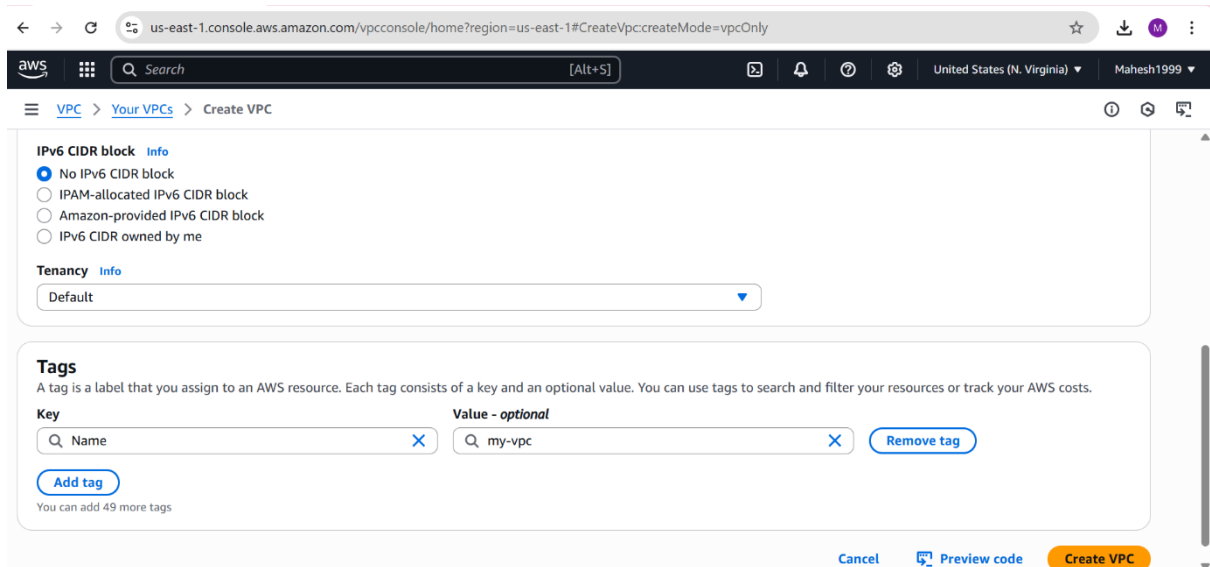
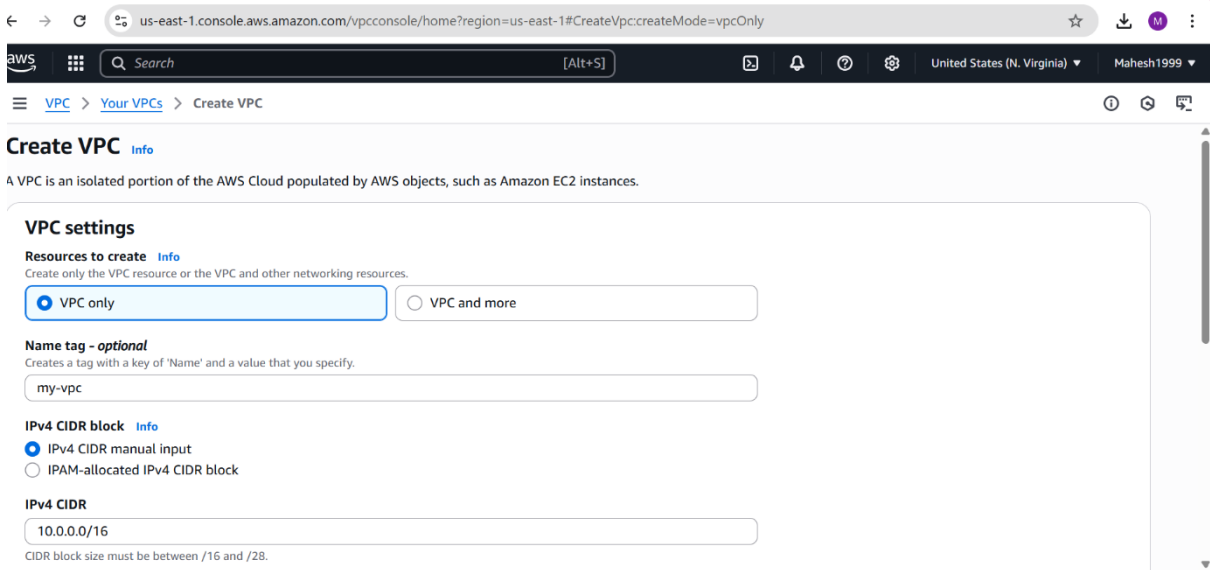
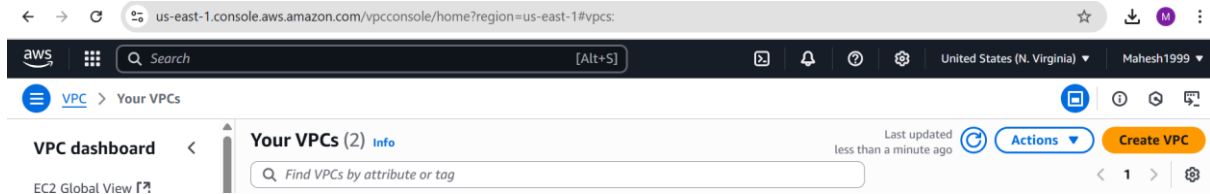


