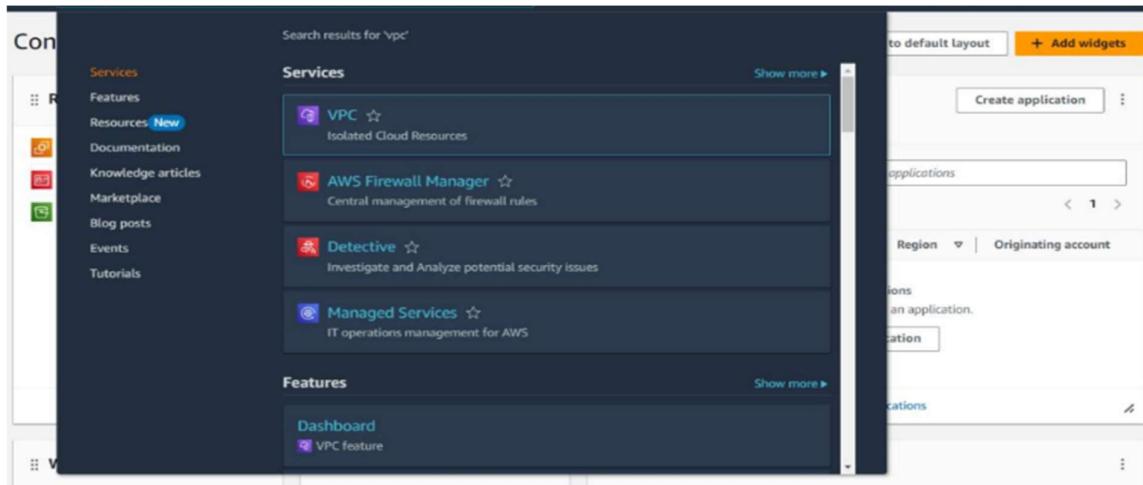
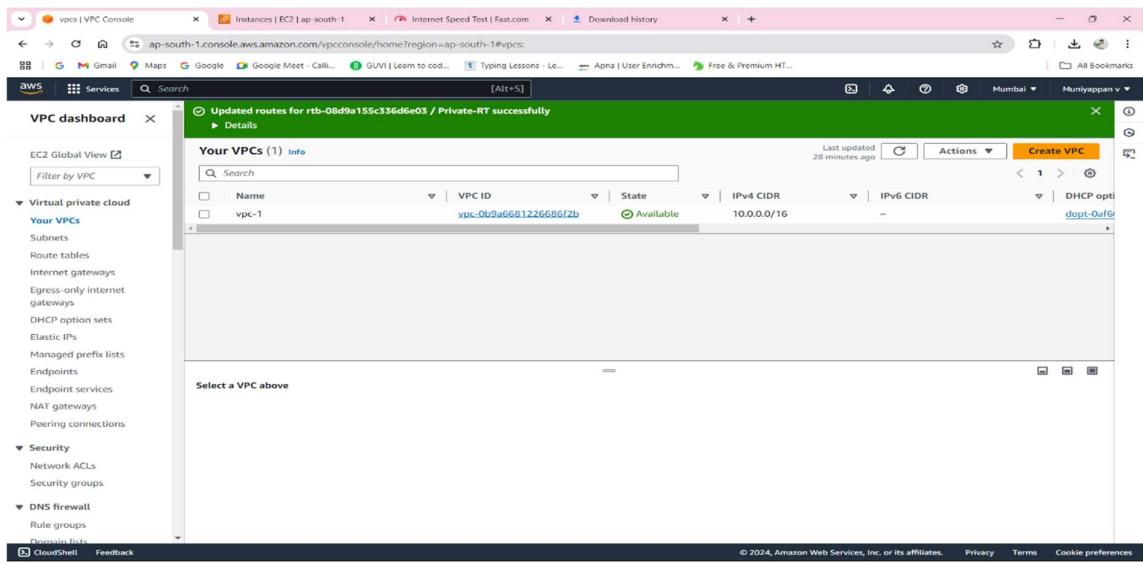


CREATION OF VPC (VIRTUAL PRIVATE CLOUD)

