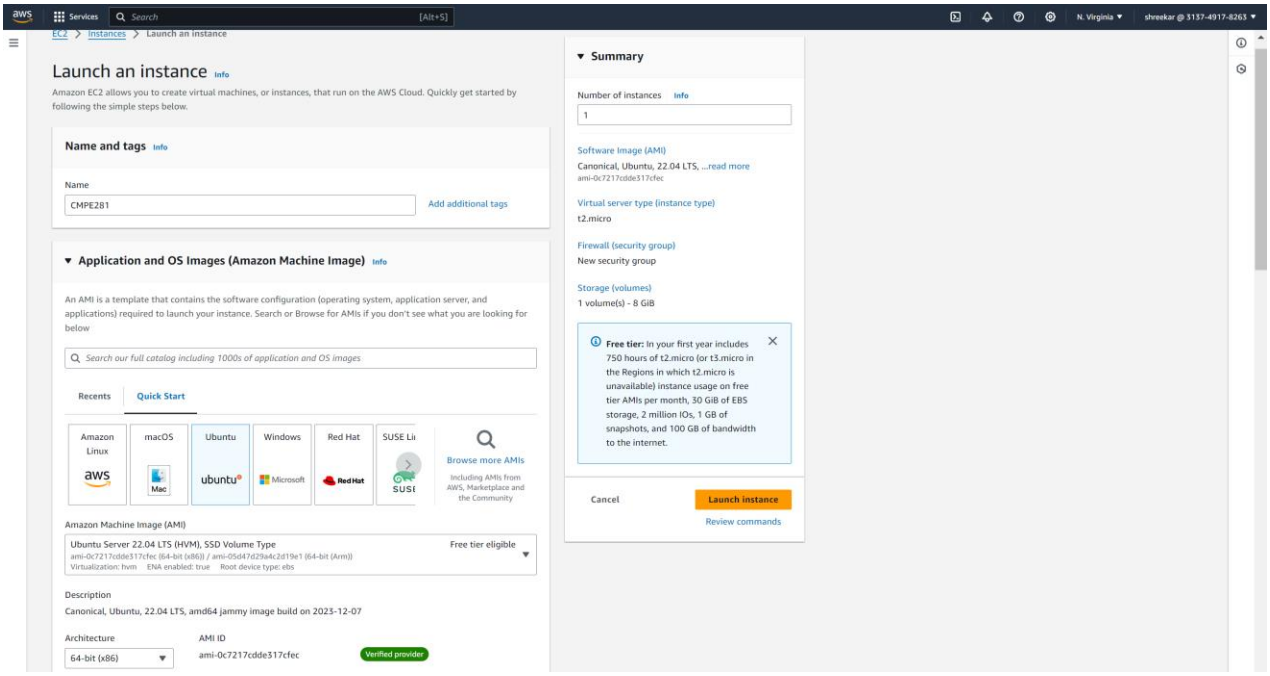


Logged in to the AWS account
From the Dashboard visit EC2

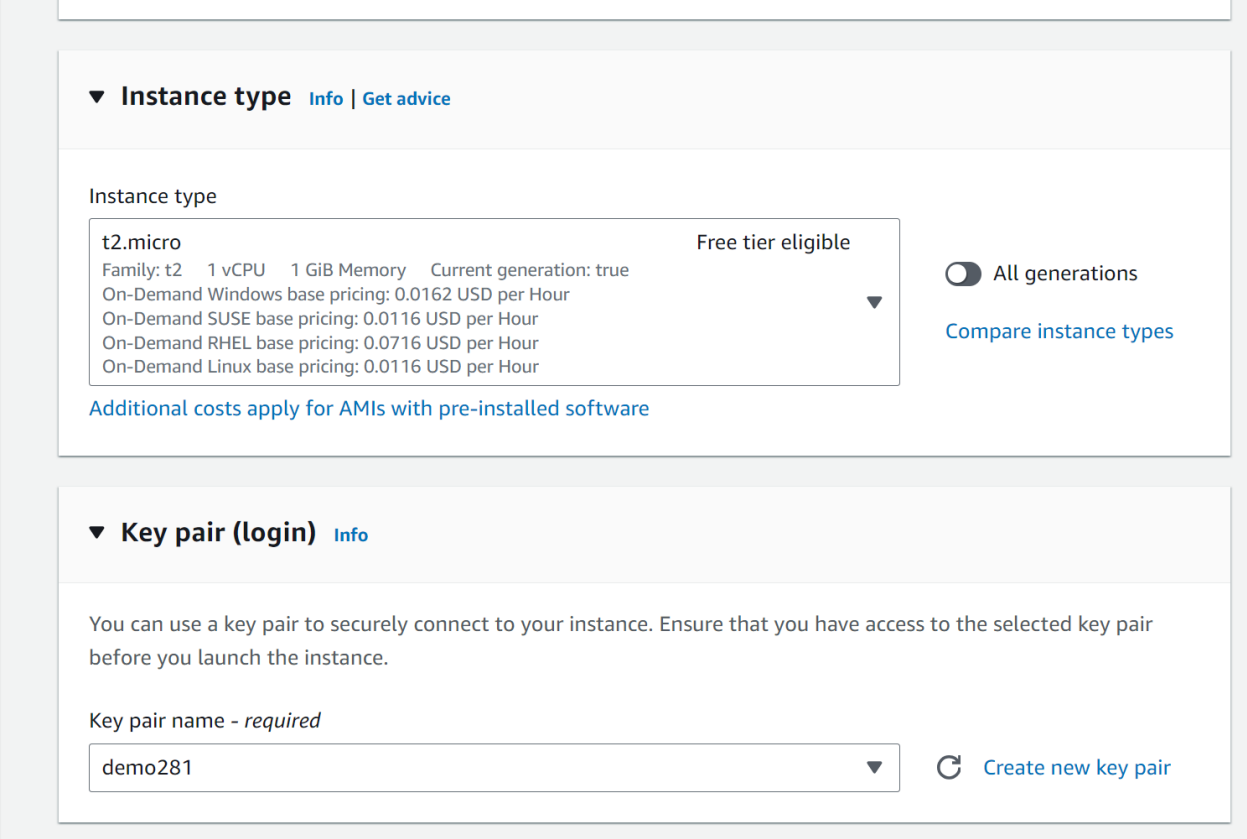
Step – 2: We should launch an EC2 Instance



