How to Setup VPC on AWS Quickly

Hello User, In this post we go through the process of Setting a VPC on AWS.

The process involves Creation of Internet Gateway, Route tables, Subnets etc.

There are many reasons why should Use VPC over a traditional data centers.

- Scalability and Elasticity
- Cost Efficient
- Security and Compliance
- Disaster Recovery and High Availability

Prerequisites:

Before we deep dive in this tutorial, User should have a basic understanding about VPC, IP addressing, CIDR, Routes, Networks.

Lets Begin the Show..

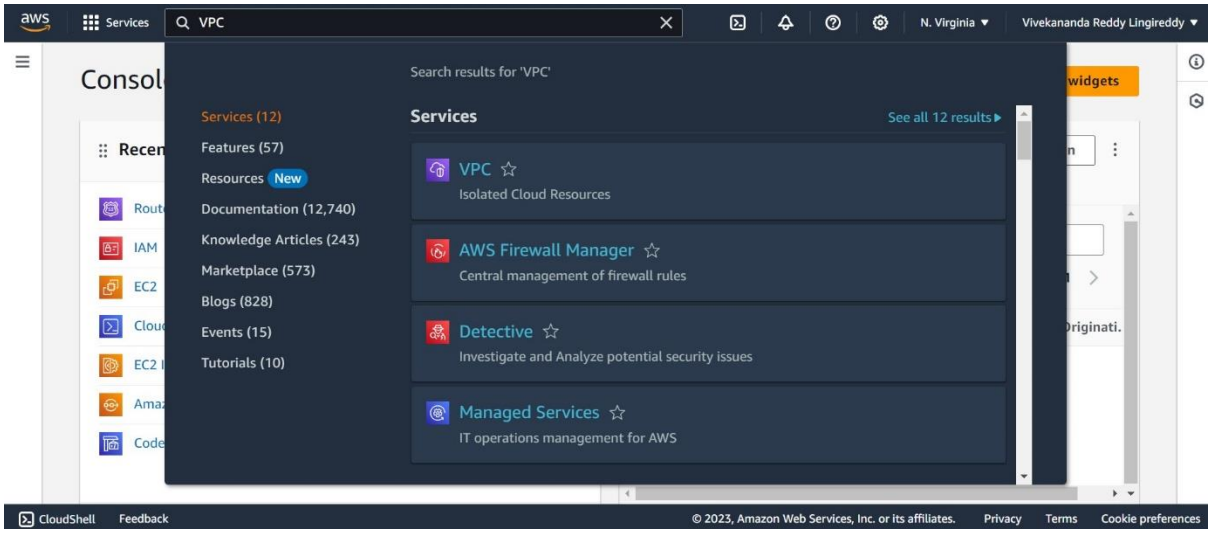
Steps to Set Up the VPC on AWS

1. Login to AWS Management Console and Creation of VPC
2. Creating Subnets inside VPC
3. Creating Internet Gateway
4. Creating Route tables
5. Attaching Route to Subnets and Internet Gateway
6. Launching an EC2 instance on VPC inside the Public Subnet
7. Termination

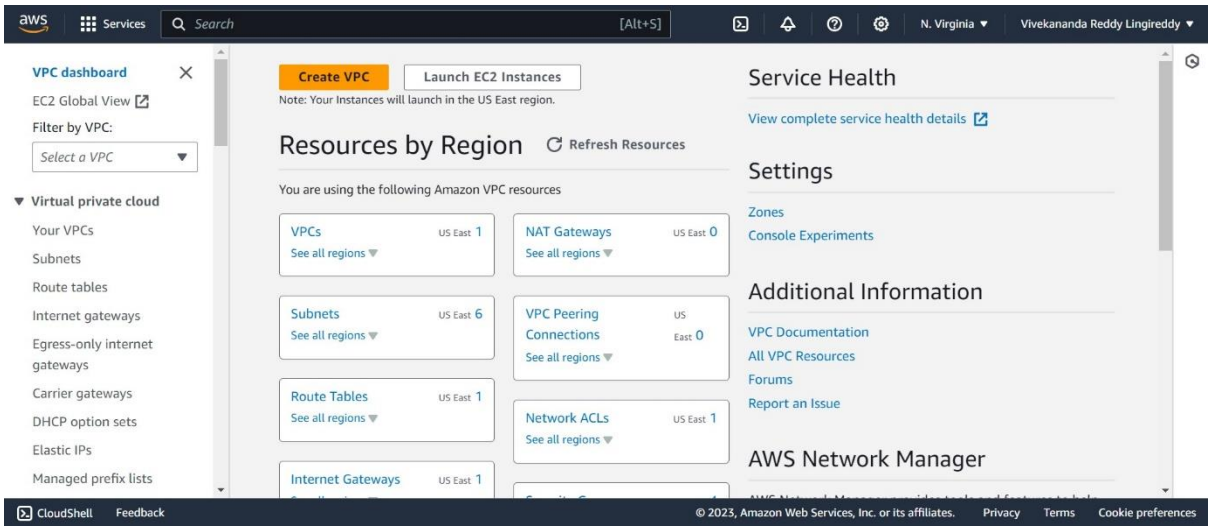
Step 1: Login to AWS Management Console and Navigate to VPC

First login to AWS Management Console. After you login, Navigate to Search bar and search VPC.

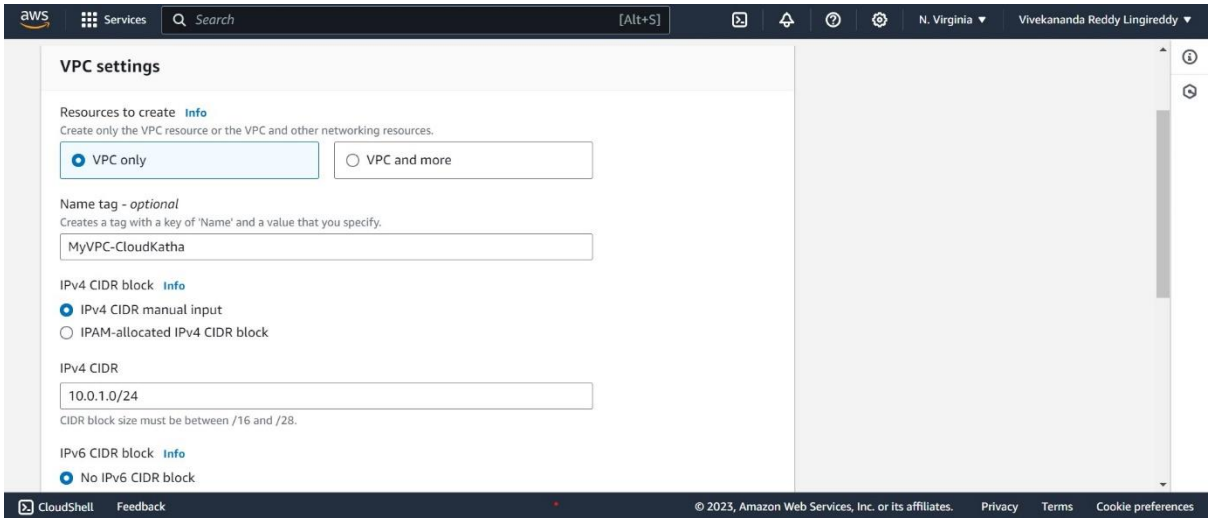
Once you see VPC, Click on it to Open the VPC Service.



Click on VPC and you will see a default VPC already exist, Now click on create VPC and click VPC only name it to your choice.

