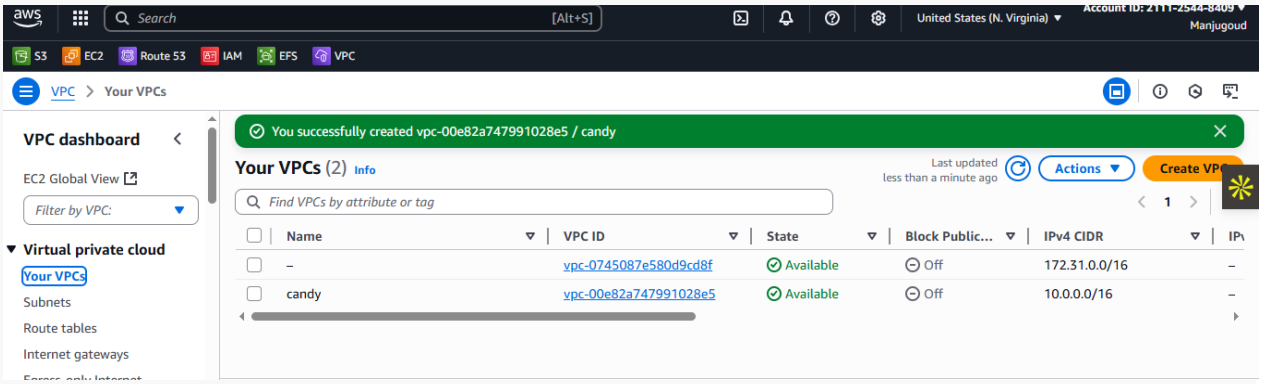
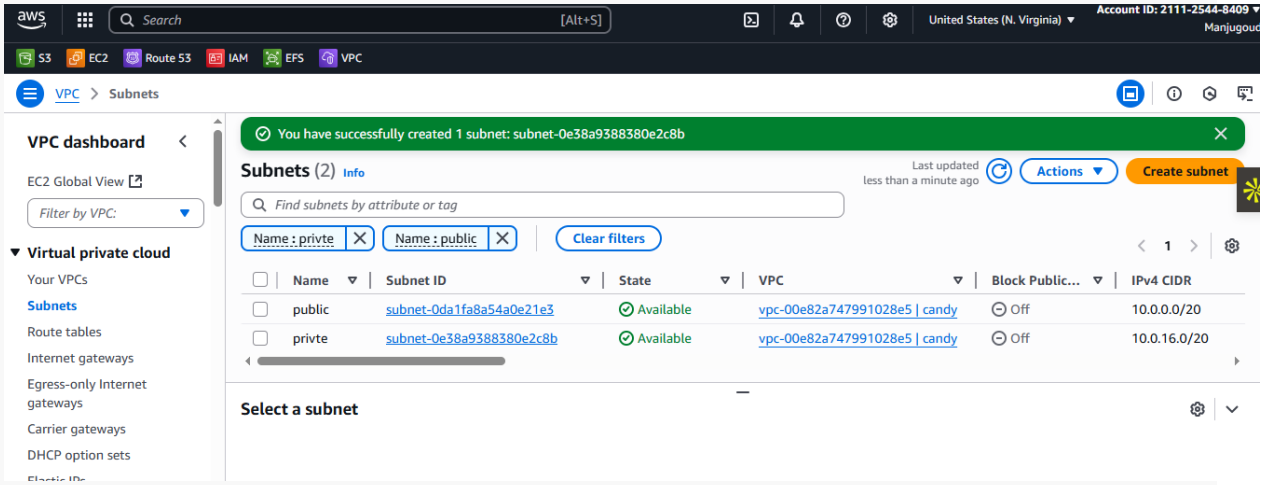
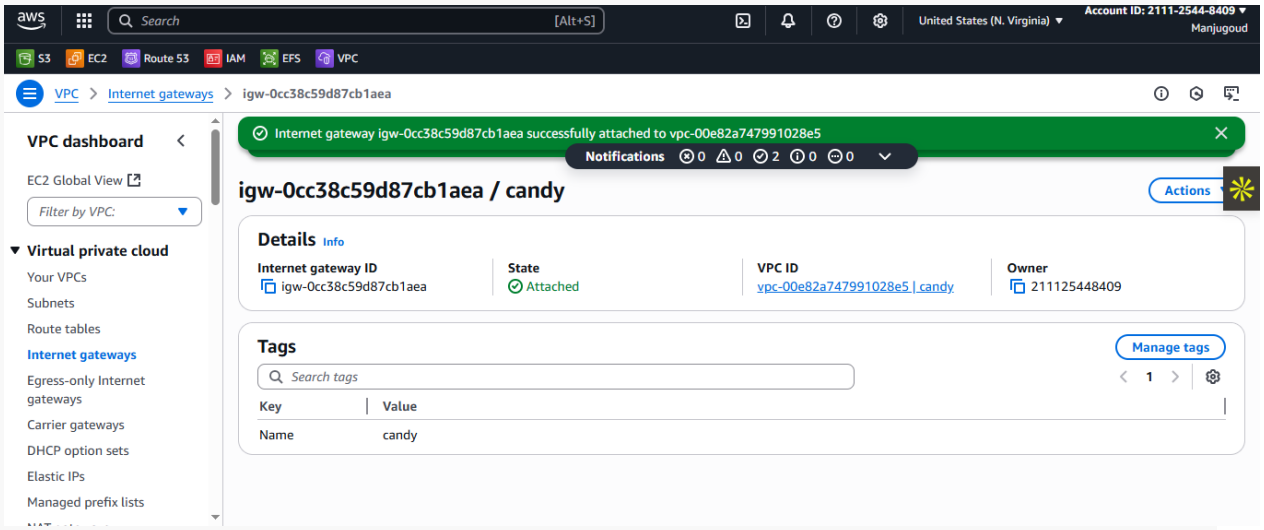
1. Create one VPC in N.virginia region.