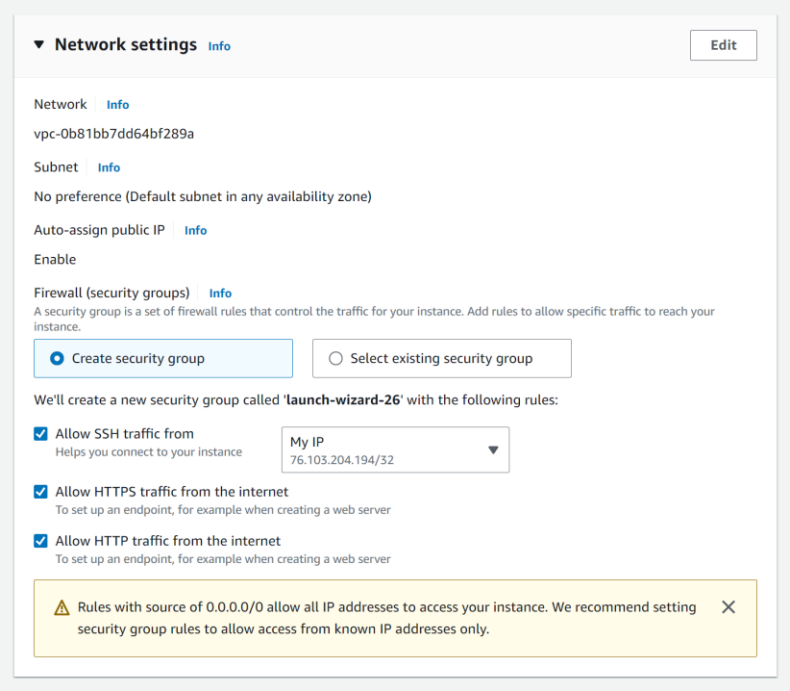
I have named my ec2 instance as CMPE 281 and selected Ubuntu as my AMI image.



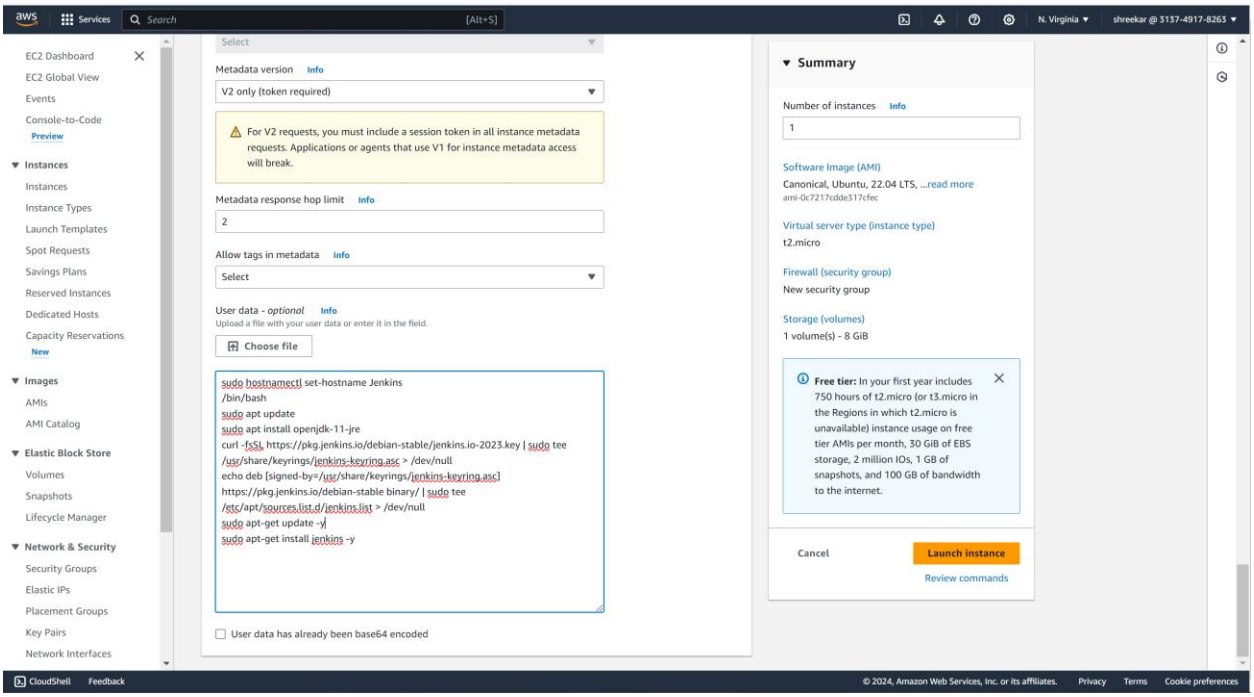
I have selected my instance as t2micro (free tier) and have created a key pair already named demo281.



