

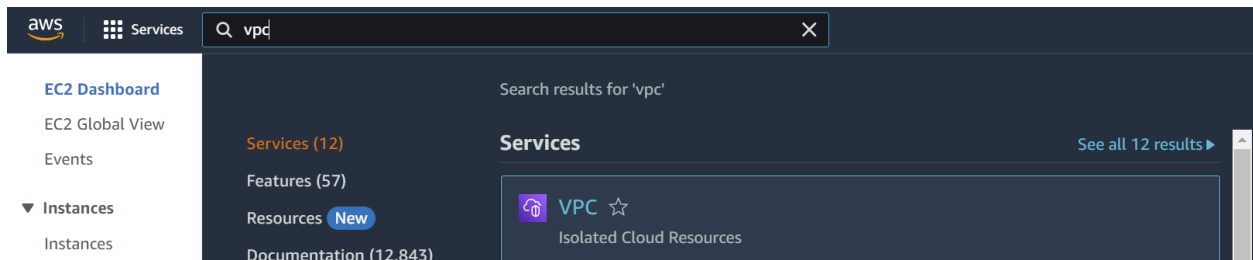
ASSIGNMENT-1

Create a VPC with 2 subnets and 2 route tables and internet gateway

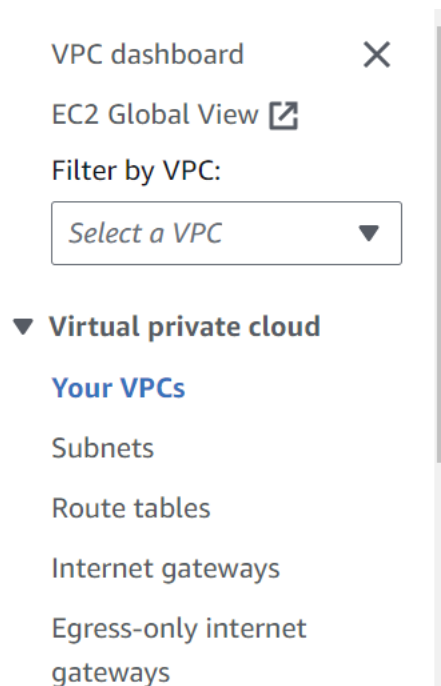
- Launch an instances
- Attach 1 instance with EBS

Create a virtual private cloud (VPC)

Search for VPC in search space of AWS home page and click on VPC (Pic-1)

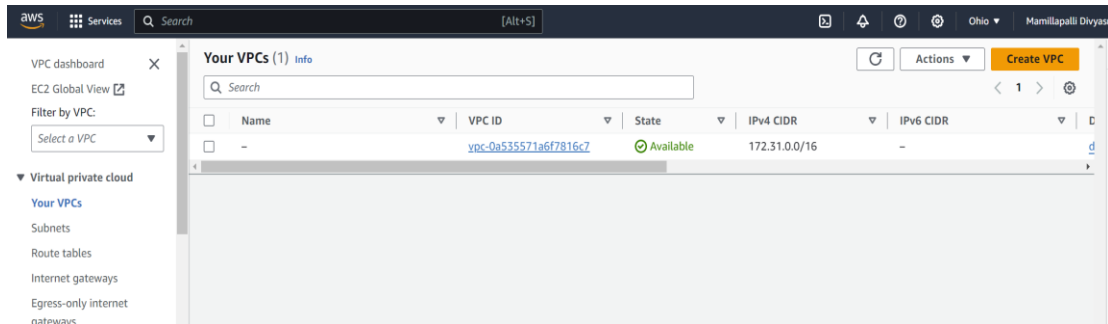


pic-1



Pic-2

Now click on Create VPC to create our custom VPC (pic3)



pic-3

Now we must give the details for our VPC and finally click on Create VPC (pic - 4)

VPC > Your VPCs > Create VPC

Create VPC [Info](#)

A VPC is an isolated portion of the AWS Cloud populated by AWS objects, such as Amazon EC2 instances.

VPC settings

Resources to create [Info](#)
Create only the VPC resource or the VPC and other networking resources.

☒ VPC only ☐ VPC and more

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

my-vpc

IPv4 CIDR block [Info](#)
☒ IPv4 CIDR manual input
☐ IPAM-allocated IPv4 CIDR block

IPv4 CIDR
10.0.0.0/16
CIDR block size must be between /16 and /28.

IPv6 CIDR block [Info](#)
☒ No IPv6 CIDR block
☐ IPAM-allocated IPv6 CIDR block
☐ Amazon-provided IPv6 CIDR block
☐ IPv6 CIDR owned by me

Tenancy [Info](#)
Default

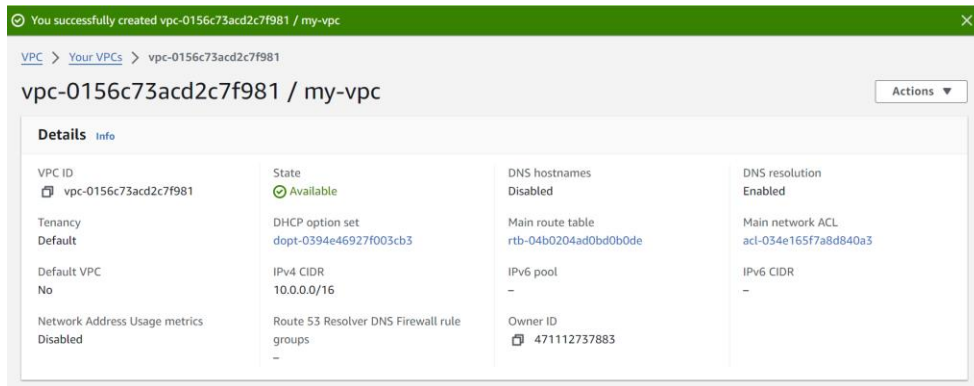
Tags

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: Name Value - optional: my-vpc

You can add 49 more tags

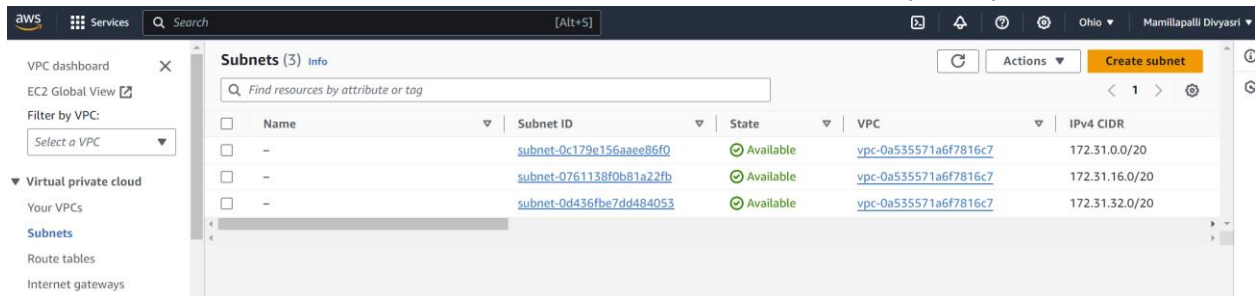
Pic-4



pic5

Now we have created our custom VPC successfully.

Now click on Subnets to create Subnets to our custom VPC (Pic-6)



pic-6

Then create two subnets public and private We have given our custom VPC-ID, Subnet name, choose only one availability Zone, IPv4 subnet CIDR block, then finally create subnet

VPC > Subnets > Create subnet

Create subnet Info

VPC

VPC ID

Create subnets in this VPC.

vpc-0156c73acd2c7f981 (my-vpc) ▼

Associated VPC CIDRs

IPv4 CIDRs
10.0.0/16

Subnet settings

Specify the CIDR blocks and Availability Zone for the subnet.

Subnet 1 of 1

Subnet name

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

public-subnet

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.

US East (Ohio) / us-east-2a ▼

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.

10.0.0/16 ▼

IPv4 subnet CIDR block

10.0.0/24

256 IPs

▼ Tags - optional

Key

Value - optional

Q Name

X

Q public-subnet

X

Remove

Add new tag

You can add 49 more tags.

Remove

Add new subnet

Cancel

Create subnet

🔔 You have successfully created 1 subnet: subnet-052bfcf85dff90478

Subnets (1) Info

🔍 Find resources by attribute or tag

Subnet ID: subnet-052bfcf85dff90478 X

Clear filters

< 1 > ⚙

<input type="checkbox"/>	Name	Subnet ID	State	VPC	IPv4 CIDR
<input type="checkbox"/>	public-subnet	subnet-052bfcf85dff90478	🟢 Available	vpc-0156c73acd2c7f981 my-vpc	10.0.0/24

pic-7(public-subnet)

VPC > Subnets > Create subnet

Create subnet [Info](#)

VPC

VPC ID
Create subnets in this VPC.

vpc-0156c73acd2c7f981 (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

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

private-subnet

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.

US East (Ohio) / us-east-2b ▼

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

10.0.20.0/24 256 IPs

< > ^ v

▼ **Tags - optional**

Key	Value - optional	
Q Name	Q private-subnet	X Remove
<button>Add new tag</button>		
You can add 49 more tags.		
<button>Remove</button>		
<button>Add new subnet</button>		

Cancel Create subnet

You have successfully created 1 subnet: subnet-05b7e201cb485b4fc

Subnets (1) Info					
Find resources by attribute or tag					
Subnet ID: subnet-05b7e201cb485b4fc X		Clear filters			
<input type="checkbox"/> Name	<input type="checkbox"/> Subnet ID	<input type="checkbox"/> State	<input type="checkbox"/> VPC	<input type="checkbox"/> IPv4 CIDR	
<input type="checkbox"/> private-subnet	subnet-05b7e201cb485b4fc	Available	vpc-0156c73acd2c7f981 my-vpc	10.0.20.0/24	

Pic-8(private-subnet)

Subnets (2/5) Info

Find resources by attribute or tag

Name	Subnet ID	State	VPC	IPv4 CIDR
-	subnet-0c179e156aae86f0	Available	vpc-0a535571a6f7816c7	172.31.0.0/20
-	subnet-0761138f0b81a22fb	Available	vpc-0a535571a6f7816c7	172.31.16.0/20
-	subnet-0d436f8e7dd484053	Available	vpc-0a535571a6f7816c7	172.31.32.0/20
<input checked="" type="checkbox"/> public-subnet	subnet-052bfcf85dff90478	Available	vpc-0156c73acd2c7f981 my-vpc	10.0.0.0/24
<input checked="" type="checkbox"/> private-subnet	subnet-05b7e201cb485b4fc	Available	vpc-0156c73acd2c7f981 my-vpc	10.0.20.0/24

pic 9

Now we created two Subnets to our custom VPC successfully (Pic-9)

Now click on Internet gateways from menu bar and click on Create internet gateway. (Pic-10)

Internet gateways (1) Info

Search

Name	Internet gateway ID	State	VPC ID	Owner
-	igw-0b6902a2df7f17f7c	Attached	vpc-0a535571a6f7816c7	4711127378

pic-10

Create internet gateway Info

An internet gateway is a virtual router that connects a VPC to the internet. To create a new internet gateway specify the name for the gateway below.

Internet gateway settings

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

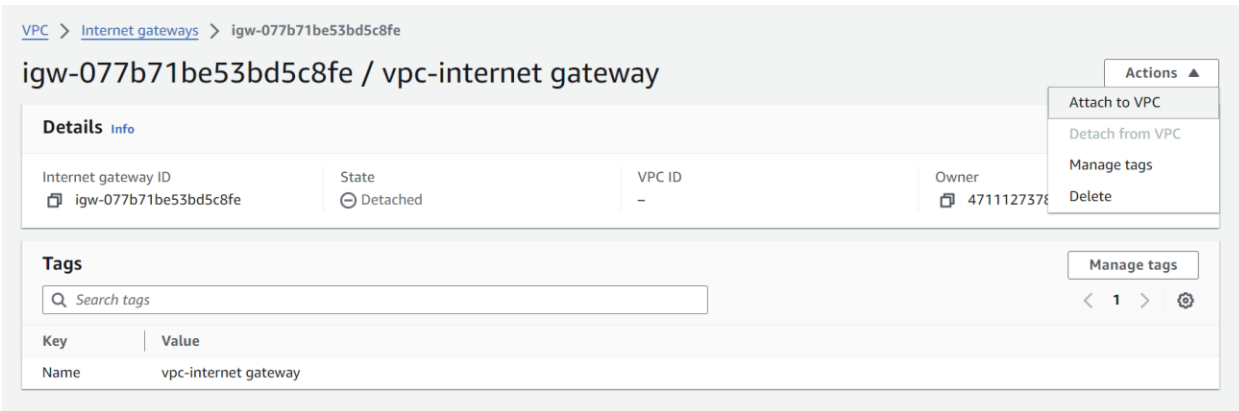
Tags - optional
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key	Value - optional	
<input type="text" value="Name"/>	<input type="text" value="vpc-internet-gateway"/>	<input type="button" value="Remove"/>

You can add 49 more tags.

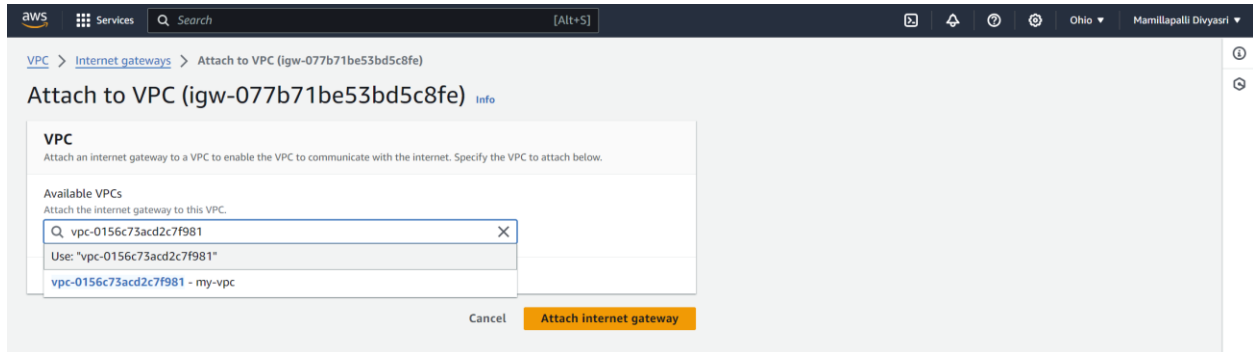
pic-11

Then click on Actions and click on Attach to VPC(Pic-12)



pic-12

Now we have selected our custom VPC in that Available VPCs so we already created it our custom VPC. and finally click on Attach internet gateway. (Pic-13)



pic-13

Now we created internet gateway to our custom VPC successfully (Pic-14)



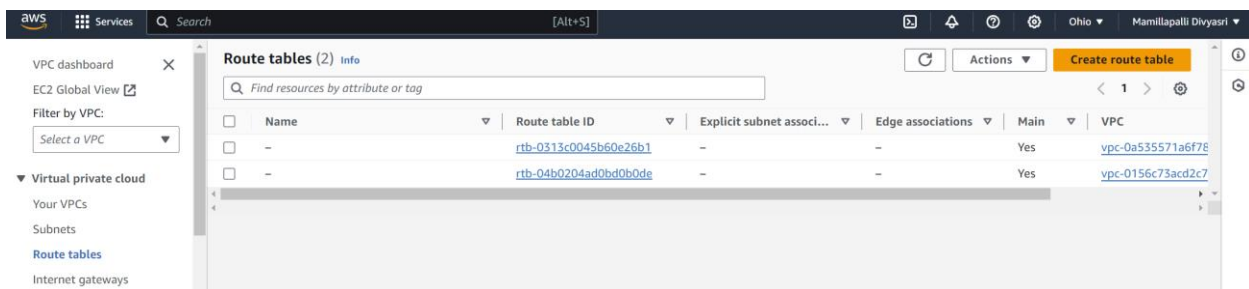
pic-14

Now we have to create 2 route tables (one is public, and another one is private). Click on Route tables from menu bar and click on Create route table (Pic-15)



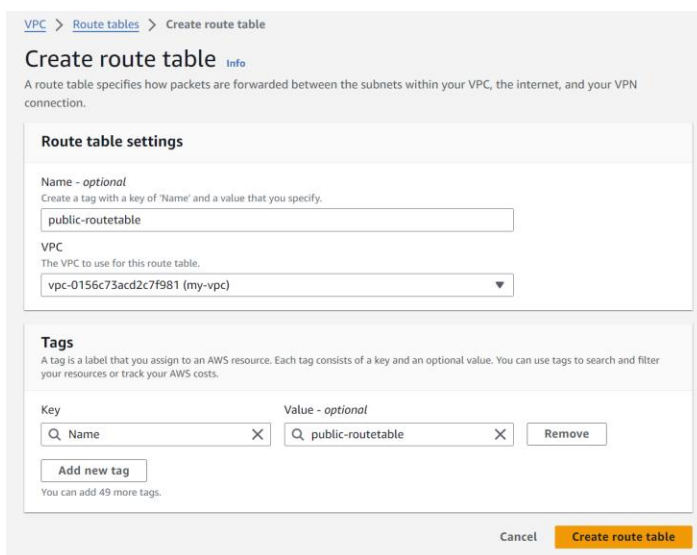
pic-15

Now we have to create 2 route tables (one is public and another one is private). Click on Route tables from menu bar and click on Create route table (Pic-16)



pic-16

Then give name to route table and select our custom VPC and finally click on Create route table (Pic-17)



Pic-17

Now click on Actions, click on Edit routes (Pics-18)

rtb-0ddb2026b2d9ae850 / public-routetable

Actions ▲

- Set main route table
- Edit subnet associations
- Edit edge associations
- Edit route propagation
- Edit routes
- Manage tags
- Delete

Details Info

Route table ID rtb-0ddb2026b2d9ae850	Main No	Explicit subnet associations -	Edge associations -
VPC vpc-0156c73acd2c7f981 my-vpc	Owner ID 471112737883		

pic-18

click on Add route. Select 0.0.0.0/0 as Destination (Pic-19)

VPC > Route tables > rtb-0ddb2026b2d9ae850 > Edit routes

Edit routes

Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No

Add route

Cancel Preview Save changes

pic-19

Select Internet gateway from drop down list ,we have select use id like this igw-077b71be53bd5c8fe and choose that one to our Internet gateway(Pic-20)

Edit routes

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

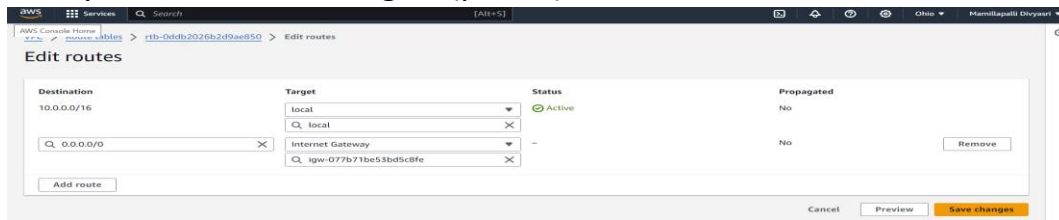
Remove

Add route

Cancel Preview Save changes

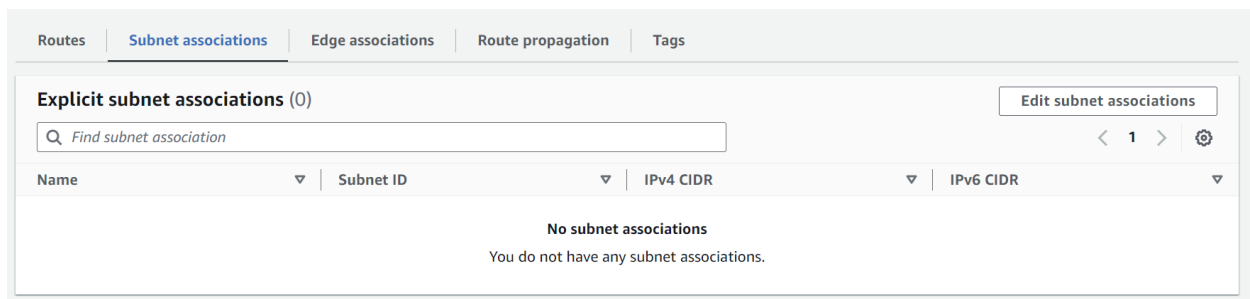
pic-20

finally click on Save changes. (pic-21)



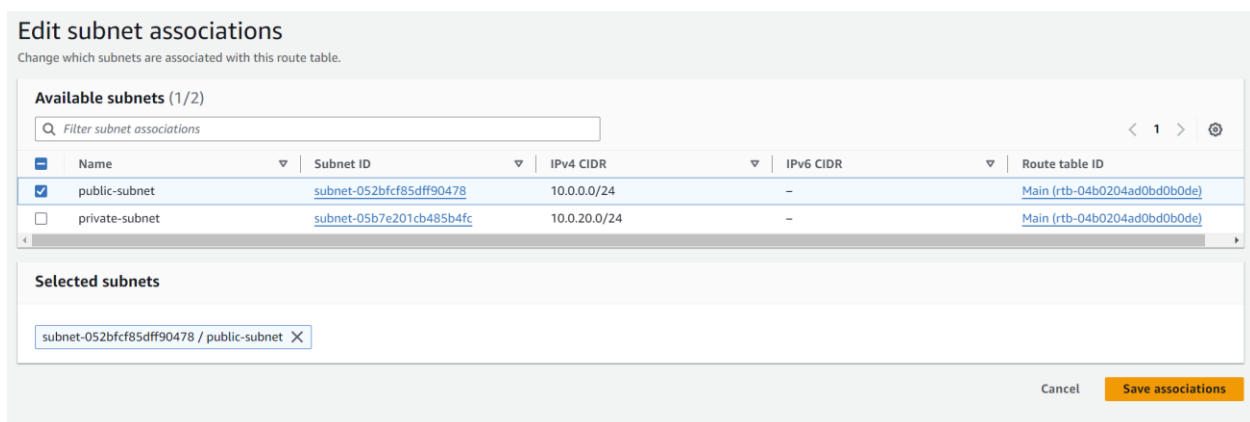
Pic21

Then click on Subnet associations and Edit subnet associations.(Pics-22)



pic-22

Select public subnet check box and Save associations.(Pic-23)

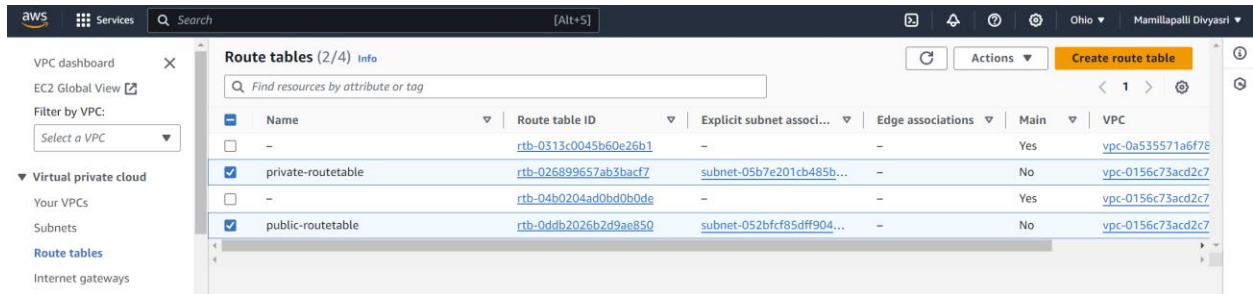


pic-23

Create one more route table (private subnet) and associate with private subnet.

*Note: To the private route table, we are not giving internet gateway access to private, because we want to make it as private subnet

Now we created two route tables to our custom VPC successfully (Pic-24)

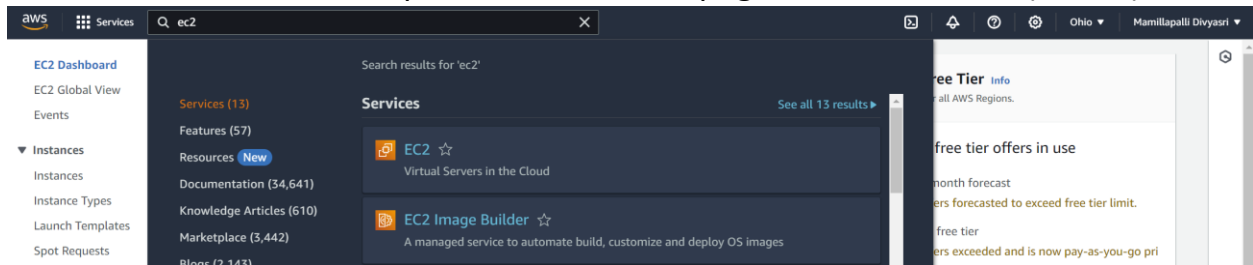


pic-24

VPC with 2 subnets and 2 route tables and internet gateway successfully created.