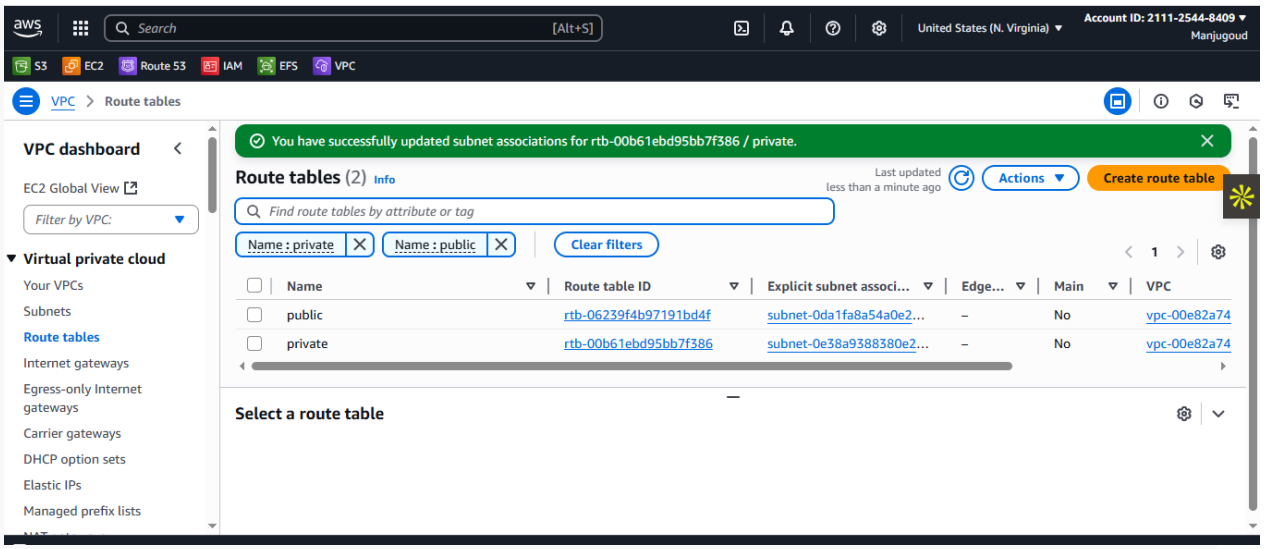
2. Create two subnets. One Public subnet and one private subnet.



