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

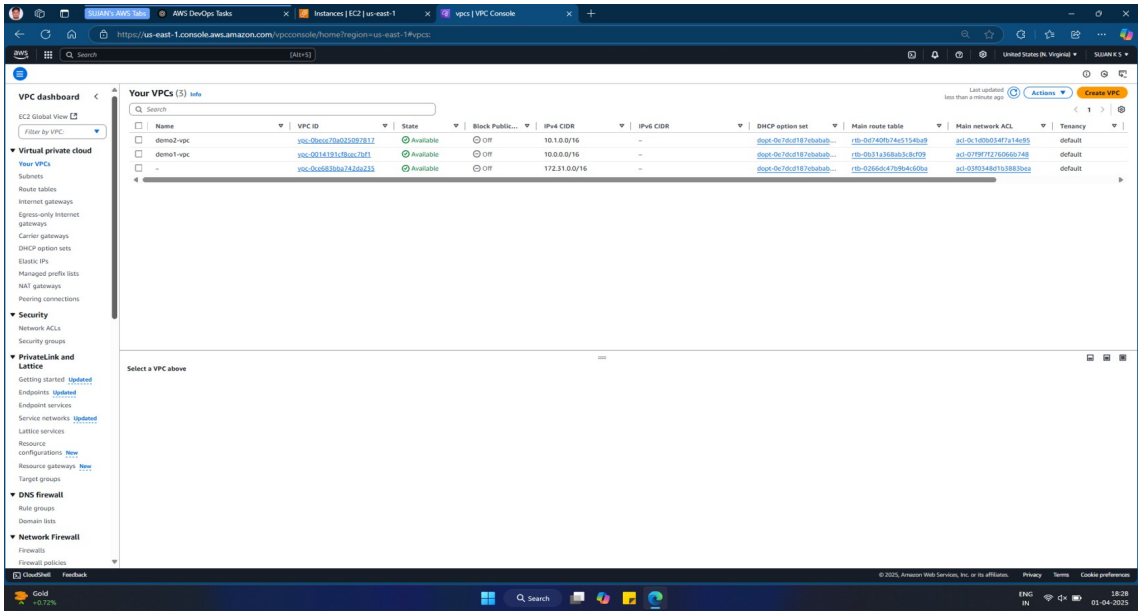
Introduction

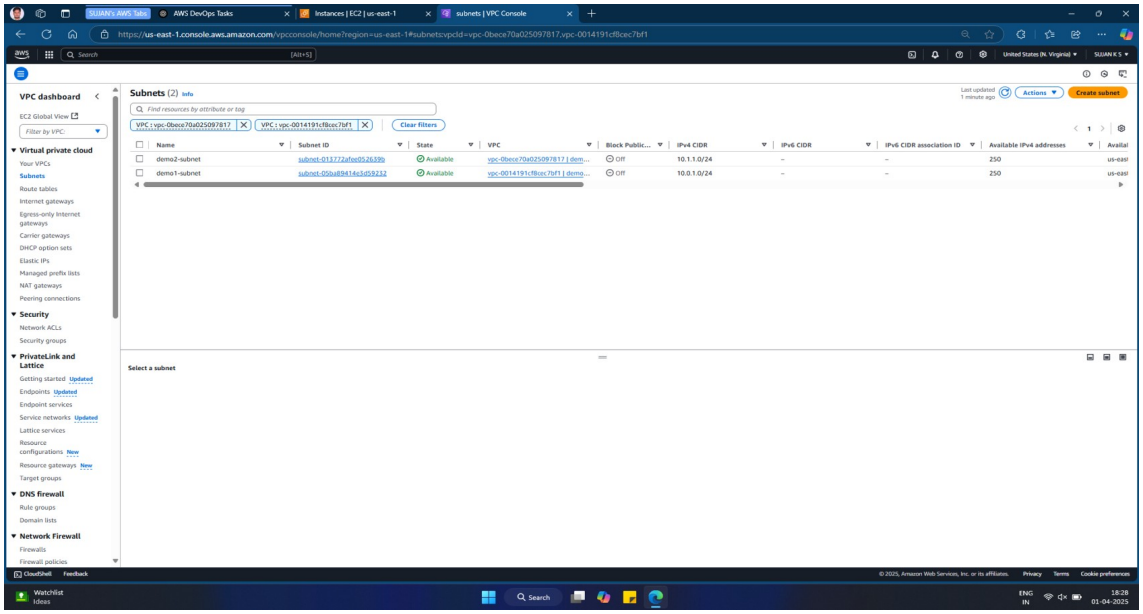
This document outlines the process of creating two Virtual Private Clouds (VPCs) in the same AWS region and establishing VPC peering between them.

VPC and Subnet Setup

VPC Creation:

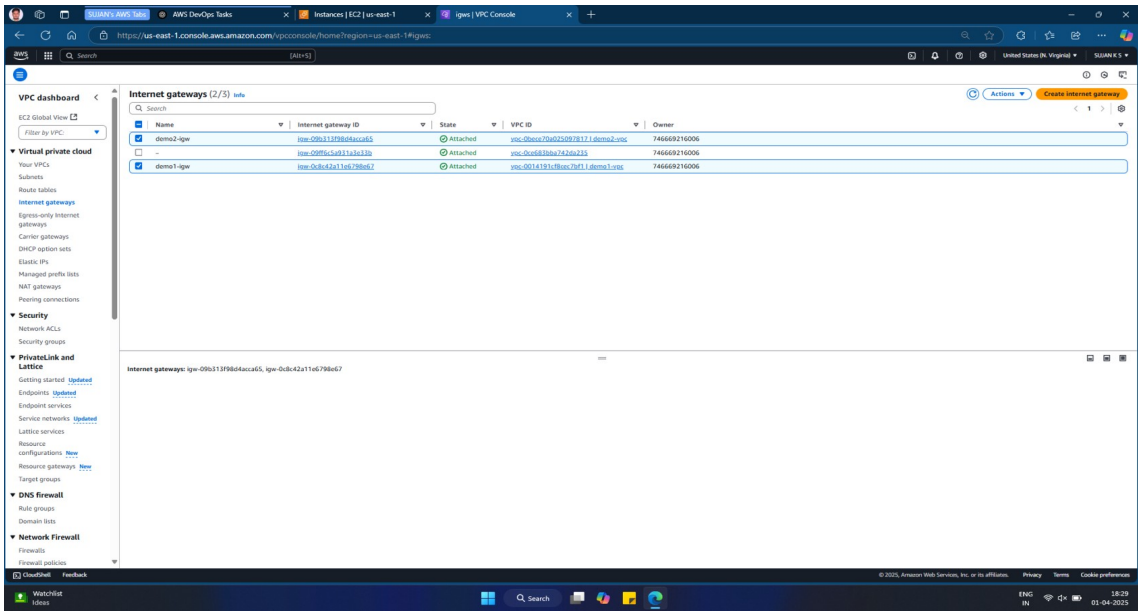
- **Created** demo1-vpc with **CIDR block** 10.0.0.0/16.
- **Created** demo2-vpc with **CIDR block** 10.1.0.0/16.
- **Created** a **public subnet** demo1-subnet under demo1-vpc with **CIDR block** 10.0.1.0/24.
- **Created** a **public subnet** demo2-subnet under demo2-vpc with **CIDR block** 10.1.1.0/24.





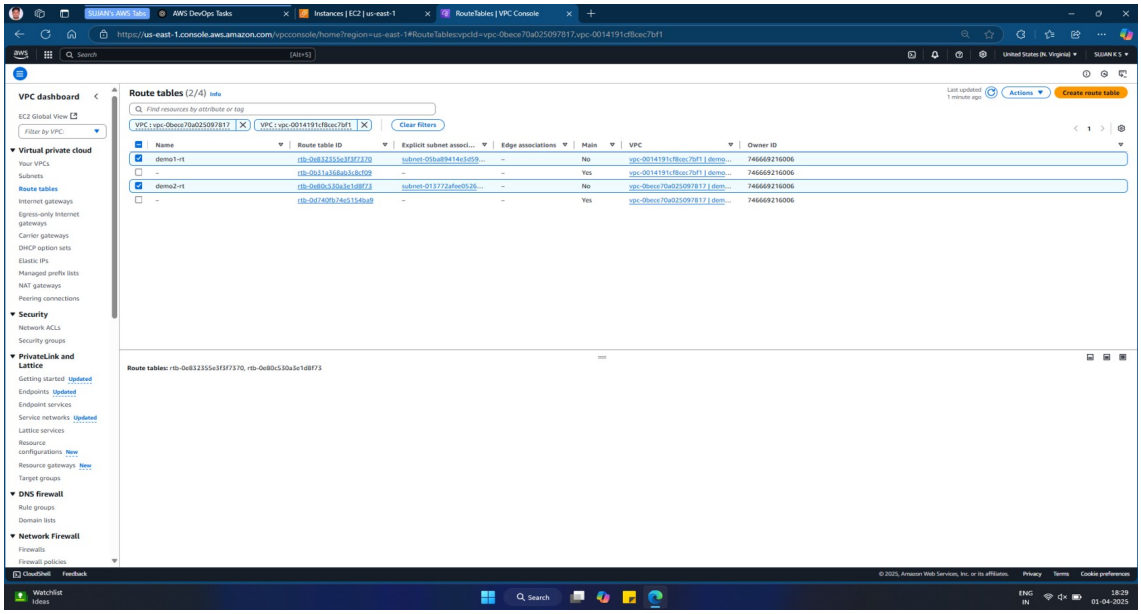
Internet Gateway:

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



Route Table Configuration:

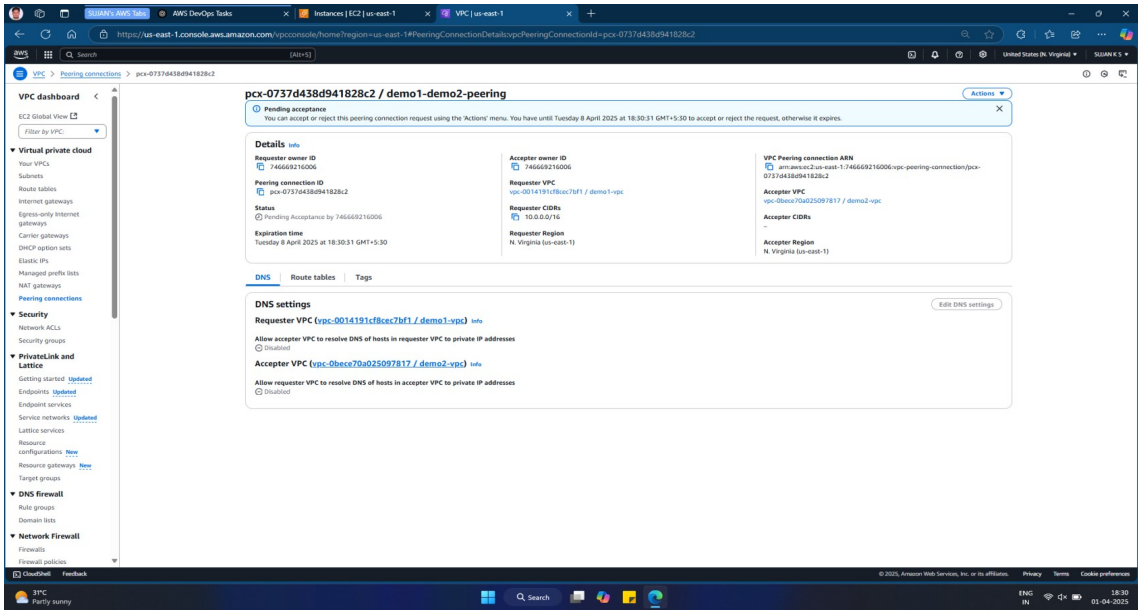
- demo1-vpc-rt **was associated** with demo1-subnet and **configured** to route internet traffic via demo1-igw.
- demo2-vpc-rt **was associated** with demo2-subnet and **configured** to route internet traffic via demo2-igw.

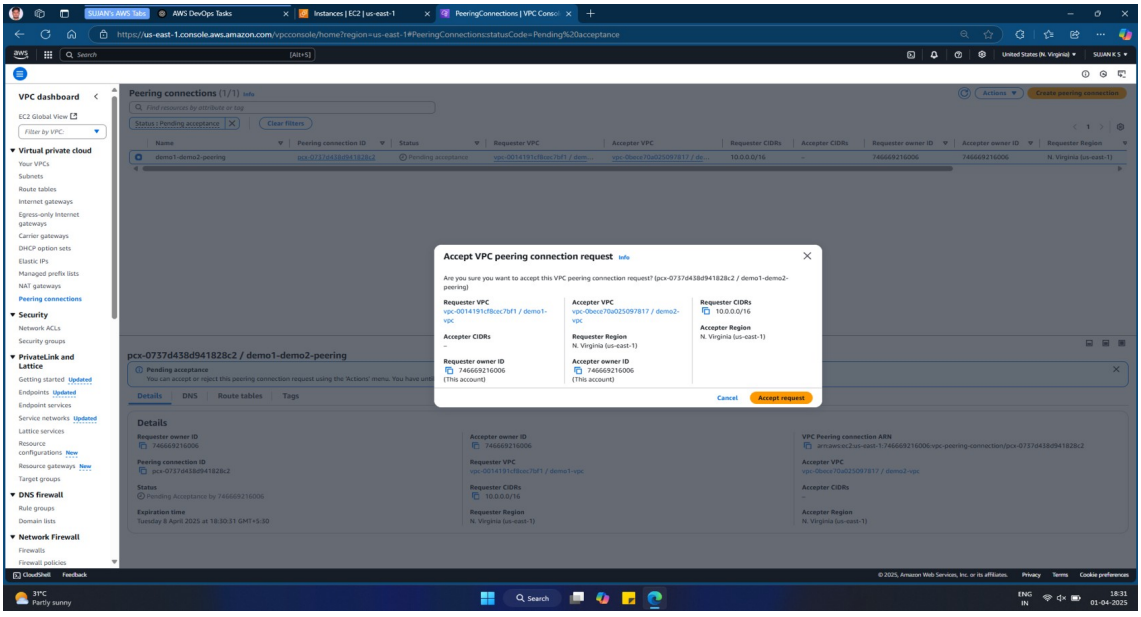


VPC Peering Setup

Peering Connection Creation:

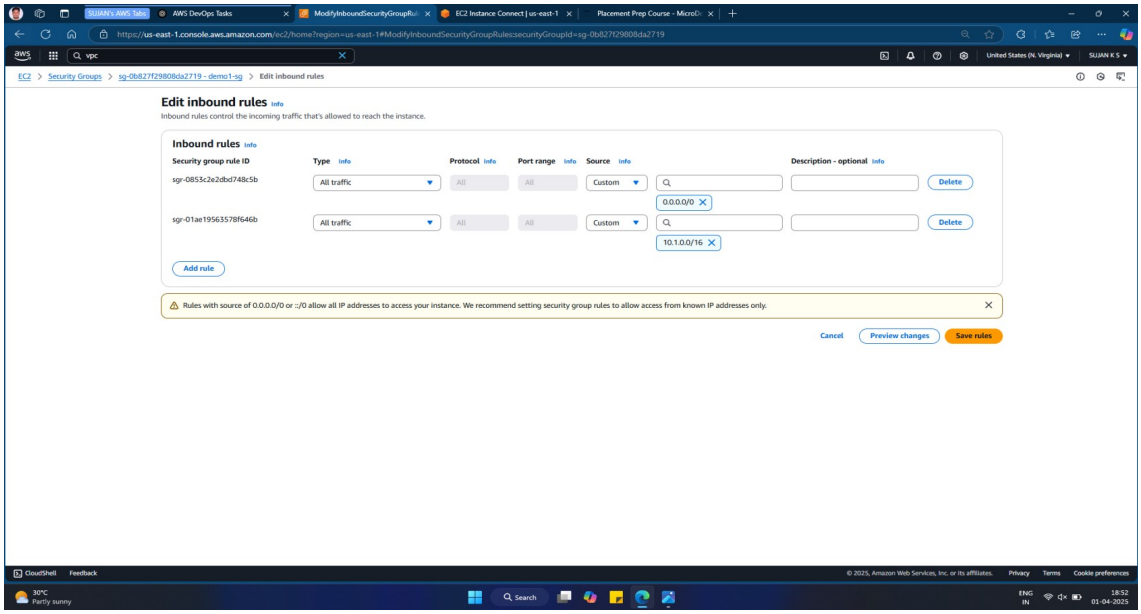
- **Created** a **VPC Peering Connection** demo1-demo2-peer between demo1-vpc and demo2-vpc.
- **Accepted** the **peering connection request** from the demo2-vpc side.