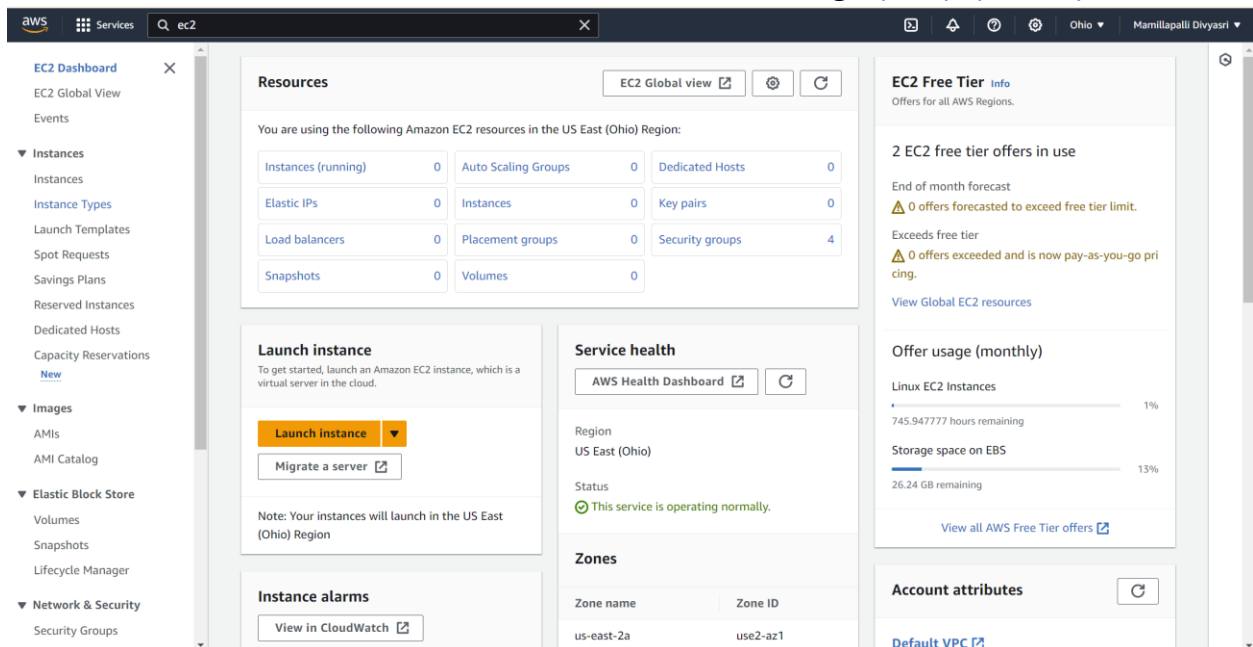
Create Three EC2 Instances

Search for EC2 in search space of AWS home page and click on EC2 (Pic-25)



pic-25

Now Create one ec2 instance to the elastic block storage (EBS). (Pic-26)



pic-26

Then launch the instance of ec2 for ebs, Now We must give the details for our ec2(EBS)Instance and then we have mentioned some details like we have name,OS type to start, instance type, keypair(login), network setting.

finally click on Launch instance (Pic-27)

Launch an instance [info](#)

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags [info](#)

Name: [Add additional tags](#)

Application and OS Images (Amazon Machine Image) [info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs. If you don't see what you are looking for below, search our full catalog including 1000s of application and OS images.

Search our full catalog including 1000s of application and OS images

Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat SUSE [Browse more AMIs](#)
Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Amazon Linux 2023 AMI [info](#) [Free tier eligible](#)

ami-0a0bf35d6f6a294
Virtualization type: PTH enabled: true Root device type: ebs

Description

Amazon Linux 2023 AMI 2023.3.20240312.0 x86_64 HVM kernel: 6.1

Architecture: Boot mode: AMI ID: [Verified provider](#)

Instance type [info](#) [Get advice](#)

Instance type: [Free tier eligible](#) [All generations](#) [Compare instance types](#)

Family: t2 1 vCPU 1 GB Memory Current generations: true
On-Demand Linux base pricing: \$0.0116 USD per Hour
On-Demand S3FS base pricing: \$0.0116 USD per Hour
On-Demand Windows base pricing: \$0.0116 USD per Hour
On-Demand RHEL base pricing: \$0.0116 USD per Hour

Additional costs apply for AMIs with pre-installed software

Key pair (login) [info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name: [Create new key pair](#)

Network settings [info](#)

VPC: [Create new VPC](#)

Subnet: [Create new subnet](#)

Auto-assign public IP: [info](#)

Additional charges apply when outside of Free tier allowance

Firewall (security group) [info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

☒ Create security group ☐ Select existing security group

Security group name: [info](#)

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters are: a-z, 0-9, spaces, and _ (underscore).

Description: [info](#)

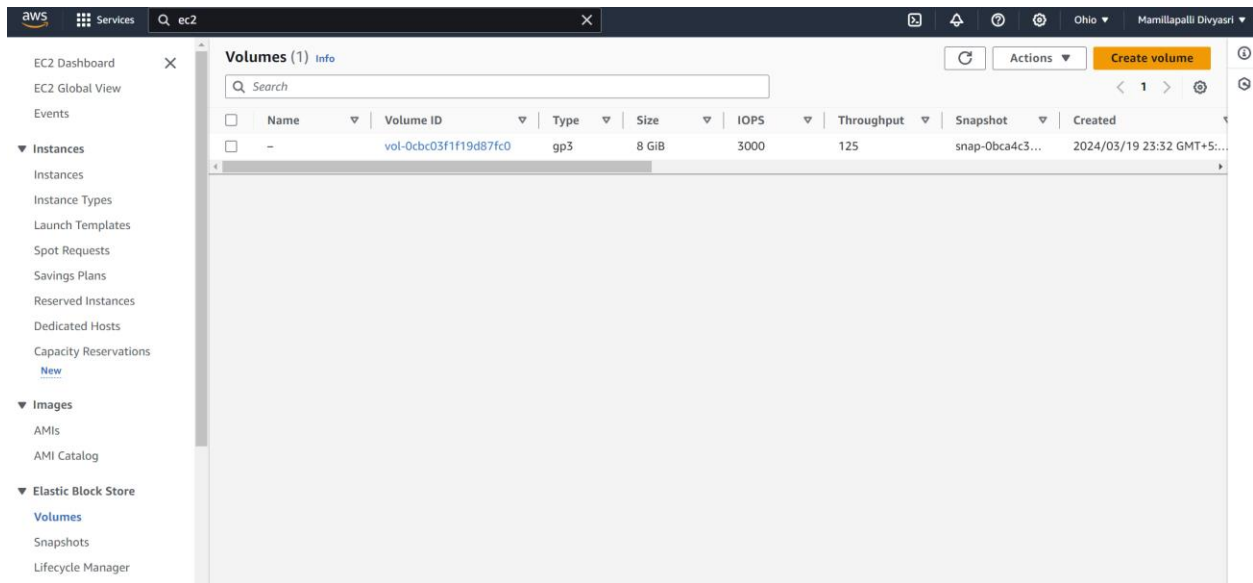
[Cancel](#) [Launch Instance](#) [Review commands](#)

Pic-27

Now we created EBS EC2 Instance successfully.

Now click on Elastic Block Store option from EC2 instance menu

Then click on volumes. (Pic-28)



pic-28

create Volume for EBS so that We must give the details for volume type,size,availability zone.

finally click on create volume (Pic-29)

Create volume [Info](#)

Create an Amazon EBS volume to attach to any EC2 instance in the same Availability Zone.

Volume settings

Volume type [Info](#)

General Purpose SSD (gp3) ▼

Size (GiB) [Info](#)

12

Min: 1 GiB, Max: 16384 GiB. The value must be an integer.

IOPS [Info](#)

3000

Min: 3000 IOPS, Max: 16000 IOPS. The value must be an integer.

Throughput (MiB/s) [Info](#)

125

Min: 125 MiB, Max: 1000 MiB. Baseline: 125 MiB/s.

Availability Zone [Info](#)

us-east-2a ▼

Snapshot ID - optional [Info](#)

Don't create volume from a snapshot ▼



Encryption [Info](#)

Use Amazon EBS encryption as an encryption solution for your EBS resources associated with your EC2 instances.

☐ Encrypt this volume

Tags - optional [Info](#)

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.

No tags associated with the resource.

Add tag

You can add 50 more tags.

Snapshot summary [Info](#)



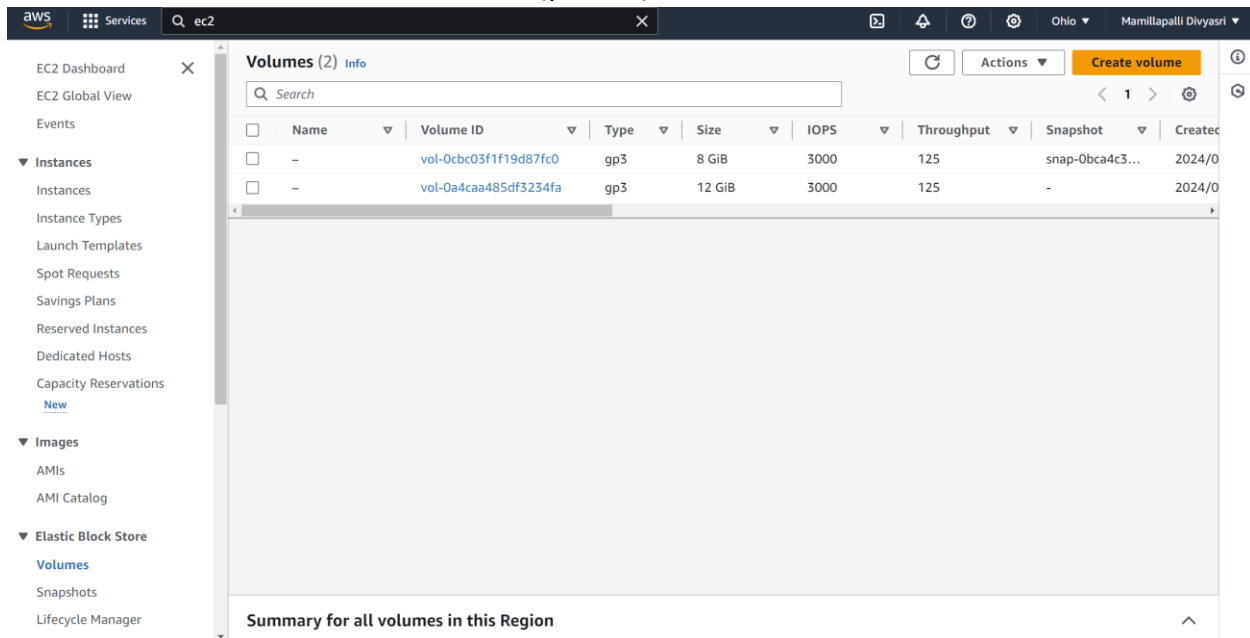
🕒 Click refresh to view backup information

The volume type that you select and the tags that you assign determine whether the volume will be backed up by any Data Lifecycle Manager policies.