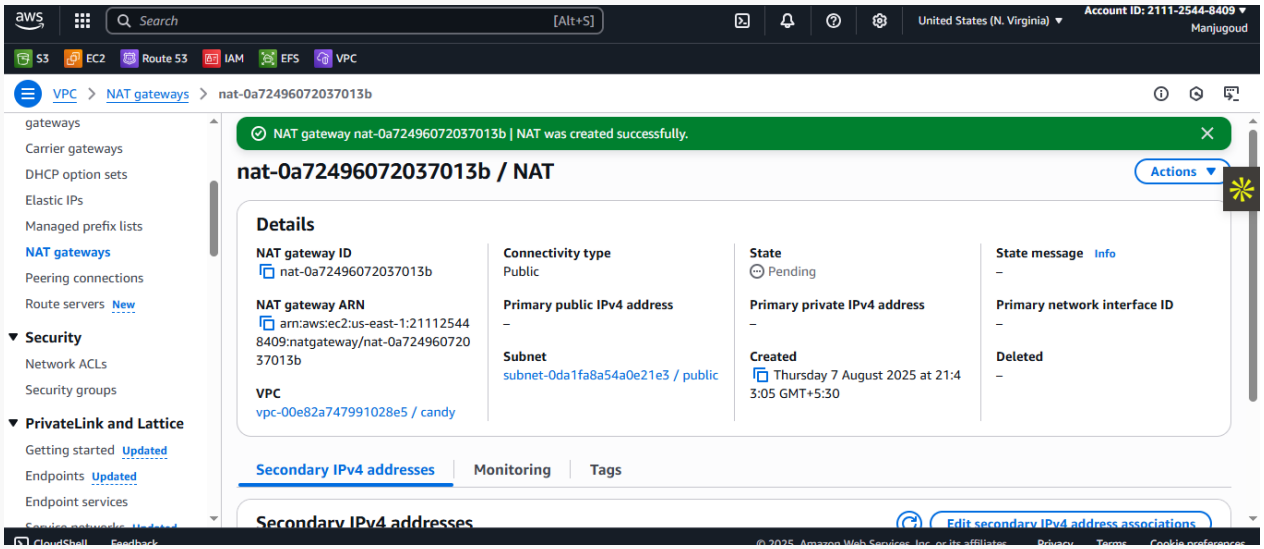
3. Provide the IGW to the vpc.

