Assignment #3VPC Peering & IAM Implementation

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2025-03-12

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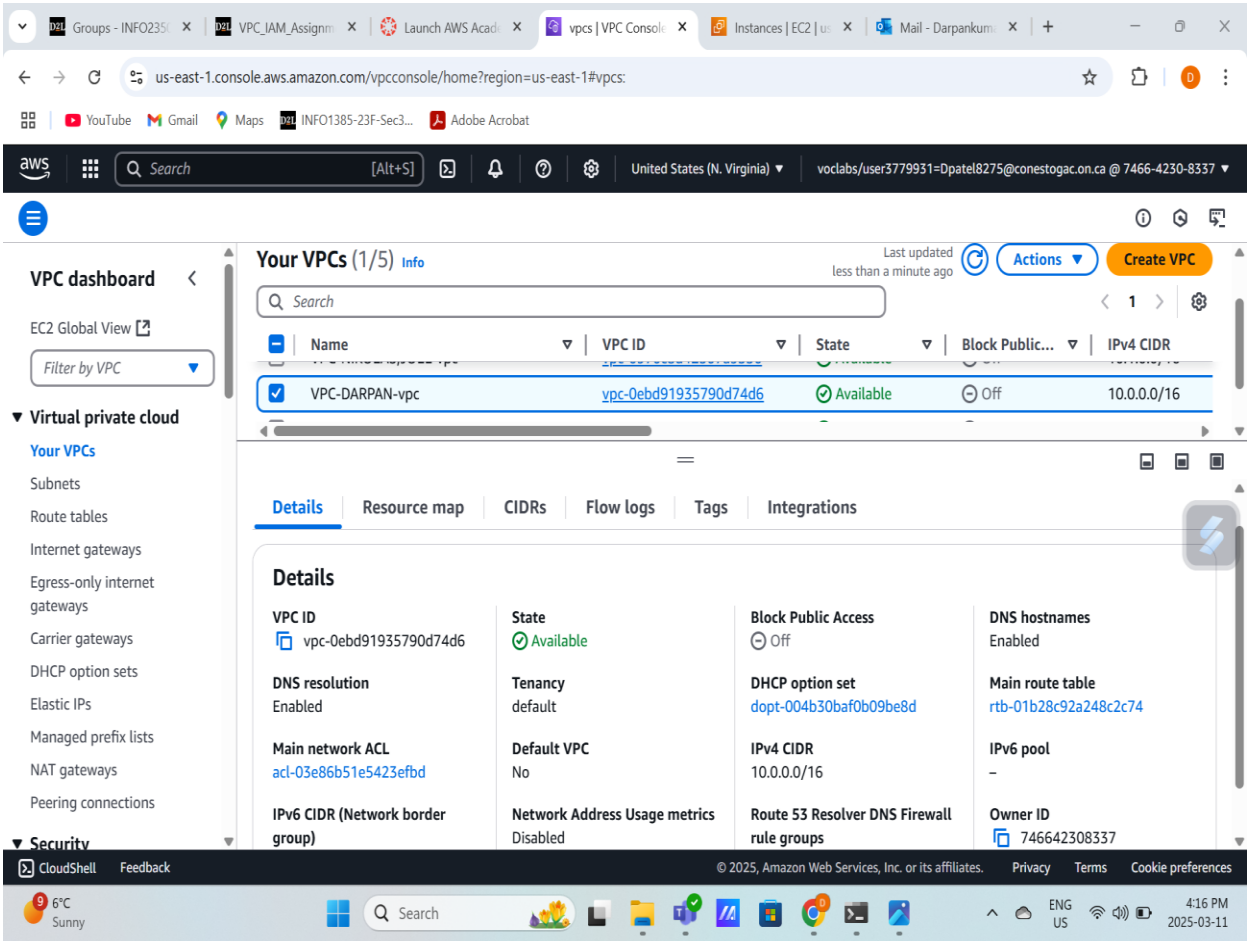
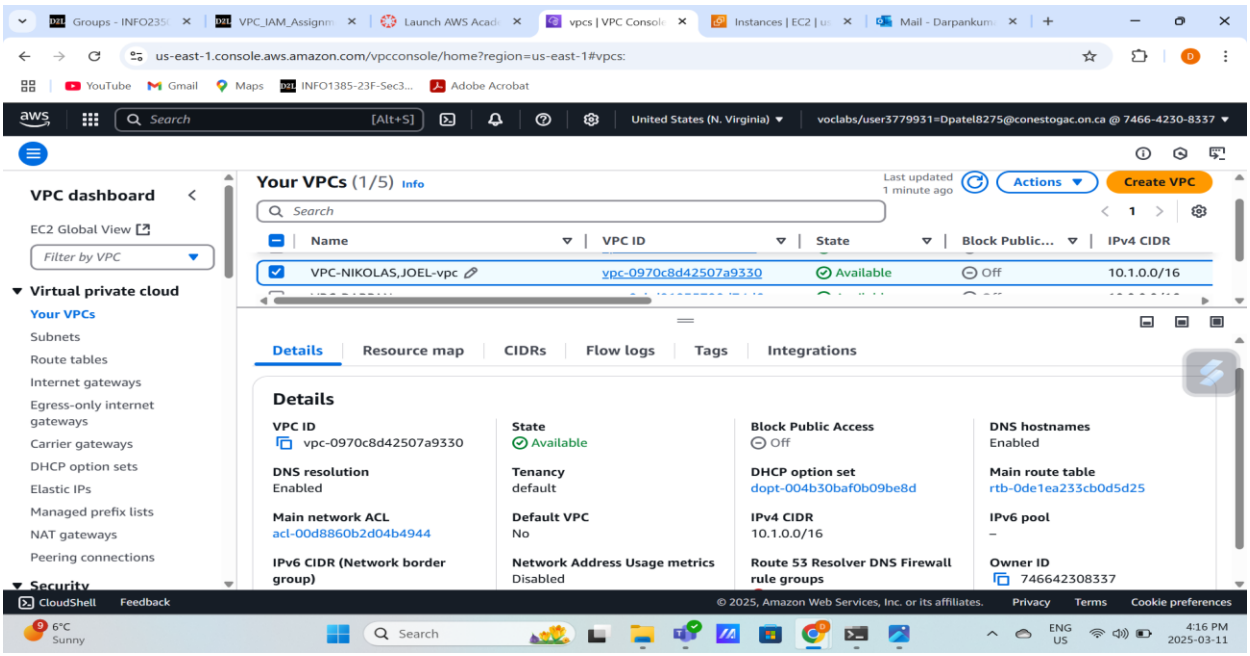
- **VPC-DARPAN:** 10.0.0.0/16
- **VPC-NIKOLAS, JOEL:** 10.1.0.0/16

Screenshots



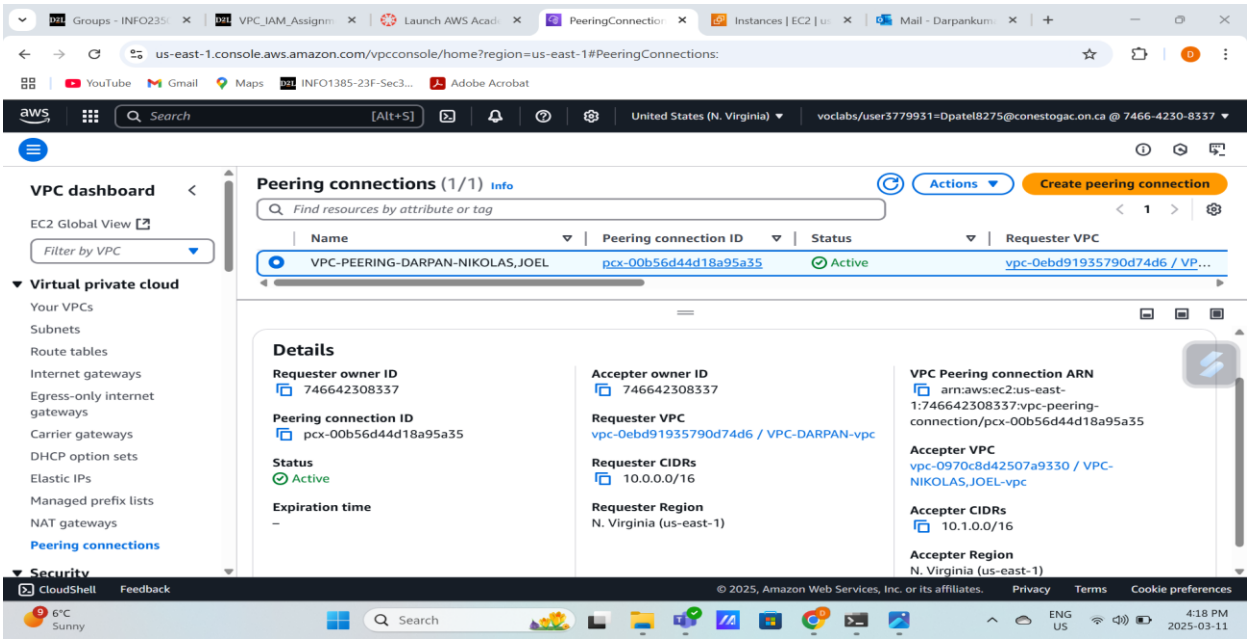


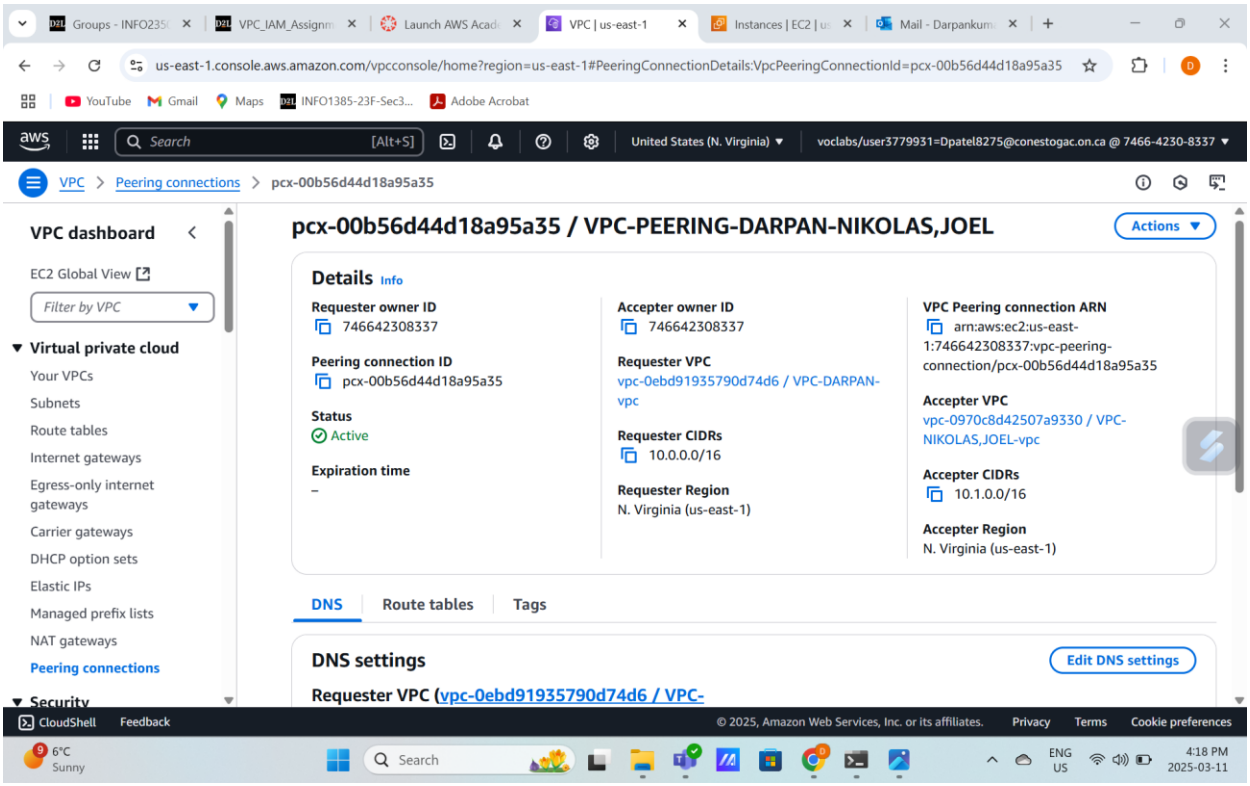
Step 2: Establish VPC Peering.

I established a VPC Peering Connection from **VPC-DARPAN** to **VPC-NIKOLAS, JOEL**.

The peer accepted the request via the AWS console.