Cancel

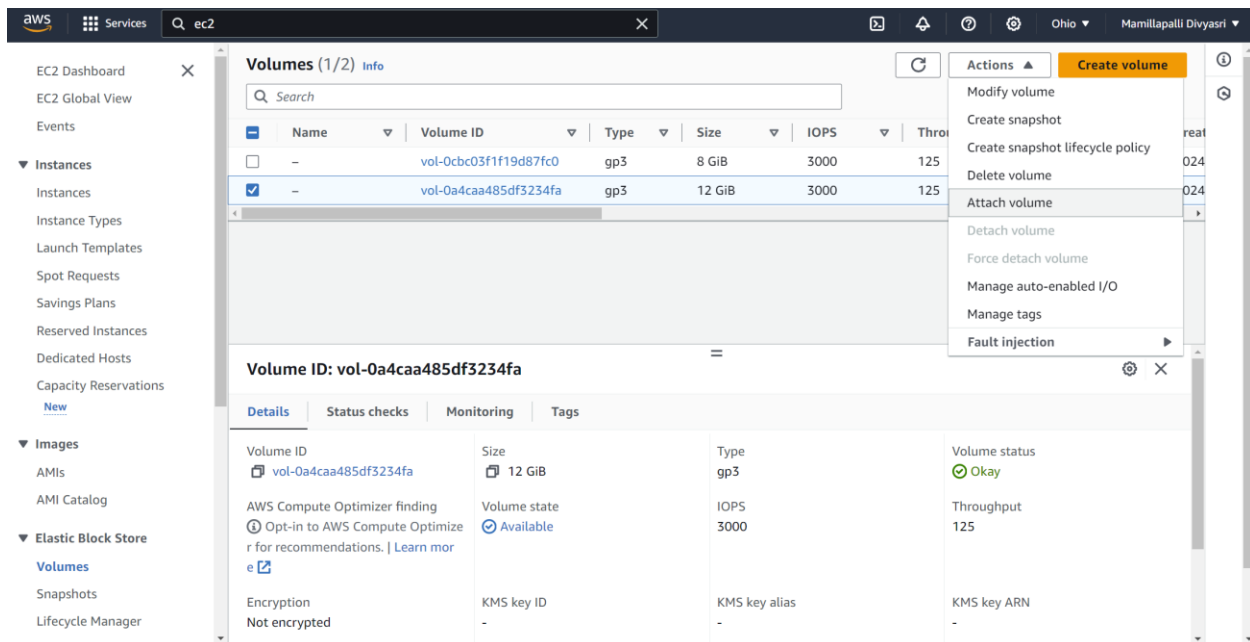
Create volume

Once the volume has been created(pic-30).



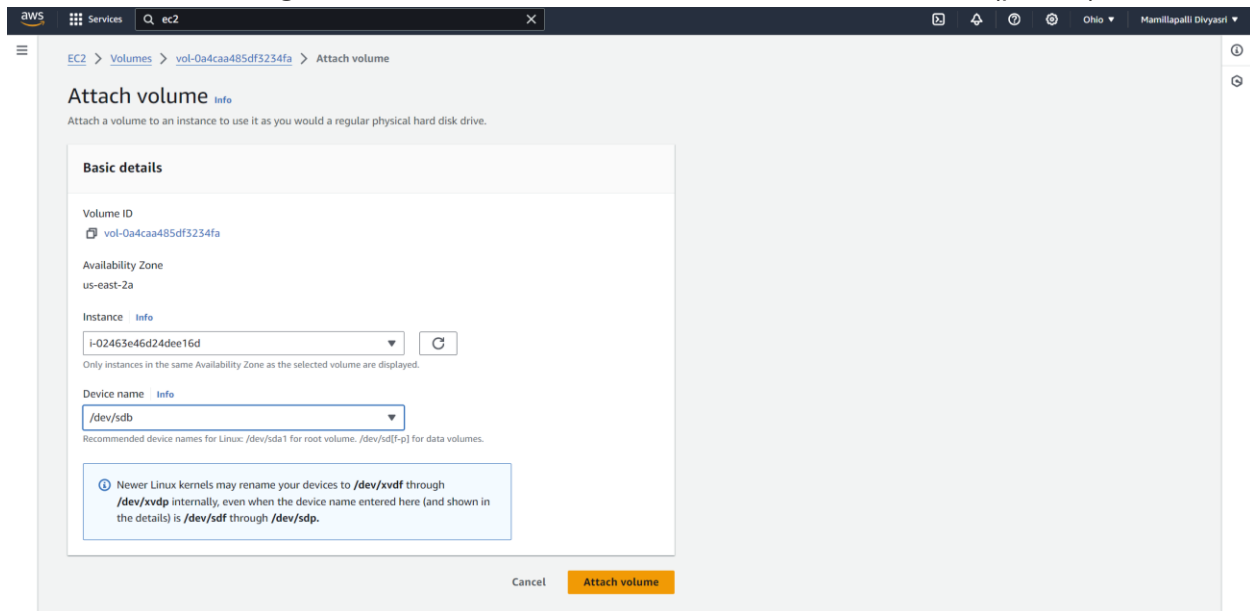
pic-30

click on actions in that click on attach volume(Pic-31)



pic-31

In Attach volume give created instance id and click on attach volume.(pic-32)



pic-32

The volume is successfully attached to instance