Web Application in a VPC Creation

Login to the AWS Management console

Services select **VPC** → **Create VPC**



1. Select VPC Only option to create VPC
2. Provide a VPC name
3. Select IPv4 CIDR manual input (Currently we are targeting for IPv4 only)

4. Select Default tenancy

Click “Create MY-VPC”

The screenshot shows the AWS Management Console VPC dashboard. A green notification banner at the top states: "You successfully created vpc-007c2eb992b4a7106 / my-vpc". Below this, the "Your VPCs (2)" section displays a table of VPCs. The table has columns for Name, VPC ID, State, Block Public..., and IPv4 CIDR. Two VPCs are listed: one with ID vpc-05adf87528d6477f3 and another named "my-vpc" with ID vpc-007c2eb992b4a7106. Both are in an "Available" state. The left sidebar shows the navigation menu with "VPC" selected.

Name	VPC ID	State	Block Public...	IPv4 CIDR
-	vpc-05adf87528d6477f3	Available	Off	172.31.0.0/16
my-vpc	vpc-007c2eb992b4a7106	Available	Off	10.0.0.0/16

Creating Subnets

In VPC service → Click on subnets → Create subnet

The screenshot shows the "Create subnet" page in the AWS Management Console. The page is titled "Create subnet" and includes a "VPC" section where the "VPC ID" is set to "vpc-007c2eb992b4a7106 (my-vpc)". Below this, the "Associated VPC CIDRs" section shows "IPv4 CIDRs" as "10.0.0.0/16". The "Subnet settings" section is partially visible at the bottom, indicating where to specify CIDR blocks and Availability Zones.

Subnet 1 of 1

Subnet name
Create a tag with a key of 'Name' and a value that you specify.
public
The name can be up to 256 characters long.

Availability Zone [Info](#)
Choose the zone in which your subnet will reside, or let Amazon choose one for you.
United States (N. Virginia) / us-east-1a

IPv4 VPC CIDR block [Info](#)
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.
10.0.0.0/16

IPv4 subnet CIDR block
10.0.1.0/24 256 IPs

▼ **Tags - optional**

Key	Value - optional
-----	------------------

10.0.0.0/16

IPv4 subnet CIDR block
10.0.1.0/24 256 IPs

▼ **Tags - optional**

Key	Value - optional
Name	public

[Add new tag](#)
You can add 49 more tags.