Screenshots




us-east-1.console.aws.amazon.com/vpcconsole/home?region=us-east-1#PeeringConnectionDetails:VpcPeeringConnectionId=pcx-00b56d44d18a95a35
VPC > Peering connections > pcx-00b56d44d18a95a35
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pcx-00b56d44d18a95a35 / VPC-PEERING-DARPAN-NIKOLAS,JOEL
Actions
Details Info
Requester owner ID
746642308337
Peering connection ID
pcx-00b56d44d18a95a35
Status
Active
Expiration time
–
Accepter owner ID
746642308337
Requester VPC
vpc-0ebd91935790d74d6 / VPC-DARPAN-vpc
Requester CIDRs
10.0.0.0/16
Requester Region
N. Virginia (us-east-1)
VPC Peering connection ARN
arn:aws:ec2:us-east-1:746642308337:vpc-peering-connection/pcx-00b56d44d18a95a35
Accepter VPC
vpc-0970c8d42507a9330 / VPC-NIKOLAS,JOEL-vpc
Accepter CIDRs
10.1.0.0/16
Accepter Region
N. Virginia (us-east-1)
DNS
Route tables
Tags
DNS settings
Edit DNS settings
Requester VPC (vpc-0ebd91935790d74d6 / VPC-
CloudShell
Feedback
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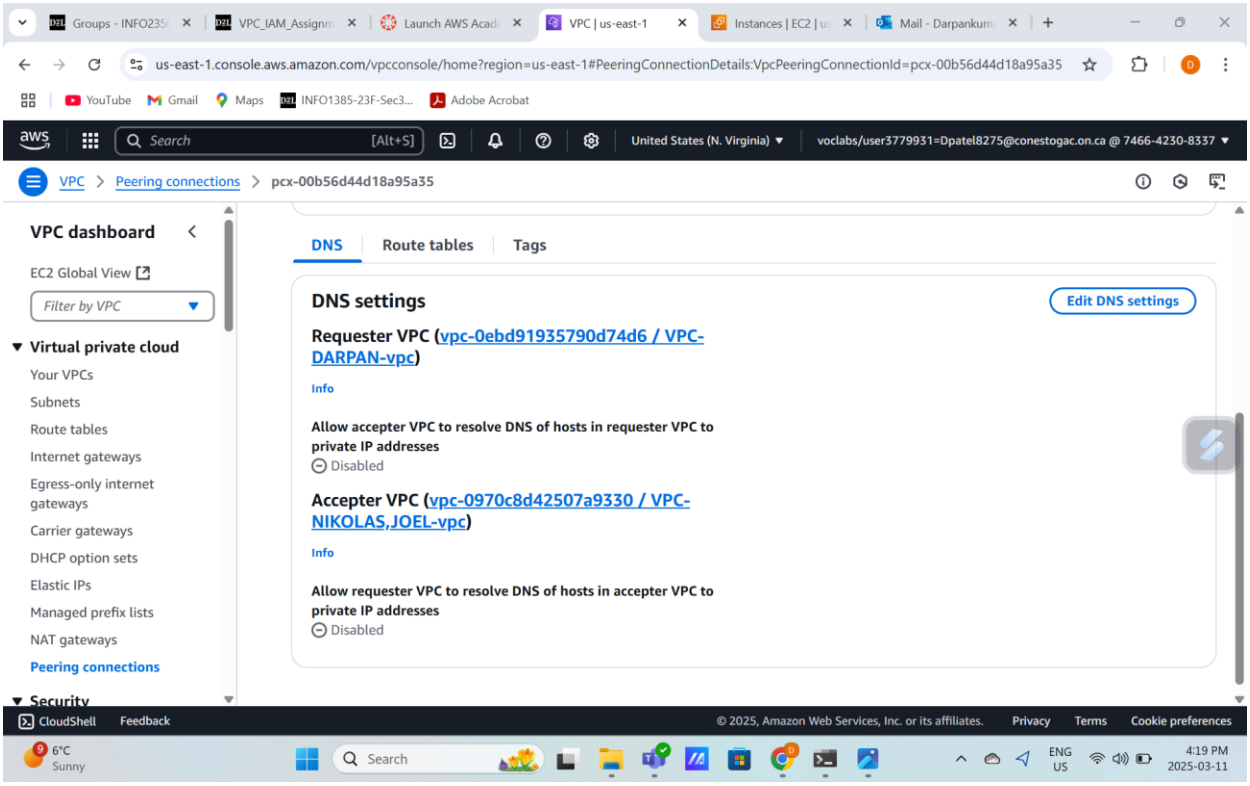
us-east-1.console.aws.amazon.com/vpcconsole/home?region=us-east-1#PeeringConnectionDetails:VpcPeeringConnectionId=pcx-00b56d44d18a95a35
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DNS settings
Edit DNS settings
Requester VPC (vpc-0ebd91935790d74d6 / VPC-DARPAN-vpc)
Info
Allow accepter VPC to resolve DNS of hosts in requester VPC to private IP addresses
Disabled
Accepter VPC (vpc-0970c8d42507a9330 / VPC-NIKOLAS,JOEL-vpc)
Info
Allow requester VPC to resolve DNS of hosts in accepter VPC to private IP addresses
Disabled
CloudShell
Feedback
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2025-03-11