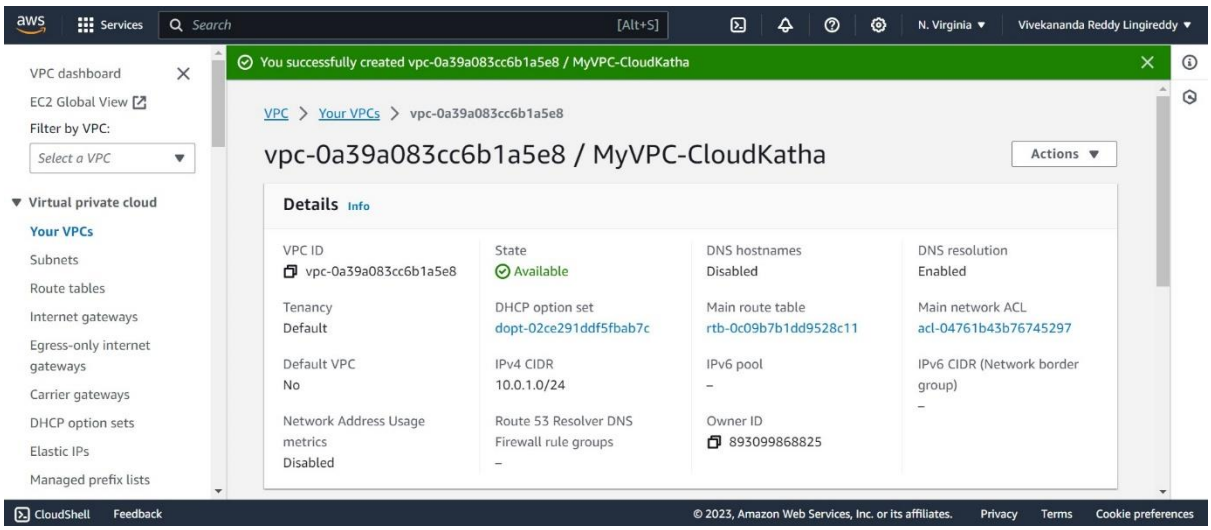


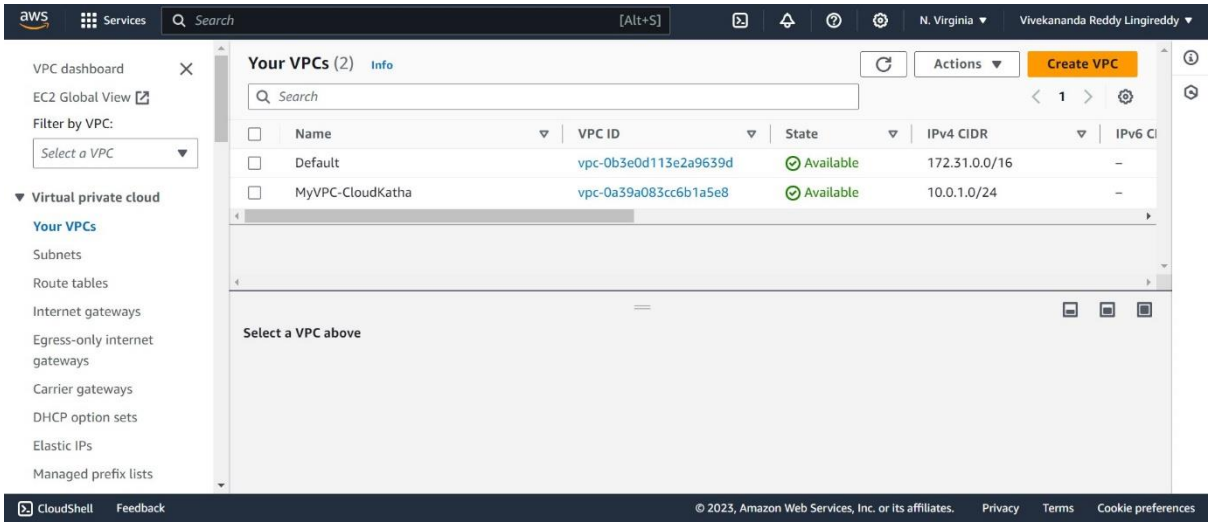
Let me Name it MyVPC-CloudKatha and add CIDR as 10.0.1.0/24.



Choose tenancy as default and click create VPC.

You will confirmation Once it is created and Shown under Your VPCs.





Now we have setup the VPC. Lets us create Subnets inside it.

Step 2: Creating Subnets inside VPC

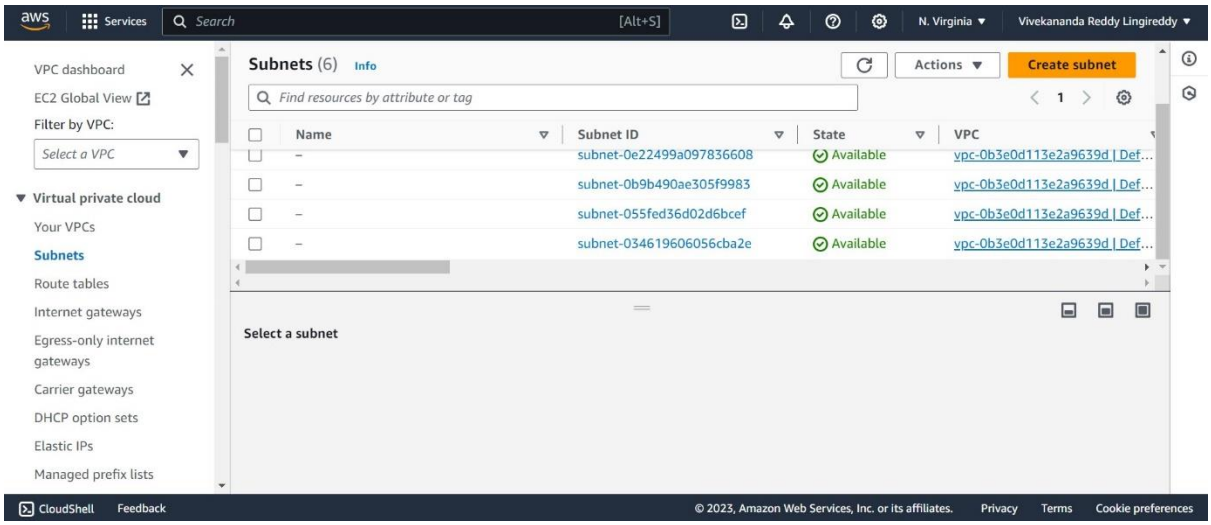
Subnets: Sub Networks are commonly called as subnets. Subnets are sub networks of a Large Internet Network. Subnets make it easy to access resource over a giant network.

Now we are creating two Subnets, Public and Private.

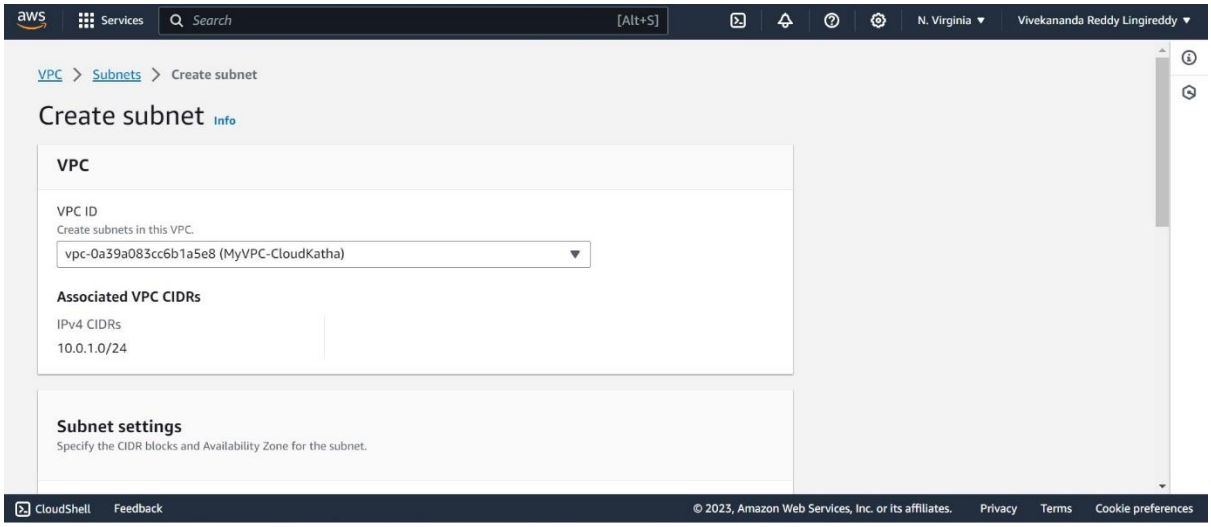
- Public subnets are internet facing networks and traffic is enabled to it.
- Private subnets are Not enabled to traffic but they can be connected only to outside world to get updates and installation purpose etc. Used to place your data base and application servers inside with no internet access.
- Subnets can be launched in multiple availability zones.

Let us Create a Public subnet, Click on the Subnets option on the left side bar.

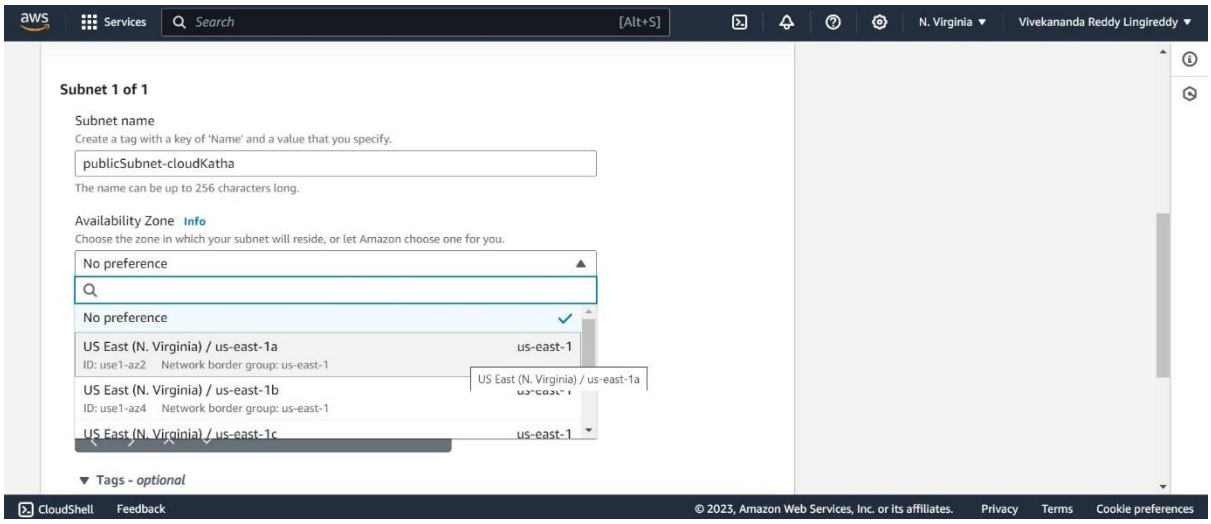
You will find some default subnets already exists. Click on create Subnet.



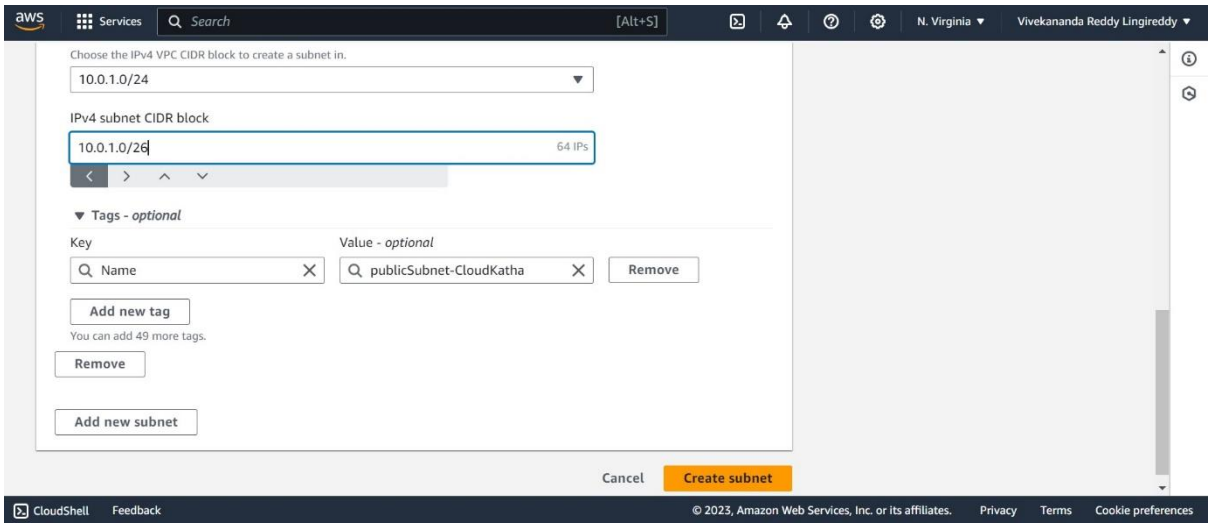
- Select the VPC we created from drop down

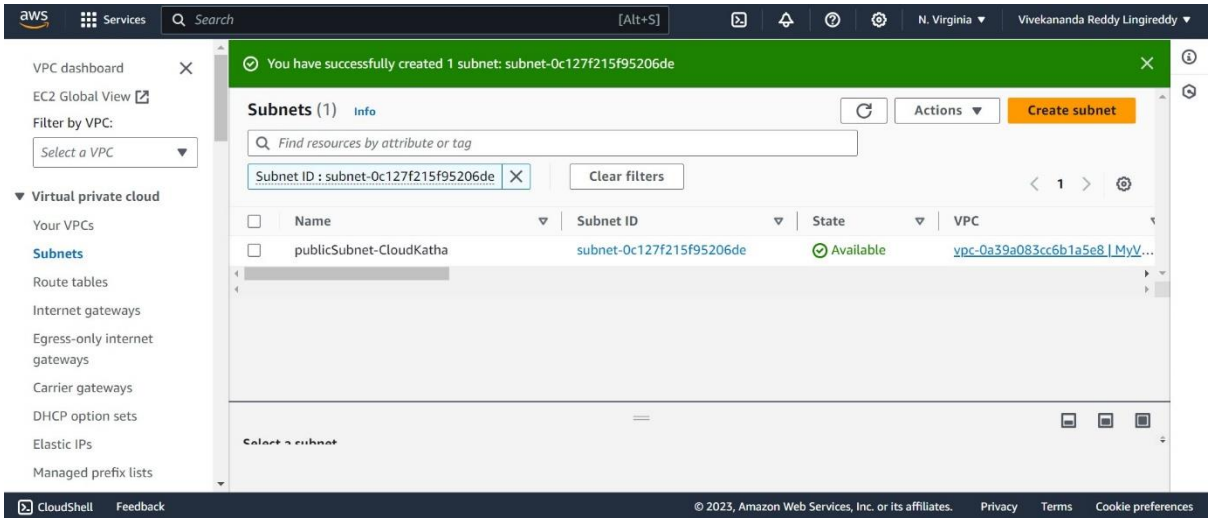


Name the Subnet of your Choice and Select the Availability Zone. I'm select here US East and naming it **PublicSubnet-CloudKatha** , you can choose your default region.



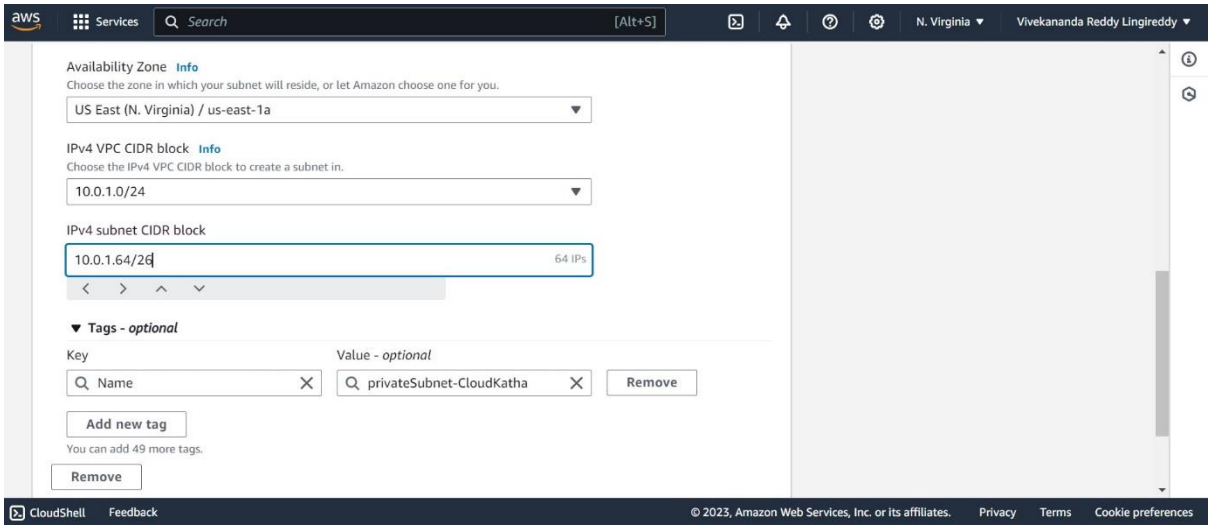
Add CIDR that is inside the VPC's CIDR. Here add the CIDR and click create Subnet.



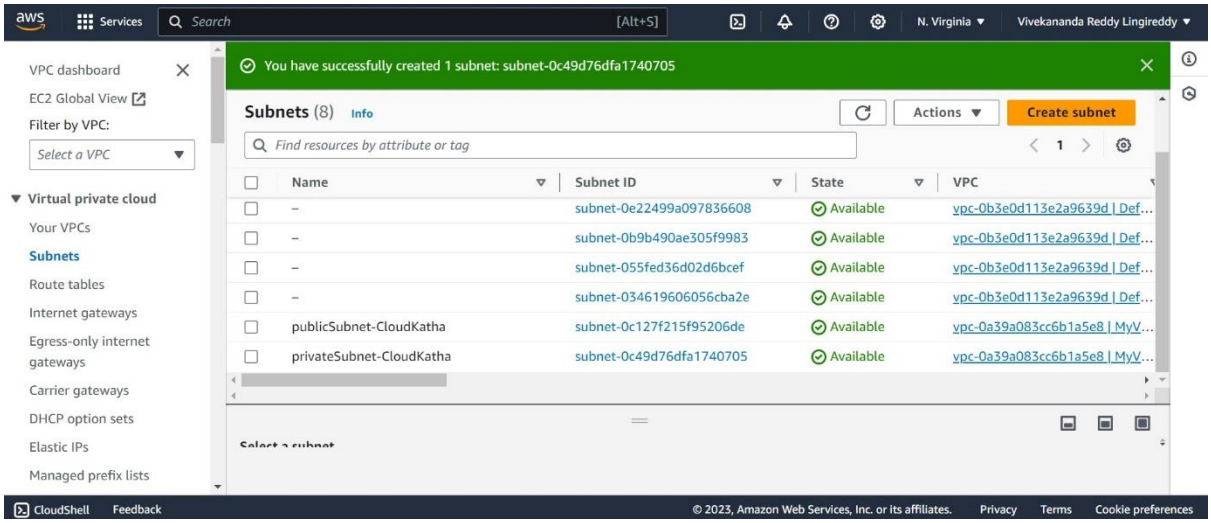


Now the Same way, we are creating a private subnet inside VPC and name it

PrivateSubnet-Cloudkatha, Availability Zone and add CIDR that doesn't conflict the public 10.0.1.64/26. Click create subnet.



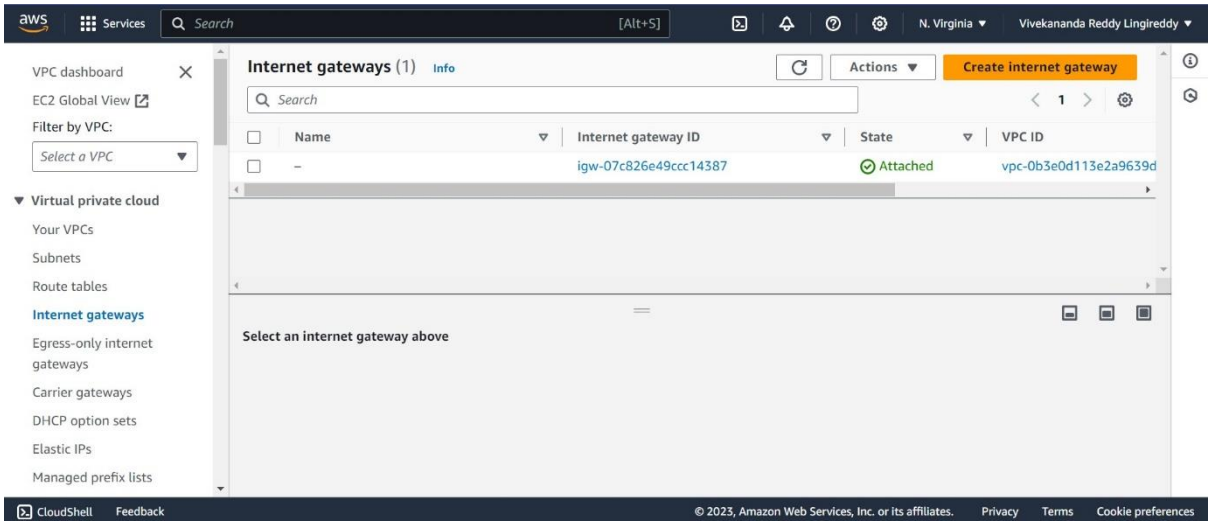
Now we are done step 2 creating subnets.



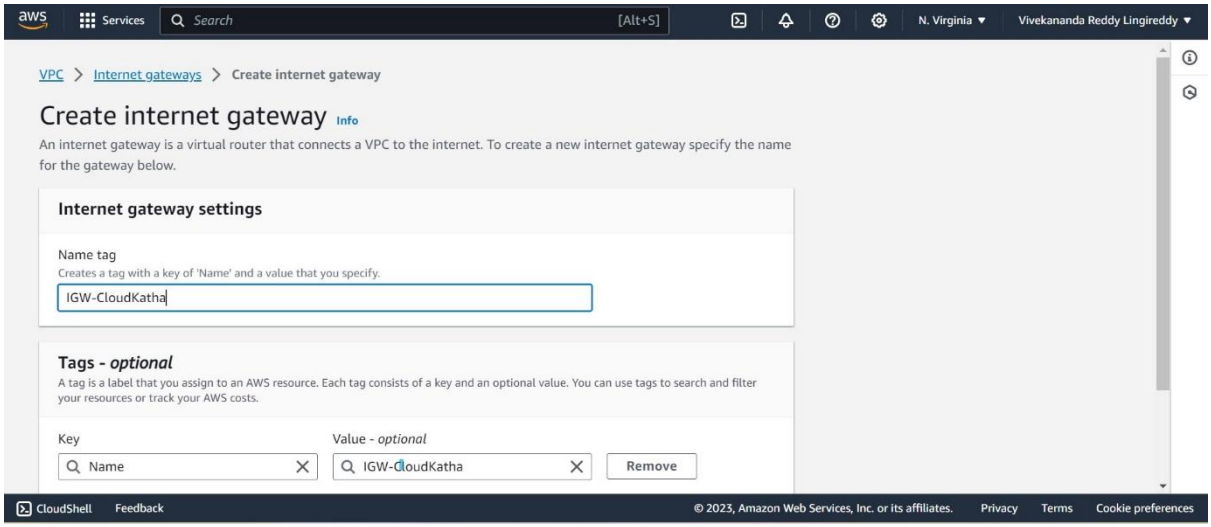
Step 3: Creating Internet Gateway

Now from the picture, Navigate to Internet gateways on your left bar.

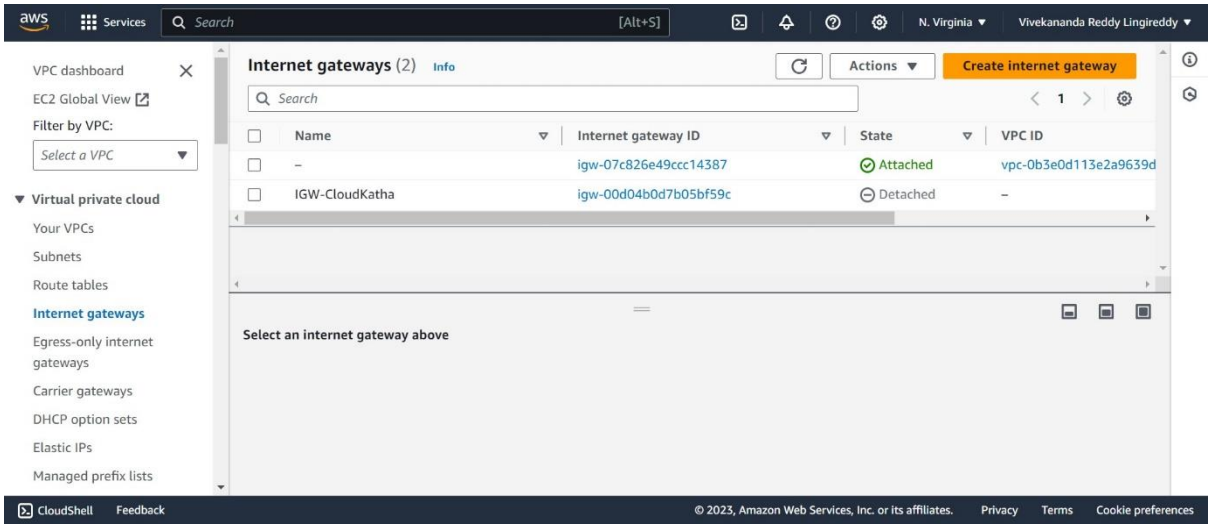
Internet Gateway: It is tunnel between outside world to your VPC. It allows traffic from the Internet to your VPC components i.e subnets.



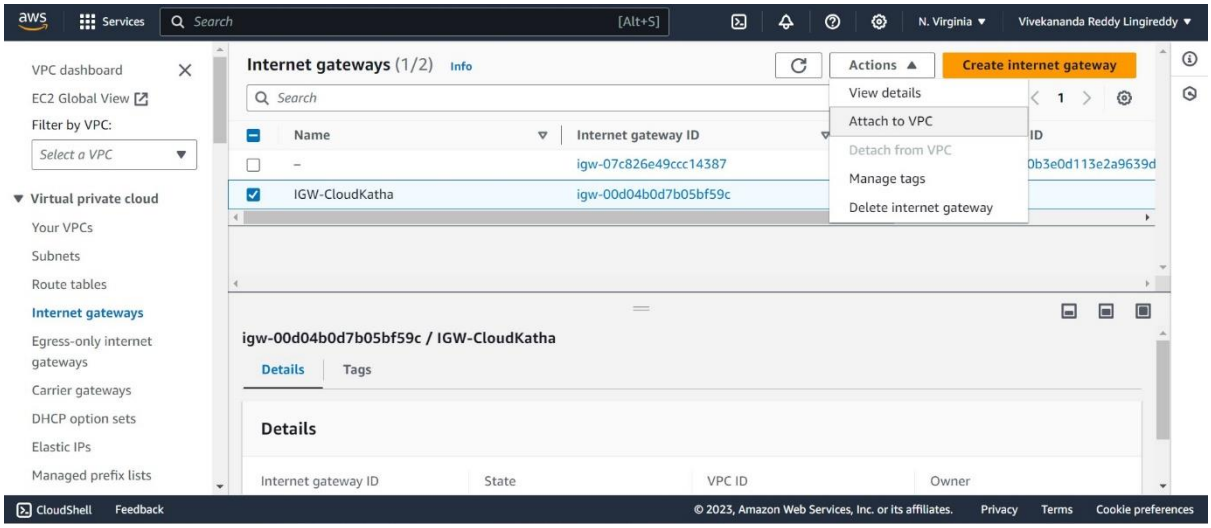
Click on Create internet gateway and name it as **IGW- CloudKatha** and create it.

