VPC Peering (19th Sep2024)   Savita-Nalawade

1)Create Two VPC

2) Create Two subnet in VPC001

3) Create Two subnet in VPC002

4)Create Internet Gateway "IGW_VPC001" and attached to VPC001

5) Create Internet Gateway "IGW_VPC002" and attached to VPC002
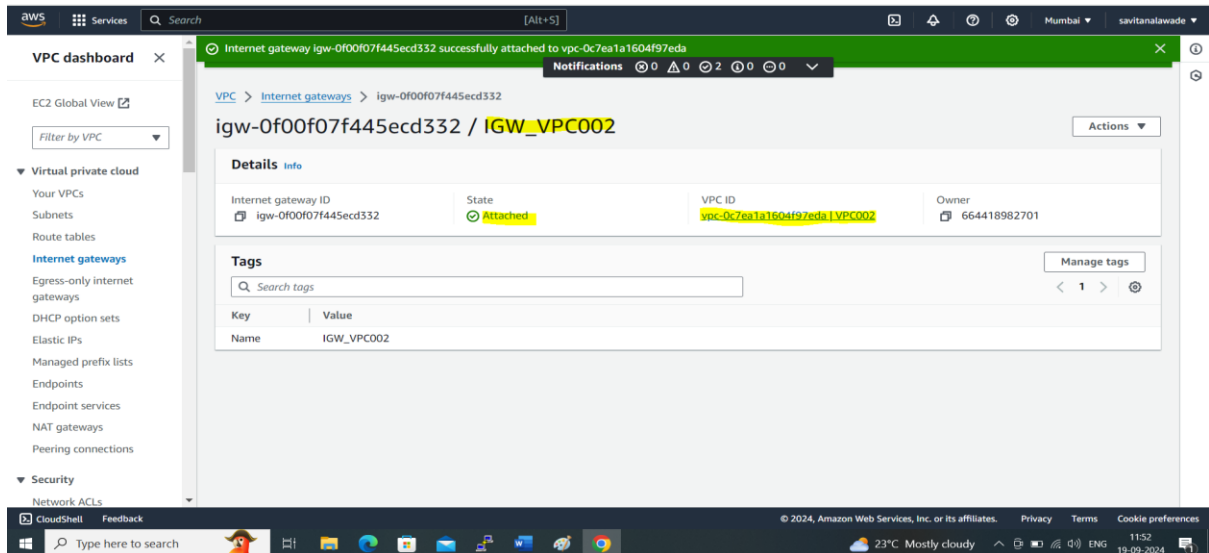
6)Enable Auto-Assign setting for both public subnet
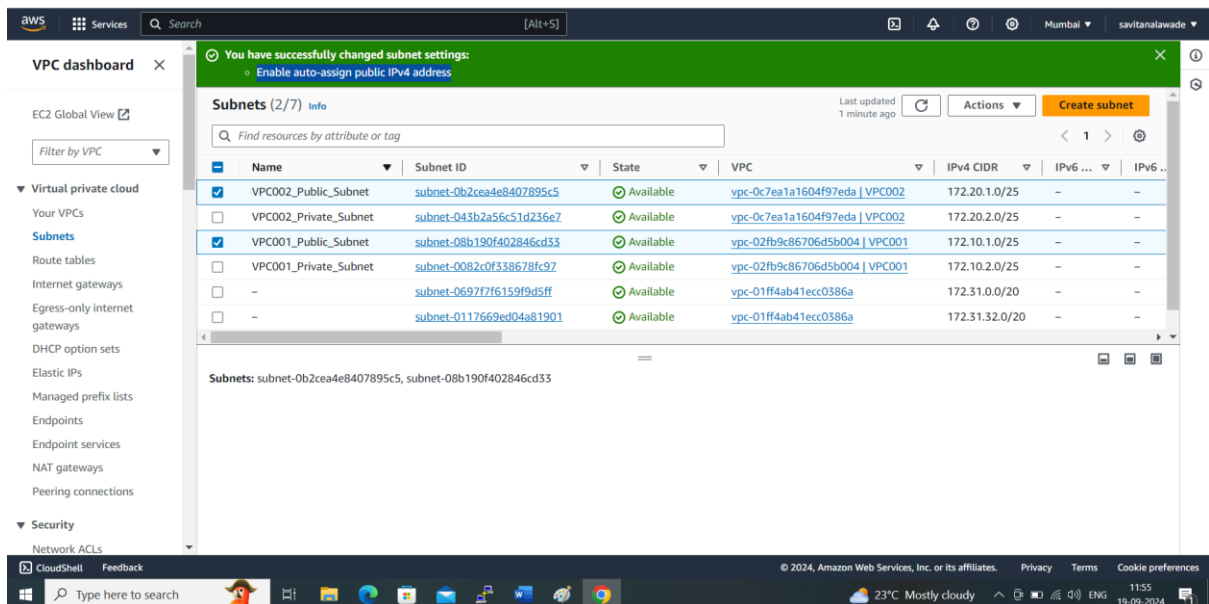
7)Create Route Table in VPC001
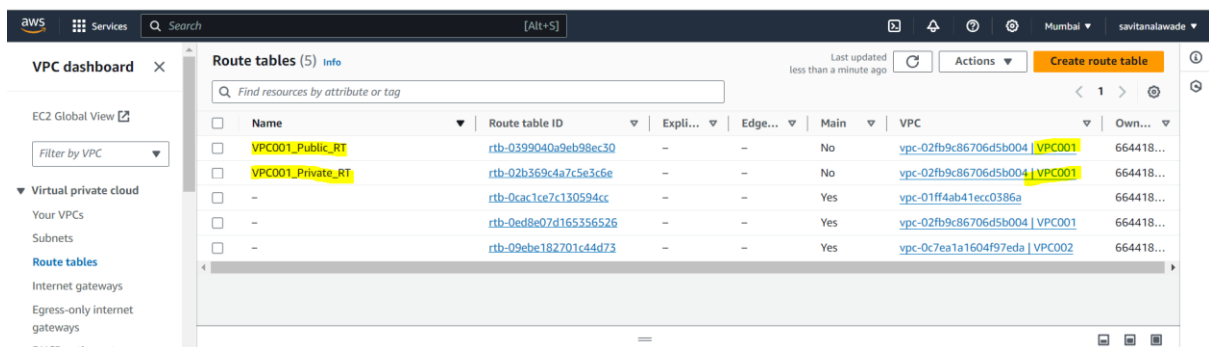
8) Create Route Table in VPC002
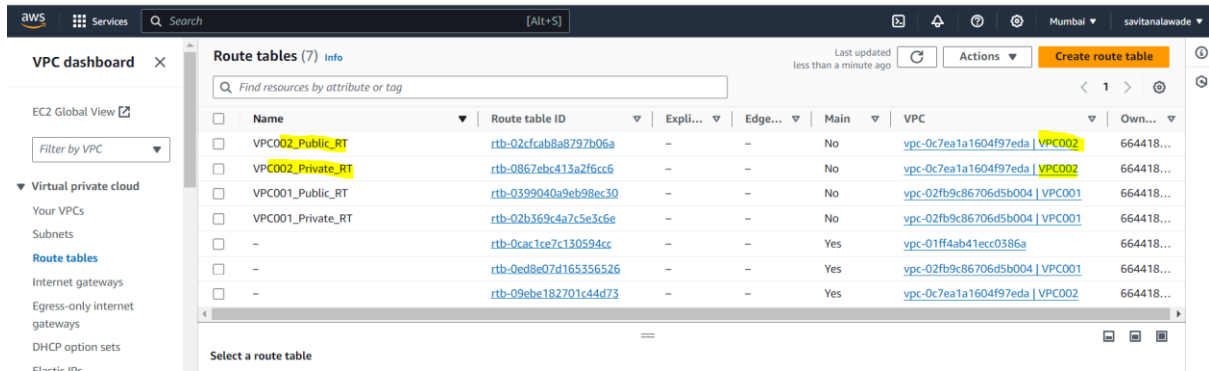
9)Create Two NAT Gateway for "VPC001" & "VPC002"
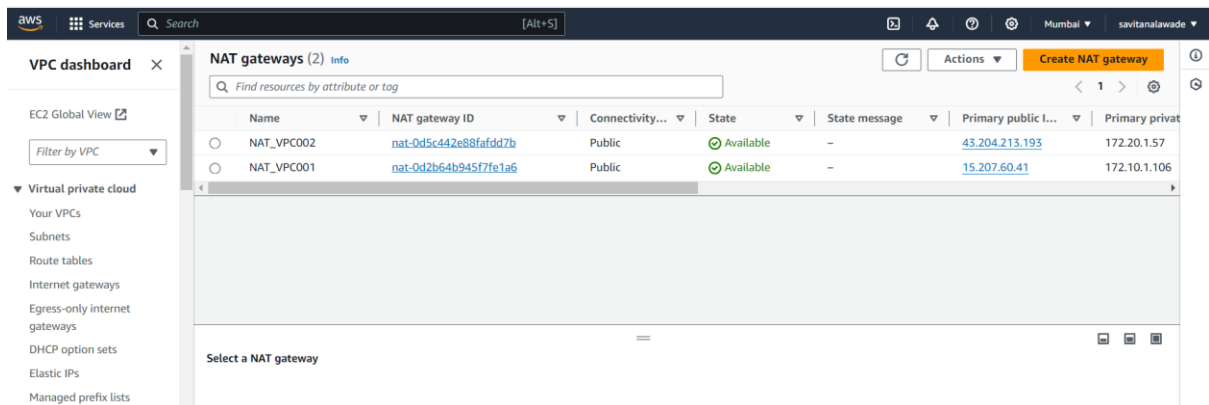
10) **Route Table Settings**

a. VPC001_Public_RT ->Edit Route ->Add Route-> assign 0.0.0.0/0 IP and select Internet Gateway (IGW_VPC001)
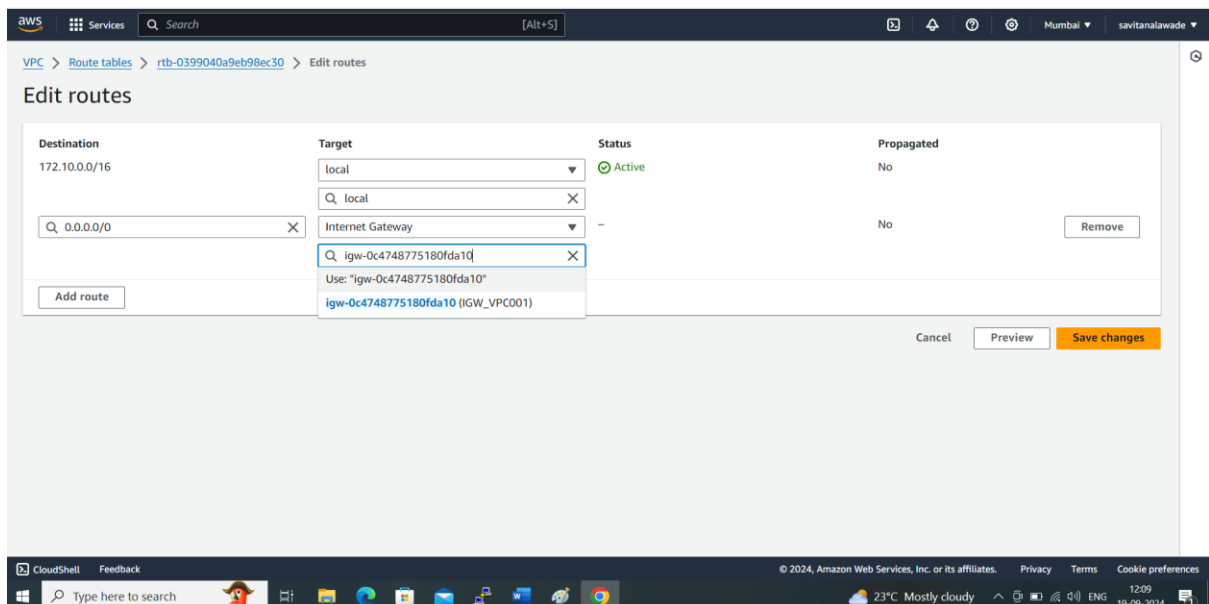
b. VPC001_Public_RT ->Subnet Association-> Select VPC001_Public_Subnet

c. VPC002_Public_RT ->Edit Route ->Add Route-> assign 0.0.0.0/0 IP and select Internet Gateway (IGW_VPC002)

d.VPC002_Public_RT ->Subnet Association-> Select VPC002_Public_Subnet
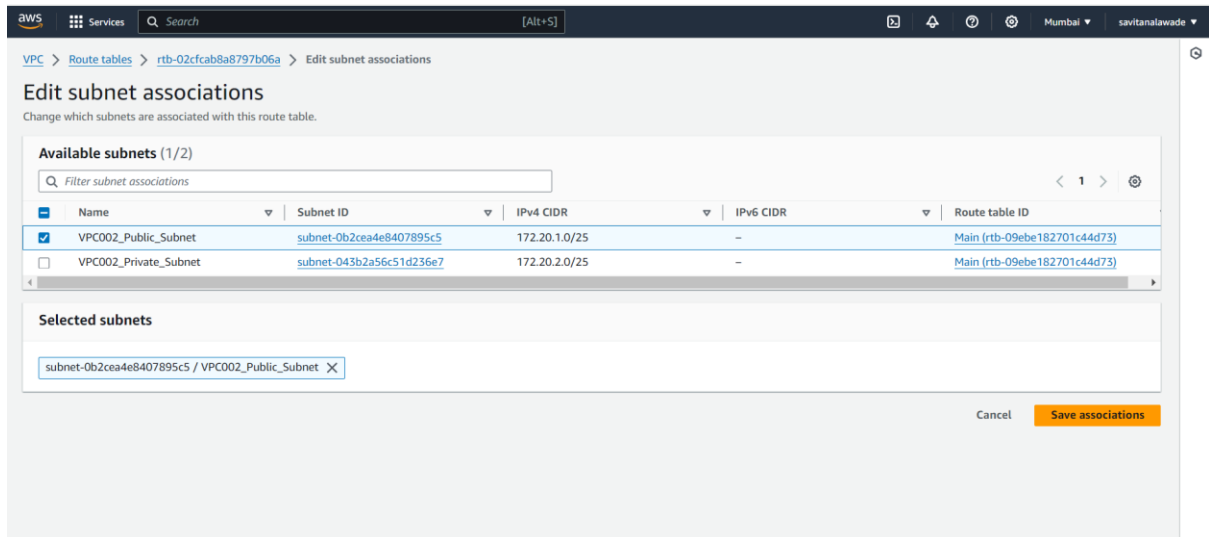
e. VPC001_Private_RT ->Edit Route ->Add Route-> assign 0.0.0.0/0 IP and select NAT Gateway (NAT_VPC001)
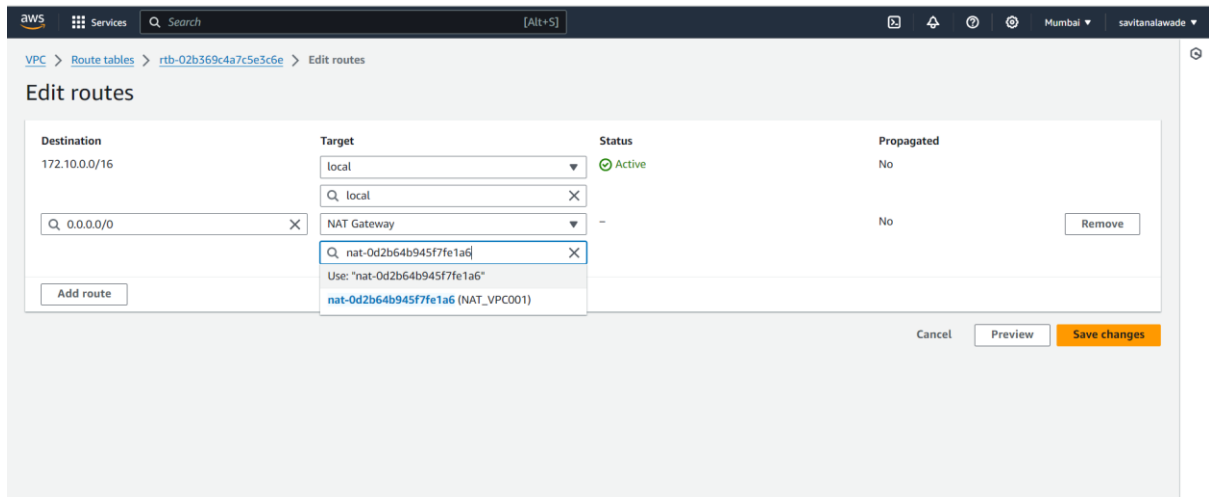
f. VPC001_Private_RT ->Subnet Association-> Select VPC001_Private_Subnet
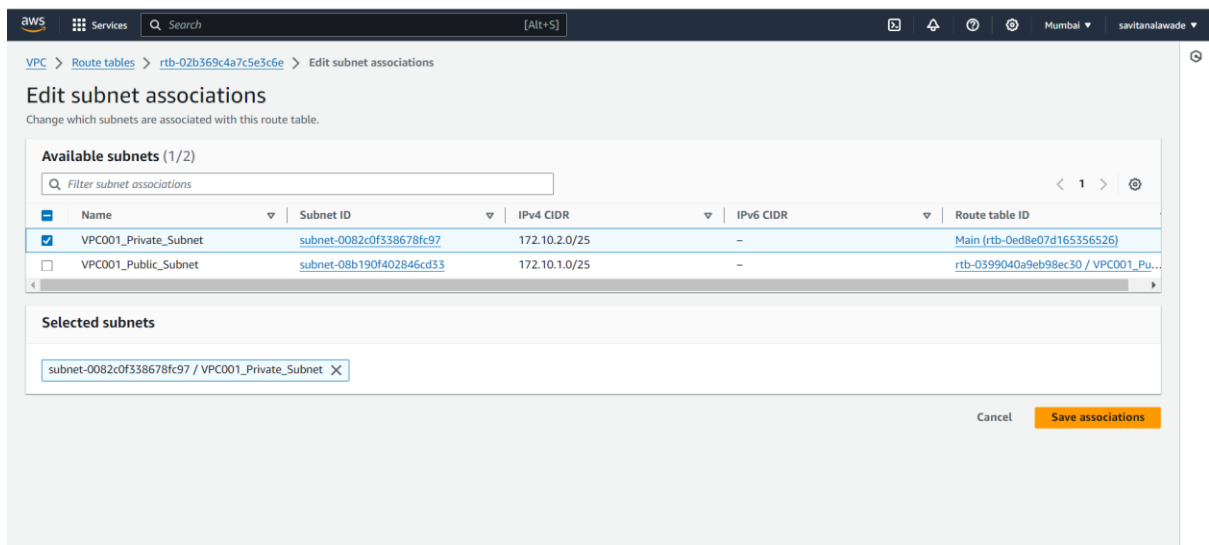
g. VPC002_Private_RT ->Edit Route ->Add Route-> assign 0.0.0.0/0 IP and select NAT Gateway (NAT_VPC002)
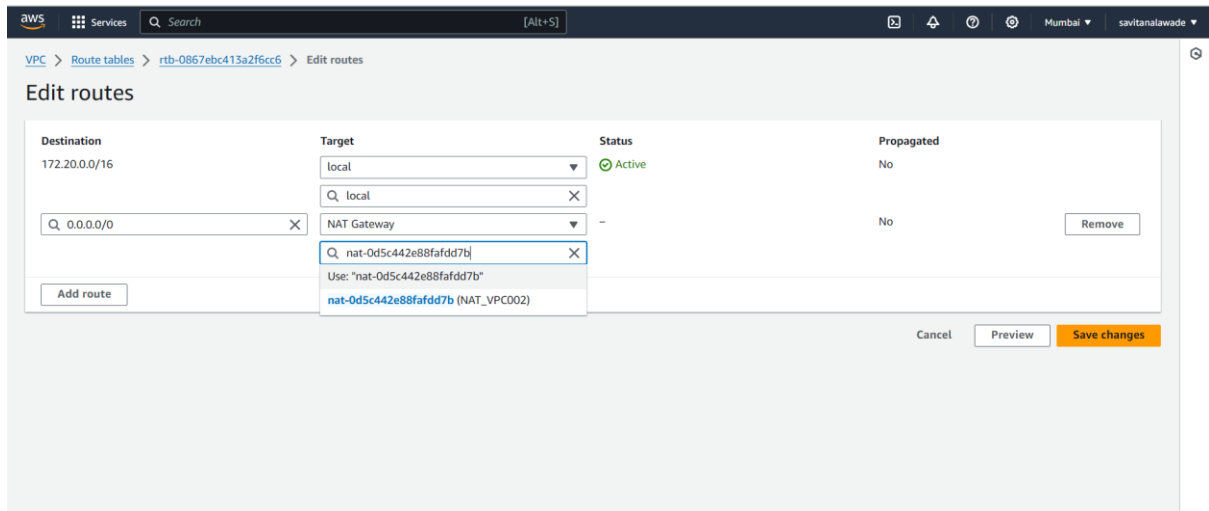
h. VPC002_Private_RT ->Subnet Association-> Select VPC002_Private_Subnet
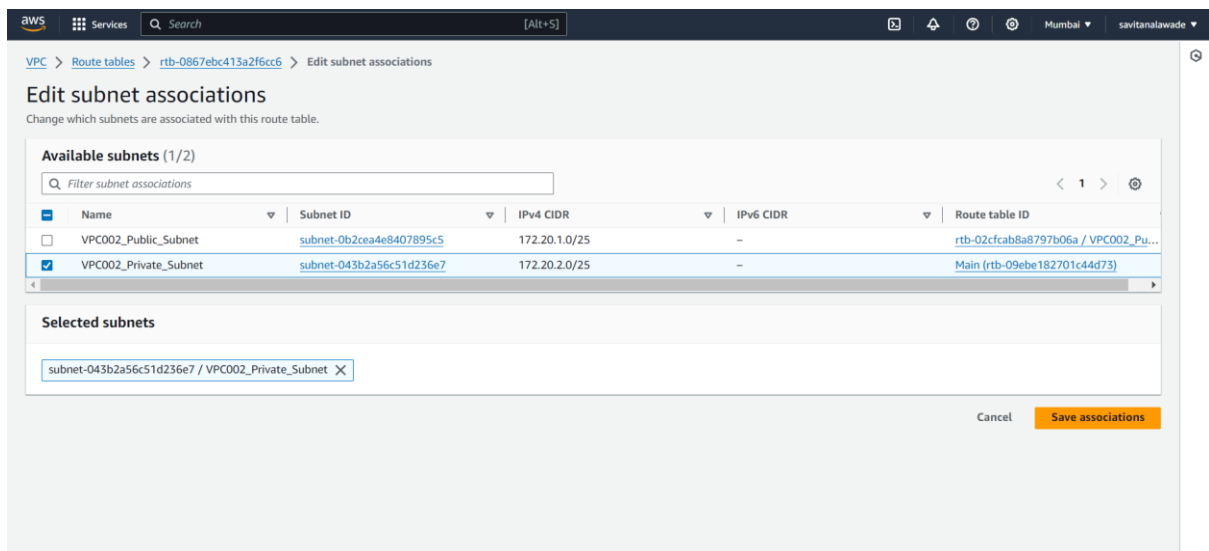
11)Create peering connection between "VPC001" & "VPC002"
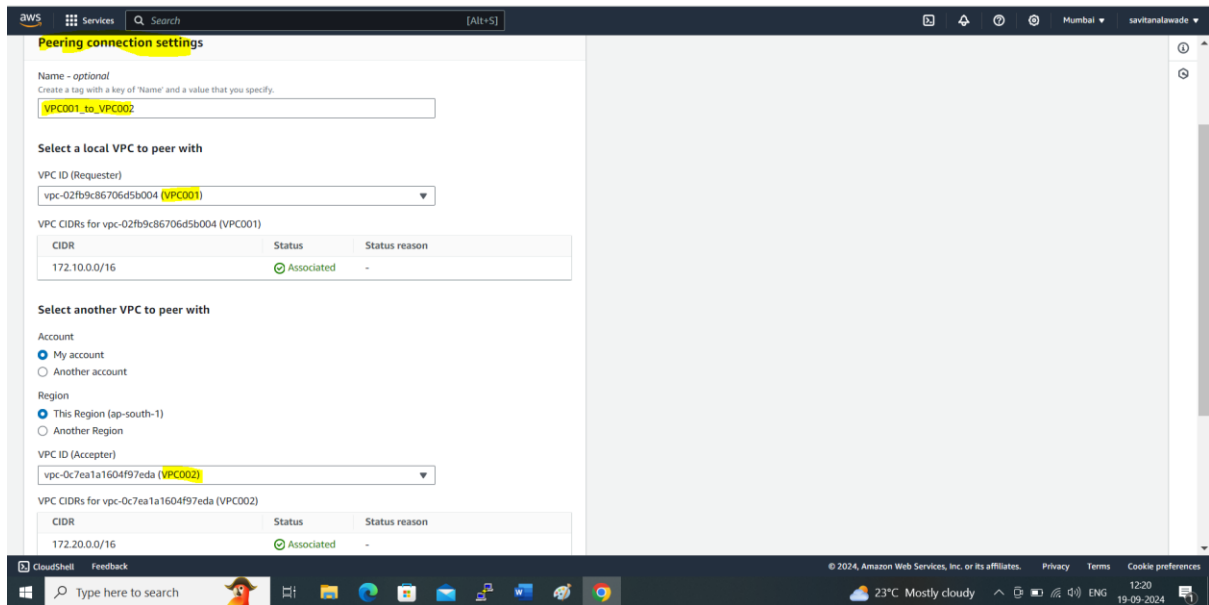
12) Peering connection is in pending state ., i.e yet to accept request from VPC002
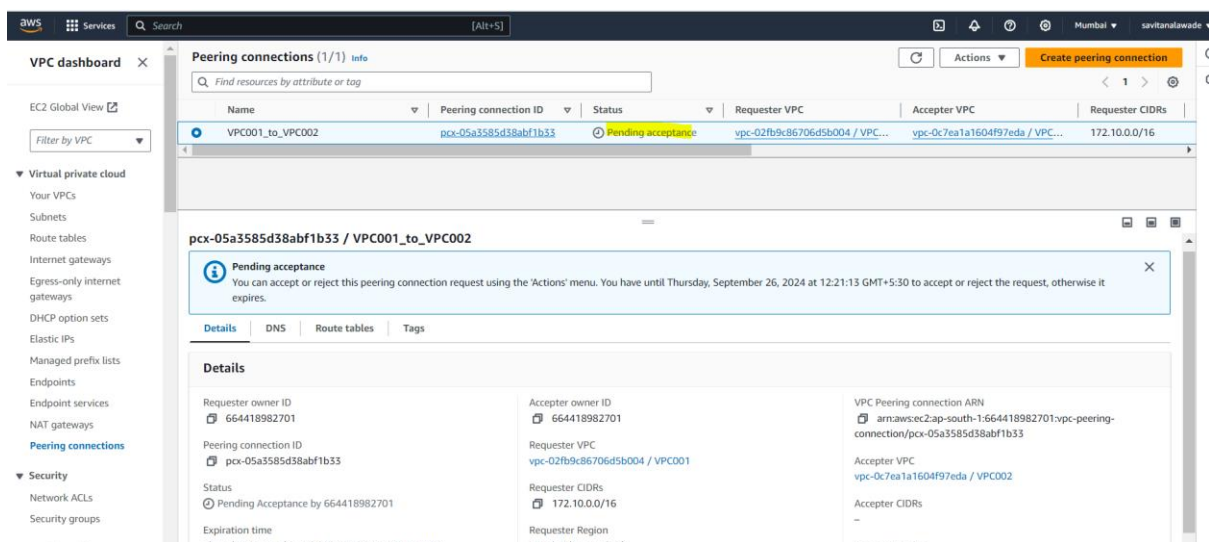
13)After Accepting request it should change state to in "Active"
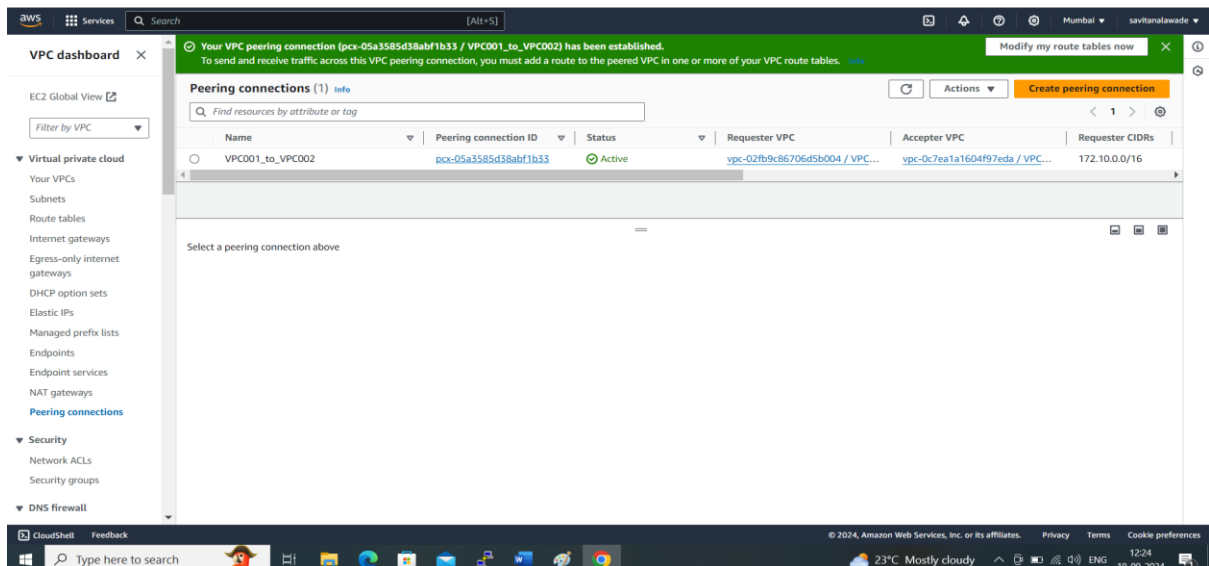
14) **Modify Route tables**