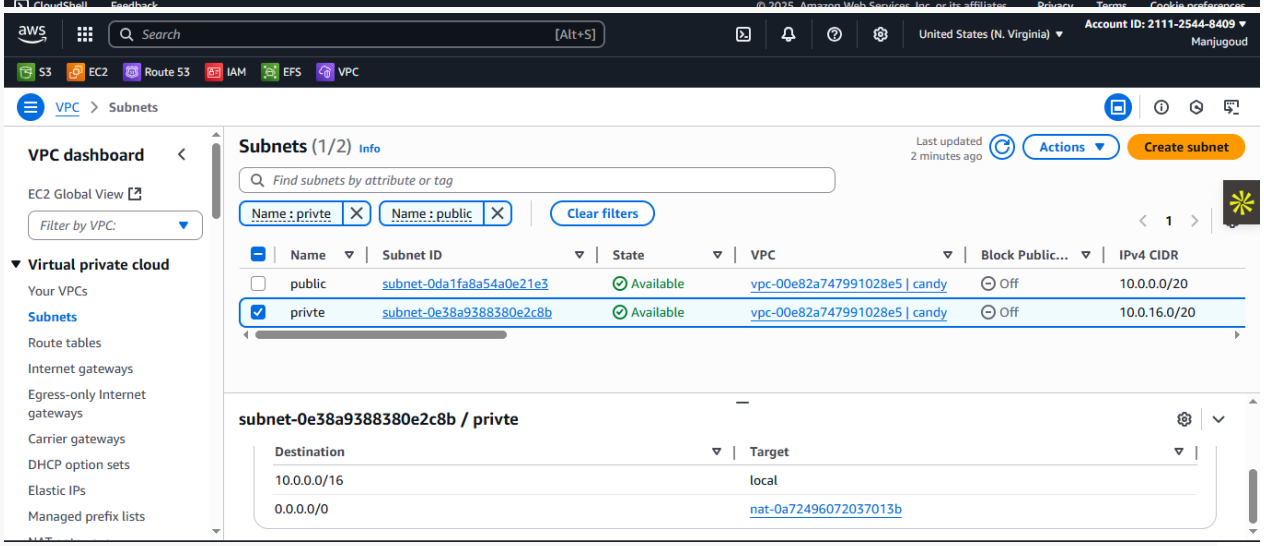


4. Create One public RT and one private RT.

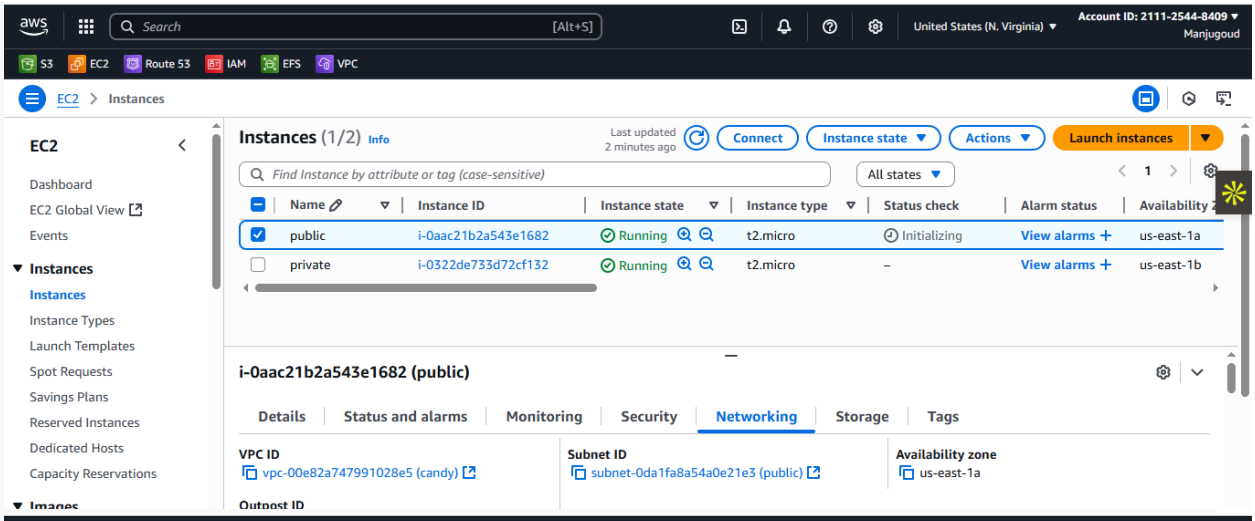


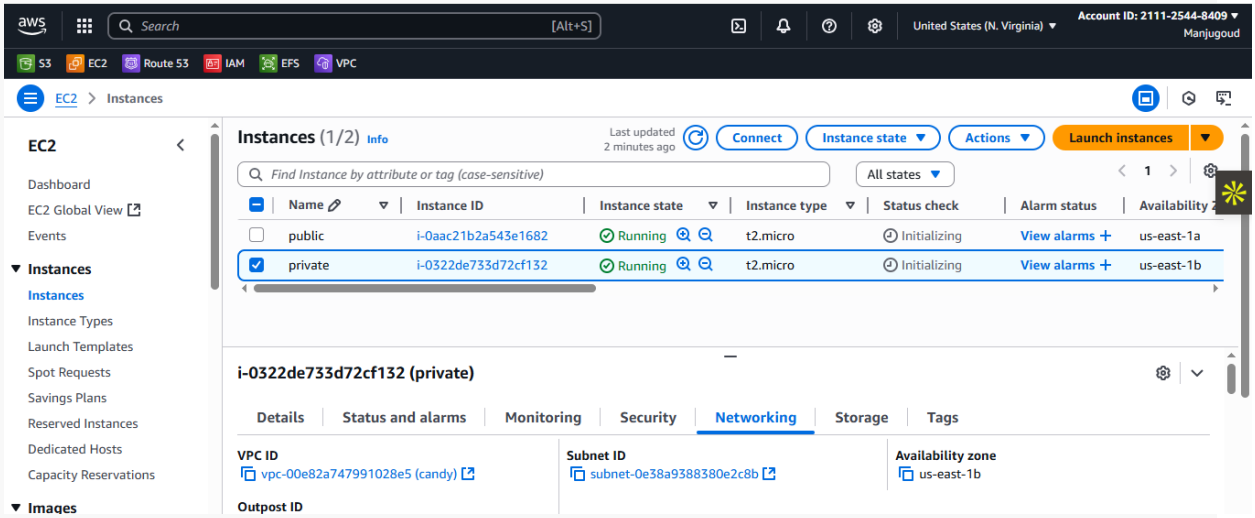
5. Deploy NAT gateway on public subnet and attach the NAT gatewat to private subnet.





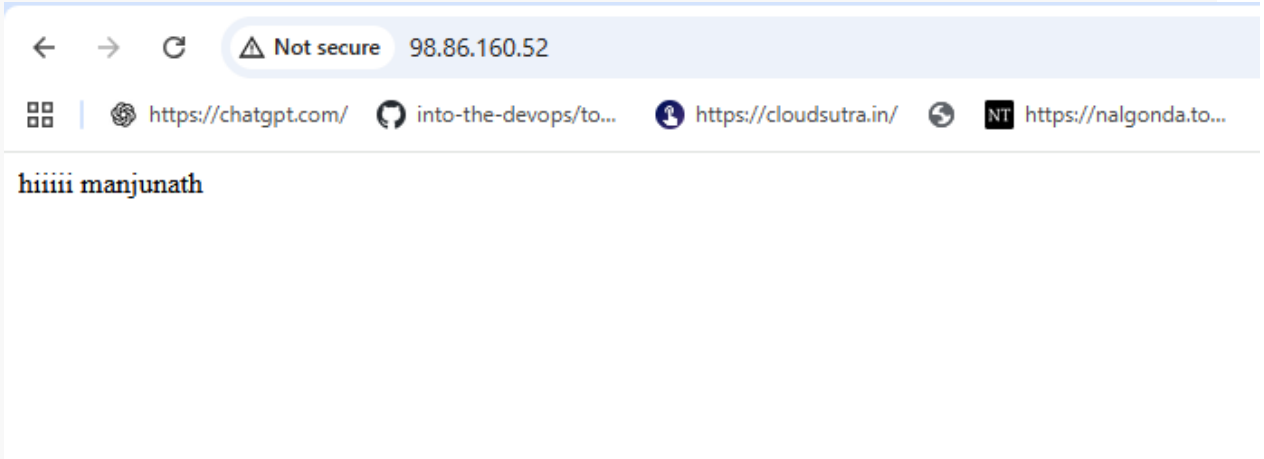
6. Create Two instances, one in public subnet and one in private subnet.