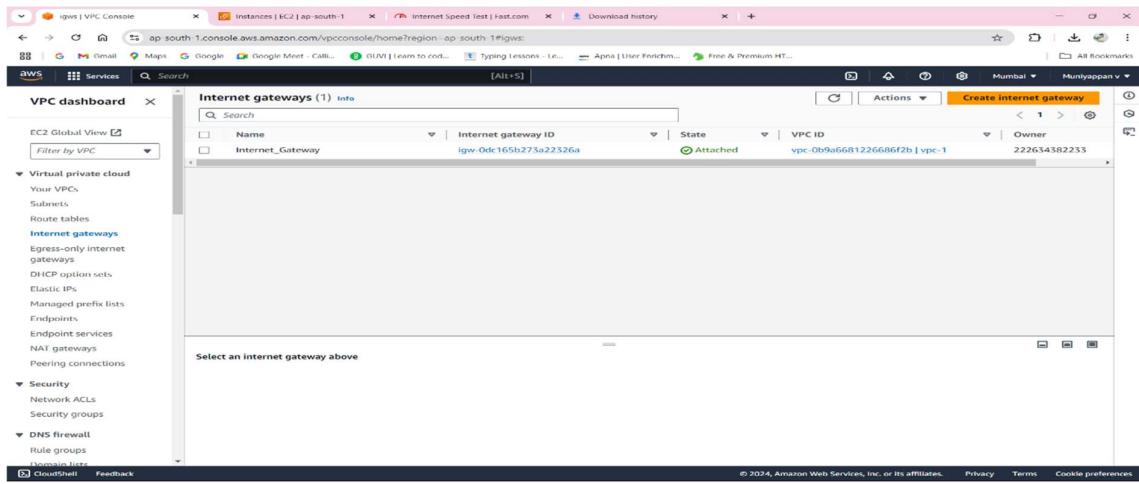
Step-1: Search VPC in the console home and click VPC.



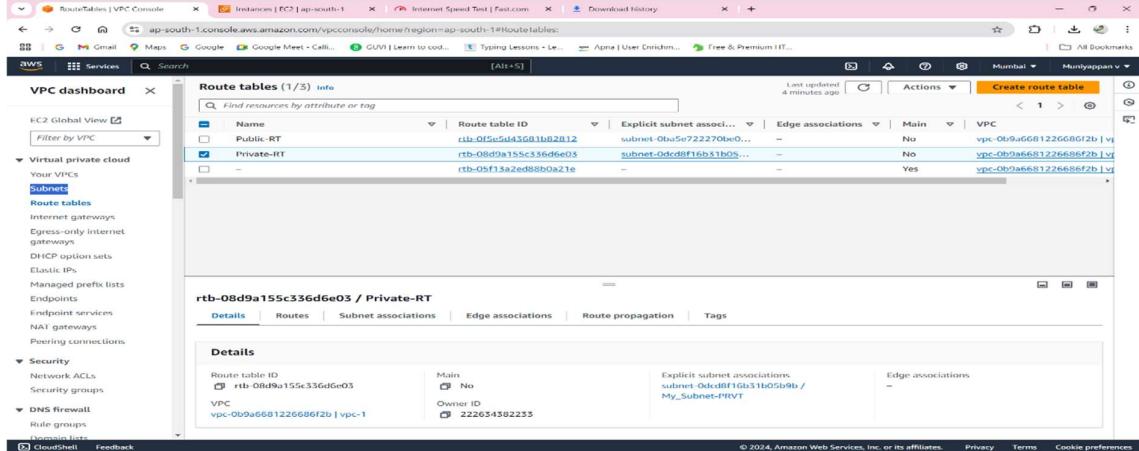
Step 2: Under the VPC dashboard, select your VPCs and click Create VPC > Give name tag and IPv4 CIDR > Click on create VPC > VPC was created successfully



Step-3: Go to Internet Gateways and click Create Internet Gateway > Provide name and select Create Internet Gateway > Internet gateway was created successfully.



Step-4: Open the Route table in the VPC dashboard and click Create Route Table
 > Give RT name, under VPC select My-vpc and select Create Route Table. Here we create public public RT > The public RT was created successfully > In the same way, create private RT



Step-5: Select subnet and click create subnet > under VPC, select My-vpc and give the subnet name. Here we create a public subnet > Provide 10.0.1.0/24 in IPv4 subnet CIDR block and click create subnet > The public subnet was created successfully > In the same way the private subnet was created. The only change was in the IPv4 subnet CIDR block (10.0.2.0/24)

The screenshot shows the AWS VPC Subnets console. On the left, there's a navigation sidebar with options like EC2 Global View, Virtual private cloud, Subnets, Security, DNS firewall, and CloudShell. The main area displays a table titled 'Subnets (2) Info' with two rows:

| Name | Subnet ID | State | VPC | IPv4 CIDR |
|----------------|--------------------------|-----------|-------------------------------|-------------|
| My_Subnet-PUB | subnet-0ba5e722270be0b2d | Available | vpc-0b9a6681226666f2b vpc-1 | 10.0.1.0/24 |
| My_Subnet-PRVT | subnet-0dd8f16b31b05b0b | Available | vpc-0b9a6681226666f2b vpc-1 | 10.0.2.0/24 |

At the bottom, there's a 'Select a subnet' dropdown and some footer links.

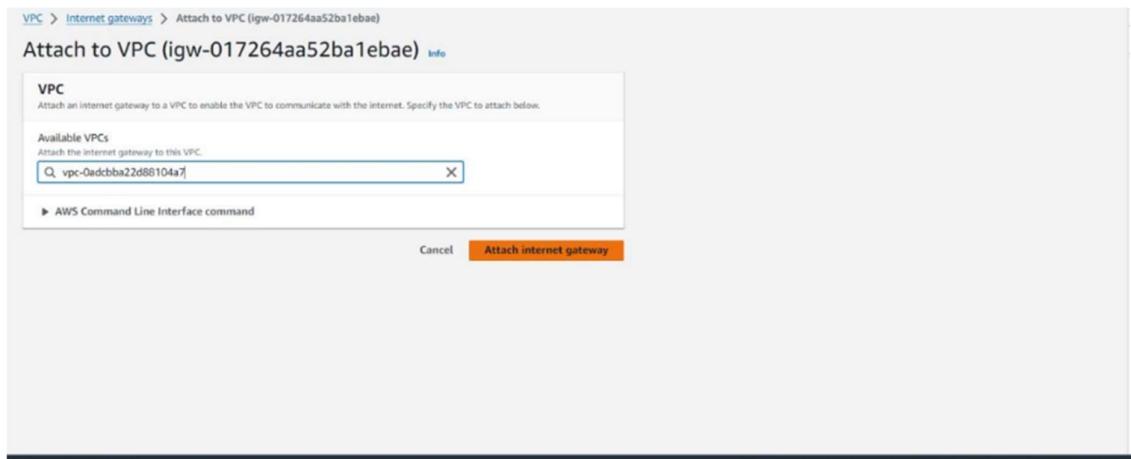
Step -6: Search for EC2 and open it > Create an instance which is named web server > Create a key pair for web server instance > Under Network settings > Edit > Select created VPC > Select pub-SN > Under auto-assign Public IP > Make enable > Under security groups, edit inbound group rules, set type as All TCP and select launch instance > Launch another instance which is named as app server > Under network settings, edit, select created VPC, select Pub-SN, Under auto-assign public IP, make disable > Under security groups, edit inbound rules, set type All TCP. Select launch instance > Connect Internet Gateway to VPC, select IGW, select actions, attach to VPC

The screenshot shows the AWS Internet Gateways console. The left sidebar includes options for EC2 Global View, Virtual private cloud, Subnets, and Internet gateways. The main table lists one internet gateway:

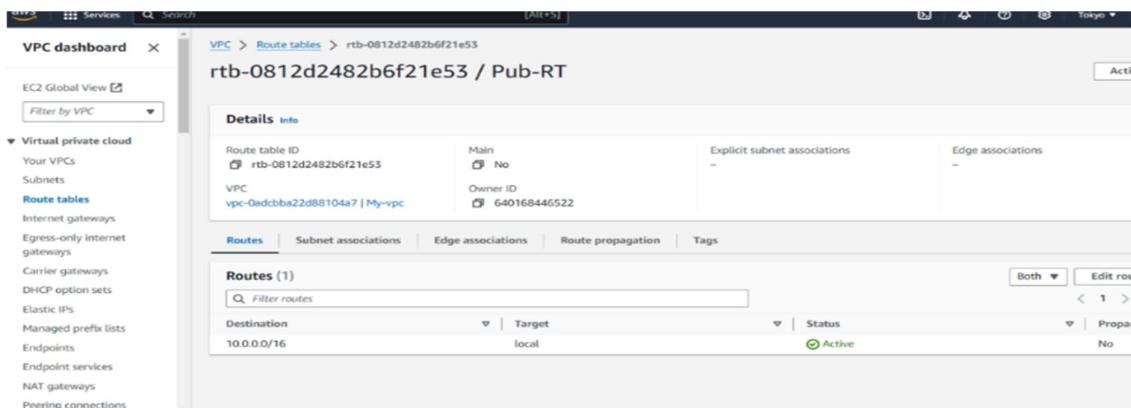
| Name | Internet gateway ID | State | VPC ID |
|------|-----------------------|----------|--------------|
| IGW | igw-017264aa52ba1ebae | Detached | - |
| - | igw-09a35ec5ff94a0611 | Attached | vpc-0faaf2b9 |

A context menu is open over the first row (IGW), with 'Attach to VPC' highlighted. Below the table, a detailed view for 'igw-017264aa52ba1ebae / IGW' shows the 'Details' tab with information like Internet gateway ID, State, VPC ID, and Owner.

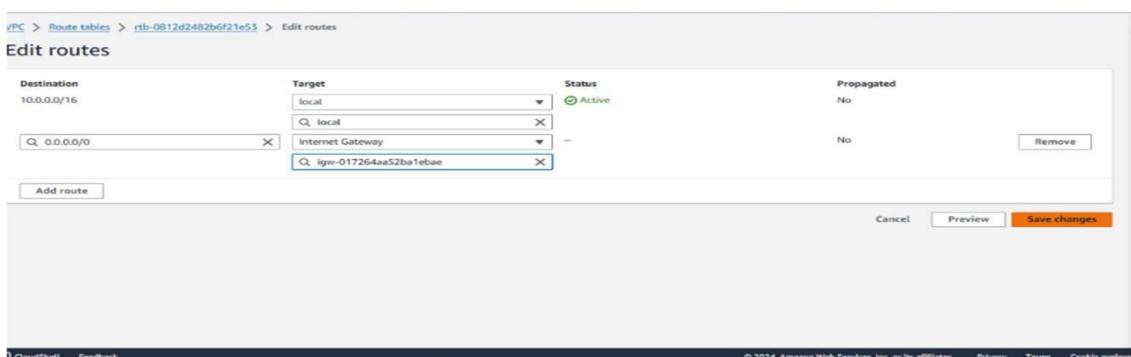
Step-7: Select VPC which we created previously.



Step 8: Go to the route table, select Pub-RT, and edit routes.



Step-9: Select add the route, choose the destination as 0.0.0.0/0 and select the target as IGW and then select IGW which we created, give save changes.



Step-10: Under subnet association in public network, edit subnet association.

VPC dashboard

Updated routes for rtb-0812d2482b6f21e53 / Pub-RT successfully

rtb-0812d2482b6f21e53 / Pub-RT

Details Info

Route table ID: rtb-0812d2482b6f21e53

Main: No

Owner ID: 640168446522

Routes Subnet associations Edge associations Route propagation Tags

Explicit subnet associations (0)

| Name | Subnet ID | IPv4 CIDR | IPv6 CIDR | Route table ID |
|--------|--------------------------|-------------|-----------|---------------------------------------|
| Pub-SN | subnet-00a8be93e41c501d0 | 10.0.1.0/24 | - | Main (rtb-0812d2482b6f21e53 / Pub-RT) |

Edit subnet associations

Step-11: Select pub-SN, save association.

VPC > Route tables > rtb-0812d2482b6f21e53 > Edit subnet associations

Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (1/2)

| Name | Subnet ID | IPv4 CIDR | IPv6 CIDR | Route table ID |
|--|--------------------------|-------------|-----------|------------------------------|
| Pvt-SN | subnet-0b72fcf5d0bfa595d | 10.0.2.0/24 | - | Main (rtb-00636f6186cd5715e) |
| <input checked="" type="checkbox"/> Pub-SN | subnet-00a8be93e41c501d0 | 10.0.1.0/24 | - | Main (rtb-00636f6186cd5715e) |

Selected subnets

| |
|-------------------------------------|
| subnet-00a8be93e41c501d0 / Pub-SN X |
|-------------------------------------|

Cancel Save associations

Step-12: Go to Pvt-SN, edit the subnet association, select Pvt-SN and save the association.

VPC > Route tables > rtb-0f8bc3ea0a25bf67b > Edit subnet associations

Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (1/2)

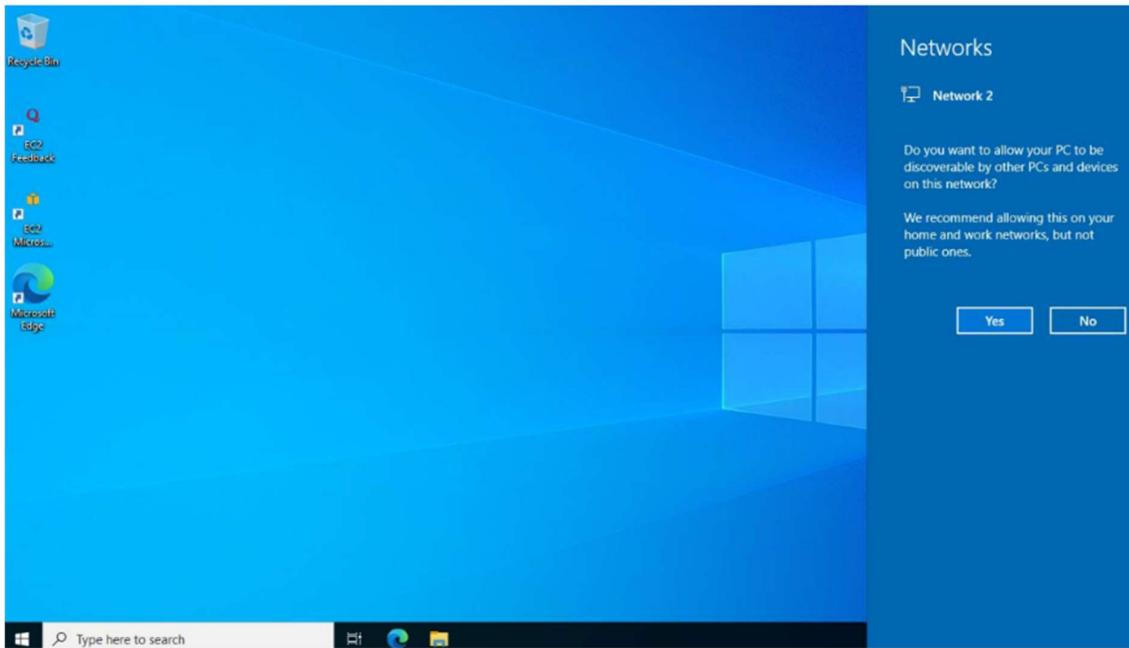
| Name | Subnet ID | IPv4 CIDR | IPv6 CIDR | Route table ID |
|--|--------------------------|-------------|-----------|--------------------------------|
| <input checked="" type="checkbox"/> Pvt-SN | subnet-0b72fcf5d0bfa595d | 10.0.2.0/24 | - | Main (rtb-00636f6186cd5715e) |
| <input type="checkbox"/> Pub-SN | subnet-00a8be93e41c501d0 | 10.0.1.0/24 | - | rtb-0812d2482b6f21e53 / Pub-RT |

Selected subnets

| |
|-------------------------------------|
| subnet-0b72fcf5d0bfa595d / Pvt-SN X |
|-------------------------------------|