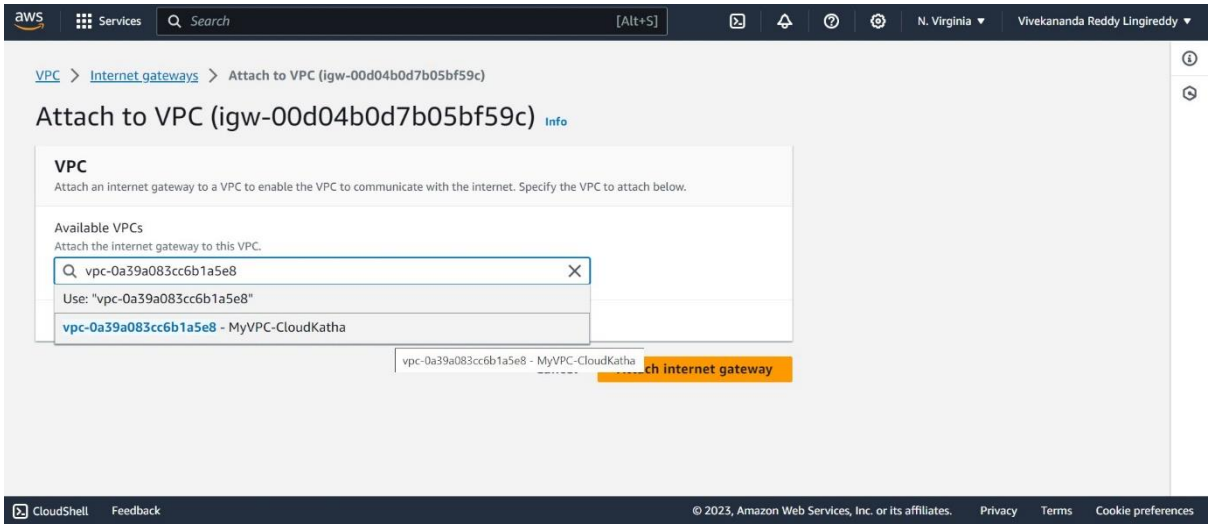


Now click on **Internet gateways**

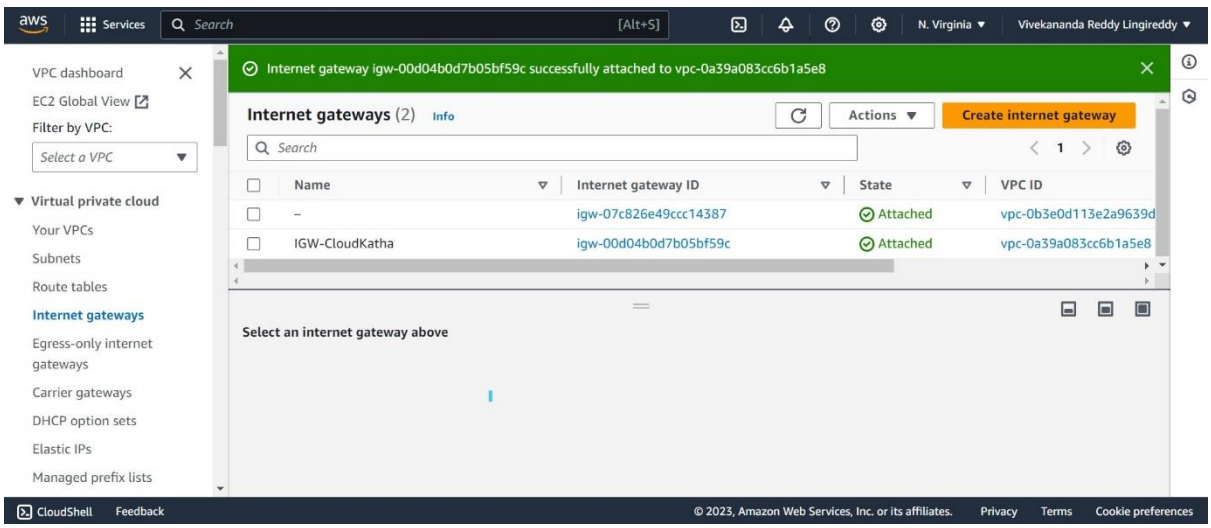


You will see it as **detached**. Because it is not yet attached to VPC. So, Click on that Attach to VPC and locate your VPC from drop down.



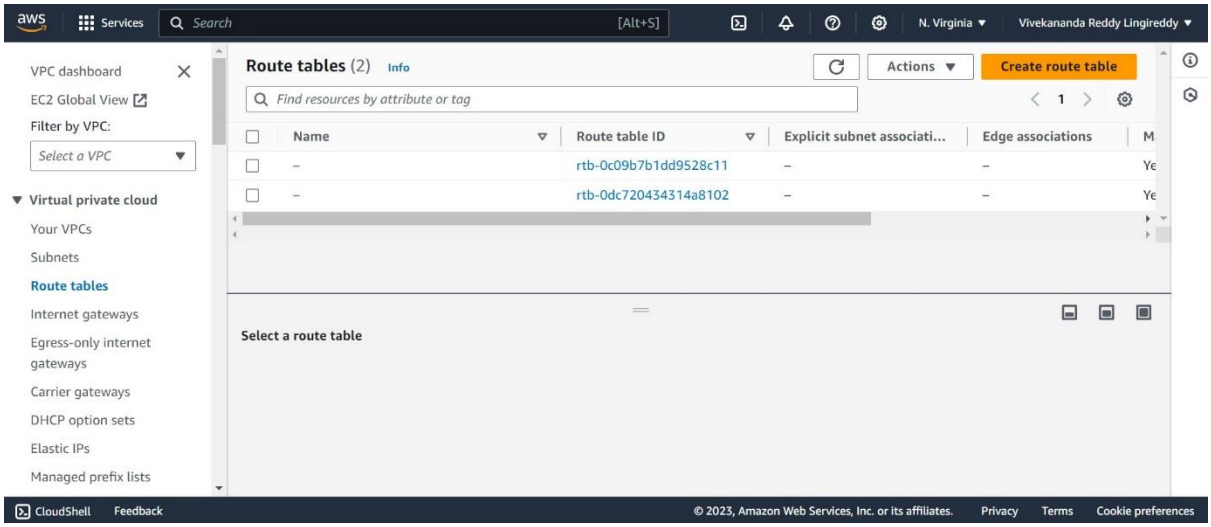


Now will see it as Attached.



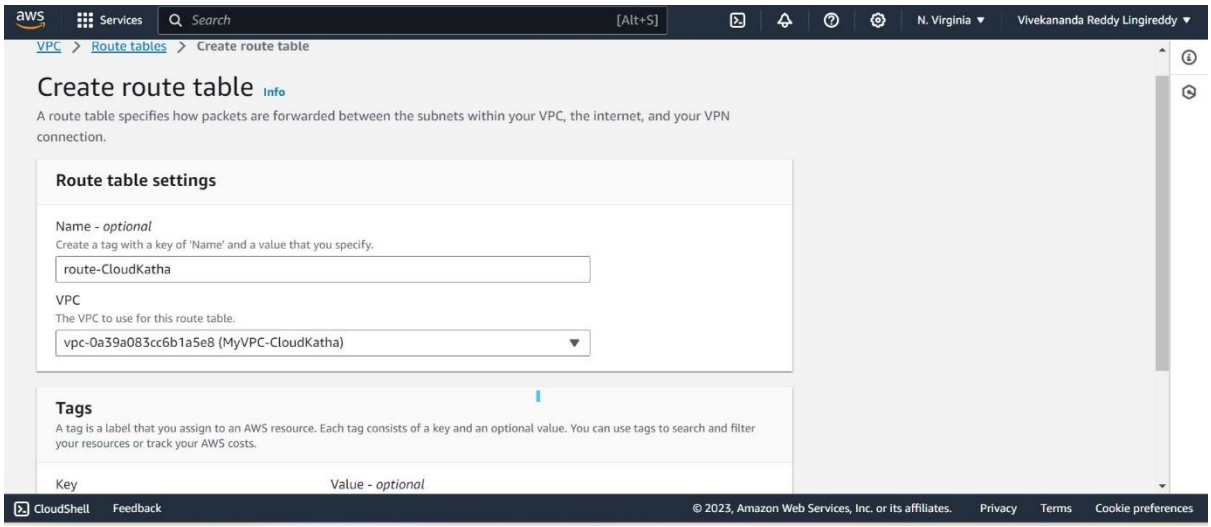
Step 4: Creating Route tables

Click on Route tables on the left side bar and click Create route table.

