

## Lab Assignment – 04

**Task: Create 2 VPC in 2 different Availability Zones in different Regions.**

### Region-1: Mumbai

The screenshot shows the AWS VPC Management Console interface. A green success message at the top states: "You successfully created vpc-00ddc665ebeefbd9b / VPC\_Region\_1". Below this, the VPC details are listed:

VPC ID	State	DNS hostnames	DNS resolution
vpc-00ddc665ebeefbd9b	Available	Disabled	Enabled
Tenancy	dopt-c935e9a2	DHCP options set	Main route table
Default		rtb-02f6ff289f543e1af	Main network ACL
Endpoints		IPv4 CIDR	acl-08cf250165e31b7c3
Endpoint Services	No	10.0.0.0/16	IPv6 CIDR

### Create subnet

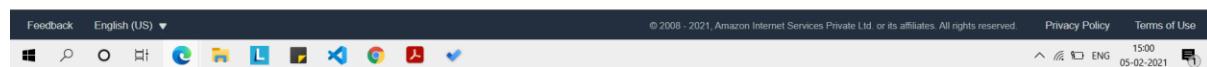
The screenshot shows the "Create subnet" wizard in the AWS VPC Management Console. The first step, "VPC", is selected. The VPC ID is set to "vpc-00ddc665ebeefbd9b (VPC\_Region\_1)". Under "Associated VPC CIDs", the IPv4 CIDR is listed as "10.0.0.0/16".

**Subnet settings**  
Specify the CIDR blocks and Availability Zone for the subnet.

The screenshot shows the AWS VPC Management Console. A green success message at the top right says, "You have successfully created 1 subnet: subnet-0d0d88575e62c9d9e". The main area displays a table titled "Subnets (1) Info" with one row of data. The table columns are: Name, Subnet ID, State, VPC, and IPv4 CIDR. The single entry is: Subnet\_Regio..., subnet-0d0d88575e6..., Available, vpc-00ddc665beefbd..., 10.0.0.0/24.

## Create a new route table.

The screenshot shows the "Create route table" page. A green success message at the top right says, "The following Route Table was created:". Below it, the Route Table ID is listed as rtb-07d8e86a3eacb25bc. A "Close" button is at the bottom right.



## Create Internet Gateway

The screenshot shows the AWS VPC Management Console. A green notification bar at the top states: "The following internet gateway was created: igw-08f0602144fc3980. You can now attach to a VPC to enable the VPC to communicate with the internet." Below this, the "Internet Gateways" page is displayed for the gateway "igw-08f0602144fc3980 / IGW\_1". The "Details" section shows the Internet gateway ID as "igw-08f0602144fc3980", the state as "Detached", and the owner as "277391238495". There is also a "Tags" section with a "Manage tags" button. The left sidebar shows the "Internet Gateways" option under "Virtual Private Cloud".

## Attach internet gateway

The screenshot shows the "Attach internet gateway" wizard. It starts with a "VPC" step where it says "Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below." Below this, there is a search bar containing "vpc-00ddc665ebeefbd9b" and a "Cancel" button. At the bottom right is a large orange "Attach internet gateway" button. The URL in the browser is "https://ap-south-1.console.aws.amazon.com/vpc/home?region=ap-south-1#AttachInternetGateway:internetGatewayId=igw-08f0602144fc3980". The left sidebar shows the "Available VPCs" section.

## Edit Route table

Route Tables > Edit routes

**Edit routes**

Destination	Target	Status	Propagated
10.0.0.0/16	local	active	No
0.0.0.0/0	igw-08f0602144cf3980		No

Add route

\* Required

Cancel Save routes

## Edit subnet associations

Route Tables > Edit subnet associations

**Edit subnet associations**

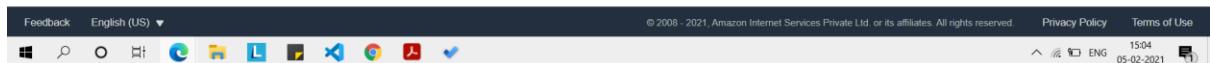
Route table rtb-07d8e86a3eacb25bc (RT\_1)

Associated subnets subnet-0d0d88575e62c9d9e

Subnet ID	IPv4 CIDR	IPv6 CIDR	Current Route Table
subnet-0d0d88575e62c9d9e   Subnet_R...	10.0.0.0/24	-	Main