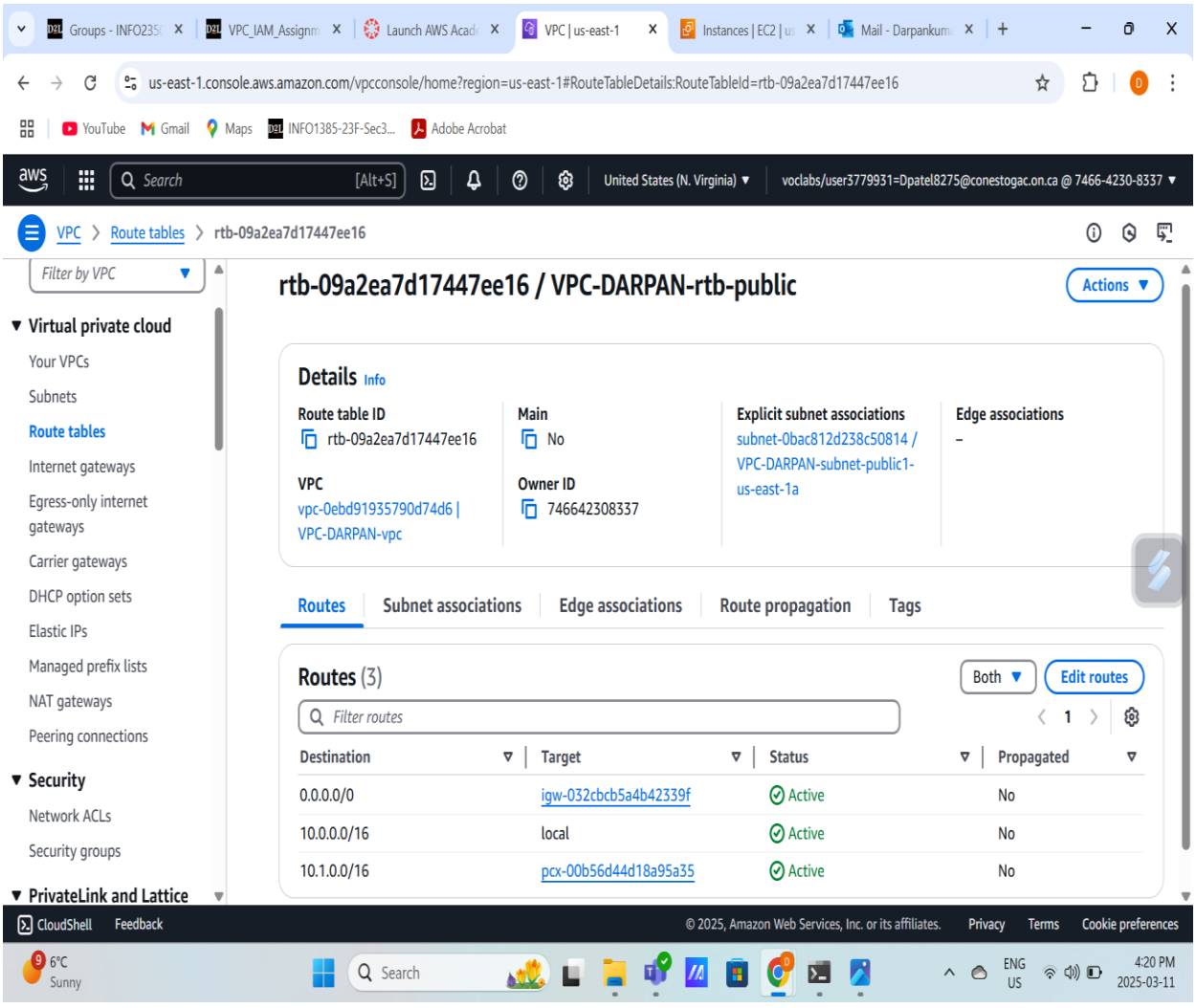
Step 3: Route Tables Are Updated

1. **VPC-DARPAN** Route Table has been modified.

   Destination: 10.1.0.0/16

   Target: Peering Connection

Screenshots:

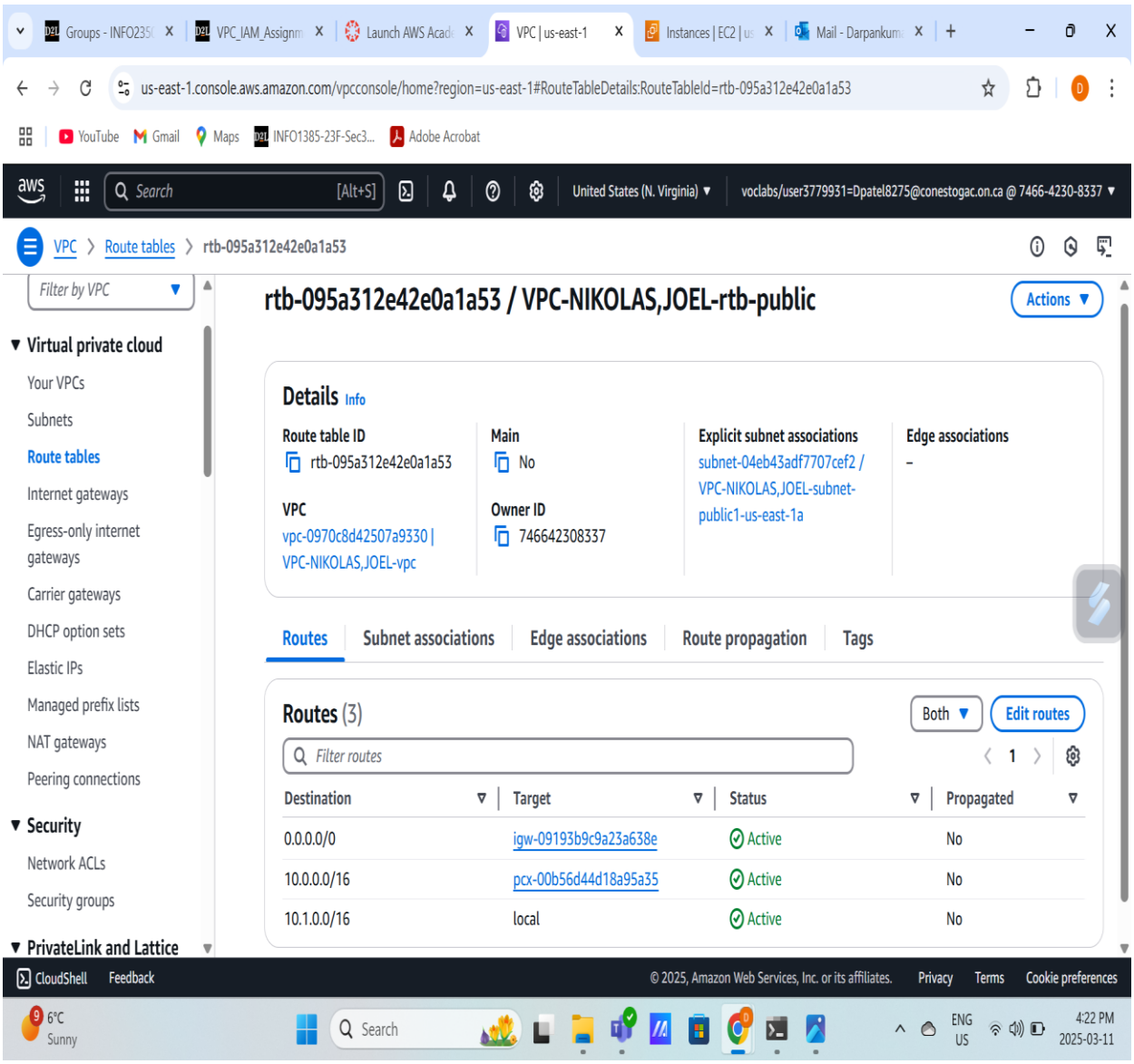


2. **VPC-NIKOLAS, JOEL** Route Table has been modified.

