Task-4: Create VPC peering between 2 different regions.

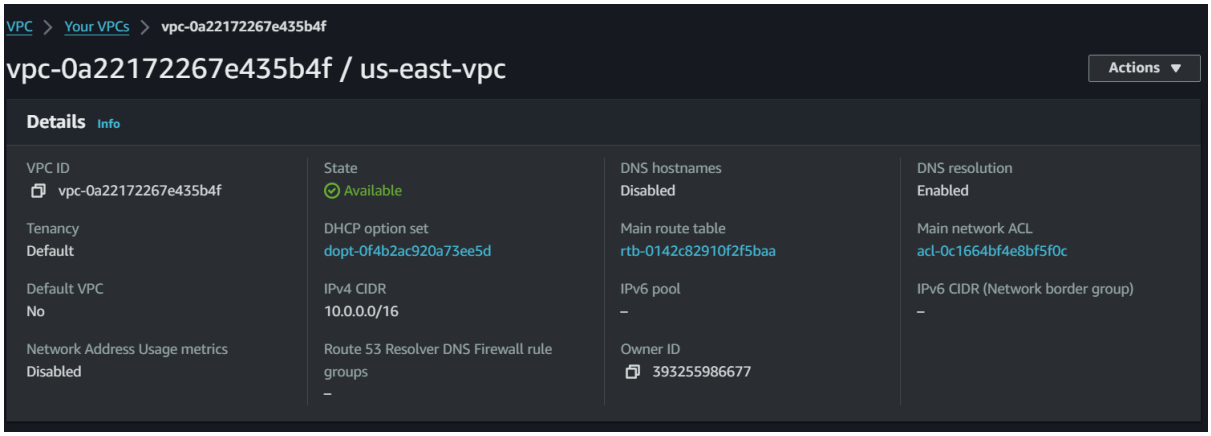
Steps:

1. VPCs creation (two regions within account)
2. Subnets creation (two regions within account)
3. Internet gateway creation (two regions within account)
4. Route tables creation (two regions within account)
5. Ec2 instance creation (two region within account)
6. Connect two instances
7. Copy two VPC Ids
8. Copy two instances private Ips
9. Create VPC Peering
10. Edit route table
11. Ping private Ips

Step-1:

VPC creation

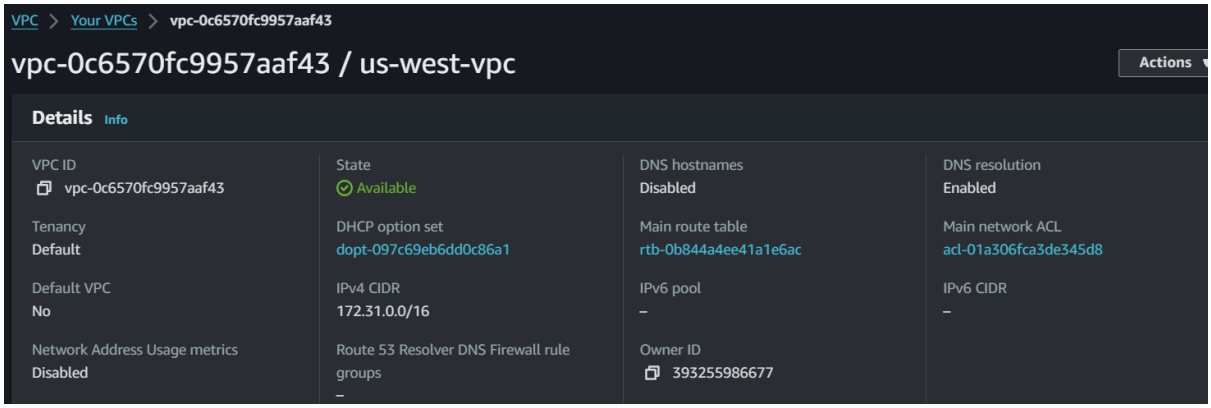
Region-1: us-east-1



IPv4 CIDR: 10.0.0.0/16

Region-2: us-west-1

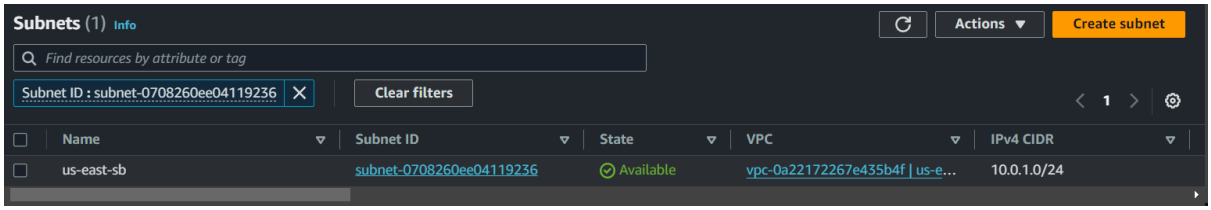
IPv4 CIDR: 172.31.0.0/16



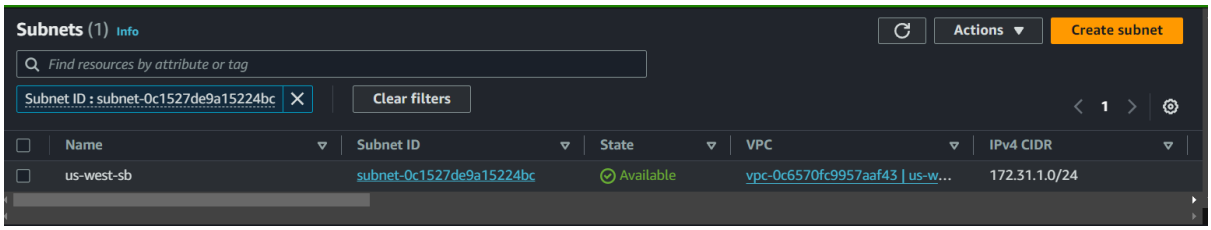
Step-2:

Subnet creation (within VPC)

Region-1: us-east-1



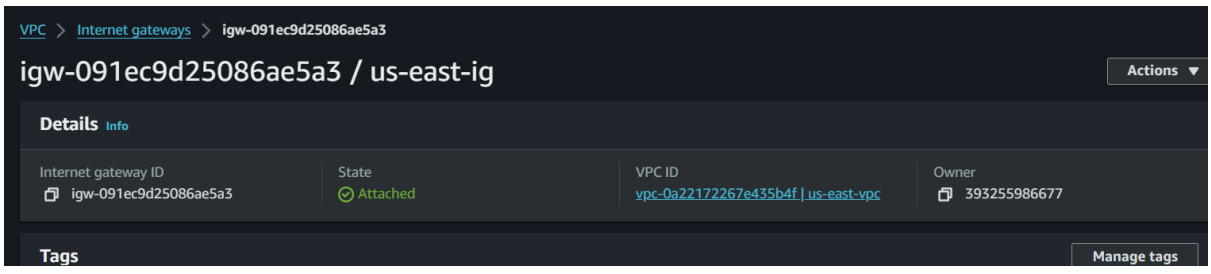
Region-2: us-west-1



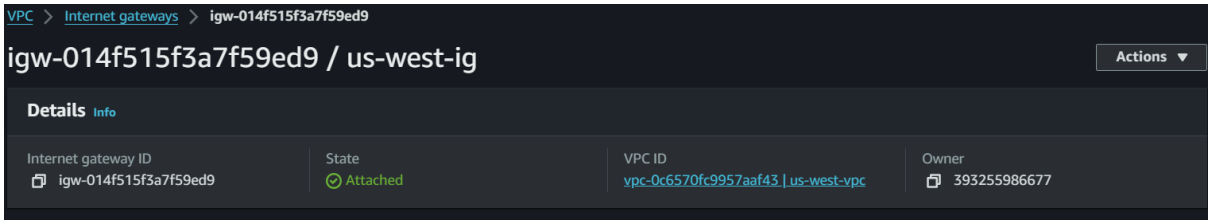
Step-3:

Internet gateway (within VPC), Attach VPC in the internet gateway

Region-1: us-east-1



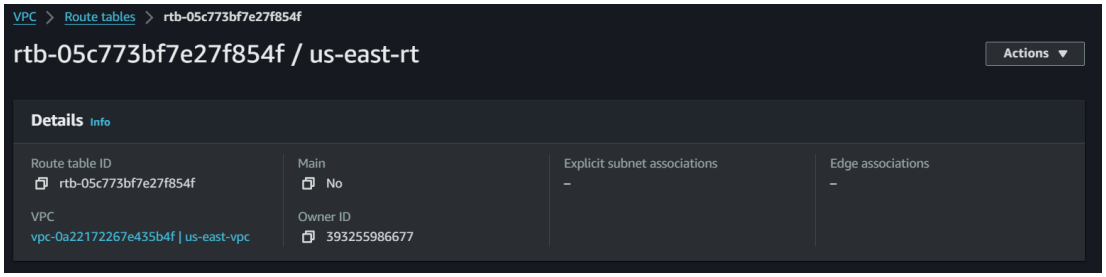
Region-2: us-west-1



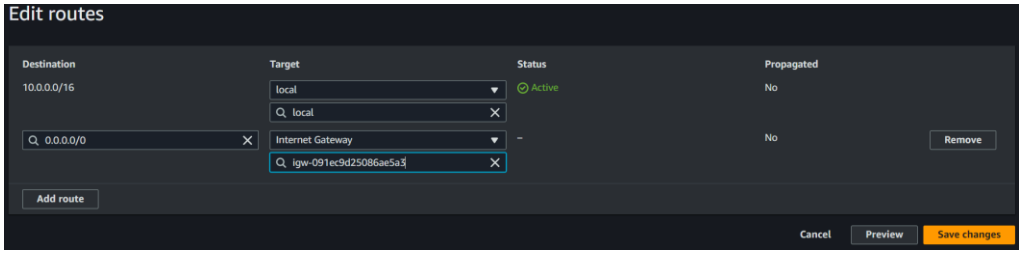
Step-4:

Route table creation

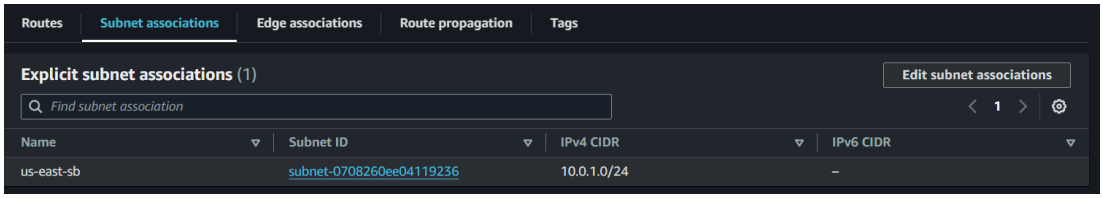
Region-1: us-east-1



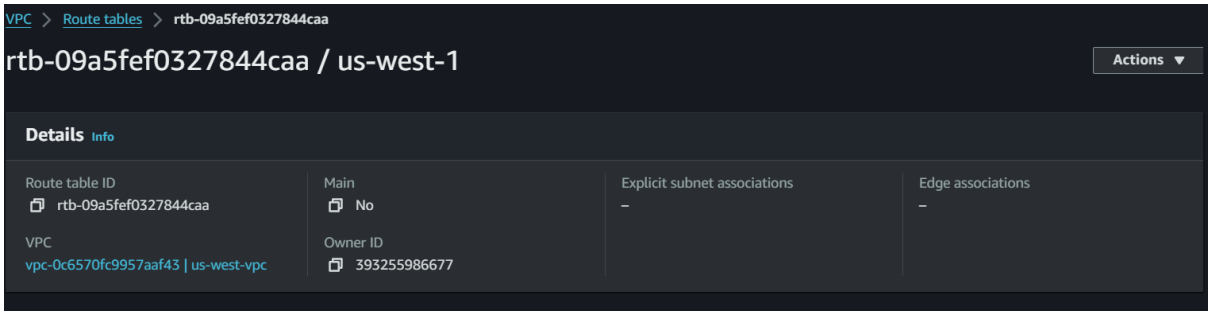
Edit routes



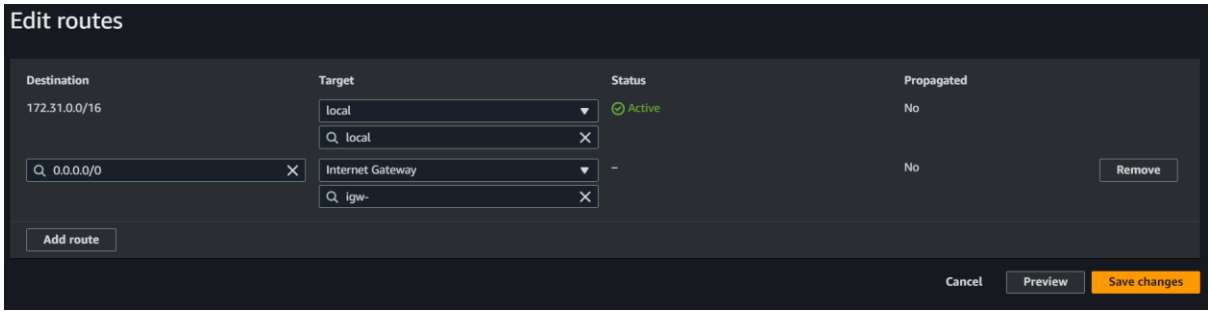
Edit subnet association



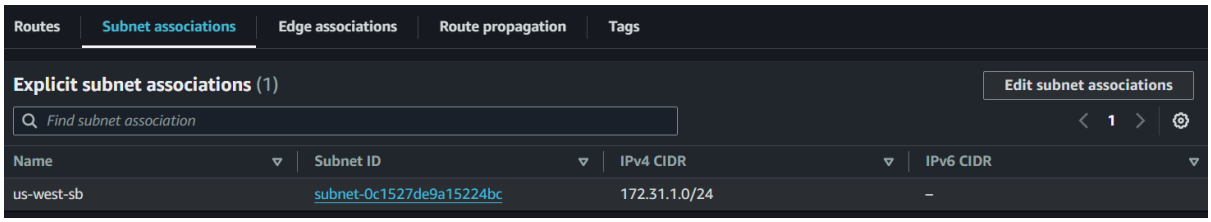
Region-2: us-west-1



Edit routes



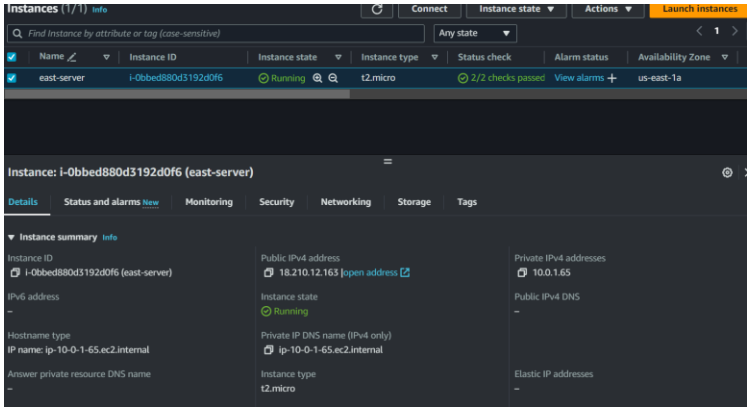
Edit subnet associations



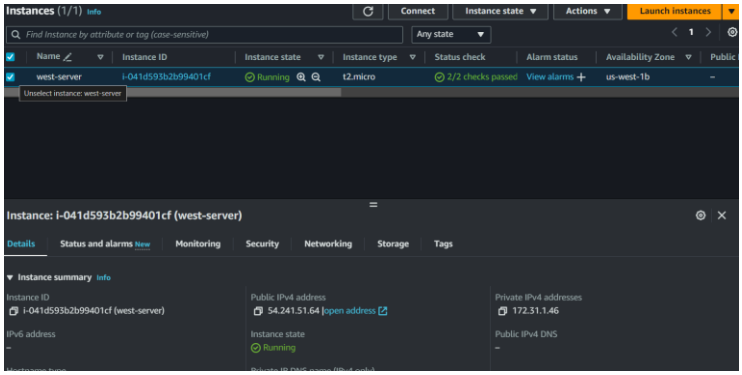
Step-5:

Ec2 instance creation

Region-1: us-east-1



Region-2: us-west-1



Step-6:

Connect ec2 instances

Region-1: us-east-1

```
Rushika@Rushika MINGW64 ~/Downloads (main)
$ ssh -i "task-key.pem" ubuntu@ec2-18-210-12-163.compute-1.amazonaws.com
The authenticity of host 'ec2-18-210-12-163.compute-1.amazonaws.com (18.210.12.1
63)' can't be established.
ED25519 key fingerprint is SHA256:pwYDz5GAcEWicEWVi3SYyo3olpKzckmEDQn54Ci7fMg.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-18-210-12-163.compute-1.amazonaws.com' (ED25519)
 to the list of known hosts.
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 Wed Feb  7 19:02:31 UTC 2024

  System load:  0.0               Processes:             98
  Usage of /:   20.5% of 7.57GB   Users logged in:       0
  Memory usage: 21%               IPv4 address for eth0: 10.0.1.65
  Swap usage:   0%
```