\* Required

Cancel Save



## Launch window server in this VPC subnet [Mumbai Region]

**Step 3: Configure Instance Details**

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances: 1

Purchasing option: Request Spot instances

Network: vpc-00ddc665beefbd9b | VPC\_Region\_1

Subnet: subnet-0d0d88575e62c9d9e | Subnet\_Region\_1 | ap

Auto-assign Public IP: Enable

Placement group: Add instance to placement group

Capacity Reservation: Open

Domain Join directory: No directory

IAM role: None

Buttons: Cancel, Previous, **Review and Launch**, Next: Add Storage

**Step 6: Configure Security Group**

Assign a security group:

- Create a new security group
- Select an existing security group

Security group name: SG\_VPC\_Peering

Description: launch-wizard-1 created 2021-02-05T15:08:31.787+05:30

Type	Protocol	Port Range	Source	Description
RDP	TCP	3389	Anywhere	e.g. SSH for Admin Desktop
All ICMP - IPv4	ICMP	0 - 65535	Anywhere	e.g. SSH for Admin Desktop
HTTPS	TCP	443	Anywhere	e.g. SSH for Admin Desktop

**Warning**  
Rules with source of 0.0.0.0/ allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Buttons: Cancel, Previous, **Review and Launch**, Next: Add Storage

Repeat the same steps for the Tokyo Region

## Region: Tokyo

### Create VPC

The screenshot shows the AWS VPC Management Console interface. A green success message at the top states: "You successfully created vpc-0834432e1558dc9c5 / VPC\_Region\_2". The main page displays the details of the newly created VPC, including its ID (vpc-0834432e1558dc9c5), state (Available), and various network settings like DNS resolution and DHCP options. The left sidebar shows navigation links for VPC Dashboard, Your VPCs, Subnets, Route Tables, Internet Gateways, Egress Only Internet Gateways, Carrier Gateways, DHCP Options Sets, Elastic IPs, Managed Prefix Lists, and Endpoints.

VPC ID	State	DNS hostnames	DNS resolution
vpc-0834432e1558dc9c5	Available	Disabled	Enabled

### Create subnet

The screenshot shows the AWS Subnets Management Console interface. A green success message at the top states: "You have successfully created 1 subnet: subnet-0f2bf77ee2256c76f". The main page displays the created subnet in a table, with its ID, name (Subnet\_Regio...), state (Available), VPC (vpc-0834432e1558dc...), and IPv4 CIDR (192.168.0.0/16). The left sidebar shows navigation links for VPC Dashboard, Your VPCs, Subnets, Route Tables, Internet Gateways, Egress Only Internet Gateways, Carrier Gateways, DHCP Options Sets, Elastic IPs, Managed Prefix Lists, and Endpoints.

Name	Subnet ID	State	VPC	IPv4 CIDR
Subnet_Regio...	subnet-0f2bf77ee2256c76f	Available	vpc-0834432e1558dc...	192.168.0.0/16

## Create new route table

The screenshot shows the AWS VPC Management Console with the URL <https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#CreateRouteTable>. A success message box is displayed, stating "The following Route Table was created:" with a Route Table ID of [rtb-0f4aeaf57b3641eed](#). The "Close" button is visible at the bottom right of the message box.

## Create Internet Gateway

The screenshot shows the AWS VPC Management Console with the URL <https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#InternetGateway:internetGatewayId=igw-0ed...>. A success message box is displayed, stating "The following internet gateway was created: igw-0ed71019e71956b8b . You can now attach to a VPC to enable the VPC to communicate with the internet." An "Attach to a VPC" button is visible. The main view shows the details of the newly created Internet Gateway, including its ID (igw-0ed71019e71956b8b), State (Detached), VPC ID (-), and Owner (277391238495). The "Actions" dropdown menu is open. The left sidebar shows the VPC navigation path: VPC Dashboard > Internet gateways > igw-0ed71019e71956b8b.

## Attach Internet Gateway

The screenshot shows the AWS VPC Management Console. In the top navigation bar, there is a success message: "Internet gateway igw-0ed71019e71956b8b successfully attached to vpc-0834432e1558dc9c5". Below this, the breadcrumb navigation shows "VPC > Internet gateways > igw-0ed71019e71956b8b". The main content area displays the details of the Internet Gateway "igw-0ed71019e71956b8b / IGW\_Region\_2". The "Details" tab is selected, showing the following information:

Internet gateway ID	State	VPC ID	Owner
igw-0ed71019e71956b8b	Attached	vpc-0834432e1558dc9c5   VPC_Region_2	277391238495

Below the details, there is a "Tags" section with a "Manage tags" button. The bottom of the page includes standard AWS footer links and a timestamp.