[Remove](#)

[Add new subnet](#)

[Cancel](#) [Create subnet](#)

1. Select the correct VPC.
2. Provide a subnet Name i.e., Public
3. Assign the IPv4 CIDR block for this subnet 10.0.1.0/24.
4. Provide Tags for easy tracking and identification.

Click **"Create subnet"**

us-east-1.console.aws.amazon.com/vpcconsole/home?region=us-east-1#subnets:subnetId=subnet-0a616fa046dfd50f7

aws [Search] [Alt+S] United States (N. Virginia) Mahesh1999

VPC > Subnets

VPC dashboard < EC2 Global View [?] Filter by VPC

▼ Virtual private cloud Your VPCs Subnets Route tables

✓ You have successfully created 1 subnet: subnet-0a616fa046dfd50f7

Subnets (1) Info Last updated 43 minutes ago [Actions] [Create subnet]

Find subnets by attribute or tag

Subnet ID : subnet-0a616fa046dfd50f7 [X] [Clear filters]

<input type="checkbox"/>	Name	Subnet ID	State	VPC
<input type="checkbox"/>	public	subnet-0a616fa046dfd50f7	Available	vpc-007c2eb992b4a7106 my...

The public subnet has been created successfully.

us-east-1.console.aws.amazon.com/vpcconsole/home?region=us-east-1#CreateSubnet:

aws [Search] [Alt+S] United States (N. Virginia) Mahesh1999

VPC > Subnets > Create subnet

Create subnet Info

VPC
VPC ID
Create subnets in this VPC.
vpc-007c2eb992b4a7106 (my-vpc)

Associated VPC CIDRs
IPv4 CIDRs
10.0.0.0/16

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

Subnet 1 of 1

us-east-1.console.aws.amazon.com/vpcconsole/home?region=us-east-1#CreateSubnet:

aws [Search] [Alt+S] United States (N. Virginia) Mahesh1999

VPC > Subnets > Create subnet

Subnet 1 of 1

Subnet name
Create a tag with a key of 'Name' and a value that you specify.
Private-1
The name can be up to 256 characters long.

Availability Zone Info
Choose the zone in which your subnet will reside, or let Amazon choose one for you.
United States (N. Virginia) / us-east-1b

IPv4 VPC CIDR block Info
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.
10.0.0.0/16

IPv4 subnet CIDR block
10.0.2.0/24 256 IPs

▼ Tags - optional

10.0.0.0/16

IPv4 subnet CIDR block

10.0.2.0/24 256 IPs

▼ Tags - optional

Key Value - optional

Q Name X Q Private-1 X Remove

Add new tag

You can add 49 more tags.

Remove

Add new subnet

Cancel Create subnet

1. Select the appropriate VPC.
2. Provide a subnet name Private1.
3. Select the Availability Zone and select a different AZ than another subnet for redundancy
4. Provide IPv4 CIDR block i.e., 10.0.2.0/24.

Click **“Create subnet”**

us-east-1.console.aws.amazon.com/vpcconsole/home?region=us-east-1#subnets:

aws Search [Alt+S] United States (N. Virginia) Mahesh1999

VPC Subnets

VPC dashboard

EC2 Global View

Filter by VPC

▼ Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet

✓ You have successfully created 1 subnet: subnet-0eae6f0d78e59f9f2

Subnets (3) info Last updated less than a minute ago Actions Create subnet

Find subnets by attribute or tag

<input type="checkbox"/>	Name	Subnet ID	State	VPC
<input type="checkbox"/>	-	subnet-00f9954d7b5a88044	✓ Available	vpc-05adf87528d6477f3
<input type="checkbox"/>	public	subnet-0a616fa046dfd50f7	✓ Available	vpc-007c2eb992b4a7106 my-...
<input type="checkbox"/>	Private-1	subnet-0eae6f0d78e59f9f2	✓ Available	vpc-007c2eb992b4a7106 my-...

Private1 subnet created successfully.

us-east-1.console.aws.amazon.com/vpconsole/home?region=us-east-1#CreateSubnet

aws Search [Alt+S] United States (N. Virginia) Mahesh1999

VPC > Subnets > Create subnet

Create subnet [Info](#)

VPC

VPC ID
Create subnets in this VPC.

vpc-007c2eb992b4a7106 (my-vpc)

Associated VPC CIDRs

IPv4 CIDRs
10.0.0.0/16

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

Subnet 1 of 1

us-east-1.console.aws.amazon.com/vpconsole/home?region=us-east-1#CreateSubnet

aws Search [Alt+S] United States (N. Virginia) Mahesh1999

VPC > Subnets > Create subnet

Subnet 1 of 1

Subnet name
Create a tag with a key of 'Name' and a value that you specify.

Private-2
The name can be up to 256 characters long.

Availability Zone [Info](#)
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

United States (N. Virginia) / us-east-1c

IPv4 VPC CIDR block [Info](#)
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.

10.0.0.0/16

IPv4 subnet CIDR block

10.0.3.0/24 256 IPs

< > ^ v

▼ **Tags - optional**

us-east-1.console.aws.amazon.com/vpconsole/home?region=us-east-1#CreateSubnet

aws Search [Alt+S] United States (N. Virginia) Mahesh1999

VPC > Subnets > Create subnet

10.0.0.0/16

IPv4 subnet CIDR block

10.0.3.0/24 256 IPs

< > ^ v

▼ **Tags - optional**

Key	Value - optional	
Q Name	Private-2	Remove

[Add new tag](#)
You can add 49 more tags.

[Remove](#)

[Add new subnet](#)

[Cancel](#) [Create subnet](#)

1. Select appropriate VPC

2. Provide a subnet name Private2.
3. Select the Availability Zone and select a different AZ than another subnet for redundancy.
4. Provide IPv4 CIDR block i.e., 10.0.3.0/24.

Click **“Create subnet”**

The screenshot shows the AWS VPC console 'Subnets' page. A success message indicates a new subnet was created. The table below lists the existing subnets:

Name	Subnet ID	State	VPC
-	subnet-00f9954d7b5a88044	Available	vpc-05adf87528d6477f3
public	subnet-0a616fa046dfd50f7	Available	vpc-007c2eb992b4a7106 my...
Private-1	subnet-0eae6f0d78e59f9f2	Available	vpc-007c2eb992b4a7106 my...
Private-2	subnet-0b1efe3df4f641213	Available	vpc-007c2eb992b4a7106 my...

Create Internet Gateway:-

The screenshot shows the 'Create internet gateway' wizard. The 'Name tag' is set to 'igw-1'. A tag is being added with the key 'Name' and value 'igw-1'.

Internet gateway settings

Name tag
Creates a tag with a key of 'Name' and a value that you specify.
igw-1

Tags - optional
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

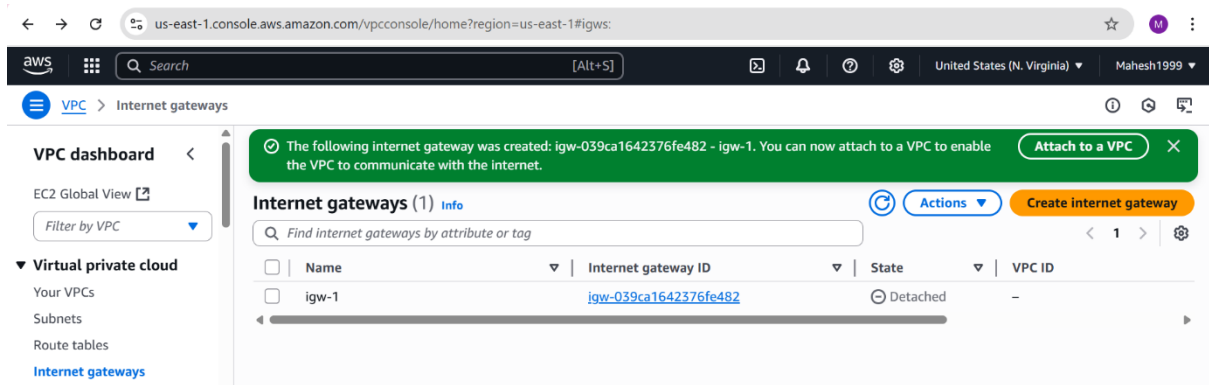
Key
Name

Value - optional
igw-1

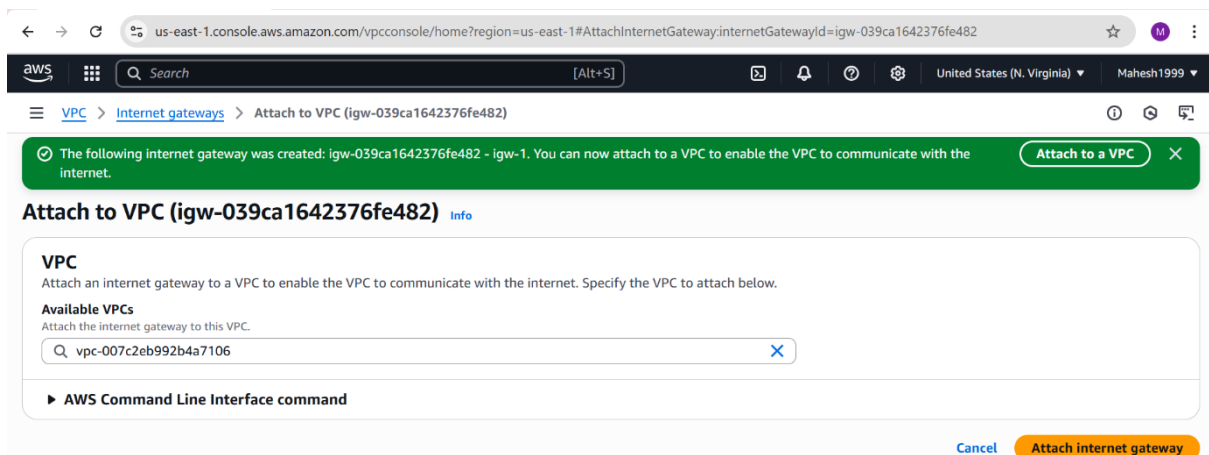
Buttons: Add new tag, Remove, Cancel, Create internet gateway

1. Provide a Internet Gateway a Name **“igw1”**
2. Provide Tags for later identification

Click on **“Create Internet Gateway”**

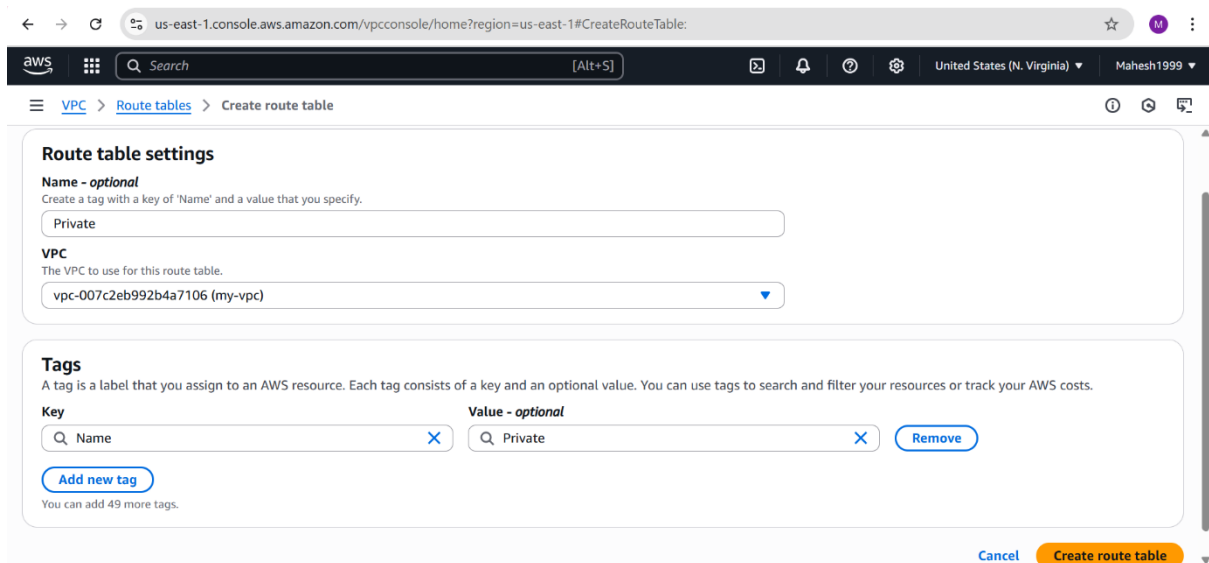


Select the “igw-1” which is newly created, **Actions → Attach to VPC**



Select “MY-VPC” which is a newly created then click on “**Attach internet gateway**”

In **VPC service → route tables → Create route table**



Click “**Create route table**”

us-east-1.console.aws.amazon.com/vpcconsole/home?region=us-east-1#RouteTables:

aws Search [Alt+S] United States (N. Virginia) Mahesh1999

VPC > Route tables

VPC dashboard < EC2 Global View Filter by VPC

▼ Virtual private cloud
Your VPCs
Subnets
Route tables

Route tables (4) Info Last updated 26 minutes ago Actions Create route table

Find route tables by attribute or tag

<input type="checkbox"/>	Name	Route table ID	Explicit subnet associ...	Edge associations	Main
<input type="checkbox"/>	Private	rtb-03904cddf41b27387	-	-	No
<input type="checkbox"/>	Public	rtb-0e8a5164104c022ce	-	-	No
<input type="checkbox"/>	-	rtb-06c2a25159189c856	-	-	Yes
<input type="checkbox"/>	-	rtb-03857258769bb8cfd	-	-	Yes

Edit Public route table and add internet route

us-east-1.console.aws.amazon.com/vpcconsole/home?region=us-east-1#EditRoutes:RouteTableId=rtb-03904cddf41b27387

aws Search [Alt+S] United States (N. Virginia) Mahesh1999

VPC > Route tables > rtb-03904cddf41b27387 > Edit routes

Edit routes

Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No
0.0.0.0/0	Internet Gateway	-	No

Add route

Cancel Preview Save changes

Now Public subnet have internet access

Create NAT Gateway

VPC Service → NAT gateways → Create NAT gateways →

us-east-1.console.aws.amazon.com/vpcconsole/home?region=us-east-1#CreateNatGateway:

aws Search [Alt+S] United States (N. Virginia) Mahesh1999

VPC > NAT gateways > Create NAT gateway

Create NAT gateway Info

A highly available, managed Network Address Translation (NAT) service that instances in private subnets can use to connect to services in other VPCs, on-premises networks, or the internet.

NAT gateway settings

Name - optional
Create a tag with a key of 'Name' and a value that you specify.
nat
The name can be up to 256 characters long.

Subnet
Select a subnet in which to create the NAT gateway.
subnet-0eae6f0d78e59f9f2 (Private-1)

Connectivity type
Select a connectivity type for the NAT gateway.
☒ Public
☐ Private

Elastic IP allocation ID Info
Assign an Elastic IP address to the NAT gateway.
eipalloc-0be6b7c069452126c Allocate Elastic IP

us-east-1.console.aws.amazon.com/vpcconsole/home?region=us-east-1#CreateNatGateway:

VPC > NAT gateways > Create NAT gateway

☒ Public
☐ Private

Elastic IP allocation ID [Info](#)
Assign an Elastic IP address to the NAT gateway.
eipalloc-0be6b7c069452126c [Allocate Elastic IP](#)

► **Additional settings** [Info](#)

Tags
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key	Value - optional	
Q Name	Q nat	Remove

[Add new tag](#)
You can add 49 more tags.

[Cancel](#) [Create NAT gateway](#)

1. Provide a NAT gateway name nat.
2. Select the subnets.
3. Connectivity type Public
4. Assign Elastic IP

Click “Create NAT Gateway”

us-east-1.console.aws.amazon.com/vpcconsole/home?region=us-east-1#NatGateways:

VPC > NAT gateways

NAT gateways (1/1) [Info](#)

Find NAT gateways by attribute or tag

Name	NAT gateway ID	Connectivity...	State	State message	Prim
nat	nat-024819bab5d78283b	Public	Available	-	98.8

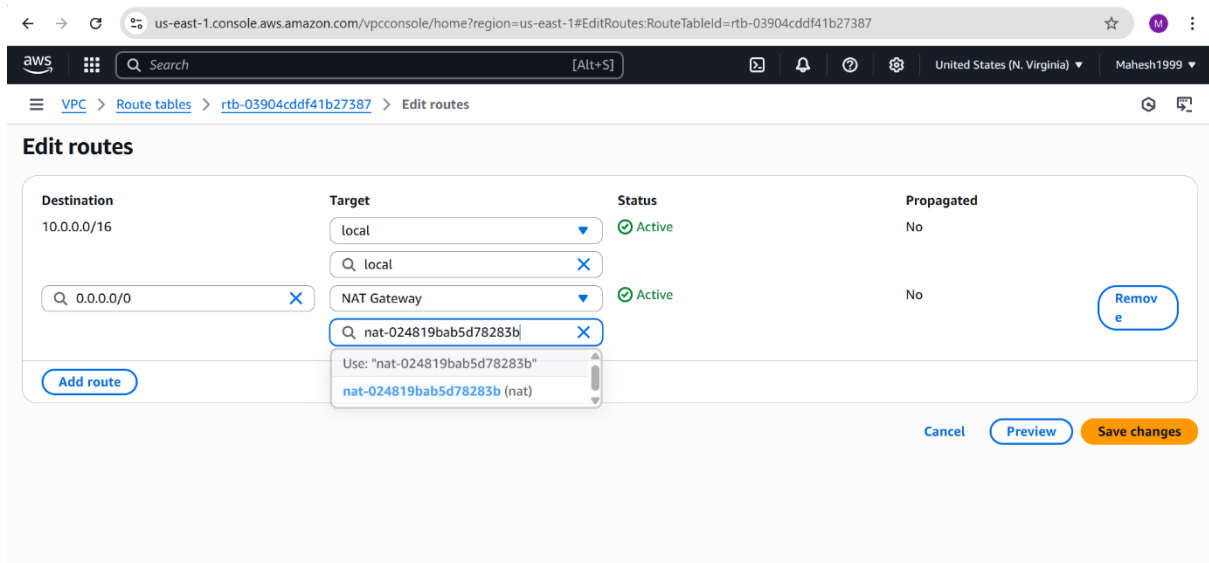
nat-024819bab5d78283b / nat

[Details](#) [Secondary IPv4 addresses](#) [Monitoring](#) [Tags](#)

Details	
NAT gateway ID nat-024819bab5d78283b	Connectivity type Public
NAT gateway ARN arn:aws:ec2:us-east-1:51093:6383080:natgateway/nat-024819bab5d78283b	Primary public IPv4 address 98.83.62.212
Subnet subnet-0eae6f0d78e59f9f2 /	Primary private IPv4 address 10.0.2.29
Created Wednesday, July 16, 2025 at	Primary network interface ID eni-0c1b1563d1ddb811
	Deleted -

NAT Gateway is created successfully.

VPC Service → Route tables → Select Private route table → Edit route table



Add another

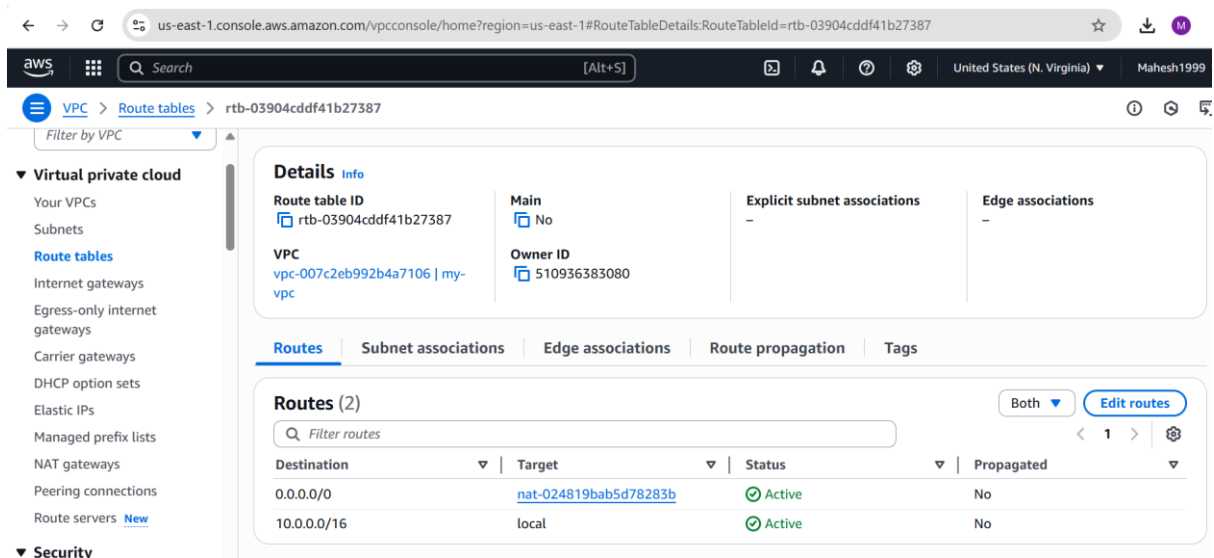
route

Destination:

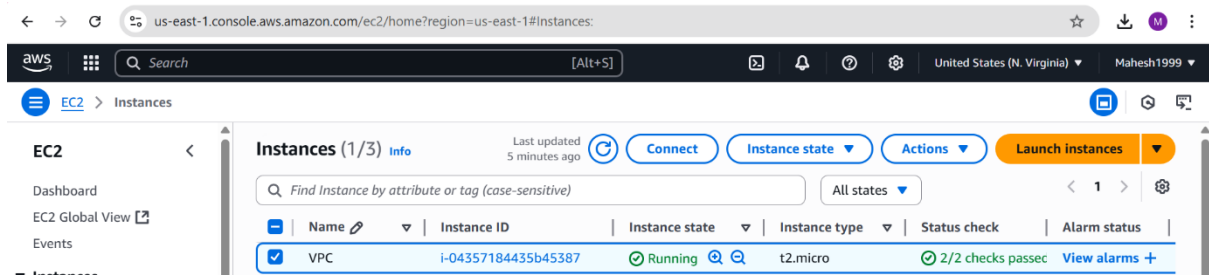
0.0.0.0/0 Target:

NAT-GATEWAY

Click “Save Changes”



EC2 Instance Creation:-



EC2 Connect:-

Give this commands

Update command: Sudo apt update

Installation command: Sudo apt install -y apache2

Status enable command: Sudo systemctl enable apache2

Status Start command: Sudo systemctl start apache

Check the Status command: Sudo systemctl status apache2

Next come to ec2 instance->Click on Instance

Next Copy the public ip address

Next Paste the ip address in Browser



Activity Completed.