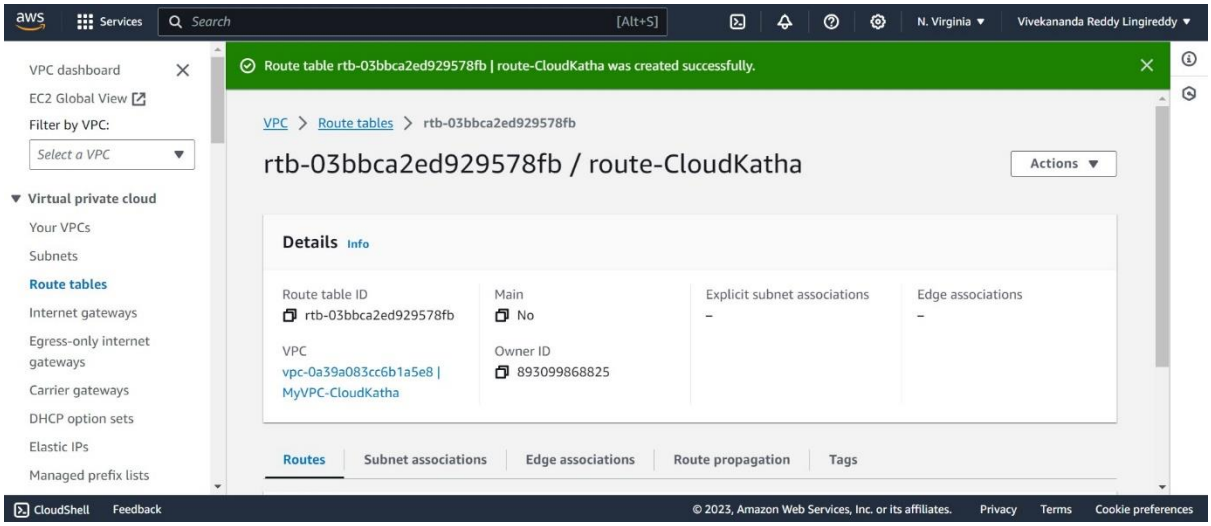


We will create **two** route tables one is for the **Public** another for **Private**.

Name the route table as **routePublic-CloudKatha**. I had created as just route later changed it.

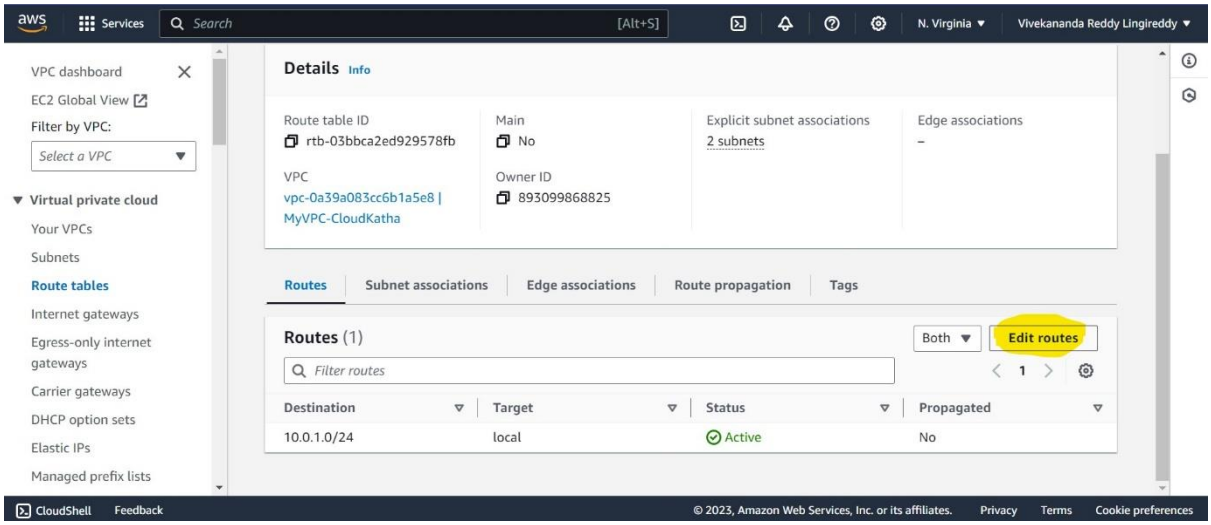


Once it is created you will see **Routes, Subnet Associations** below. Click on **routes** to attach it to the Internet gateway and also click on subnet associations to attach public subnet to it.

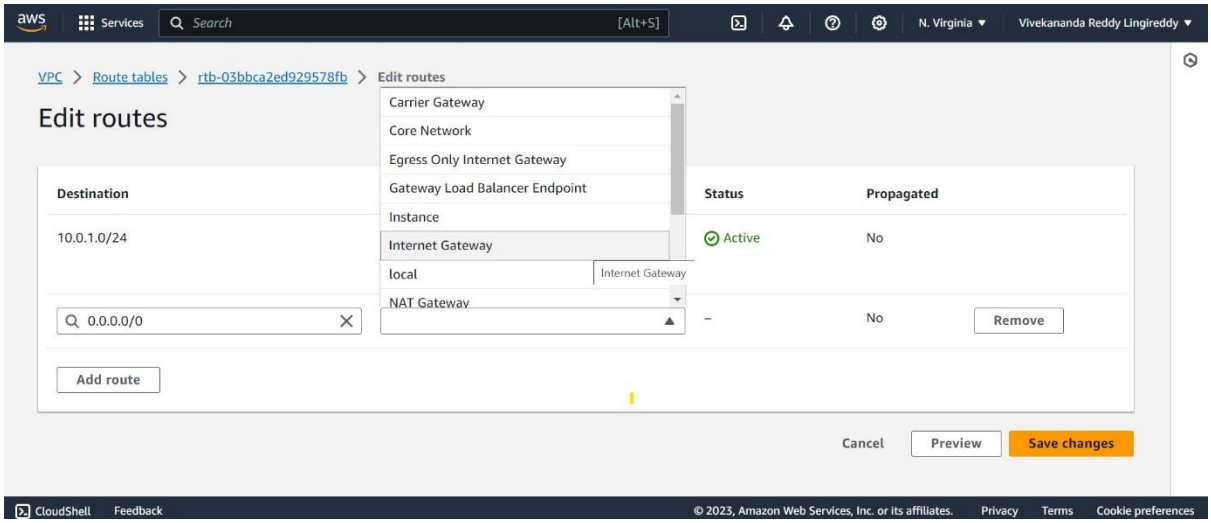


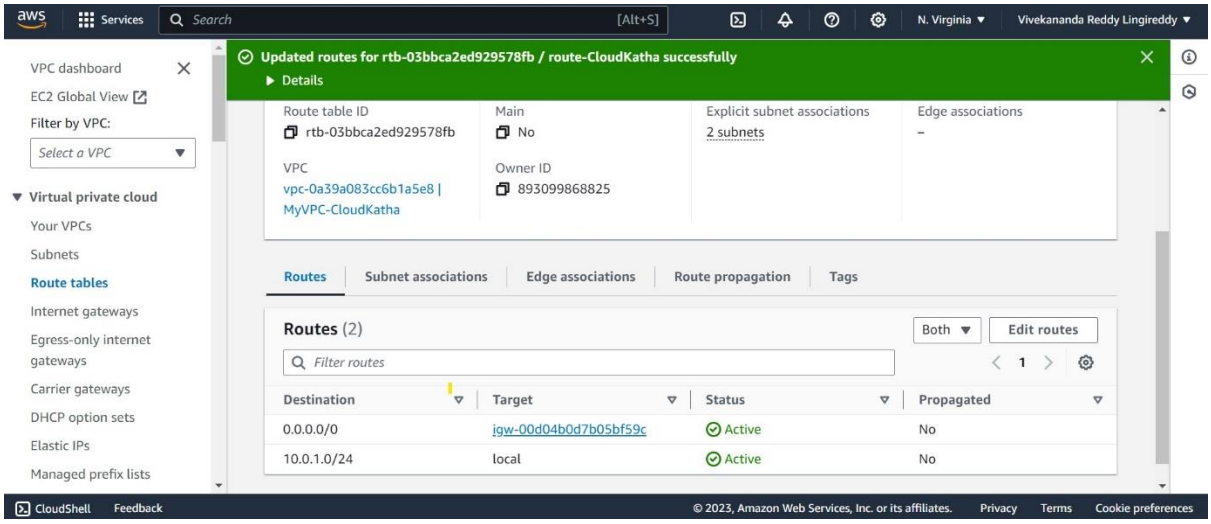
Step 5: Attaching Route to Subnets and Internet Gateway

Click on **Edit routes** to Attach **Internet Gateway** to allow traffic to public subnet.

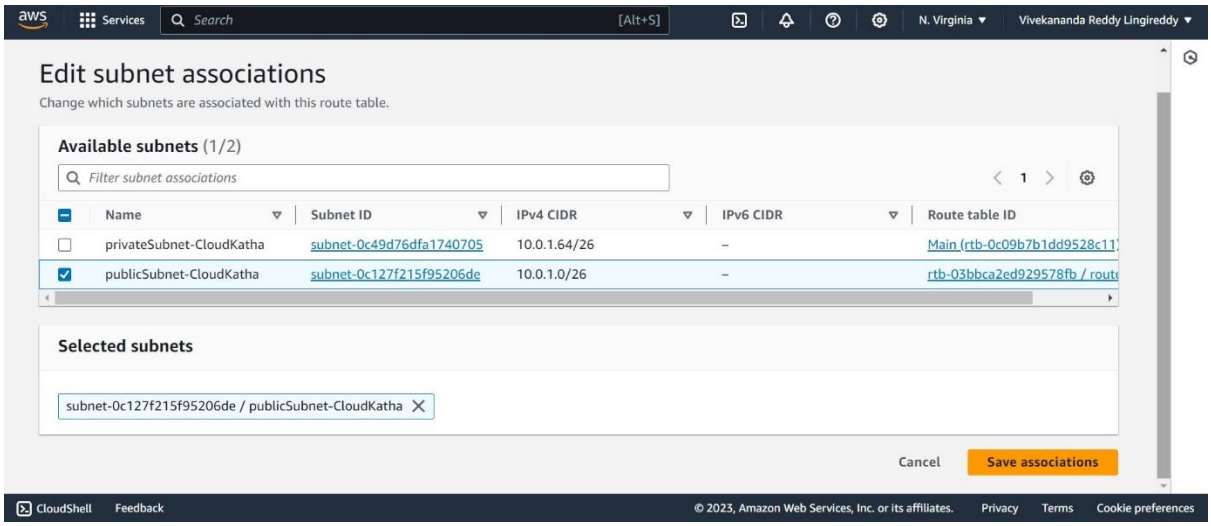


Select the **Internet Gateway** (IGW-Cloudkatha) we had created and save changes

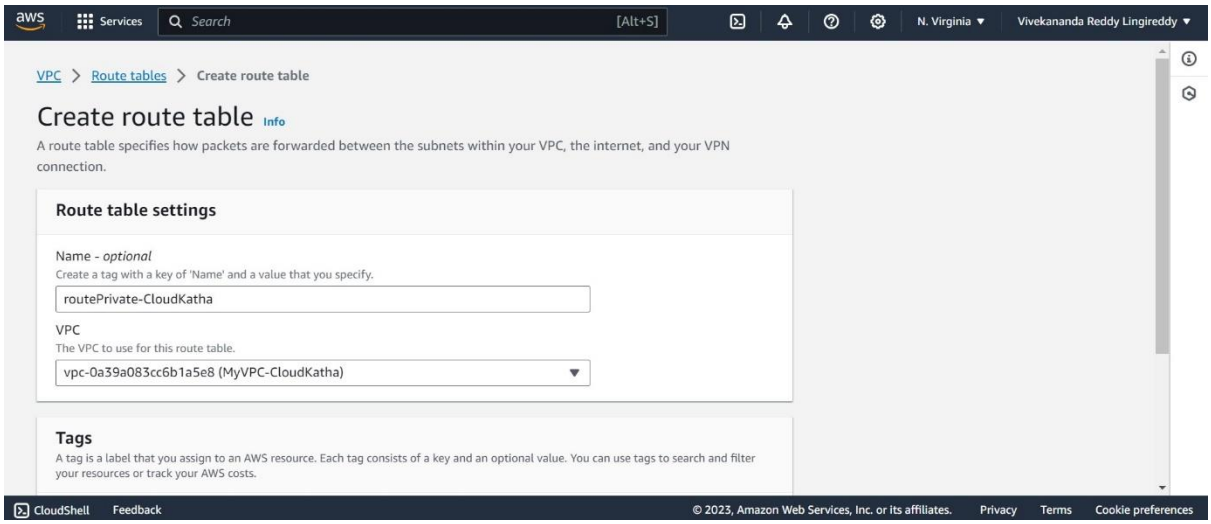




Now Click on **Subnet Associations**, attach the **publicsubnet** to it and save changes



Now create on more **Route table** for **private subnet**. Navigate to route tables pages and create as below

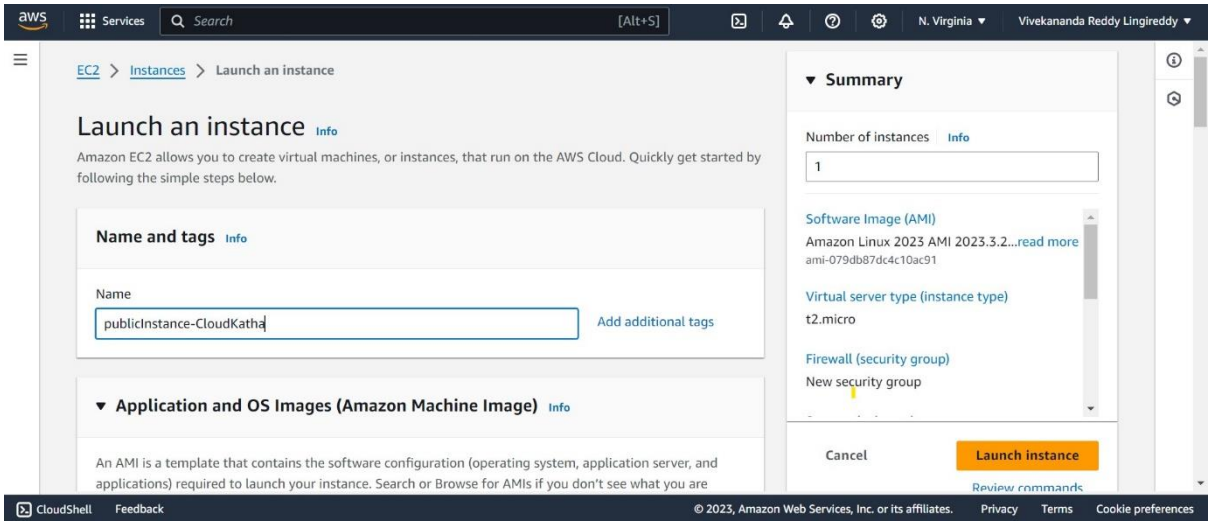


Follow as the same for the Private from above process and attach private subnet under associations and **no need to attach to Internet Gateways as we don't allow traffic to private subnet.** Create a route table.

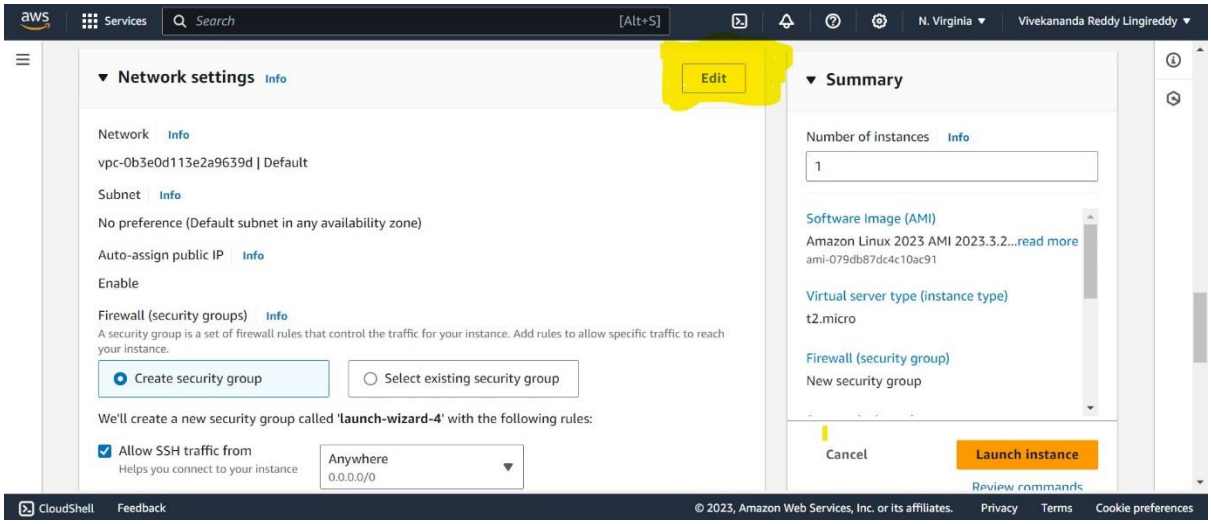
Now we have done with VPC with subnets accessing internet. Lets launch a instance and connect to it through the SSH.