Region-2: us-west-1

```
Rushika@Rushika MINGW64 ~/Downloads (main)
$ ssh -i "west-key.pem" ubuntu@ec2-54-241-51-64.us-west-1.compute.amazonaws.com
The authenticity of host 'ec2-54-241-51-64.us-west-1.compute.amazonaws.com (54.2
41.51.64)' can't be established.
ED25519 key fingerprint is SHA256:YPoUMOjrHT3ttrjvQ7rstOYesJPgf5UdbtyU8EjebfA.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-54-241-51-64.us-west-1.compute.amazonaws.com' (E
D25519) to the list of known hosts.
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 Wed Feb  7 19:08:29 UTC 2024

  System load:  0.0               Processes:             96
  Usage of /:   20.5% of 7.57GB   Users logged in:       0
  Memory usage: 21%               IPv4 address for eth0: 172.31.1.46
  Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

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

Step-7 Copy VPC Ids

Region-1: us-east-1 -> vpc-0a22172267e435b4f

Region-1: us-west-1 -> vpc-0c6570fc9957aaf43

Step-8

Copy ec2 instance private Ips

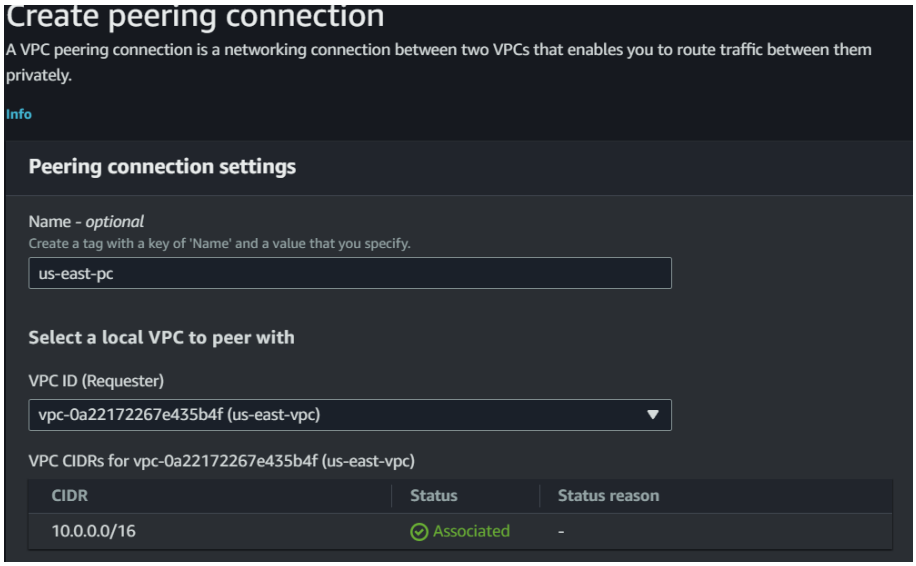
Region-1: us-east-1-> 10.0.1.65

Region-2: us-west-1-> 172.31.1.46

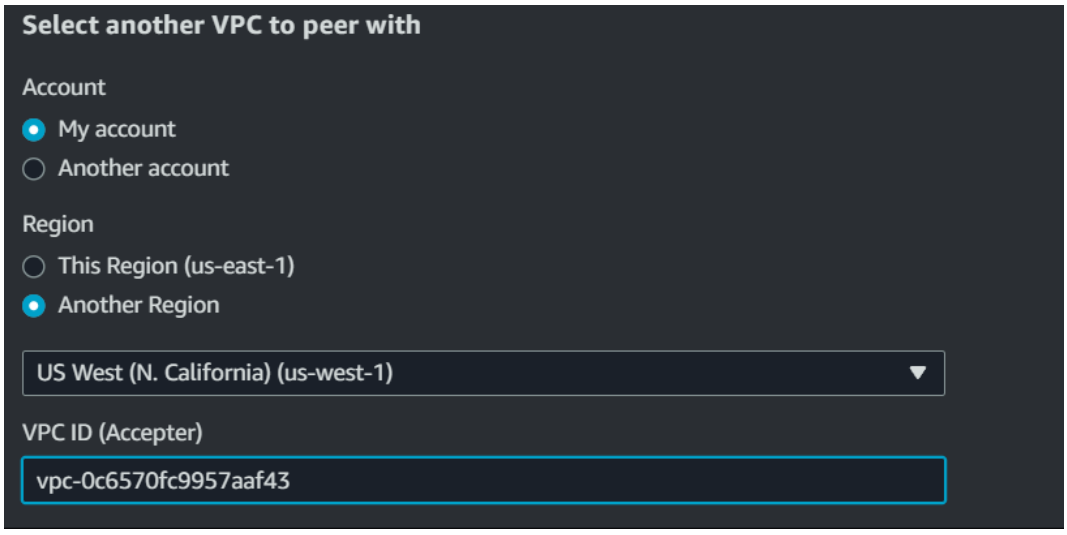
Step-9:

Create VPC peering