a. Change VPC001_Public_RT Route setting -> Add route-> enter IP of VPC002 and select Peering connection(VPC001_to_VPC002)
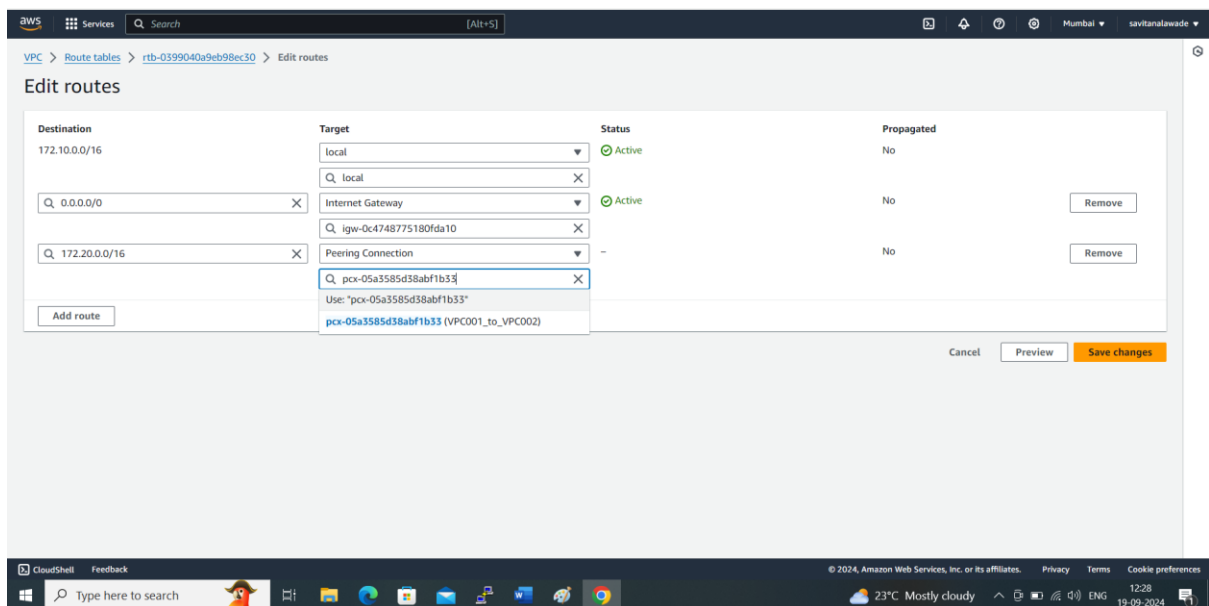
b. Change VPC002_Private_RT Route setting -> Add route-> enter IP of VPC001 and select Peering connection(VPC001_to_VPC002)
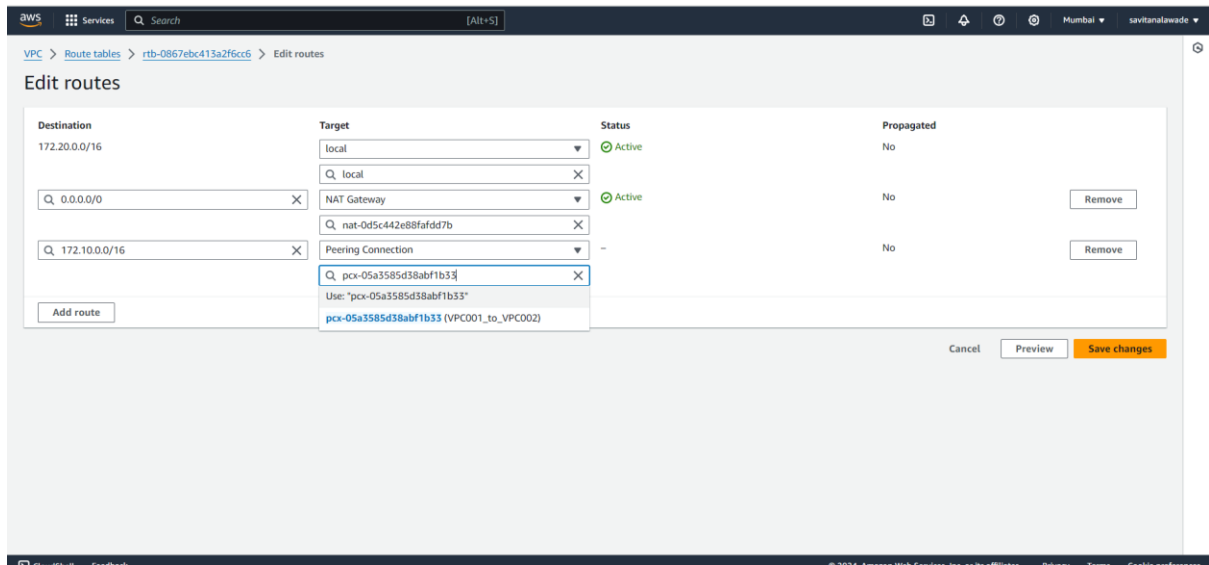
15) Create Two instance VPC001_Public_Subnet_VM and VPC002_Private_Subnet_VM

<mark>Validation</mark>

1)Connect VPC001_Public_Subnet_VM via putty

2) Check network connectivity and try to install some package

3)Create VPC002.pem file and copy content of pem file

```
Complete!
[ec2-user@ip-172-10-1-89 ~]$ cat >VPC002.pem
-----BEGIN RSA PRIVATE KEY-----
MIIEpAIBAAKCAQEA6biSt6pKEpRTsSjQWFrsMTMoDok1DabvIwxEKCm3Eo2Jfnic
vn8D9vUTyKFeADPDqe4IlkSG4ssmdpnC0OA4/SZHuXAQQBG55cMldOCnDWco6wZs
dxRDUeoFxuWCbemRk4NX/16HnC2heIYFTOEJ42npreV1QjNXvh8qYXXEDkgagzcv
idr+X2C2hmlISReA2GK471kUueQLrbIAoy9KWNb7xo/seMpdSL0Kc+mXi8tNm8zh
wbDoCZ9cjXEBxM7VHNA8tucblV0X+70PF4/oMDp+8d+Xuy3MnB6R13aKzjzQmY5M
LR0LUAYcnrCiHRP1UAvpezF61vvQmA6QmPrwUwIDAQABAoIBAAfkYKftCyVHdvAD
hc2F/HXI2XBsN6tnWKnhTyfgCLuKpfrsTbatCVA8hFeBA3CUTuYdEJMqazebTogw
twBgoewCb+eWHiZbsuBMT6Z7s4hjVGFjTSRUPdW1Rk6qD1Zwzaaih8UiIggnDk3I
kMNA0hmoyOhDV8D9hNf5q2+xD1bADgVf5I4WPCofHe0uYt3jz8GDY5g//7y7tSXr
8a3M6QKTFhtVHx9ExNvsPRDMm0HYdgAmsZN96v+pHvxHKaDWfkT1O+/ZuQssDJTO
fsb8mnQOXjimyVFQ51uAtyvk5i/Wy0Rshb6C/Qhm5qdIDufc9Sf47PjjkGjm4Ik1
5fSqLAECgYEA/Y/kh+nD8KUDj9bwHVDpNKa3cbUMVVZuthBbvRNrvOYuWucgqasY
o3Ct8HX5vFxUtObHRmqKOnoeZ17B7xrhDfWFG2kF0rduUeltKIecqKBmt0A0qqCq
Gu9YpKGaj7KHC1yO3iBOXFc3u3O4BfdxKwyVtzVuIryqau3sr7YELgECgYEA6/fY
KGEvM6E6jqW4UtjeZ1ddLoOSgRFjw8jwDIcFDKPPw+AaLvogw5jFTIot2que3vhE
c98/1ug3bRiwAlpTrf+sMqV9O86m9wVY2yt+8FxBLmpoaekX6wFTrCCugl5YDqt/
HwleLfGGpslBPEHgrTxlUEFOICzoxY2f81SMB1MCgYEA8+DEU50Zoo1ORZLb27aI
tuVrJ2iVdjbtwRs2wUK+qy9RgokvN0GjLwAfrFosW2kK5/vXyviJ/viZ6Z6QNSPL
Npvg7J40xZk7+HjlTsgwe1fbs4GDpmFlewaeYao1eOSjUuAxYZ/8/n+80QTaCJMY
O+mczlwLlEmWN8ajkdUlbAECgYEAhTZoG3Ox+A2/RySbSHoSJHkXq9ivbpnonnDj
w869tQMNmeD8JyUiNgoa6Djh5h8ZE3tI+blBCwwRrk9PniRsNUCvb/ApIQhrDe1A
2opVoVATpCaCR7hFvnADUpsoqYSlZbK/kz/woTNG9wWLBH+UXXhJIeOcPWHdDxoD
AJXsbu0CgYB2I8I57AEsPykqSsJqreeCeHz1BW81pqzwFZtMRaG38pX5LD8P0t52
afFrAYu96m6HKNCXxcdeP7H1yrikKCVK8dli0kHzyUrO6p4GSBYxVZws8xdJ4ouM
egNZ7+pnzFV3na3LtkUAROOMWTo1V+u5a6z3NlOYWs3W1+0V6nSPtA==
-----END RSA PRIVATE KEY-----
[ec2-user@ip-172-10-1-89 ~]$ ls -ltr
total 4
-rw-rw-r-- 1 ec2-user ec2-user 1679 Sep 19 07:20 VPC002.pem
[ec2-user@ip-172-10-1-89 ~]$
```

4) Change mode for VPC002.pem file and login to VPC002_Private_Subnet_VM

```
[ec2-user@ip-172-10-1-89 ~]$ chmod 400 VPC002.pem
[ec2-user@ip-172-10-1-89 ~]$ ssh -i VPC002.pem ec2-user@172.20.2.69
The authenticity of host '172.20.2.69 (172.20.2.69)' can't be established.
ECDSA key fingerprint is SHA256:NroZExXgxcJxm7HkHbxSEZMA2Xa3fgKChyPBkDaaMwk.
ECDSA key fingerprint is MD5:1a:d9:19:7d:c7:68:11:7c:02:33:9c:83:c4:fc:51:56.
Are you sure you want to continue connecting (yes/no)? Yes
Warning: Permanently added '172.20.2.69' (ECDSA) to the list of known hosts.

    ,       #_
   ~\_  ####_          Amazon Linux 2
  ~~  \_#####\
  ~~     \###|          AL2 End of Life is 2025-06-30.
  ~~      \#/ ___
   ~~      V~' '->
    ~~~         /       A newer version of Amazon Linux is available!
     ~~._.   _/
        _/ _/           Amazon Linux 2023, GA and supported until 2028-03-15.
      _/m/'               https://aws.amazon.com/linux/amazon-linux-2023/

3 package(s) needed for security, out of 6 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-20-2-69 ~]$
```
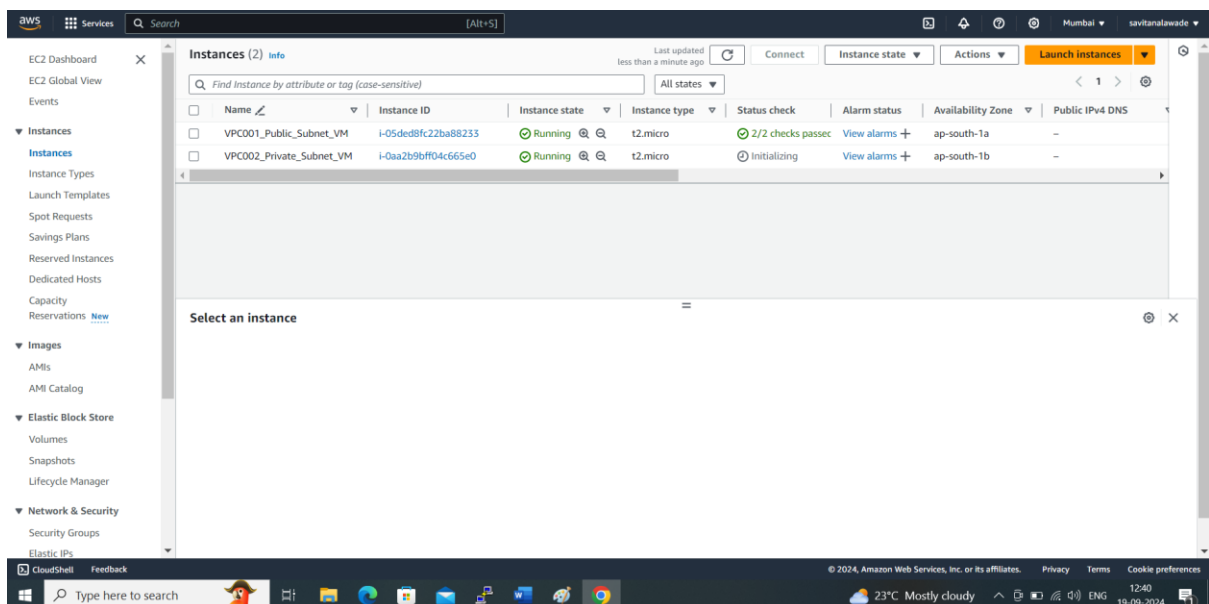
5) Check Hostname & Internet connectivity

```
[ec2-user@ip-172-20-2-69 ~]$ hostname
ip-172-20-2-69.ap-south-1.compute.internal
[ec2-user@ip-172-20-2-69 ~]$ ping chrome.com
PING chrome.com (216.239.32.27) 56(84) bytes of data.
64 bytes from any-in-201b.1e100.net (216.239.32.27): icmp_seq=1 ttl=112 time=1.57 ms
64 bytes from any-in-201b.1e100.net (216.239.32.27): icmp_seq=2 ttl=112 time=1.36 ms
64 bytes from any-in-201b.1e100.net (216.239.32.27): icmp_seq=3 ttl=112 time=1.34 ms
64 bytes from any-in-201b.1e100.net (216.239.32.27): icmp_seq=4 ttl=112 time=1.30 ms
64 bytes from any-in-201b.1e100.net (216.239.32.27): icmp_seq=5 ttl=112 time=1.67 ms
64 bytes from any-in-201b.1e100.net (216.239.32.27): icmp_seq=6 ttl=112 time=1.37 ms
^Z
[1]+  Stopped                 ping chrome.com
[ec2-user@ip-172-20-2-69 ~]$
```

6) Check if we can install package, Yes we can install...

Thank you!!