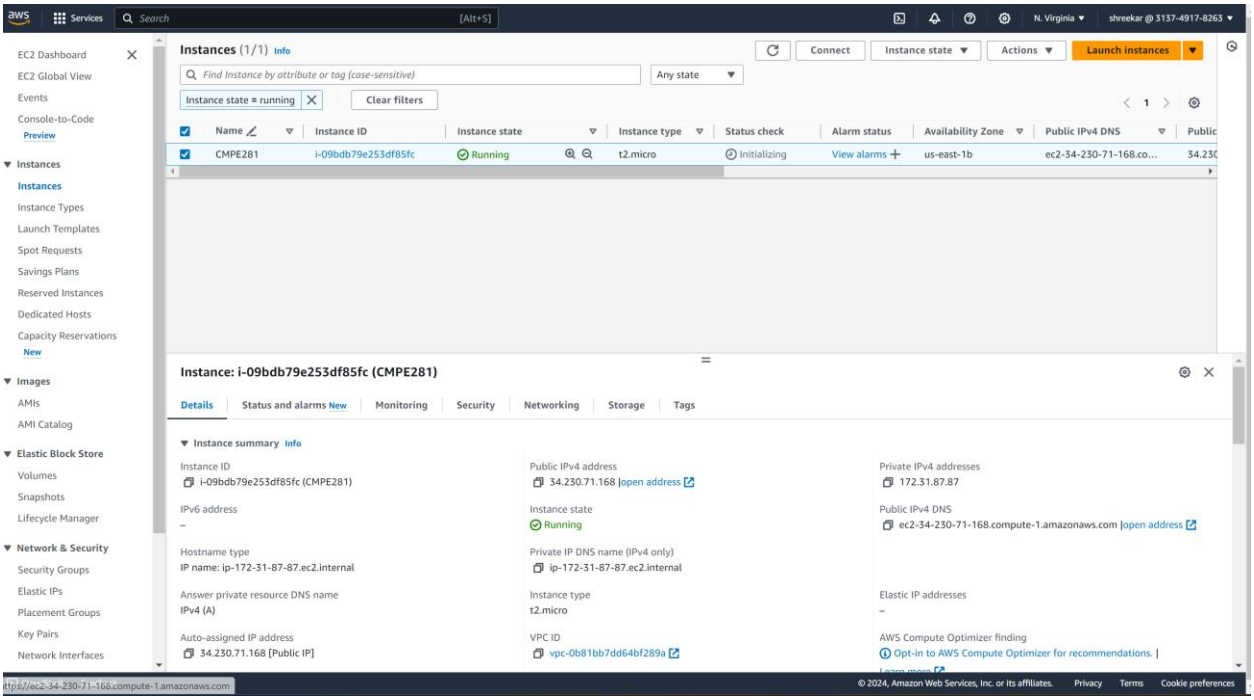
I have configured a new security group and enabled all traffic but limited to my IP address.



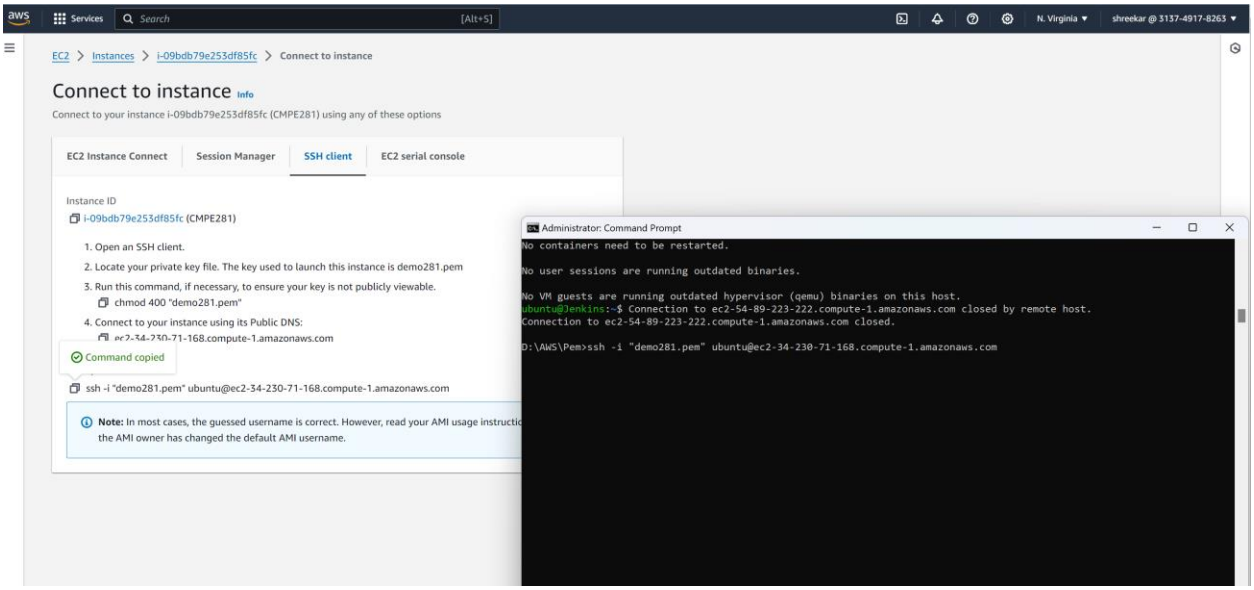
Add the Jenkins script to run on the Ubuntu server



