

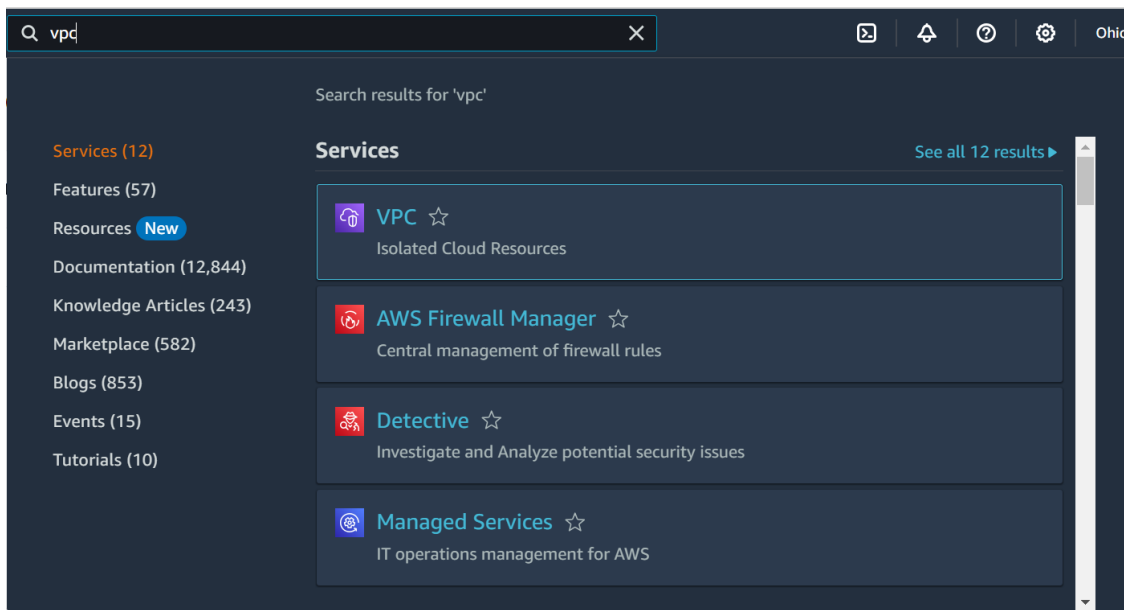
## Assignment-1

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

- Launch 3 instances
- Attach 1 instance with EBS
- Attach 2 instances with EFS

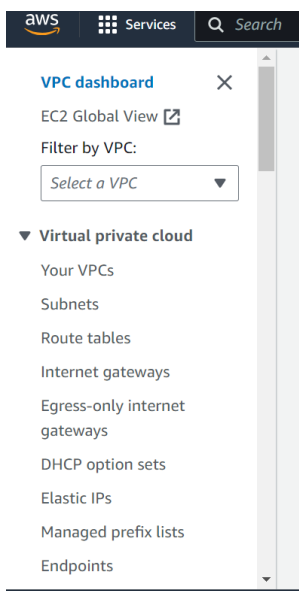
Create a virtual private cloud(VPC)

Search for VPC in search space of AWS homepage and click on VPC(pic-1)