Cancel Save associations

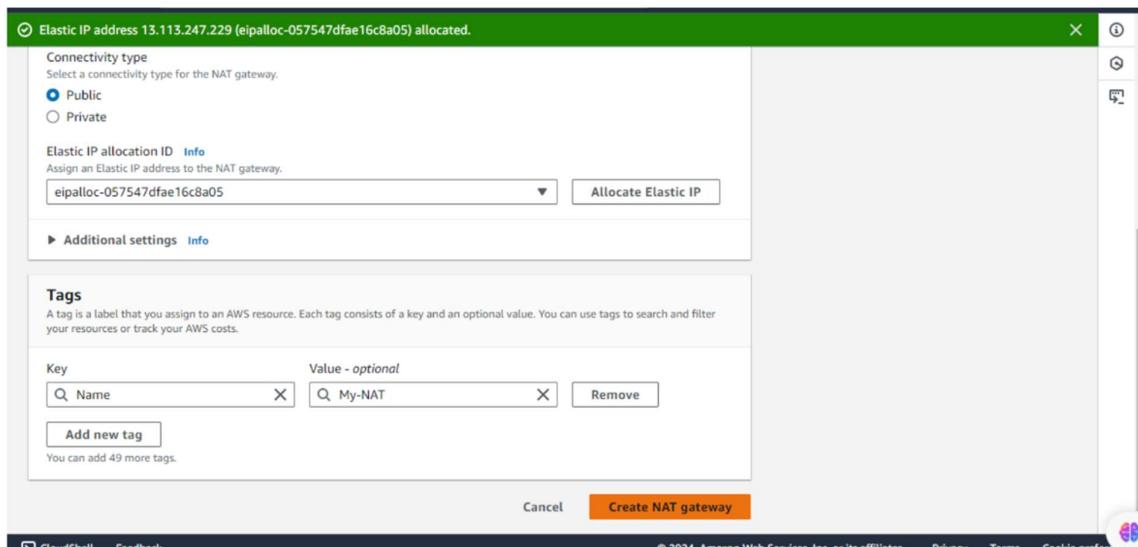
Step-13: If you launch web server, it got the network through the IGW.



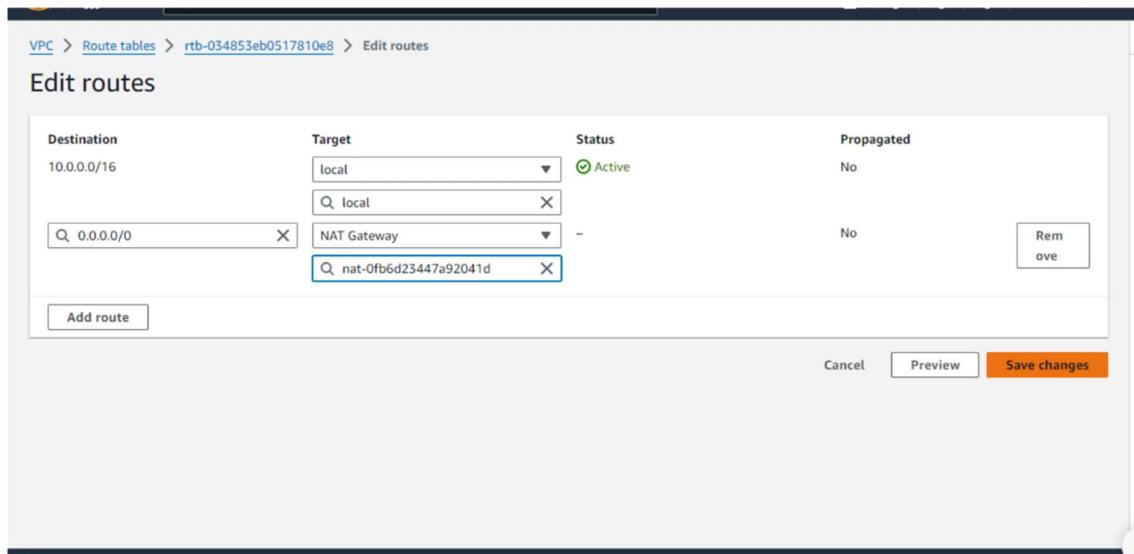
Step 14: Go to NAT gateways.

A screenshot of the AWS CloudFormation console. The left sidebar shows a navigation tree with "EC2 Global View" at the top, followed by "Virtual private cloud" (with "Your VPCs", "Subnets", "Route tables", "Internet gateways", "Egress-only internet gateways", "Carrier gateways", "DHCP option sets", "Elastic IPs", "Managed prefix lists", "Endpoints", "Endpoint services", "NAT gateways" selected), and "Security" (with "Network ACLs"). The main content area is titled "NAT gateways" and shows a table with columns: Name, NAT gateway ID, Connectivity..., State, and State message. A message at the bottom says "No NAT gateways found". Below the table, there is a section titled "Select a NAT gateway".

Step-15: Select Allocate Elastic IP > Create NAT Gateway.



Step-16: Edit Routes > Select Destination as 0.0.0.0/0 > Choose Target as NAT Gateway > Select NAT which you created > select save changes.



Final Result