   Destination: 10.0.0.0/16

   Target: Peer Connection

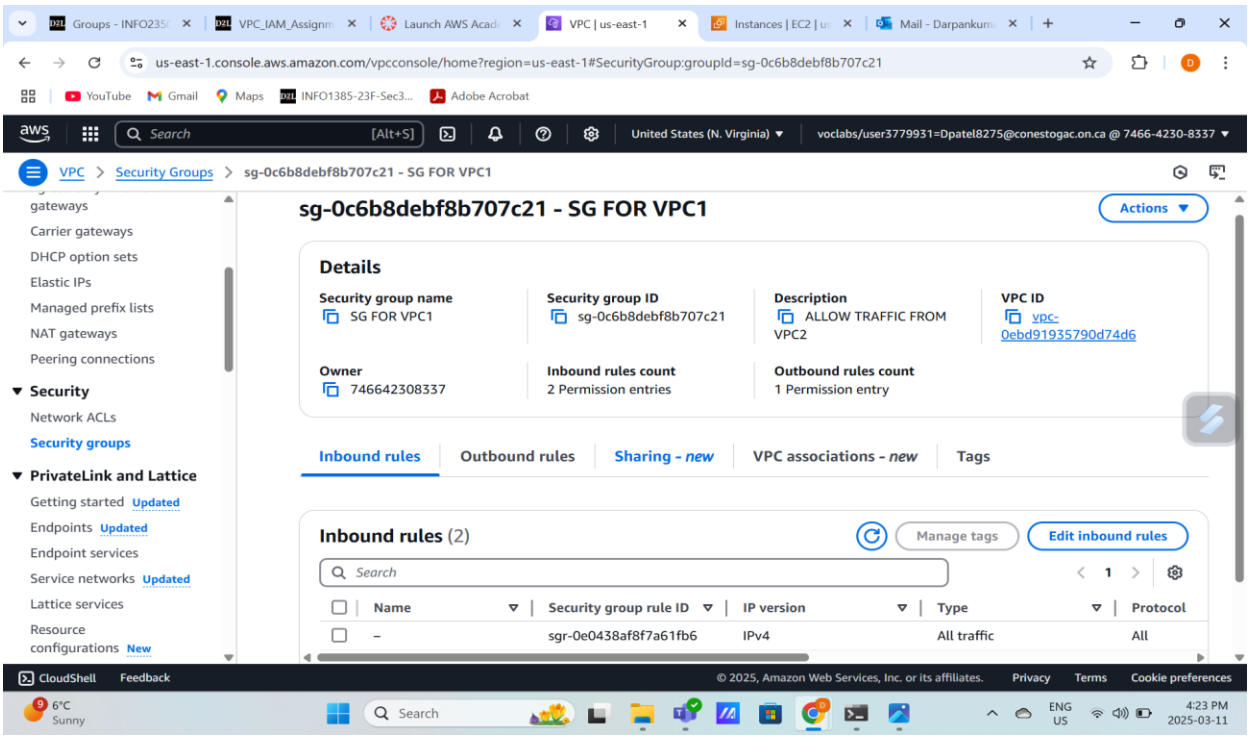
Screenshots:

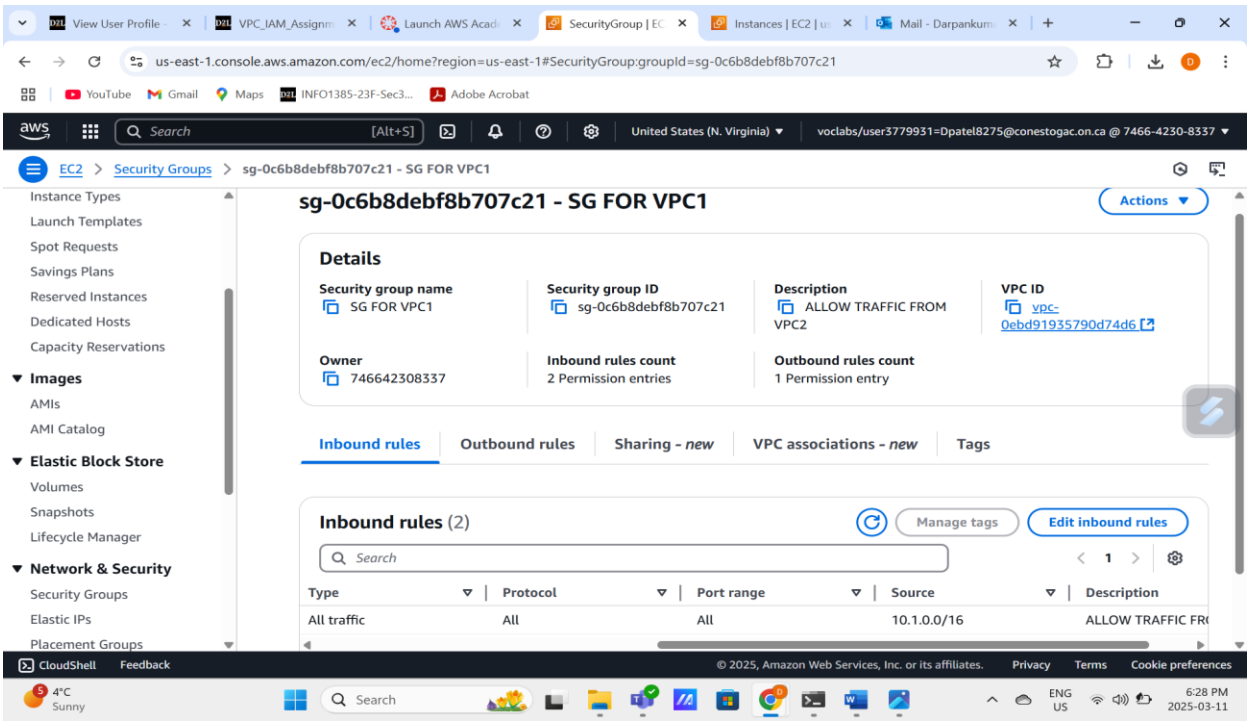


Step 4: Update Security Groups

In **VPC-DARPAN**, change the security group to accept inbound traffic from **10.1.0.0/16.**

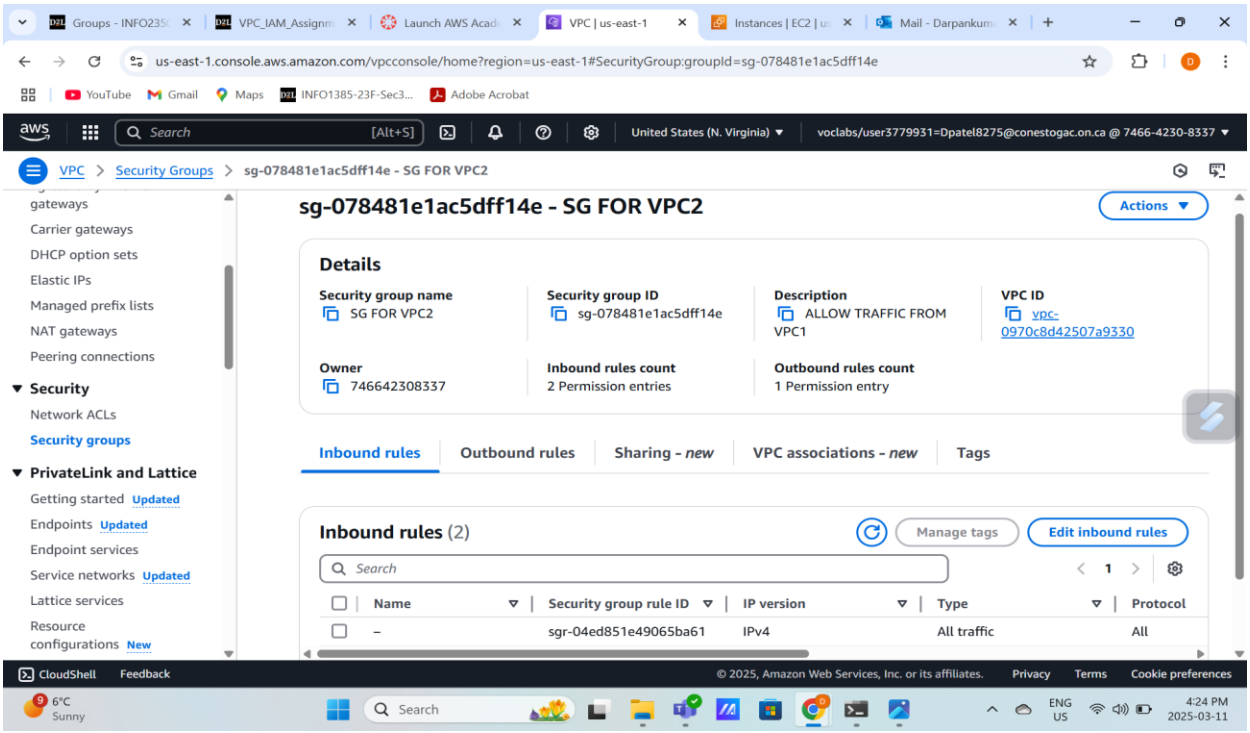
Screenshots:

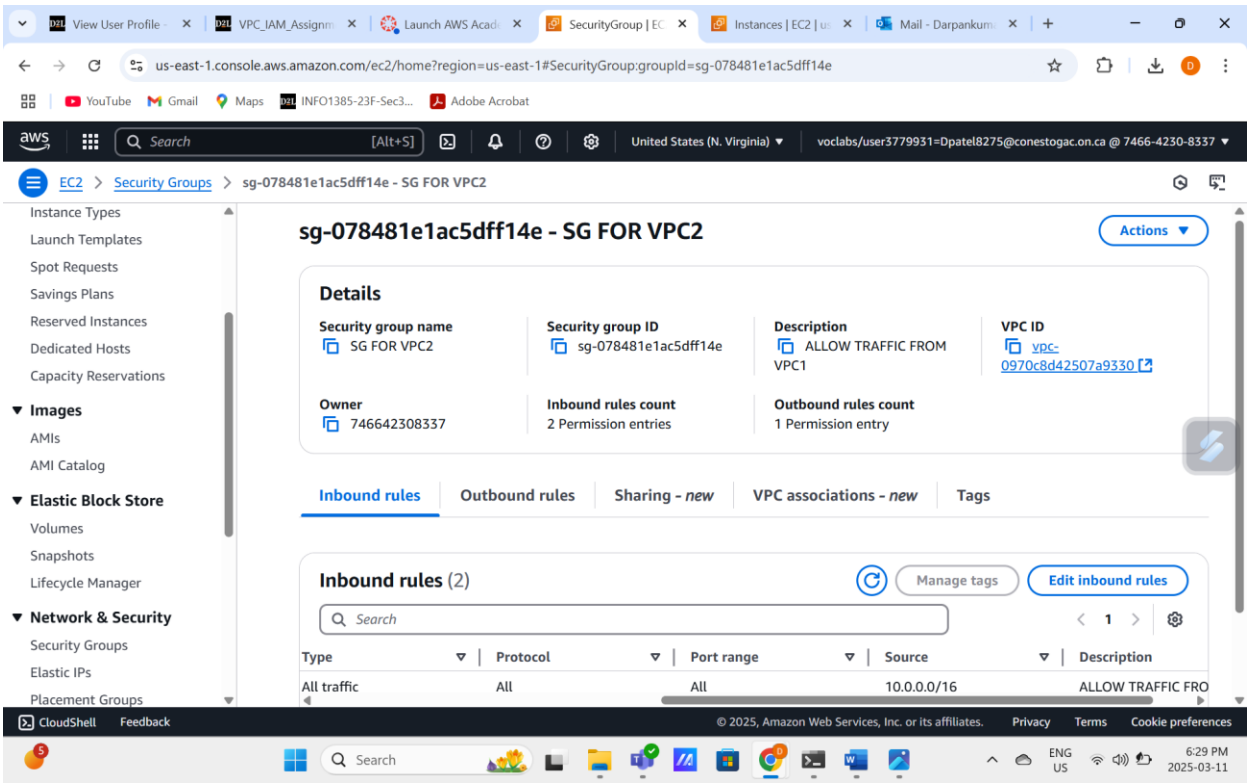




In **VPC-NIKOLAS, JOEL**, change the security group to accept inbound traffic from **10.0.0.0/16.**