## Edit route table

The screenshot shows the AWS VPC Management Console with the URL "https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#EditRoutes:routeTableId=rtb-0f4aeaf57b3641...". The breadcrumb navigation shows "Route Tables > Edit routes". The main content area is titled "Edit routes" and contains a table with two rows:

Destination	Target	Status	Propagated
192.168.0.0/16	local	active	No
0.0.0.0	igw-0ed71019e71956b8b		No

At the bottom, there is an "Add route" button, a note "\* Required", and a "Save routes" button. The bottom of the page includes standard AWS footer links and a timestamp.



## Edit subnet associations

Route table rtb-0f4aeaf57b3641eed (RT\_2)

Associated subnets subnet-0f2bf77ee2256c76f

Subnet ID	IPv4 CIDR	IPv6 CIDR	Current Route Table
subnet-0f2bf77ee2256c76f   Subnet_Re...	192.168.0.0/24	-	rtb-0f4aeaf57b3641eed

\* Required      Cancel      Save

Now launch EC2 instance in this VPC region 2 [Tokyo Region]

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances 1      Launch into Auto Scaling Group

Purchasing option Request Spot instances

Network vpc-0834432e1558dc9c5 | VPC\_Region\_2      Create new VPC

Subnet subnet-0f2bf77ee2256c76f | Subnet\_Region\_2 | ap-r      Create new subnet  
251 IP Addresses available

Auto-assign Public IP Enable

Placement group Add instance to placement group

Capacity Reservation Open

Domain join directory No directory      Create new directory

IAM role None      Create new IAM role

Cancel Previous Review and Launch Next: Add Storage

Now create a VPC Peering Connection.

One VPC will work as an acceptor (Tokyo)

Other VPC will work as requestor (Mumbai) [connection establisher]

Peering connection name tag: Mumbai\_to\_Tokyo

Select a local VPC to peer with:

CIDRs	CIDR	Status	Status Reason
	10.0.0.0/16	associated	

Select another VPC to peer with:

Account:  My account  Another account

Region:  This region (ap-south-1)  Another Region

VPC ID (Acceptor)\*: vpc-0834432e1558dc9c5

Tags:

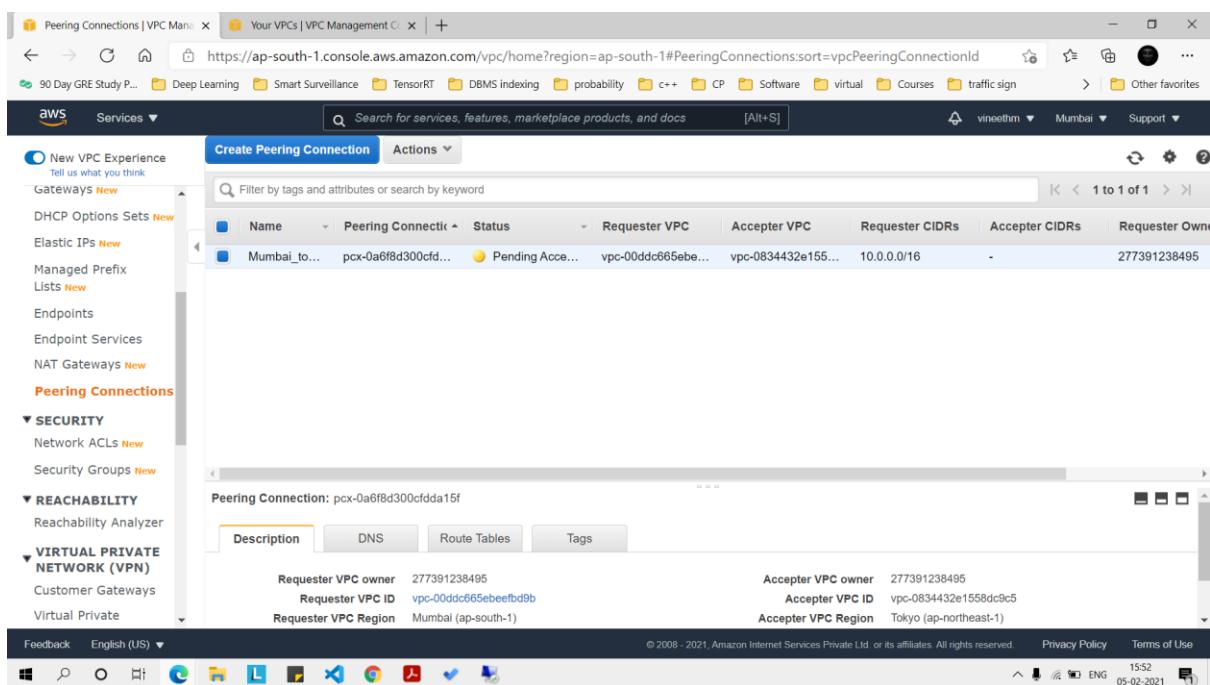
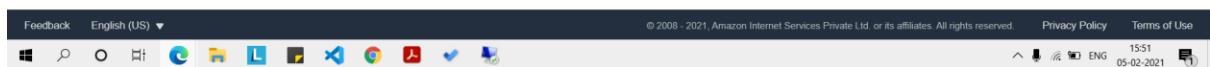
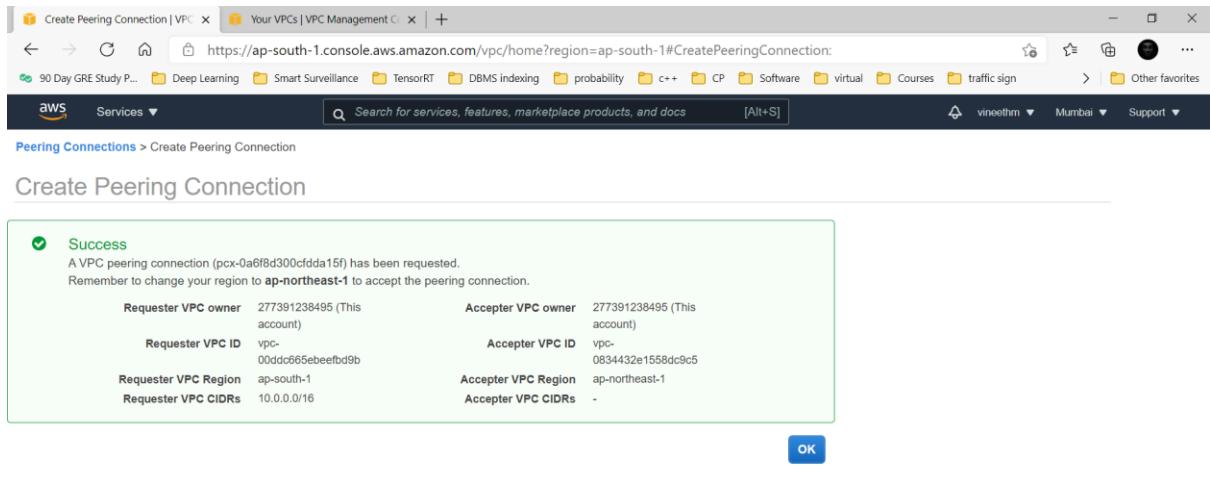
Key	(128 characters maximum)	Value	(256 characters maximum)
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This resource currently has no tags

Add Tag 50 remaining (Up to 50 tags maximum)

\* Required

Create Peering Connection



We can observe that the status is showing “Pending Acceptance”.

Now switch to Tokyo and accept the VPC Connection Request made by Mumbai Region VPC.

The screenshot shows the AWS VPC Peering Connections page. A context menu is open over a peering connection named "pcx-0af6f8d300cfddda15". The menu options are:

- Accept Request
- Reject Request
- Delete VPC Peering Connection
- Edit ClassicLink Settings
- Edit DNS Settings
- Add/Edit Tags

The main table displays the following information:

Requester VPC	Acceptor VPC	Requester CIDRs	Acceptor CIDRs	Requester Owner ID
vpc-00ddc665ebefbd9b	vpc-0834432e1558dc9c5	10.0.0.0/16	-	277391238495

The screenshot shows the AWS VPC Peering Connections page with an "Accept VPC Peering Connection Request" dialog box open. The dialog contains the following text:

Are you sure you want to accept this VPC peering connection request (pcx-0af6f8d300cfddda15)?