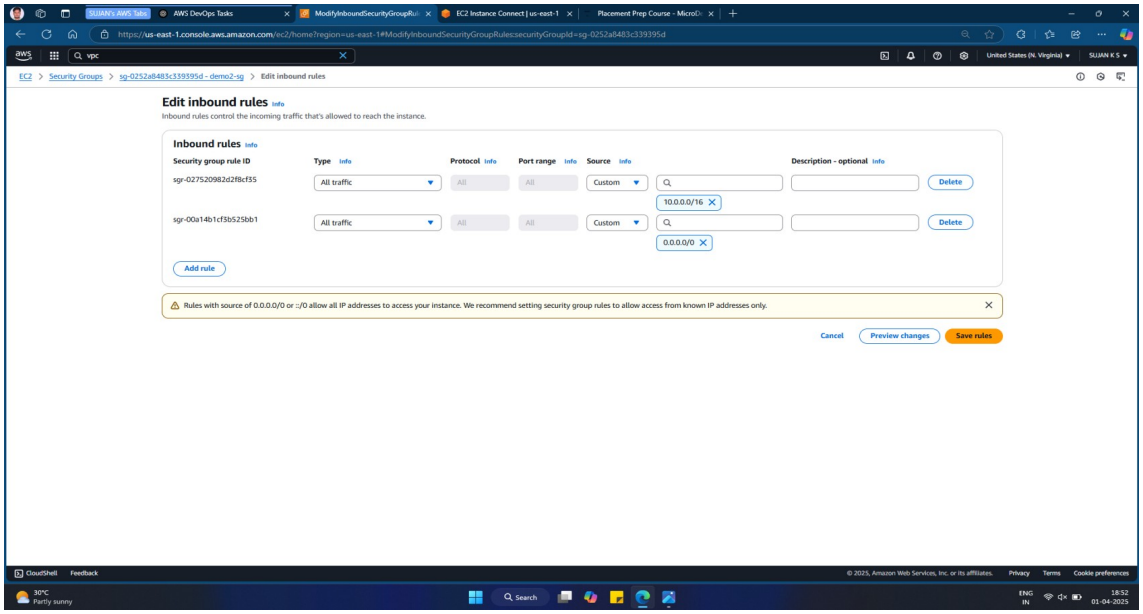




Route Table Updates for Peering:

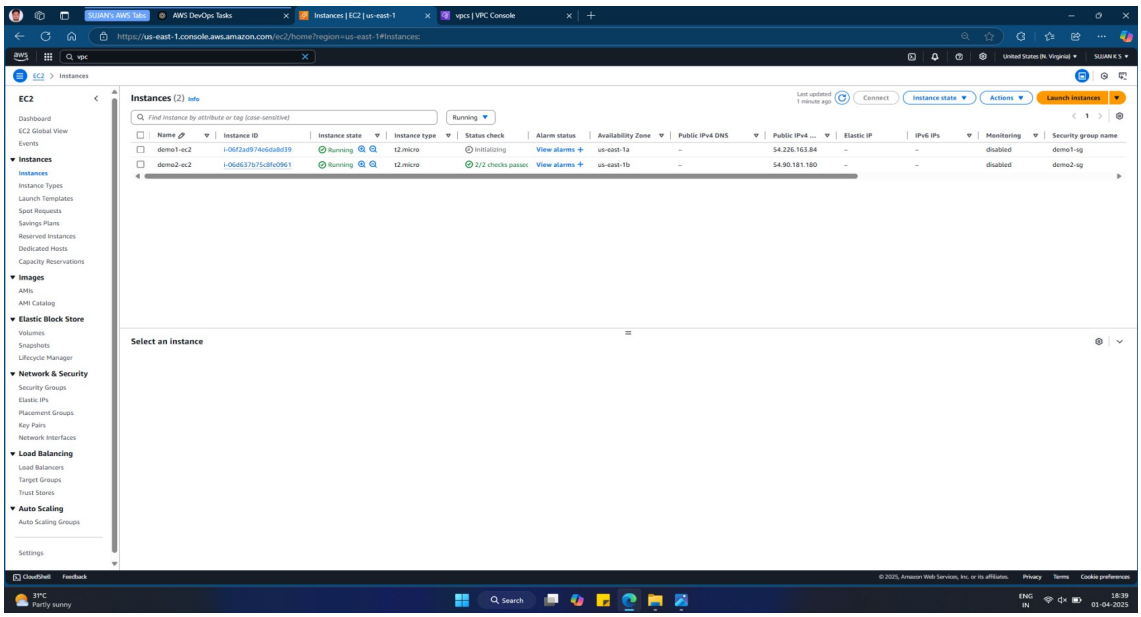
- Updated demo1-vpc-rt to route traffic destined for 10.1.0.0/16 (demo2-vpc) through the peering connection.
- Updated demo2-vpc-rt to route traffic destined for 10.0.0.0/16 (demo1-vpc) through the peering connection.