Screenshots:





Assignment #2 VPC, EC2 and RDS
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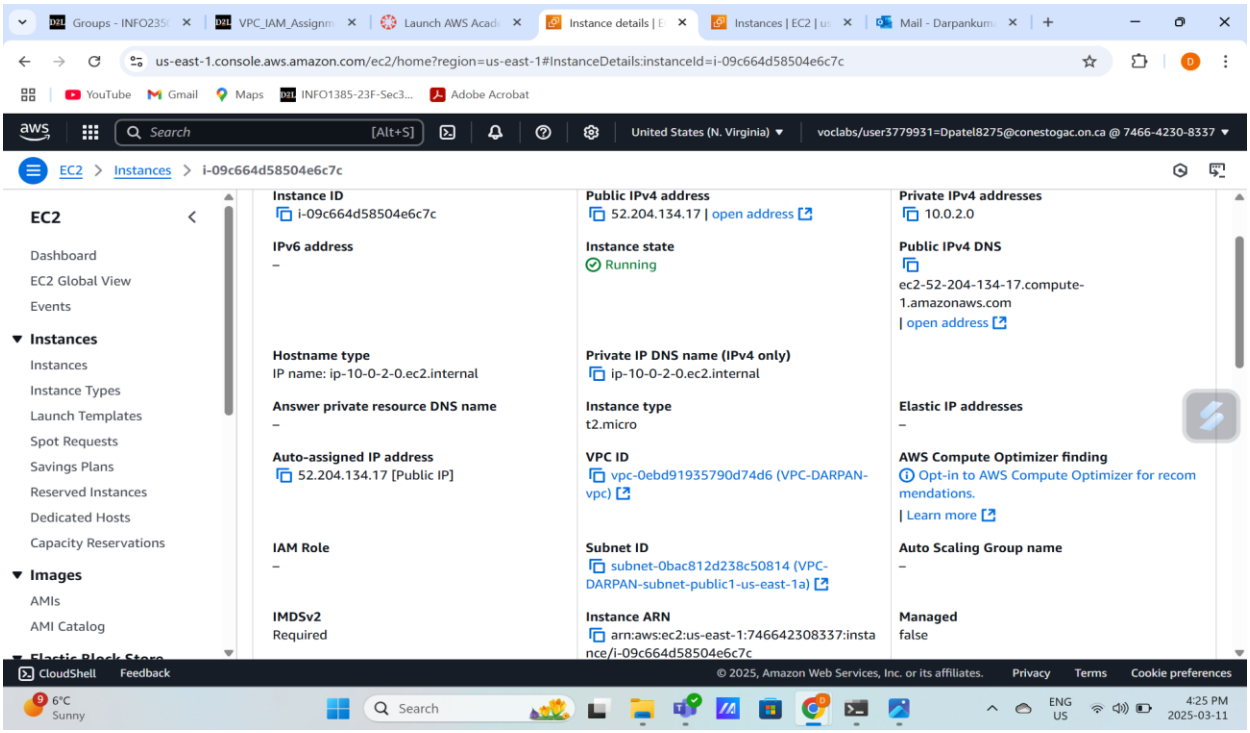
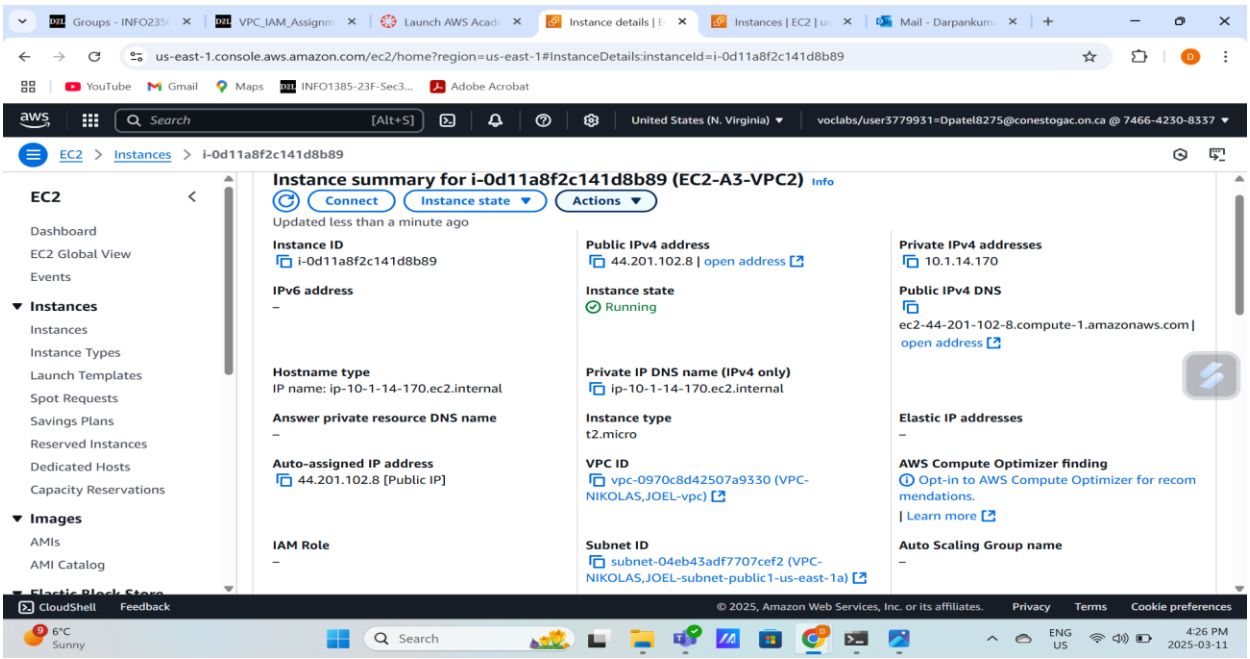
Step 5: Launched EC2 instances.

1. I launched an EC2 instance in **VPC-DARPAN** (Amazon Linux, t2.micro).
2. I launched another EC2 instance in **VPC-NIKOLAS, JOEL.**
3. I verified that each instance gets a private IP address.