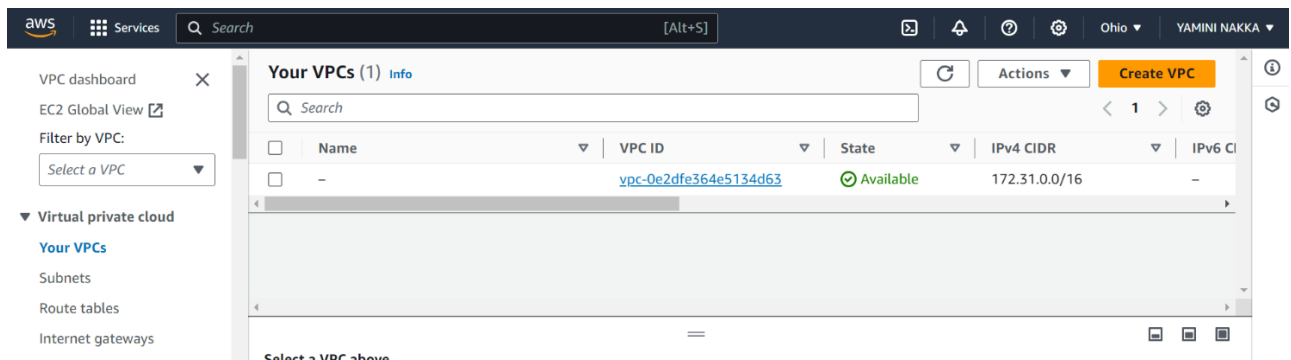
Pic-1

Now click on your VPCs option from VPC menu of VPC page(pic-2)



Pic-2

Now click on Create VPC to create our custom VPC (pic-3)



Pic-3

Now we have to give the details for our VPC and

Finally click on Create VPC (pic-4)

**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-01

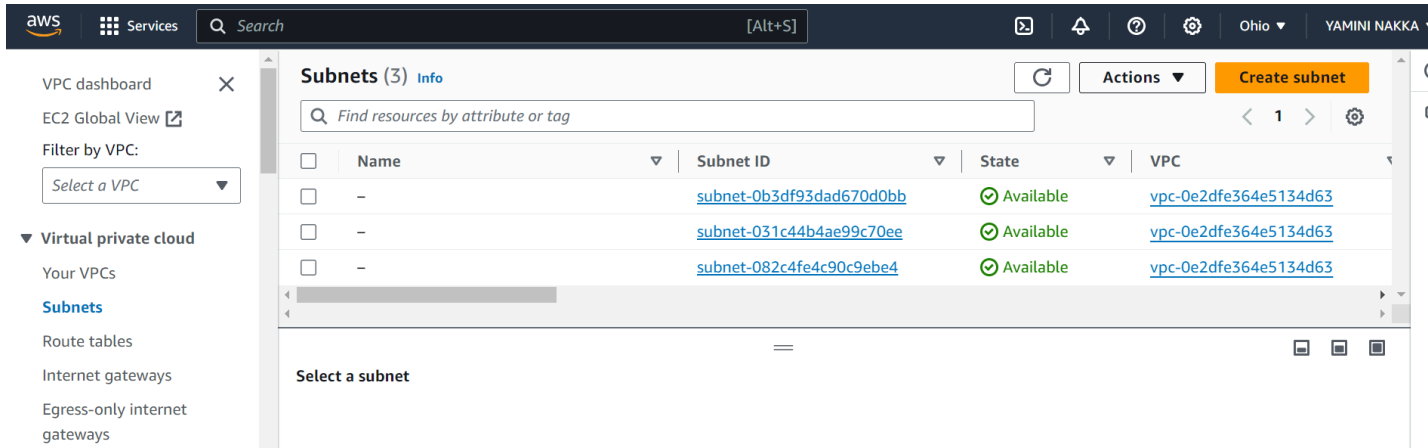
**IPv4 CIDR block** Info  
☒ IPv4 CIDR manual input ☐ IPAM-allocated IPv4 CIDR block

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

Pic-4

Now created our custom VPC successfully

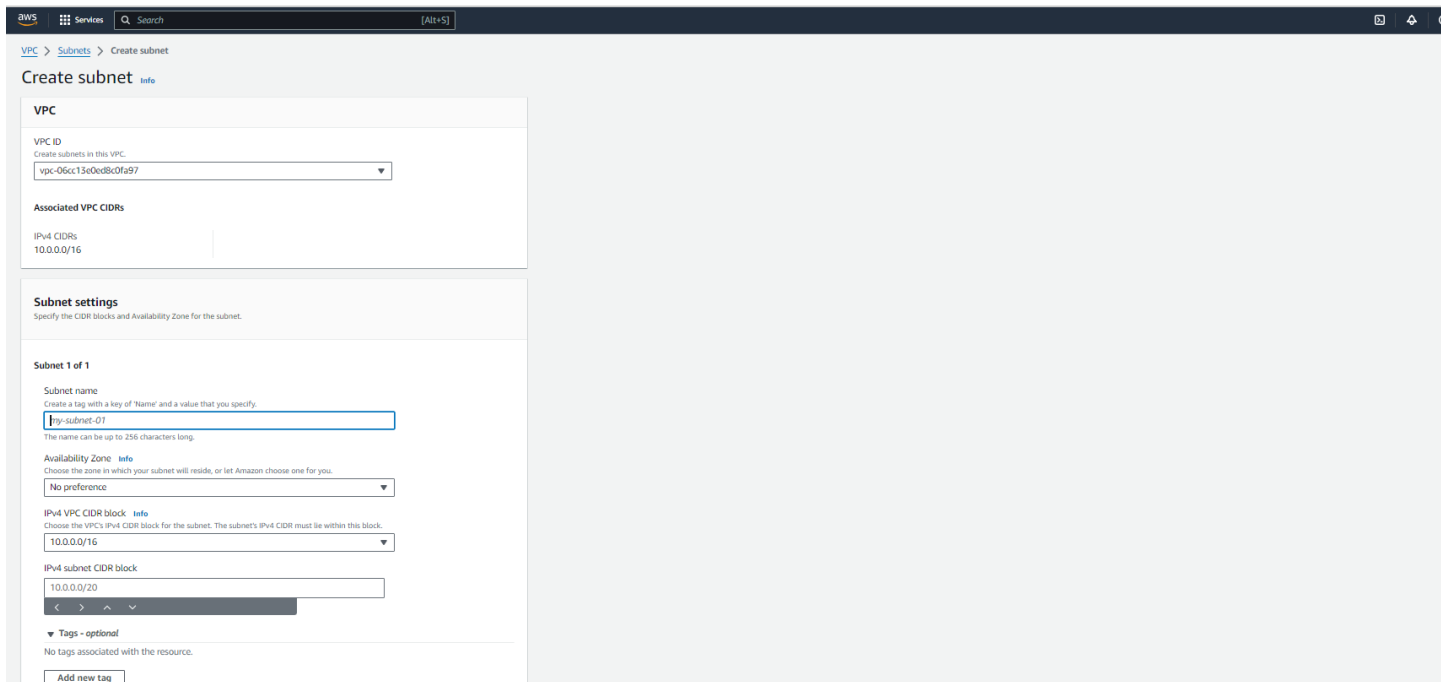
Now click on subnets to create Subnets to our custom VPC(pic-5)



Pic-5

Then create two subnets public and private

We have give the our custom VPC-ID,subnet name ,choose only one availability zone,IPV4subnet CIDR block,then finally create subnet public(pic-6)



Pic-6

Private subnet(pic-7)

**Create subnet**

**VPC ID**  
Choose a VPC ID to create this subnet.

Associated VPC CIDRs

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

**Subnet 1 of 1**

Subnet name  
Enter a name with a mix of letters and numbers that you specify.

Availability Zone  
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

IP address range  
Choose the VPC's IP address range for the subnet. The subnet's IP address must be within this block.

Tags - optional

Key Value

Cancel Create subnet

Pic-7

Now we created two subnets to our custom VPC successfully(pic-8)

**Subnets (2/5)** Info

Find resources by attribute or tag

	Name	Subnet ID	State	VPC
<input checked="" type="checkbox"/>	subnet-1	subnet-05d9fd9feb2c2effb	Available	vpc-07539fc71a
<input checked="" type="checkbox"/>	subnet(private)	subnet-04d383bd1c432cce8	Available	vpc-07539fc71a

Subnets: subnet-05d9fd9feb2c2effb, subnet-04d383bd1c432cce8

Pic-8

Now click on internet gateways from menu bar and click on create

Internet gateway(pic-9)

**Internet gateways (1)** Info

Search

	Name	Internet gateway ID	State	VPC ID
<input type="checkbox"/>	-	igw-090fd6528a7db2ba7	Attached	vpc-07539fc71a

Select an internet gateway above

Pic-9

Now ,we have give name to our internet gateway and finally click on

Internet gateway(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.

ig-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: ig-1 Remove

Add new tag  
You can add 49 more tags.

Cancel Create internet gateway

Pic-10

Then click on actions and click on attach to VPC(pic-11)

**Attach to VPC (igw-07430a4896fce1ef0)** [Info](#)

**VPC**  
Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below.

Available VPCs  
Attach the internet gateway to this VPC.

vpc-07539fc718dc74993

AWS Command Line Interface command

Cancel Attach internet gateway

Pic-11

Now we have select our custom VPCs in that available VPCs so we already Created it our custom VPC. And finally click on attach internet gateway(pic-12)

**Attach to VPC (igw-07430a4896fce1ef0)** [Info](#)

**VPC**  
Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below.

Available VPCs  
Attach the internet gateway to this VPC.

vpc-07539fc718dc74993

AWS Command Line Interface command

Cancel Attach internet gateway

Pic-12

Now we created internet gateway to our custom VPC successfully(pic-13)

**Internet gateways (1/2)** [Info](#)

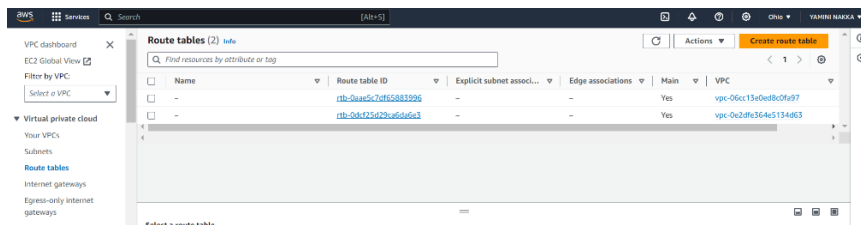
Search

Name	Internet gateway ID	State	VPC ID	Owner
-	igw-090f46528a7db2ba7	Attached	vpc-0a2dfca364e5134d63	017267539774
igw-1	igw-07430a4896fce1ef0	Attached	vpc-07539fc718dc74993   vpc-1	017267539774

Pic-13

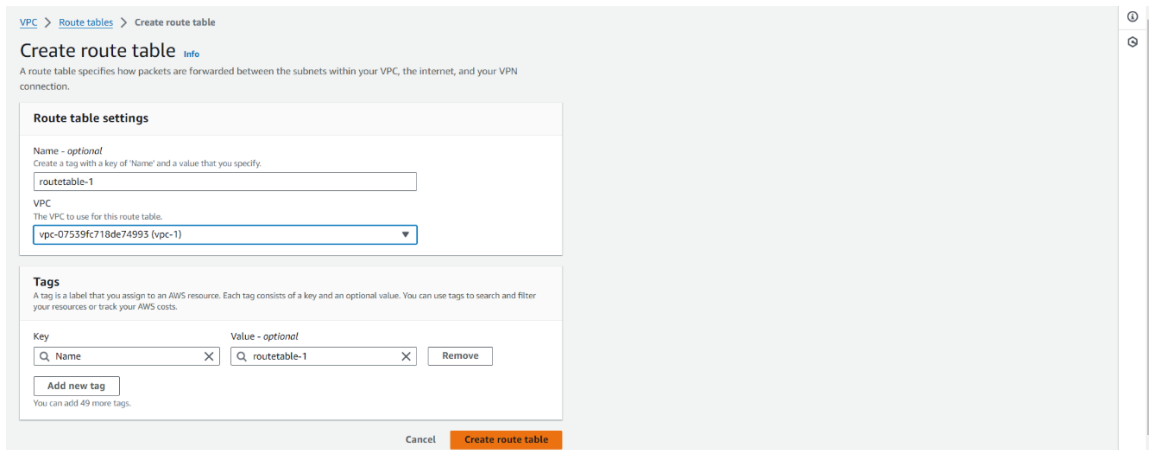
Now we have to create 2 route tables (one is public and another one is private).

Click on route tables from menu bar and click on create route table(pic-14)



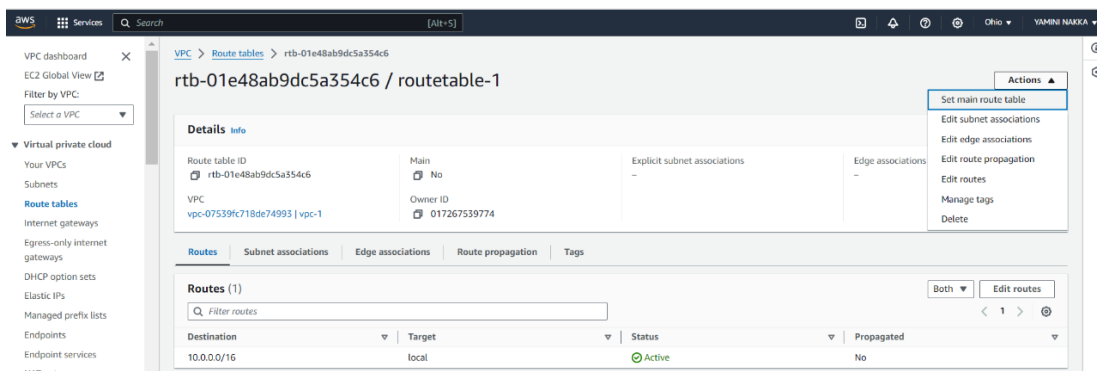
Pic-14

Then give name to route table and select our custom VPC and finally click on create route table(pic-15)



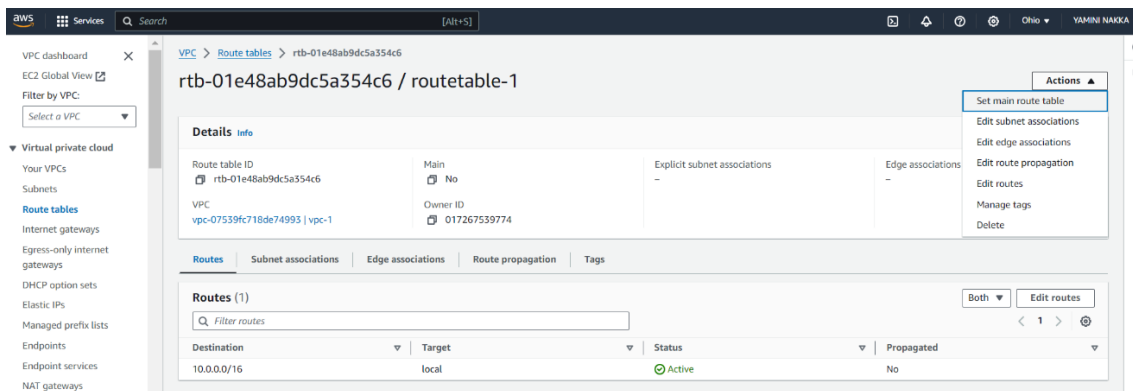
Pic-15

Now click on actions,click on edit routes(pic-16)



Pic-16

Click on add route.select 0.0.0.0/0 as destination(pic-17)



Pic-17

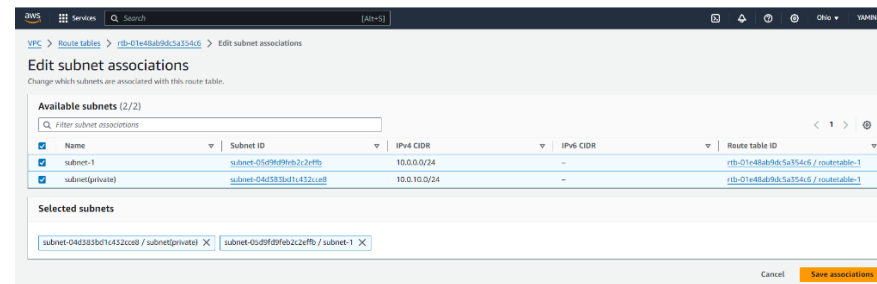
Select internet gateway from drop down list,we have select use id like

The screenshot shows the 'Edit routes' interface in the AWS Management Console. The breadcrumb navigation at the top indicates the path: VPC > Route tables > rtb-01e48ab9dc5a354c6 > Edit routes. The main heading is 'Edit routes'. Below this is a table with the following columns: Destination, Target, Status, and Propagated.

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

At the bottom left, there is an 'Add route' button. At the bottom right, there are three buttons: 'Cancel', 'Preview', and 'Save changes'.

Then click on subnet associations and edit subnet associations(pic-20)



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

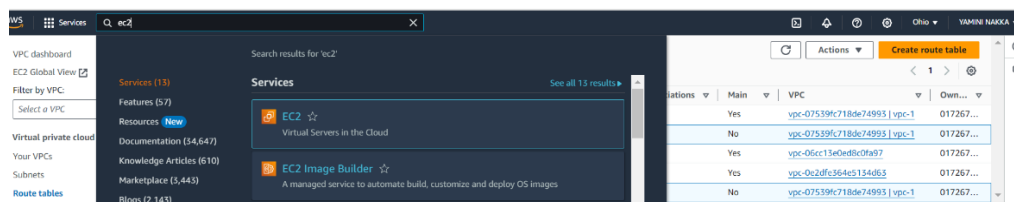
Access to private, because we want to make it as private subnet

The screenshot shows the AWS Management Console interface for the 'Route tables (2/5)' page. The left sidebar contains navigation links for VPC dashboard, EC2 Global View, and Virtual private cloud. The main content area displays a table of route tables. The table has columns for Name, Route table ID, Explicit subnet associations, Edge associations, Main, and VPC. Two route tables are listed: 'routetable-1' and 'routeprivate'. 'routetable-1' has two subnets associated with it, while 'routeprivate' has none. A 'Create route table' button is visible in the top right.

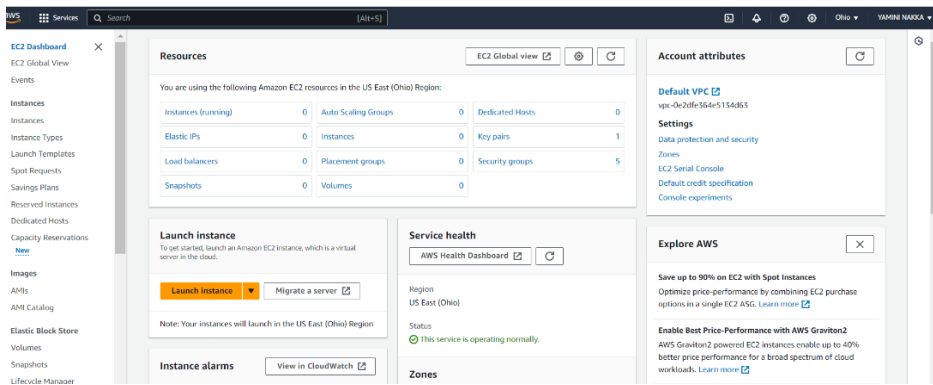
Name	Route table ID	Explicit subnet associations	Edge associations	Main	VPC	Created
<input checked="" type="checkbox"/> routetable-1	rtb-01f5ca3101799efca8	2 subnets	-	Yes	vpc-075339e718de74993   vpc-1	017267...
<input type="checkbox"/> -	rtb-01e4b40d4ca554c6	-	-	No	vpc-075339e718de74993   vpc-1	017267...
<input type="checkbox"/> -	rtb-0aaccc77f0c883996	-	-	Yes	vpc-06cc13e108de0fa97	017267...
<input type="checkbox"/> -	rtb-0cd25429ca6d4e3	-	-	Yes	vpc-0cd2f83645134d63	017267...
<input checked="" type="checkbox"/> routeprivate	rtb-00d415b748e6c5ab	-	-	No	vpc-075339e718de74993   vpc-1	017267...