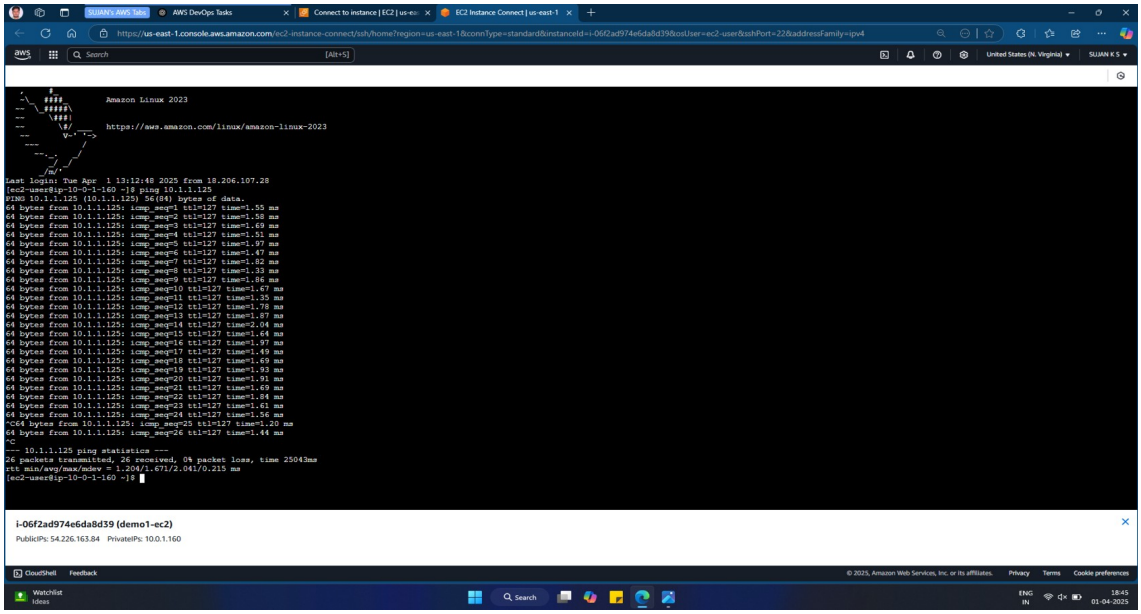
EC2 Instance Setup for Testing

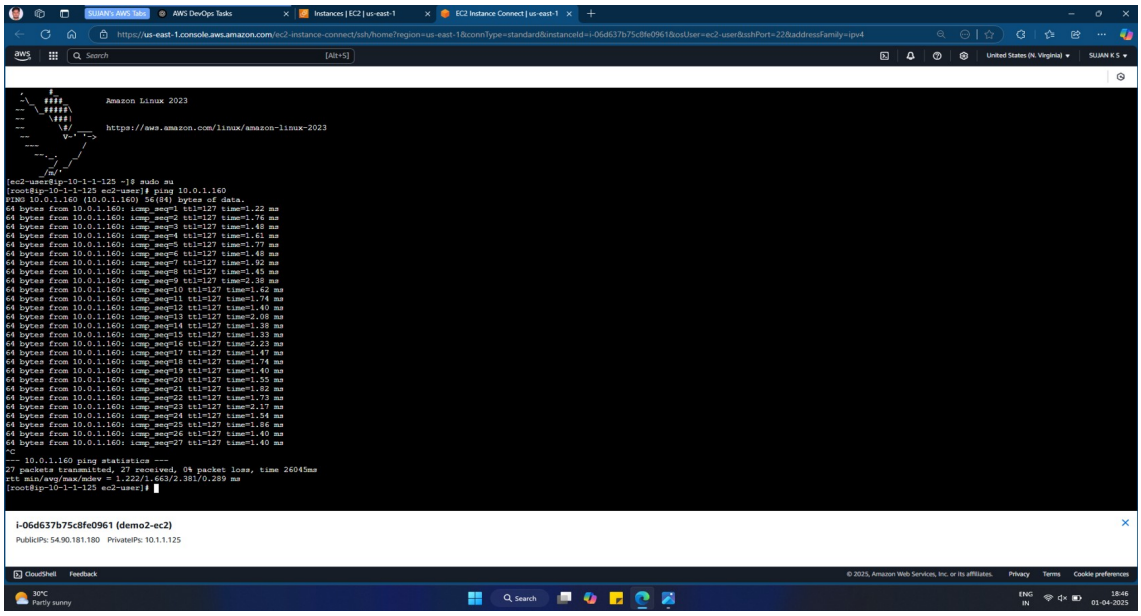
- **Launched** an **instance** demo1-ec2 in demo1-subnet with **IP** 10.0.1.160.
- **Launched** an **instance** demo2-ec2 in demo2-subnet with **IP** 10.1.1.125.



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).





Conclusion

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

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Date: 01-04-2025