Requester Account ID: 277391238495 (This account)  
 Requester VPC ID: vpc-00ddc665ebefbd9b  
 Requester VPC Region: ap-south-1  
 Requester VPC CIDR: 10.0.0.0/16  
 Acceptor Account ID: 277391238495 (This account)  
 Acceptor VPC ID: vpc-0834432e1558dc9c5  
 Acceptor VPC Region: ap-northeast-1  
 Acceptor VPC CIDR: -

Buttons: Cancel, Yes, Accept

The main table displays the following information:

Name	Peering Connection Status	Requester VPC	Acceptor VPC	Requester CIDRs	Acceptor CIDRs	Requester Owner ID
pcx-0af6f8d300cfddda15	Pending Accept	vpc-00ddc665ebefbd9b	vpc-0834432e1558dc9c5	10.0.0.0/16	-	277391238495

The screenshot shows the AWS VPC Peering Connections console. On the left, there's a sidebar for 'VIRTUAL PRIVATE CLOUD' with options like 'Your VPCs', 'Subnets', 'Route Tables', etc. The main area shows a table of peering connections. One connection is selected, showing details: Requester VPC (Owner: 277391238495, ID: vpc-0834432e1558dc9c5, Region: Mumbai), Acceptor VPC (Owner: 277391238495, ID: vpc-0a6f8d300cfdd15f, Region: Tokyo). The status is 'Provisioning'. Below the table, a modal window titled 'Peering Connection: pcx-0a6f8d300cfdd15f' shows the same information.

We can observe the status as Provisioning indicating successful acceptance.

Edit routes in Mumbai Region to accommodate the peering connection via the subnet of Tokyo Region.

The screenshot shows the AWS Route Tables management console. The user is editing routes for a specific route table. A table lists routes: one to '10.0.0.0/16' target 'local' (active, No propagation), one to '0.0.0.0/0' target 'igw-08f0602144fcf3980' (active, No propagation), and one to '192.168.0.0/16' target 'pcx-0a6f8d300cfdd15f' (active, No propagation). At the bottom, there's a button to 'Add route'.

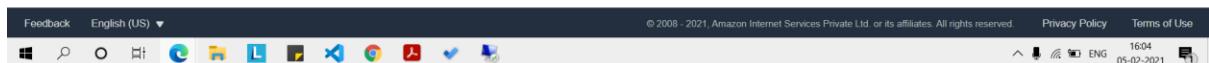


Edit routes in Tokyo Region to accommodate the peering connection via the subnet of the Mumbai Region.

Destination	Target	Status	Propagated
192.168.0.0/16	local	active	No
0.0.0.0/0	igw-0ed71019e71956b8b	active	No
10.0.0.0/16	pcx-0a6f8d300cfdda15		No

**Add route**

\* Required Cancel **Save routes**



Private IP of Mumbai EC2 instance: 10.0.0.90

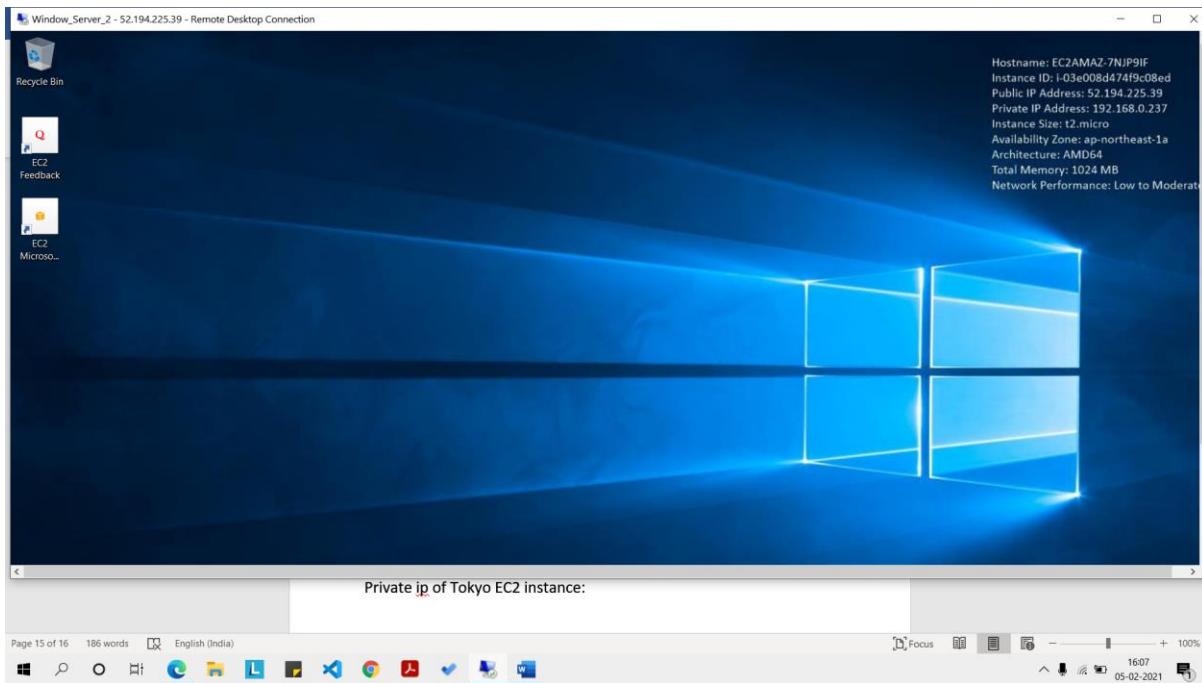
Endpoints	Target	Status	Propagated
192.168.0.0/16	local	active	No
0.0.0.0/0	igw-0ed71019e71956b8b	active	No
10.0.0.0/16	pcx-0a6f8d300cfdda15		No