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

Search for EC2 in search space of AWS homepage and click on EC2(pic-21)

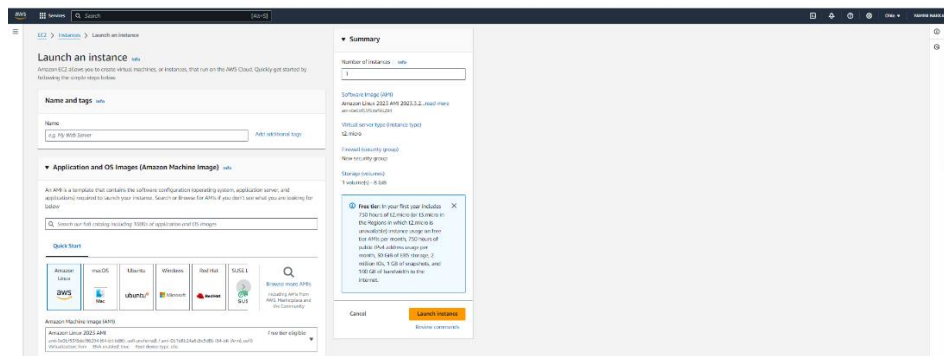


Now create one ec2 instance to the elastic block storage(EBS).(pic-24)



Pic-22

Then launch the instance of ec2 for ebs ,Now we have to give the details for our ec2(EBS) Instance and then we have mention some details like we have name ,os type to start, Instance type,key pair(login),network setting. Finally click on launch instance(pic-23)

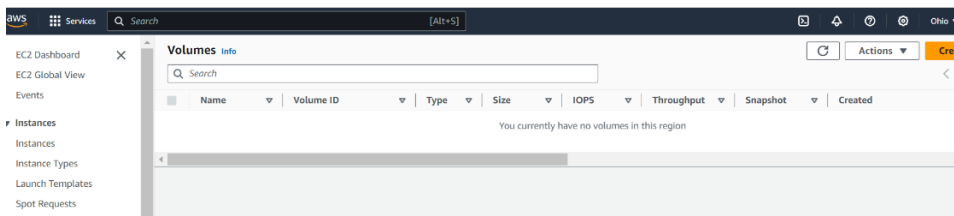


Pic-23

Now we created EBS EC2 instance successfully.

Now click on Elastic Block Store option from EC2 instance menu

Then click on volumes.(pic-24)



Pic-24

Create volume forEBS so that we have to give the details for volume Type ,size,availability zone.

Finally click on create volume(pic-25)



EC2 > Volumes > Create volume

### 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 (gp2)

General Purpose SSD (gp2) is now the default selection. gp2 provides up to 20% lower cost per GB than gp3. [Learn more](#)

Size (GB) [Info](#)

100

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

IOPS [Info](#)

3000

Min: 100 IOPS, Max: 16000 IOPS. The value must be an integer.

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

125

Min: 125 MB, Max: 1000 MB. Sustained. 100 MB/s.

Availability Zone [Info](#)

us-east-2a

Snapshot ID (optional) [Info](#)

Select 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 in AWS and AWS IAM.

No tags associated with this resource.

[Add tag](#)

You can add 50 custom tags.

#### Snapshot summary [Info](#)

[Click](#) to refresh to view backup information.

The resource 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](#)

Pic-25

Once the volume has been create click on actions in that attach volume(pic-26)

EC2 > Volumes > vol-0a34bc5ad4b3aa954 > Attach volume

### Attach volume [Info](#)

Attach a volume to an instance to use it as you would a regular physical hard disk drive.

#### Basic details

Volume ID

vol-0a34bc5ad4b3aa954

Availability Zone

us-east-2a

Instance [Info](#)

Only instances in the same Availability Zone as the selected volume are displayed.

Device name [Info](#)

Select a device name

[Cancel](#) [Attach volume](#)

Pic-26