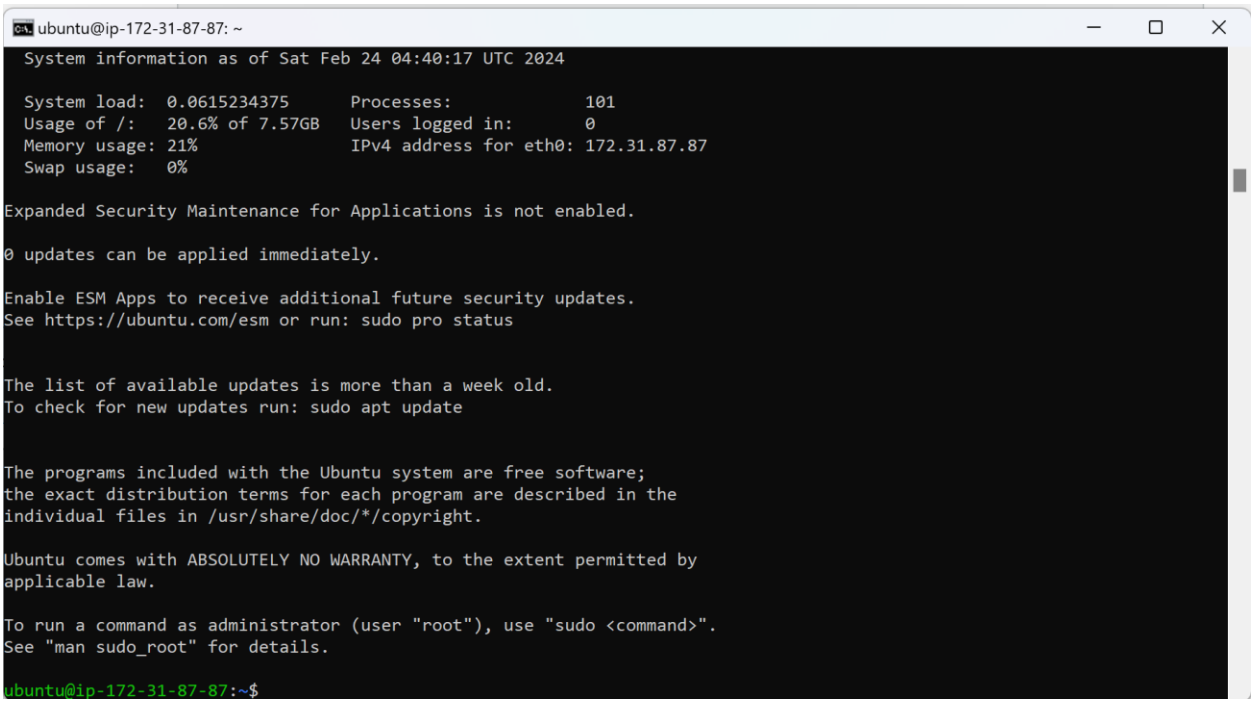
Now the instance is ready and running



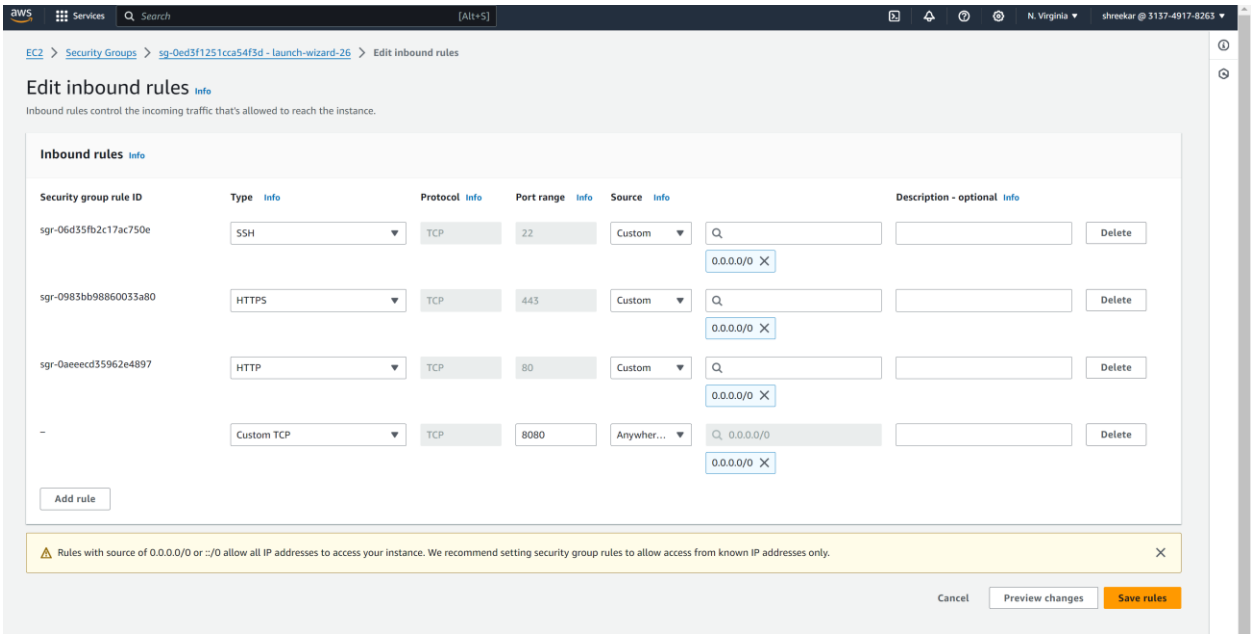
Now we are accessing the ubuntu ec2 instance via cmd with the key pair



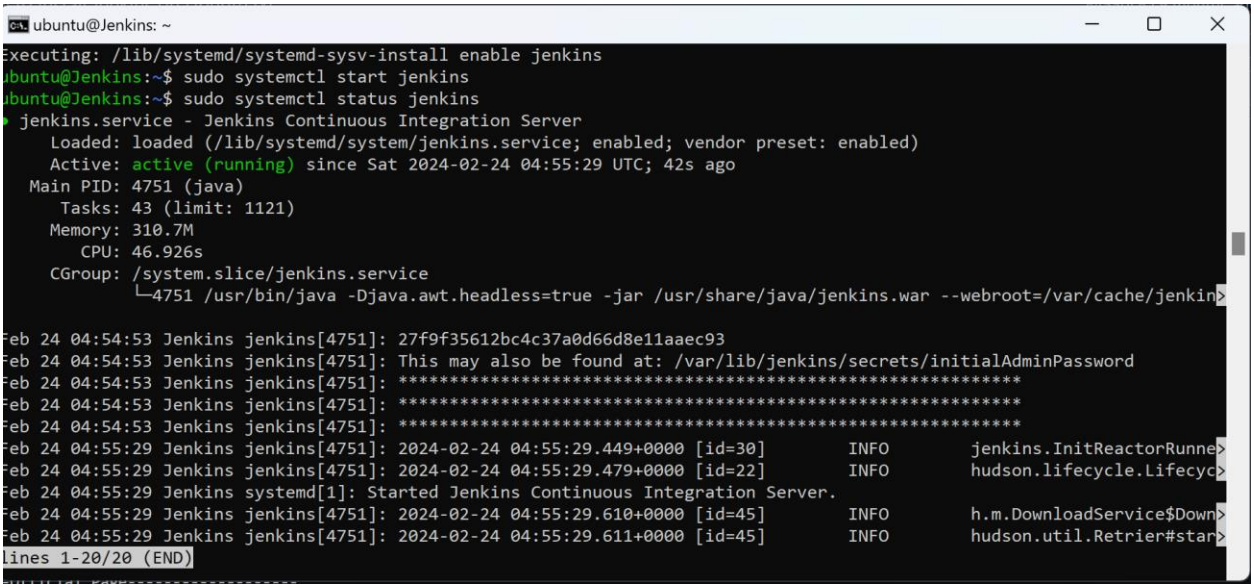
Now we have accessed the ubutu ec2 instance



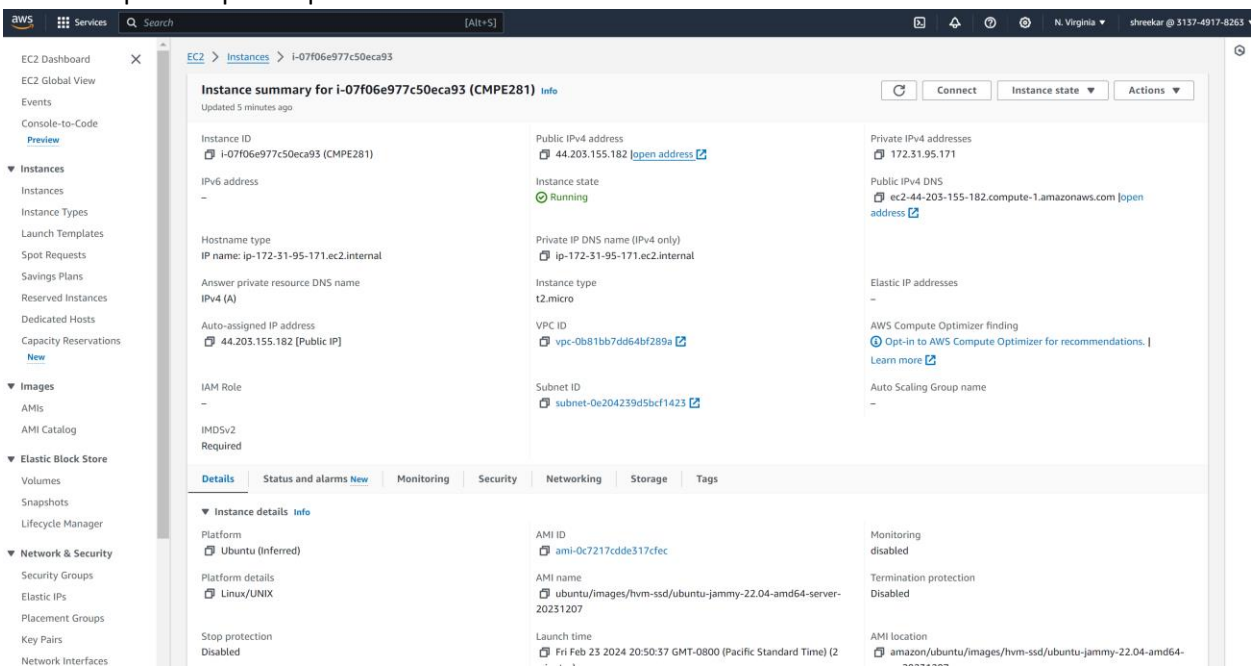
Exposing the default port on 8080 to run Jenkins on our instance



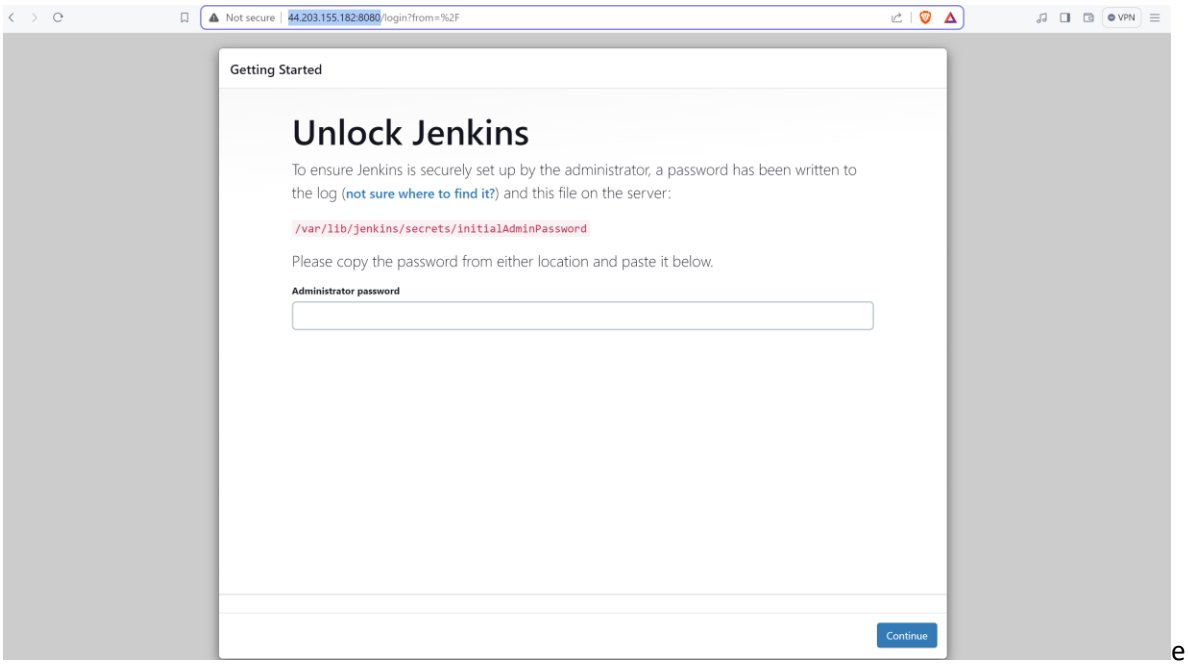
We now enable Jenkins, start the service and fetch the status.