7. Deploy Apache server on both the ec2 instances with sample index.html file.

Public-server-

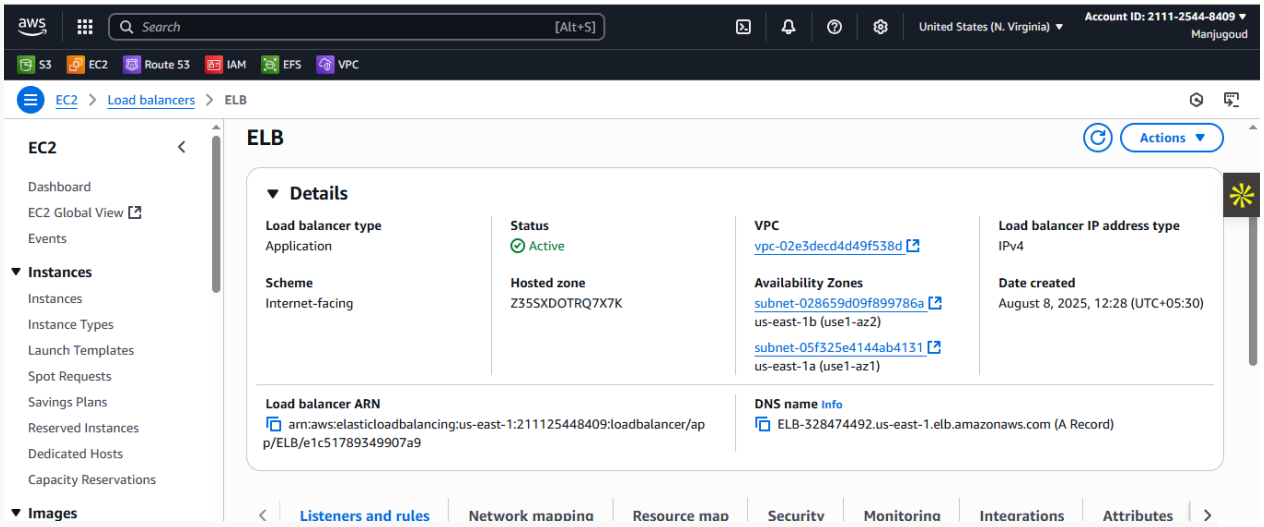


Private-server

```
[root@ip-10-0-5-238 ~]# vi candy.pem
[root@ip-10-0-5-238 ~]# chmod 700 candy.pem
[root@ip-10-0-5-238 ~]# ssh -i "candy.pem" ec2-user@10.0.20.242
   ,     #_
   ~\_  ####_        Amazon Linux 2023
  ~~  \_#####\
  ~~     \###|
  ~~       \#/ ___   https://aws.amazon.com/linux/amazon-linux-2023
   ~~       V~' '->
    ~~~         /
      ~~._.   _/
         _/ _/
       _/m/'
[ec2-user@ip-10-0-20-242 ~]$ yum update -y
Error: This command has to be run with superuser privileges (under the root user on most systems).
[ec2-user@ip-10-0-20-242 ~]$ sudo su
[root@ip-10-0-20-242 ec2-user]# yum update -y
Amazon Linux 2023 Kernel Livepatch repository
Dependencies resolved.
Nothing to do.
Complete!
```

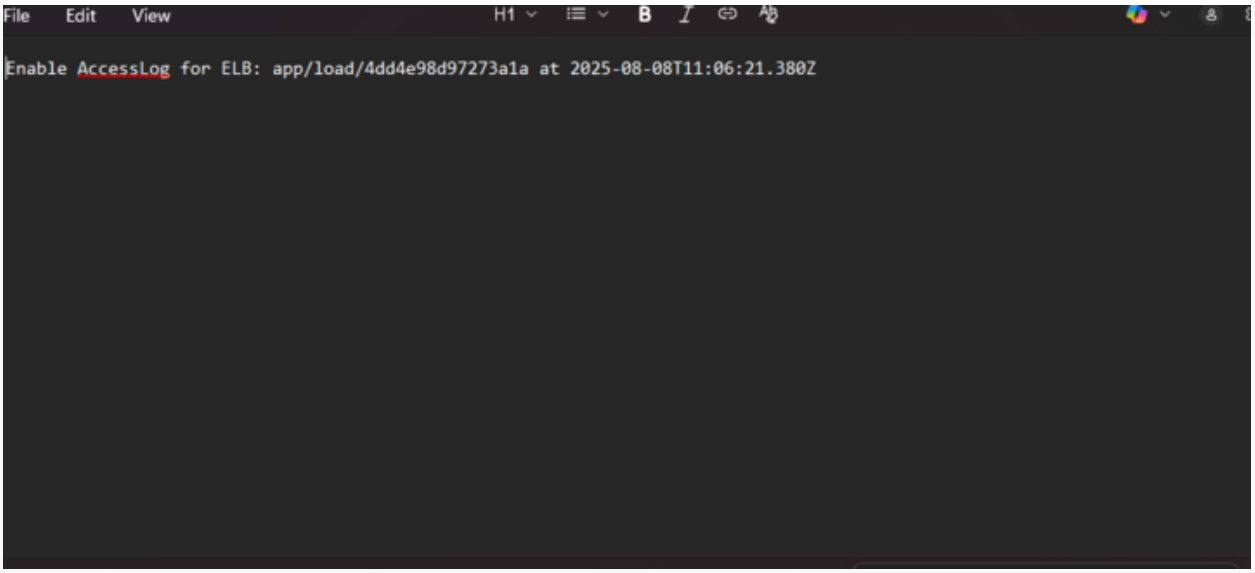
```
     Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; preset: disabled)
     Active: active (running) since Thu 2025-08-07 17:14:16 UTC; 6s ago
       Docs: man:httpd.service(8)
   Main PID: 27567 (httpd)
     Status: "Started, listening on: port 80"
      Tasks: 177 (limit: 1111)
     Memory: 13.0M
        CPU: 70ms
     CGroup: /system.slice/httpd.service
             ├─27567 /usr/sbin/httpd -DFOREGROUND
             ├─27588 /usr/sbin/httpd -DFOREGROUND
             ├─27589 /usr/sbin/httpd -DFOREGROUND
             ├─27590 /usr/sbin/httpd -DFOREGROUND
             └─27591 /usr/sbin/httpd -DFOREGROUND

Aug 07 17:14:16 ip-10-0-20-242.ec2.internal systemd[1]: Starting httpd.service - The Apache HTTP Server...
Aug 07 17:14:16 ip-10-0-20-242.ec2.internal systemd[1]: Started httpd.service - The Apache HTTP Server.
Aug 07 17:14:16 ip-10-0-20-242.ec2.internal httpd[27567]: Server configured, listening on: port 80
[root@ip-10-0-20-242 html]# curl 10.0.20.242:80
berlin,helsinki,monaco,dubai,bali
[root@ip-10-0-20-242 html]#
```