**Lists New**

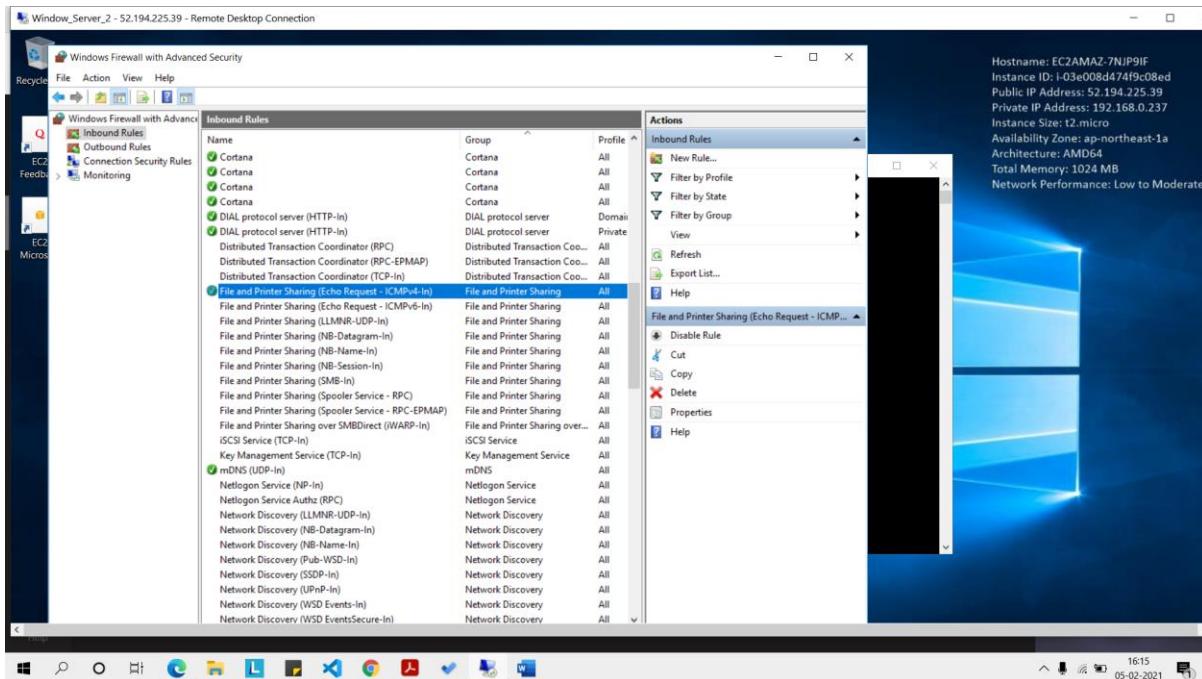
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Private IP of Tokyo EC2 instance: 192.168.0.237



Enable Echo request rule in firewall windows settings' inbound rules.



Do the same for the other EC2 instance.

We can now confirm that the Ping messages are working:

