

Create Two VPCs (demo1-vpc & demo2-vpc) in the Same Region and Perform VPC Peering

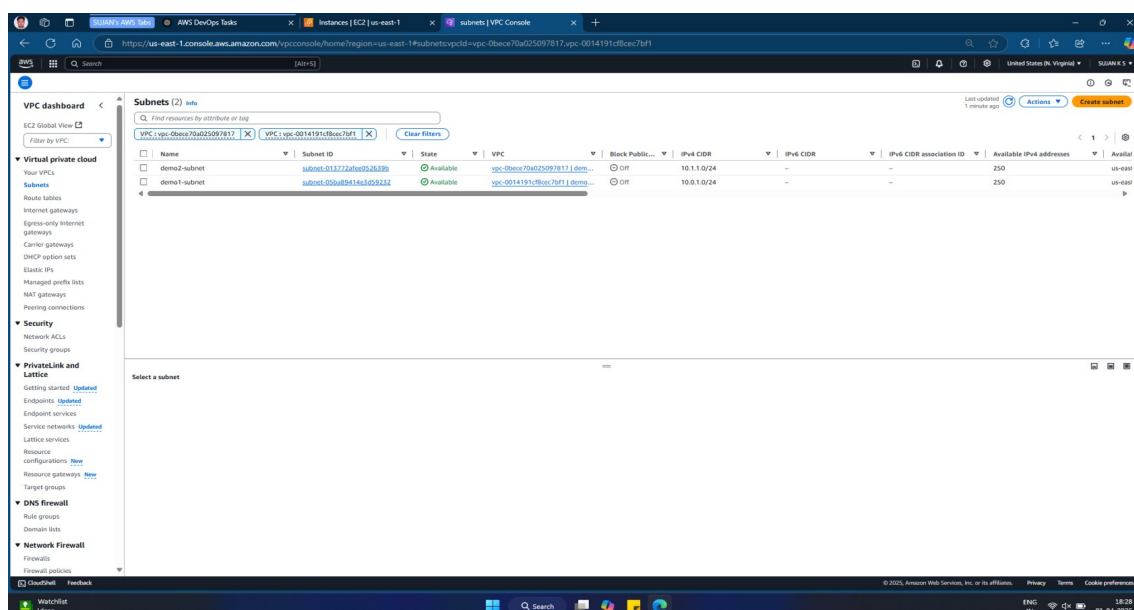
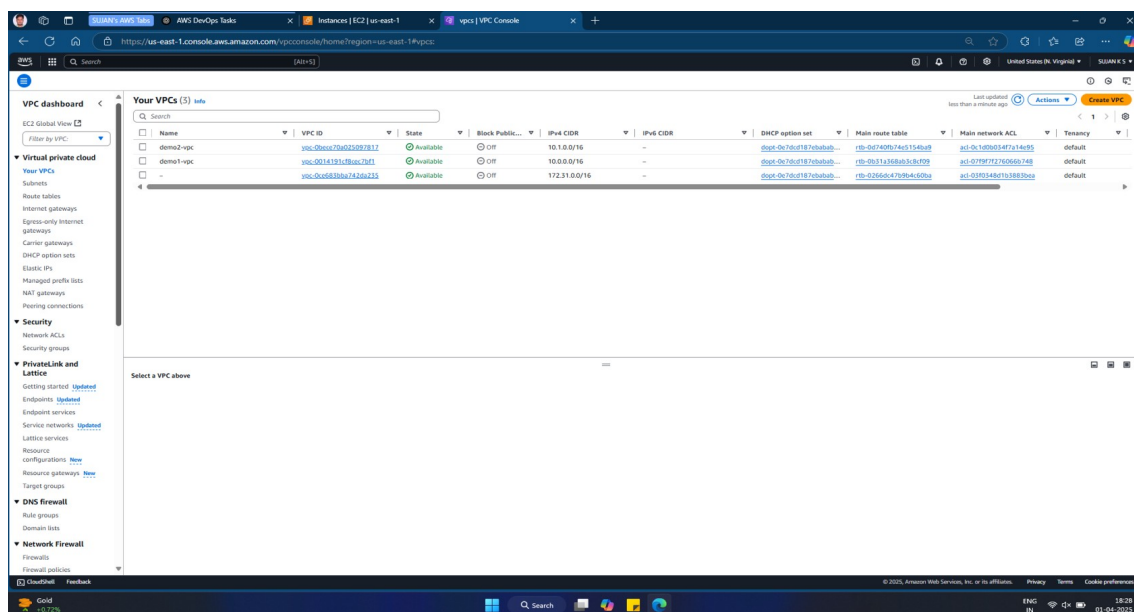
Introduction

This document outlines the process of creating two Virtual Private Clouds (VPCs) in the same AWS region and establishing VPC peering between them.

VPC and Subnet Setup

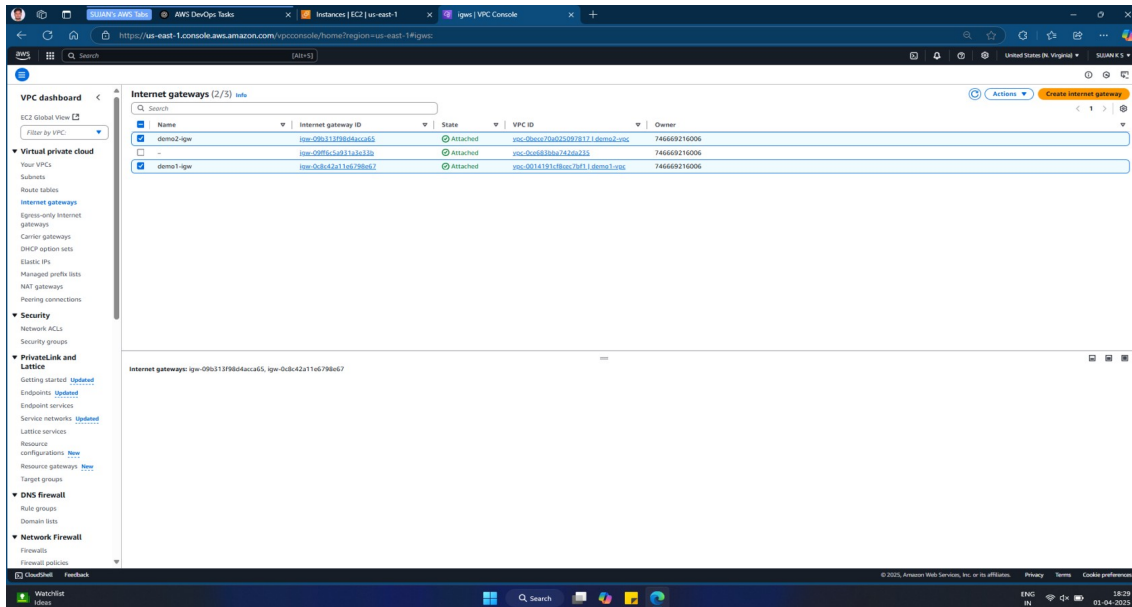
VPC Creation:

- Created demo1-vpc with CIDR block 10.0.0.0/16.
- Created demo2-vpc with CIDR block 10.1.0.0/16.
- Created a public subnet demo1-subnet under demo1-vpc with CIDR block 10.0.1.0/24.
- Created a public subnet demo2-subnet under demo2-vpc with CIDR block 10.1.1.0/24.



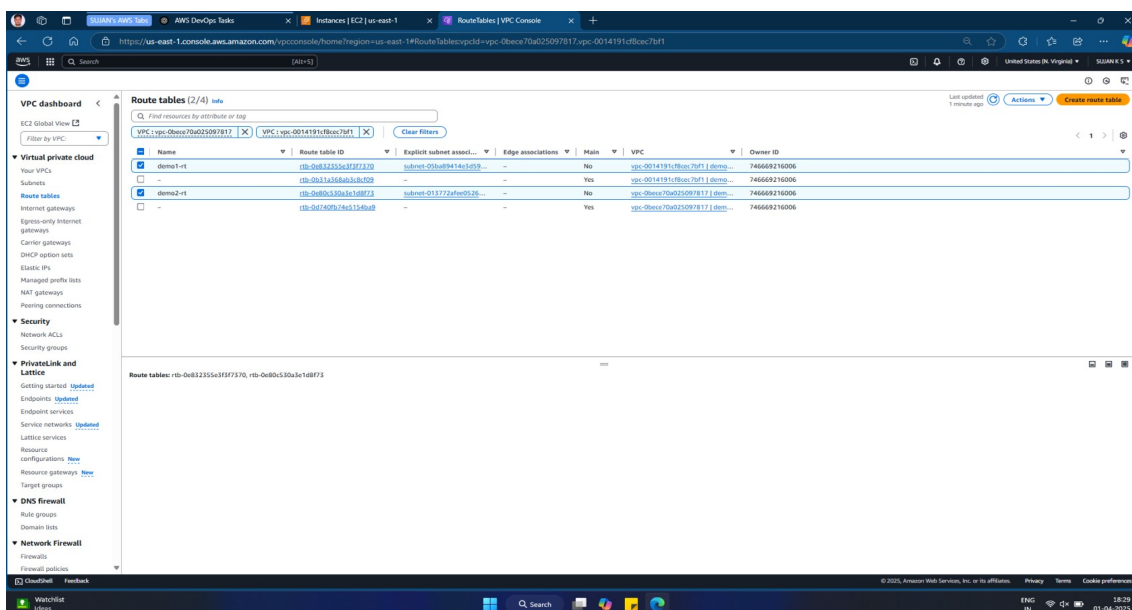
Internet Gateway:

- Created demo1-igw and **attached** it to demo1-vpc.
- Created demo2-igw and **attached** it to demo2-vpc.



Route Table Configuration:

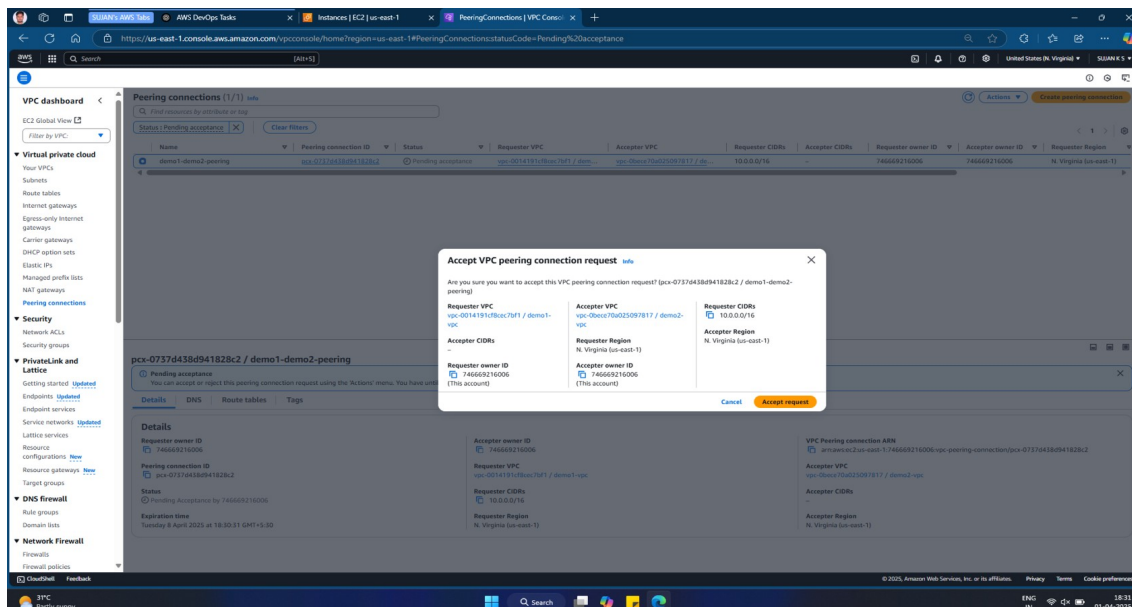
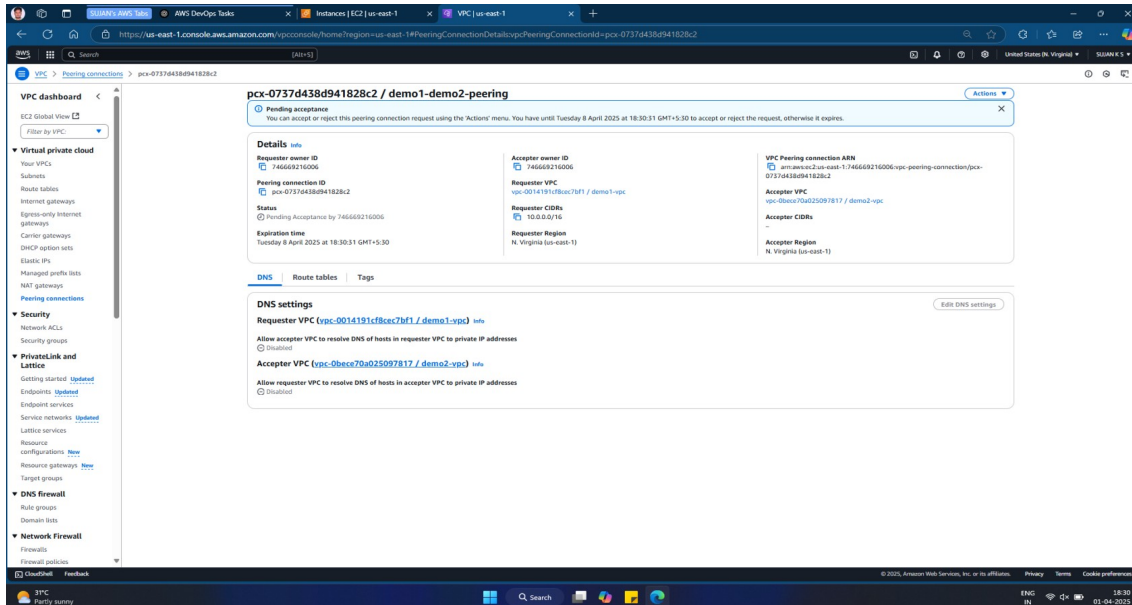
- demo1-vpc-rt **was associated** with demo1-subnet and **configured** to route internet traffic via demo1-igw.
- demo2-vpc-rt **was associated** with demo2-subnet and **configured** to route internet traffic via demo2-igw.



VPC Peering Setup

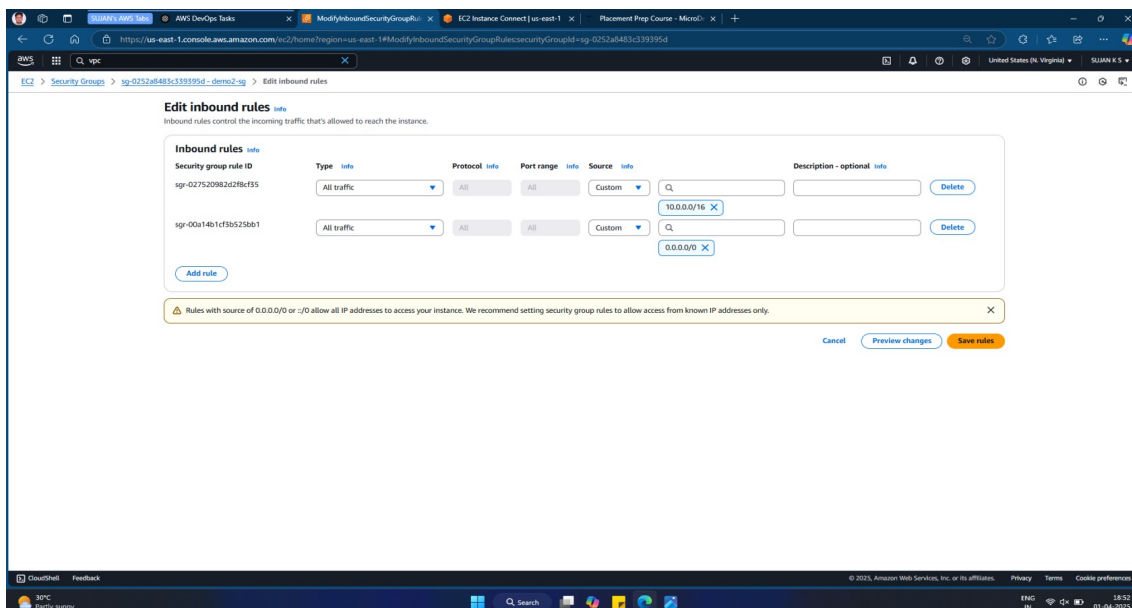
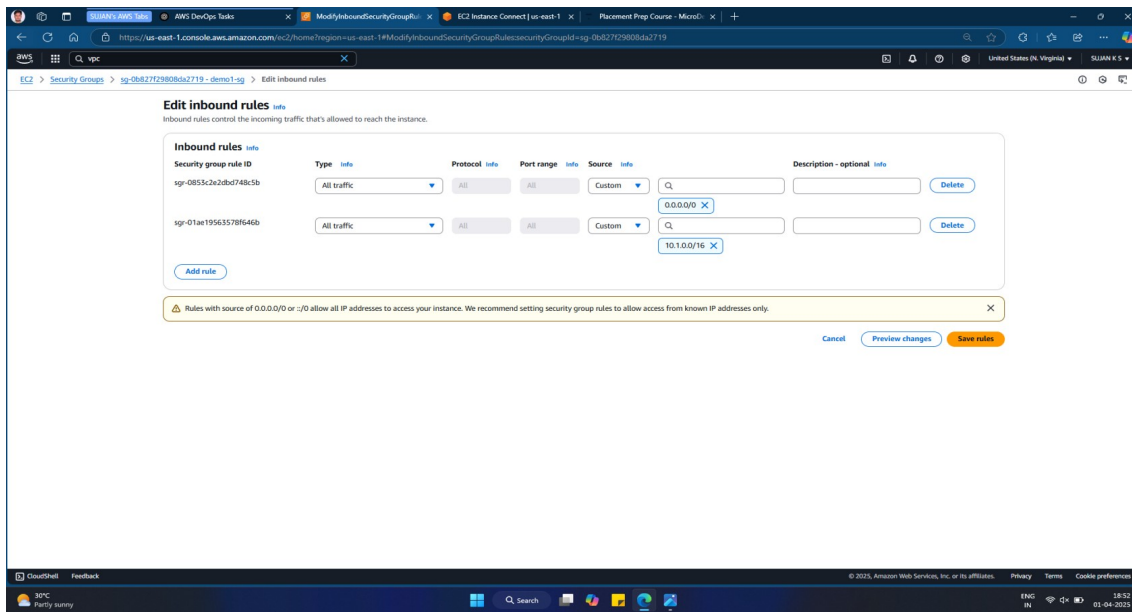
Peering Connection Creation:

- Created a VPC Peering Connection demo1-demo2-peer between demo1-vpc and demo2-vpc.
- Accepted the peering connection request from the demo2-vpc side.



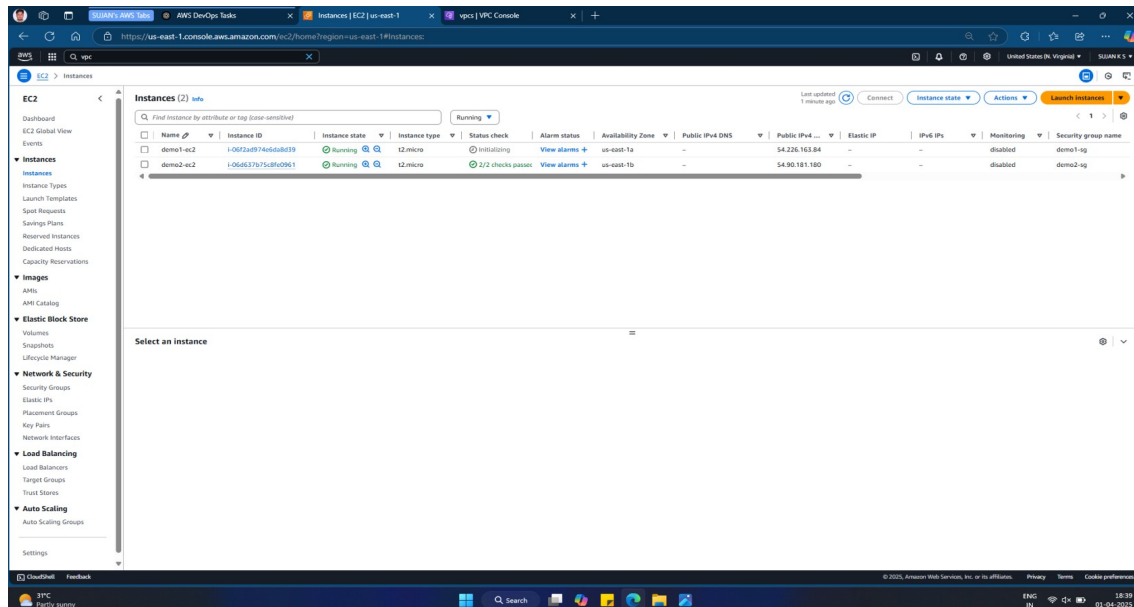
Route Table Updates for Peering:

- Updated demo1-vpc-rt to route traffic destined for 10.1.0.0/16 (demo2-vpc) through the peering connection.
- Updated demo2-vpc-rt to route traffic destined for 10.0.0.0/16 (demo1-vpc) through the peering connection.



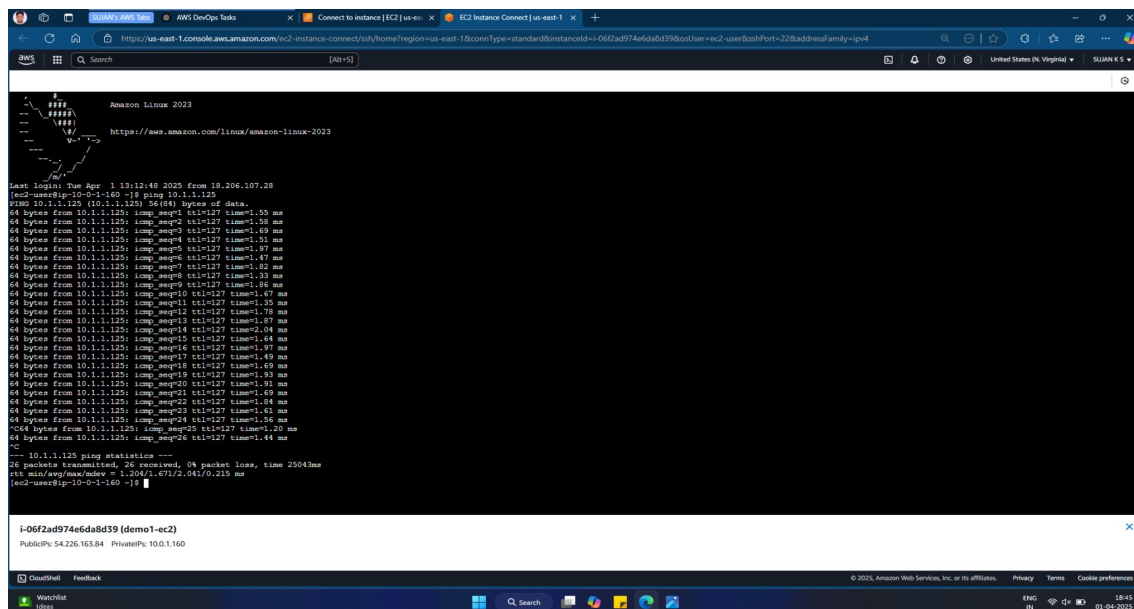
EC2 Instance Setup for Testing

- Launched an instance demo1-ec2 in demo1-subnet with IP 10.0.1.160.
- Launched an instance demo2-ec2 in demo2-subnet with IP 10.1.1.125.



Verification of Peering Connection

- Connected to demo1-ec2 via SSH and successfully pinged 10.1.1.125 (demo2-ec2).
- Connected to demo2-ec2 via SSH and successfully pinged 10.0.1.160 (demo1-ec2).



The screenshot shows a terminal window within the AWS console. The terminal output displays the command `ping 10.0.1.160` being executed on an Amazon Linux 2023 instance. The output shows 27 successful ping requests, each receiving 64 bytes of data from the target IP address. The round-trip times are consistently low, ranging from approximately 1.22 ms to 1.86 ms. The terminal also shows the public and private IP addresses of the instance: `PublicIPs: 54.90.181.180 PrivateIPs: 10.1.1.25`. The AWS console interface at the top shows the user is logged in as 'SUJAN K S' in the 'us-east-1' region.

```
Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023

[ec2-user@ip-10-1-1-125 ~]$ sudo su
[ec2-user@ip-10-1-1-125 ec2-user]$ ping 10.0.1.160
ping 10.0.1.160 (10.0.1.160) 56(84) bytes of data:
64 bytes from 10.0.1.160: icmp_seq=1 ttl=127 time=1.22 ms
64 bytes from 10.0.1.160: icmp_seq=2 ttl=127 time=1.76 ms
64 bytes from 10.0.1.160: icmp_seq=3 ttl=127 time=1.48 ms
64 bytes from 10.0.1.160: icmp_seq=4 ttl=127 time=1.61 ms
64 bytes from 10.0.1.160: icmp_seq=5 ttl=127 time=1.77 ms
64 bytes from 10.0.1.160: icmp_seq=6 ttl=127 time=1.48 ms
64 bytes from 10.0.1.160: icmp_seq=7 ttl=127 time=1.92 ms
64 bytes from 10.0.1.160: icmp_seq=8 ttl=127 time=1.45 ms
64 bytes from 10.0.1.160: icmp_seq=9 ttl=127 time=2.38 ms
64 bytes from 10.0.1.160: icmp_seq=10 ttl=127 time=1.62 ms
64 bytes from 10.0.1.160: icmp_seq=11 ttl=127 time=1.74 ms
64 bytes from 10.0.1.160: icmp_seq=12 ttl=127 time=1.40 ms
64 bytes from 10.0.1.160: icmp_seq=13 ttl=127 time=2.08 ms
64 bytes from 10.0.1.160: icmp_seq=14 ttl=127 time=1.38 ms
64 bytes from 10.0.1.160: icmp_seq=15 ttl=127 time=1.33 ms
64 bytes from 10.0.1.160: icmp_seq=16 ttl=127 time=2.23 ms
64 bytes from 10.0.1.160: icmp_seq=17 ttl=127 time=1.47 ms
64 bytes from 10.0.1.160: icmp_seq=18 ttl=127 time=1.74 ms
64 bytes from 10.0.1.160: icmp_seq=19 ttl=127 time=1.40 ms
64 bytes from 10.0.1.160: icmp_seq=20 ttl=127 time=1.55 ms
64 bytes from 10.0.1.160: icmp_seq=21 ttl=127 time=1.82 ms
64 bytes from 10.0.1.160: icmp_seq=22 ttl=127 time=1.73 ms
64 bytes from 10.0.1.160: icmp_seq=23 ttl=127 time=2.17 ms
64 bytes from 10.0.1.160: icmp_seq=24 ttl=127 time=1.54 ms
64 bytes from 10.0.1.160: icmp_seq=25 ttl=127 time=1.86 ms
64 bytes from 10.0.1.160: icmp_seq=26 ttl=127 time=1.40 ms
64 bytes from 10.0.1.160: icmp_seq=27 ttl=127 time=1.40 ms
^C
--- 10.0.1.160 ping statistics ---
27 packets transmitted, 27 received, 0% packet loss, time 2404ms
rtt min/avg/max/mdev = 1.222/1.663/2.381/0.289 ms
[ec2-user@ip-10-1-1-125 ec2-user]$
```

Conclusion

The VPC peering connection was successfully established, and communication between instances in both VPCs was verified

Submitted by: Sujan K S

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