8. Create one application load balancer and attach the load balancer to both the ec2 instances.

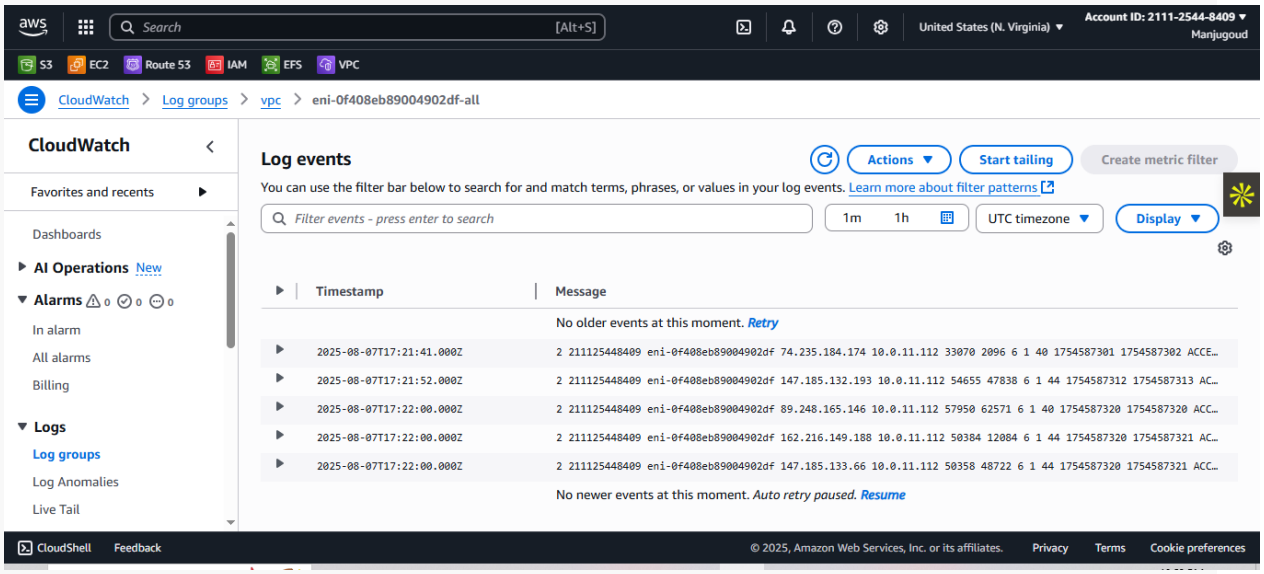


9.

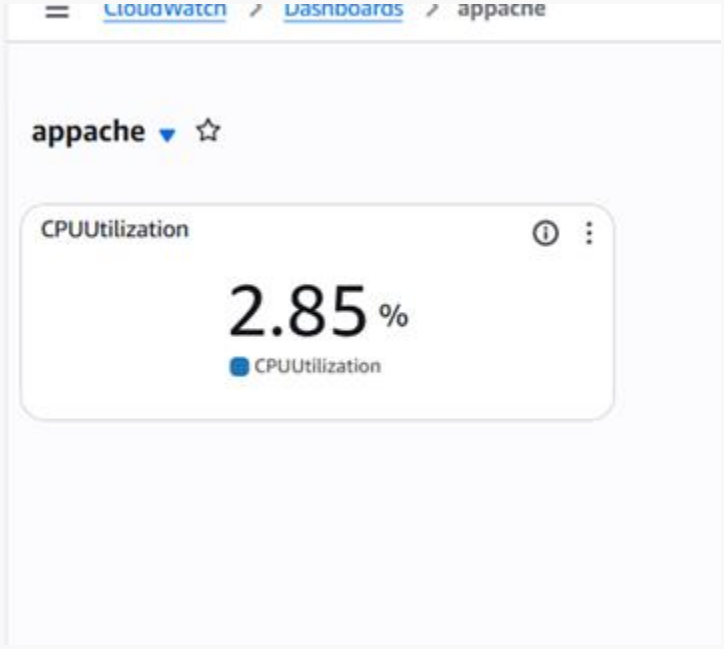
10. Store Application load balancer logs to s3.