We now open the public ip address

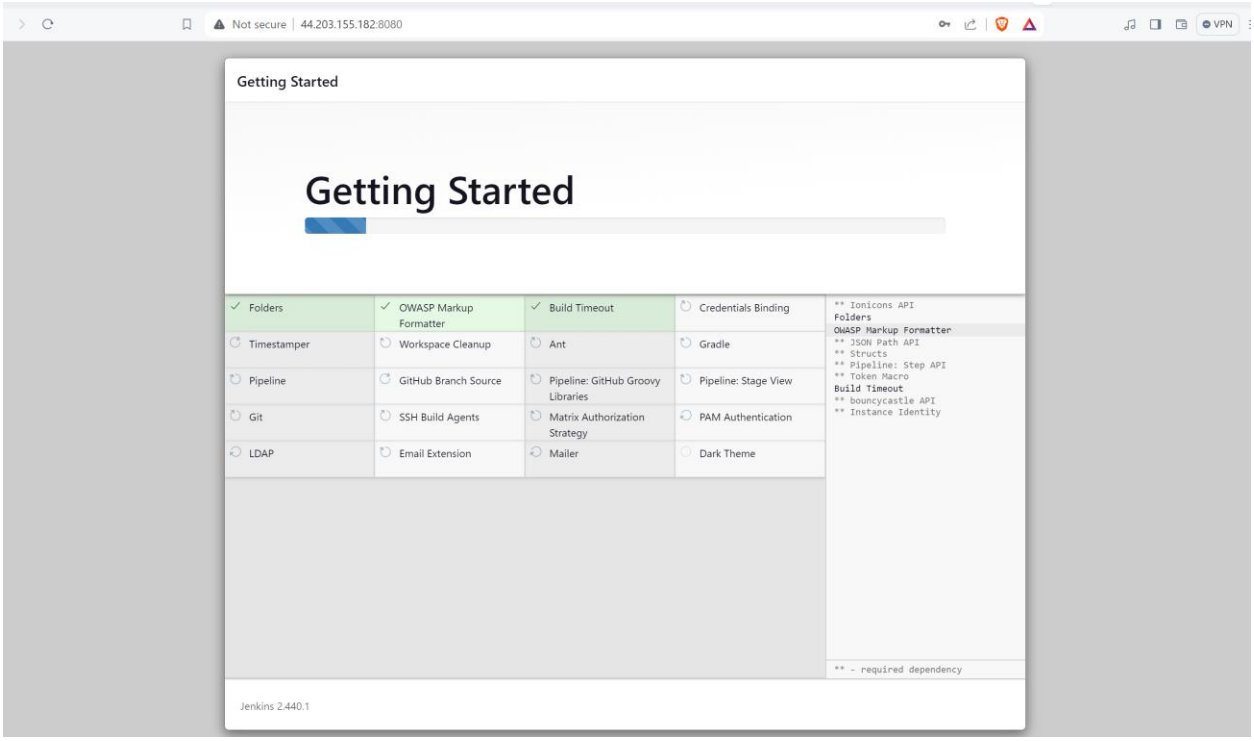


Now we access the ip address with port 8080

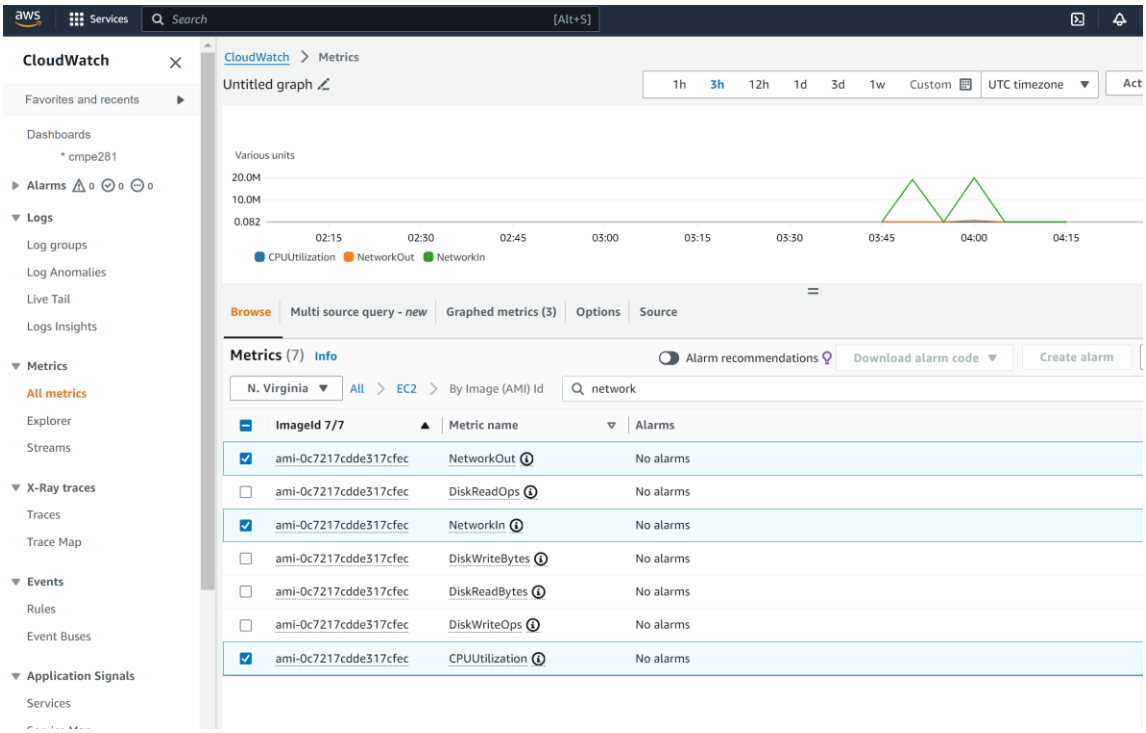


e

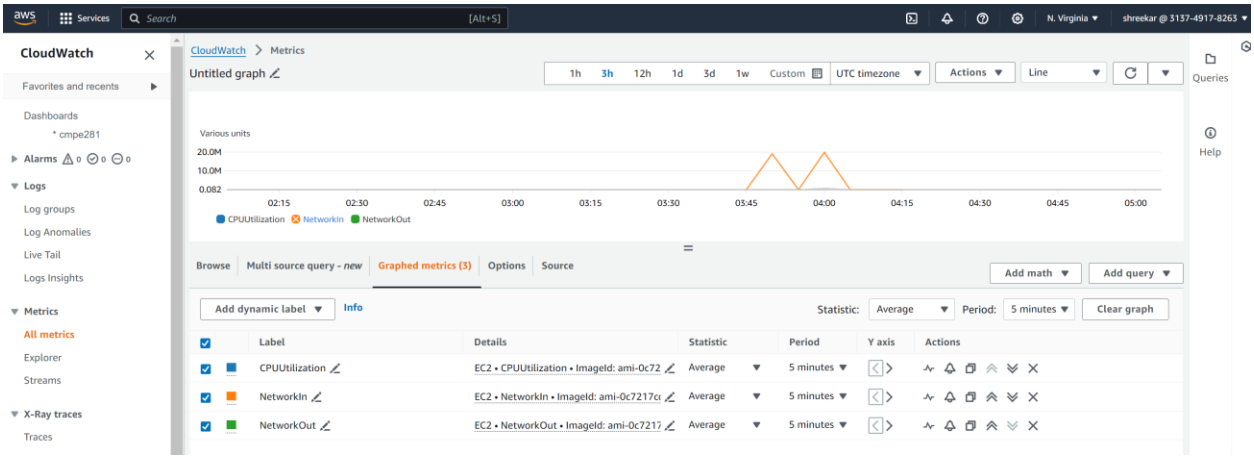
Jenkins is exposed to 8080 port. http://44.203.155.182:8080



Now we add cloudwatch metrics – Network out, Network In and CPU utilization to observe and monitor our instance.



As of now we don’t see and cpu utilization



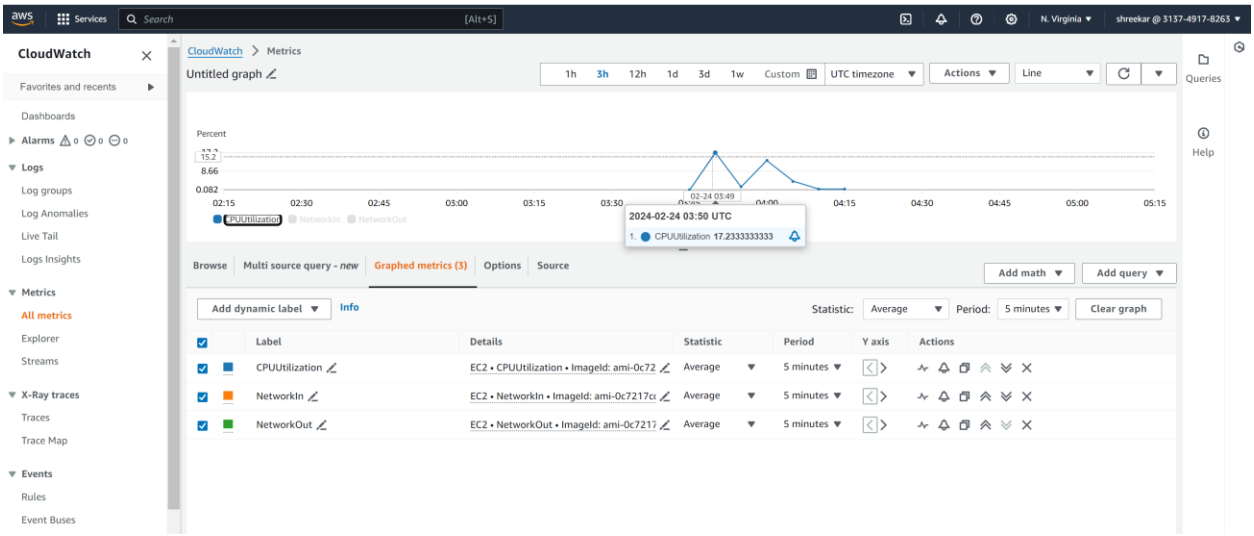
We have downloaded the pem key in the location and used the path in the directory and connected to our instance via ssh/

```
D:\>cd D:\AWS\Pem

D:\AWS\Pem>ssh -i "demo281.pem" ubuntu@ec2-44-203-155-182.compute-1.amazonaws.com
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-1017-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Sat Feb 24 05:14:49 UTC 2024

  System load:  0.0               Processes:             100
  Usage of /:   31.5% of 7.57GB   Users logged in:       0
  Memory usage: 52%               IPv4 address for eth0: 172.31.95.171
  Swap usage:   0%


Expanded Security Maintenance for Applications is not enabled.

78 updates can be applied immediately.
43 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


Last login: Sat Feb 24 04:51:27 2024 from 76.103.204.194
ubuntu@Jenkins:~$
```

Now we increase the load on the server by installing the package stress.

```
ubuntu@Jenkins:~$ sudo apt install stress
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  stress
0 upgraded, 1 newly installed, 0 to remove and 76 not upgraded.
Need to get 18.4 kB of archives.
After this operation, 52.2 kB of additional disk space will be used.
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 stress amd64 1.0.5-1 [18.4 kB]
Fetched 18.4 kB in 0s (1083 kB/s)
Selecting previously unselected package stress.
(Reading database ... 66488 files and directories currently installed.)
Preparing to unpack .../stress_1.0.5-1_amd64.deb ...
Unpacking stress (1.0.5-1) ...
Setting up stress (1.0.5-1) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
```

Now we monitor the logs on cloud watch and check the CPU utilization as we can see it has increased to 17%



Now we can see that the CPU utilization to less that 1%