Screenshots:

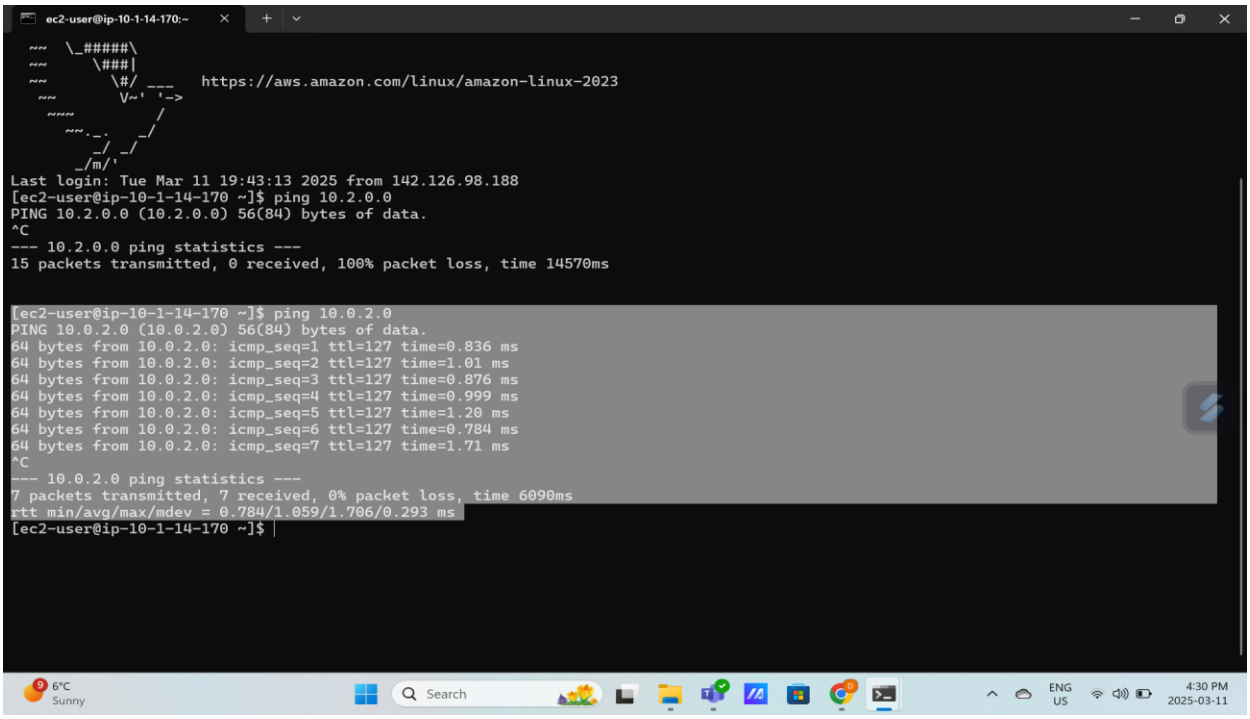


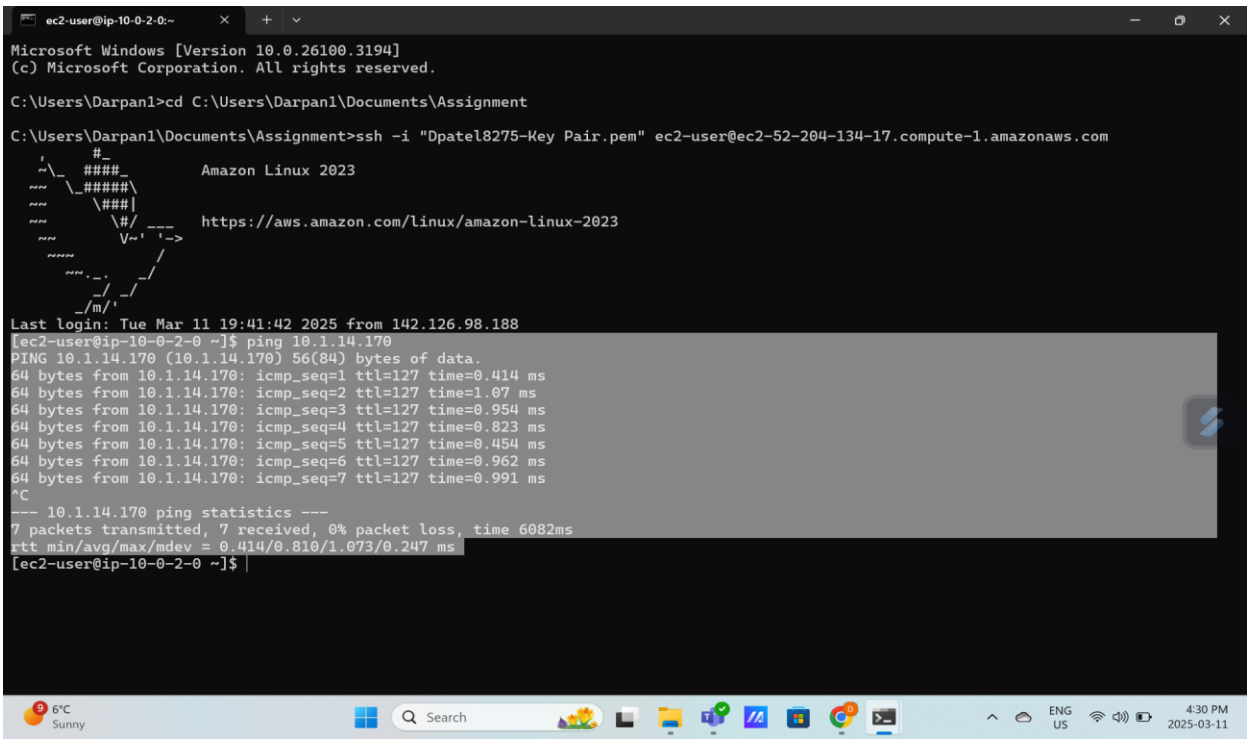


Step 6: Tested Connection Between Instance

1. I used ping to test cross-VPC connectivity across EC2 instances.
2. The test was successful, indicating that VPC Peering works.

Screenshots:





Observations:

- **VPC peering enables safe private communication between two independent VPCs.**
- **To permit traffic between VPCs, the route table must be updated properly.**
- **Security Groups must be set to allow inbound and outbound traffic.**
- **IAM enables granular access control, hence boosting security in the AWS environment.**
- **IAM Policies must be carefully assigned to guarantee that users and roles receive only the essential permissions.**