11. Store the VPC flow logs to CloudWatch group.

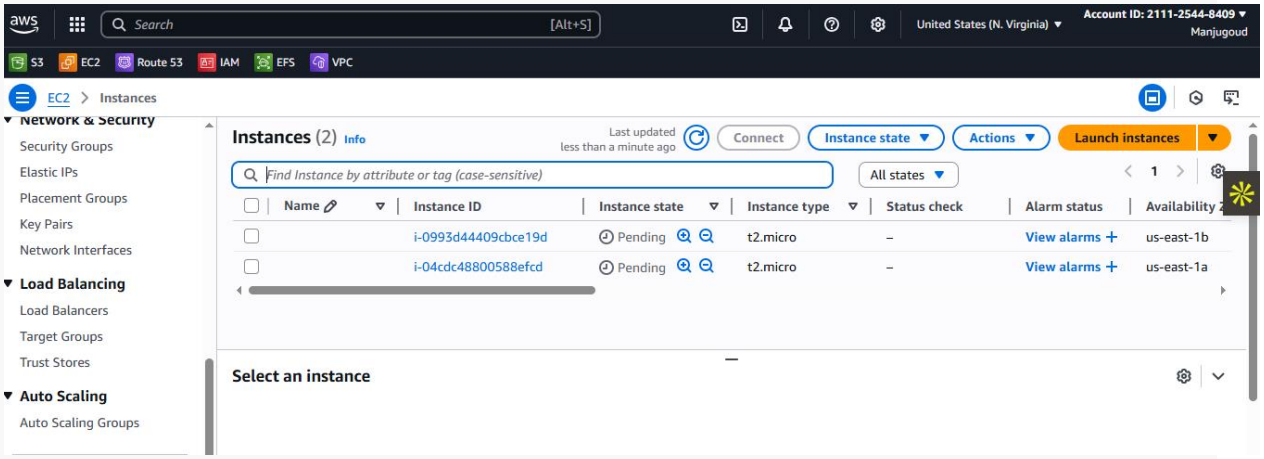


12. Create Monitoring Dashboards to monitor CPU utilization and to monitor Apache service.

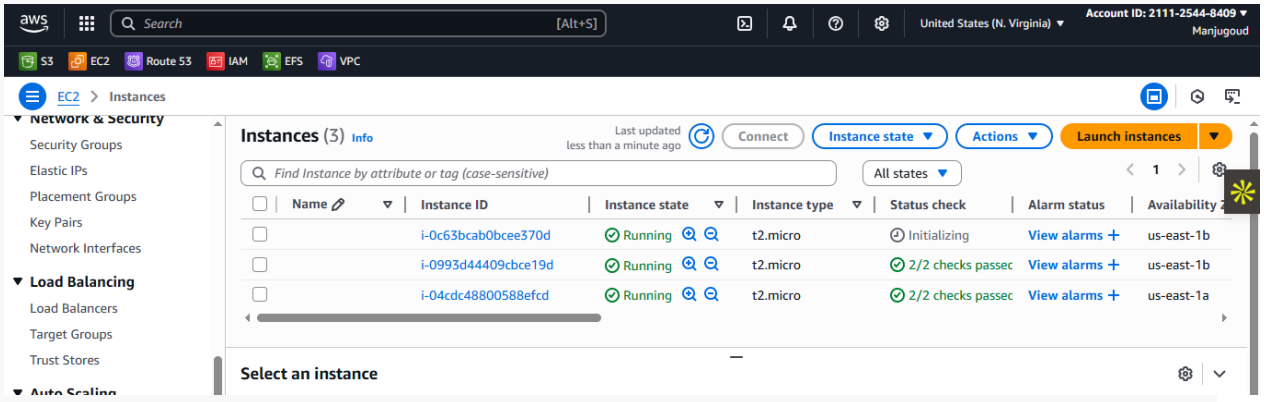


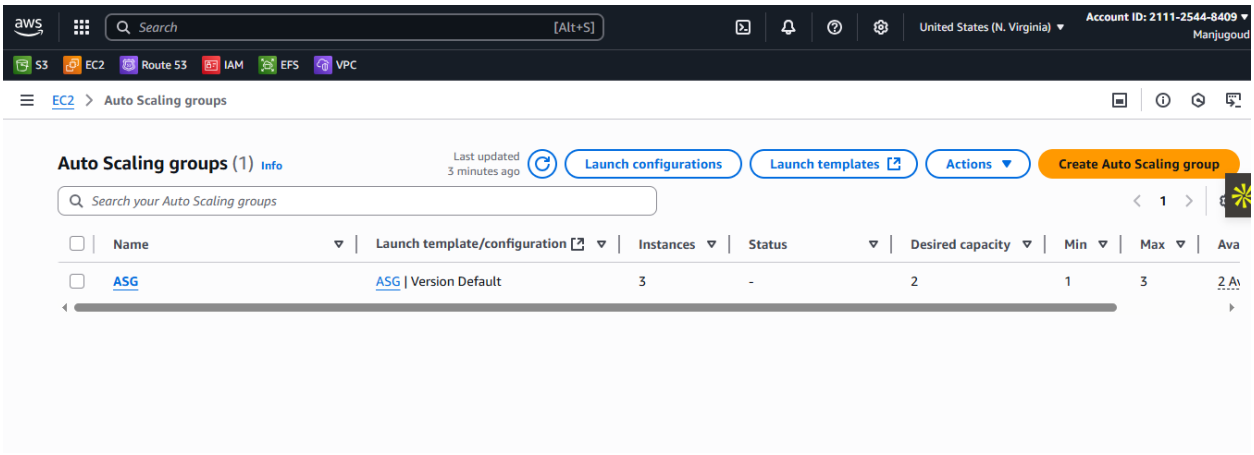
13. CPU utilizations more than 70% then it should triggered Autoscaling and launch new instance.

14.



15.




aws
Search
[Alt+S]
United States (N. Virginia)
Account ID: 2111-2544-8409
Manjugoud
S3
EC2
Route 53
IAM
EFS
VPC
EC2 > Auto Scaling groups
Auto Scaling groups (1) Info
Last updated
3 minutes ago
Launch configurations
Launch templates
Actions
Create Auto Scaling group
Search your Auto Scaling groups
1
Name
Launch template/configuration
Instances
Status
Desired capacity
Min
Max
Ava
ASG
ASG | Version Default
3
-
2
1
3
2 Av