Requester VPC details

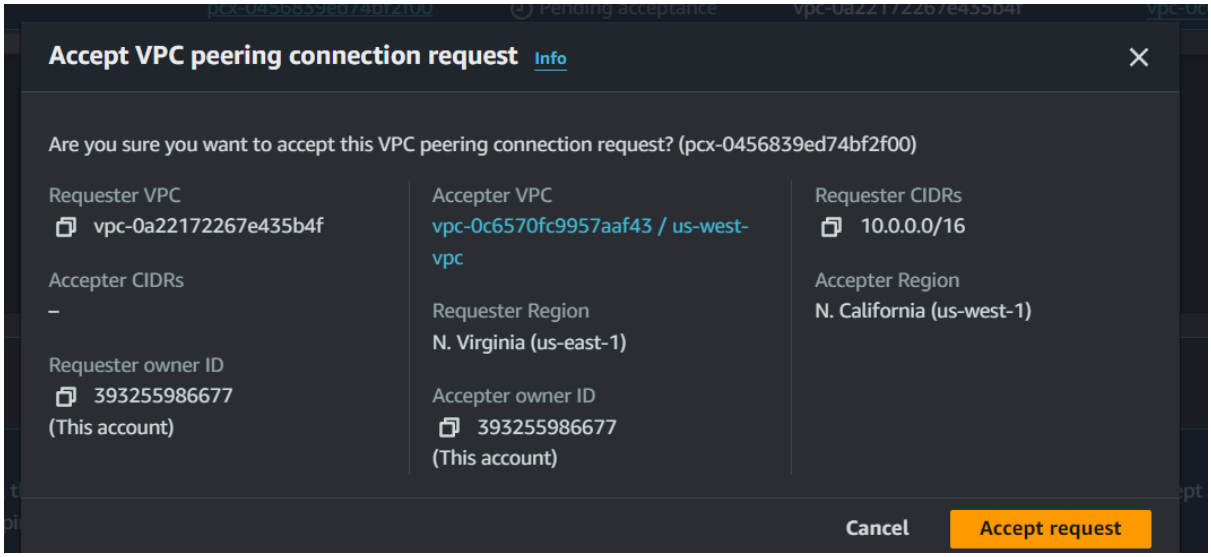


Accepter VPC details



Create VPC peering

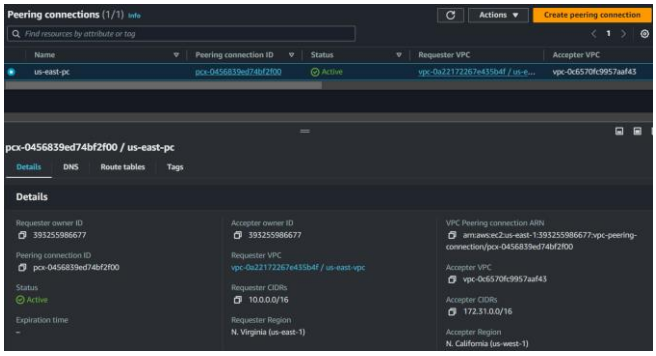
Accept peering request (for us-east-1 requester)



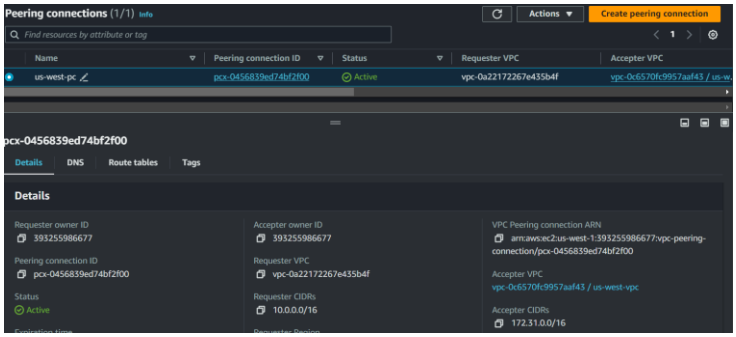
Accept request

VPC peering

Region-1: us-east-1



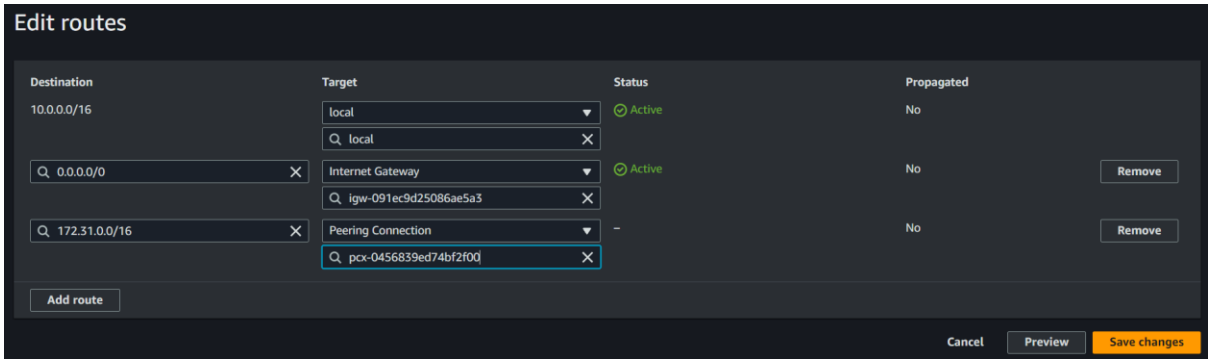
Region-1: us-west-1



Step-10

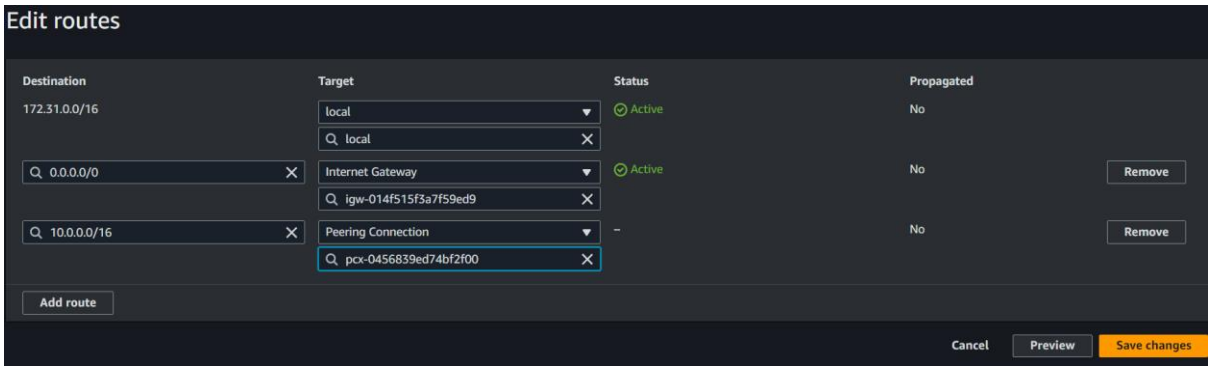
Edit route tables routes

Region-1: us-east-1



Save changes

Region-2: us-west-1



Save changes

Step-11:

Ping ec2 instance private ips

Region-1: us-east-1

Ping region-2 private Ip

```
ubuntu@ip-10-0-1-65:~$ ping 172.31.1.46
PING 172.31.1.46 (172.31.1.46) 56(84) bytes of data.
64 bytes from 172.31.1.46: icmp_seq=1 ttl=64 time=60.8 ms
64 bytes from 172.31.1.46: icmp_seq=2 ttl=64 time=60.8 ms
64 bytes from 172.31.1.46: icmp_seq=3 ttl=64 time=60.9 ms
64 bytes from 172.31.1.46: icmp_seq=4 ttl=64 time=60.8 ms
64 bytes from 172.31.1.46: icmp_seq=5 ttl=64 time=61.4 ms
64 bytes from 172.31.1.46: icmp_seq=6 ttl=64 time=60.8 ms
64 bytes from 172.31.1.46: icmp_seq=7 ttl=64 time=64.7 ms
64 bytes from 172.31.1.46: icmp_seq=8 ttl=64 time=60.8 ms
64 bytes from 172.31.1.46: icmp_seq=9 ttl=64 time=60.9 ms
^C
--- 172.31.1.46 ping statistics ---
9 packets transmitted, 9 received, 0% packet loss, time 8014ms
rtt min/avg/max/mdev = 60.752/61.302/64.720/1.221 ms
```

Region-2: us-west-1

Ping region-1 private IP