Step 6: Launching an EC2 instance on VPC inside the Public Subnet

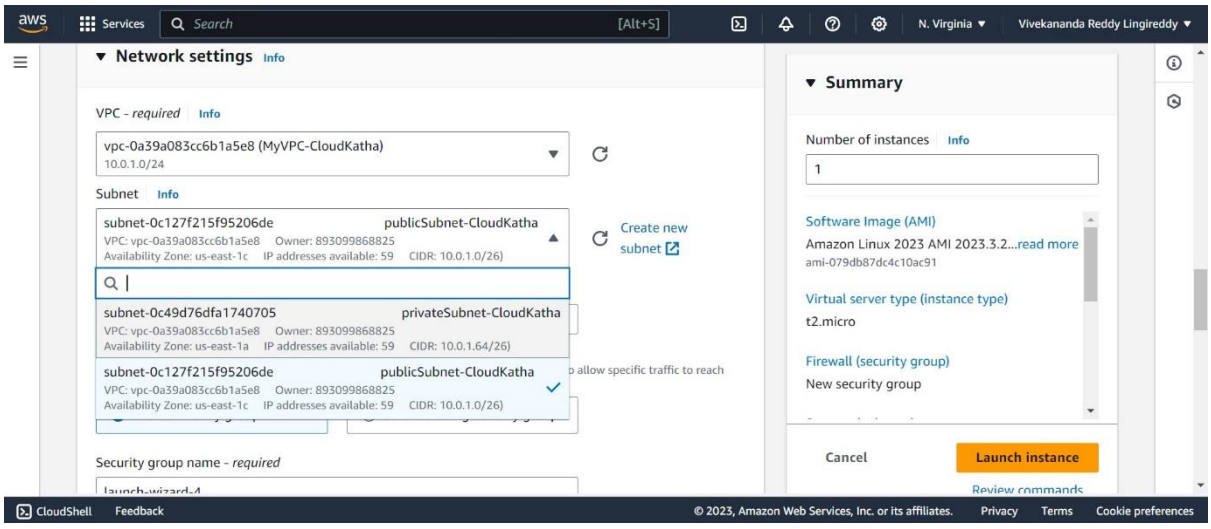
From the Console Navigate to EC2 and click on instance name it.



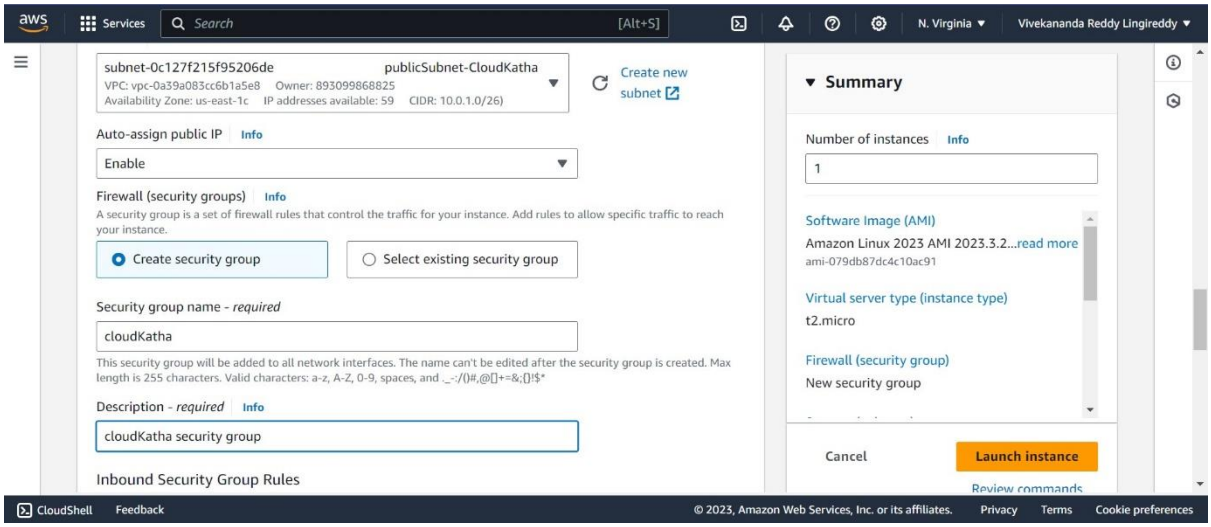
Select any Operating System, here I had selected Amazon Linux and create key pair as CloudKatha and save the .pem in your directory

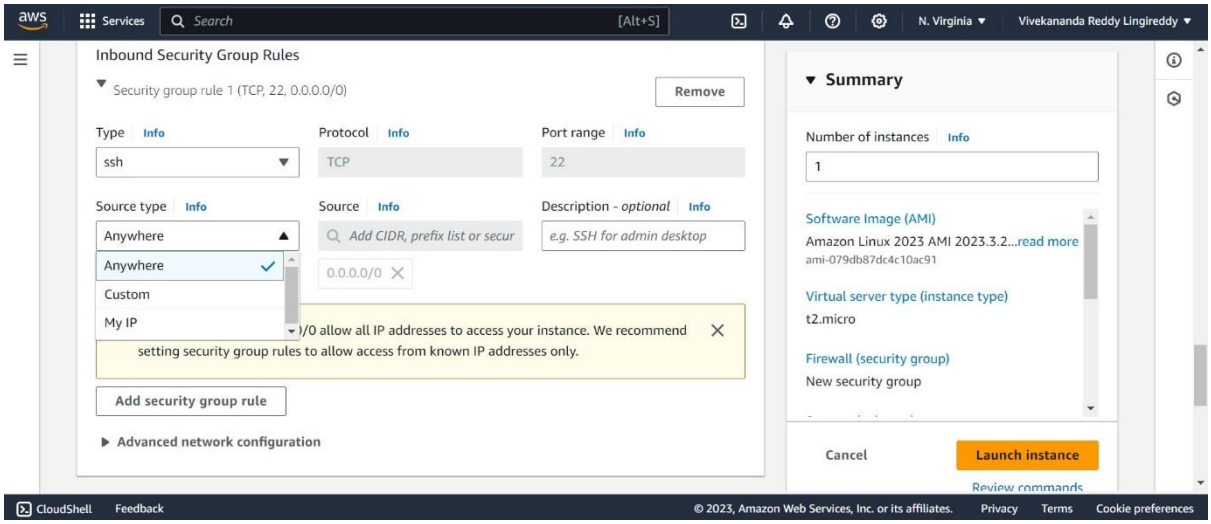


Click edit and Select our VPC, public subnet, Enable the auto-assign public ip and name the security group.

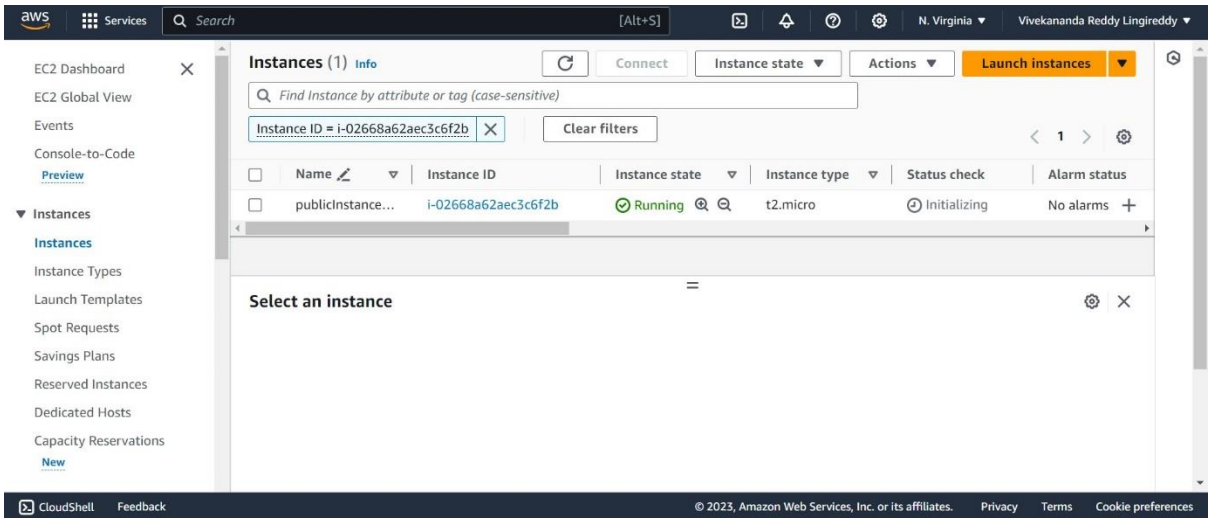


On creating Security Group, allow traffic and launch instance.





Once Instance is created, You can SSH to instance with putty/ git bash/ ubuntu.



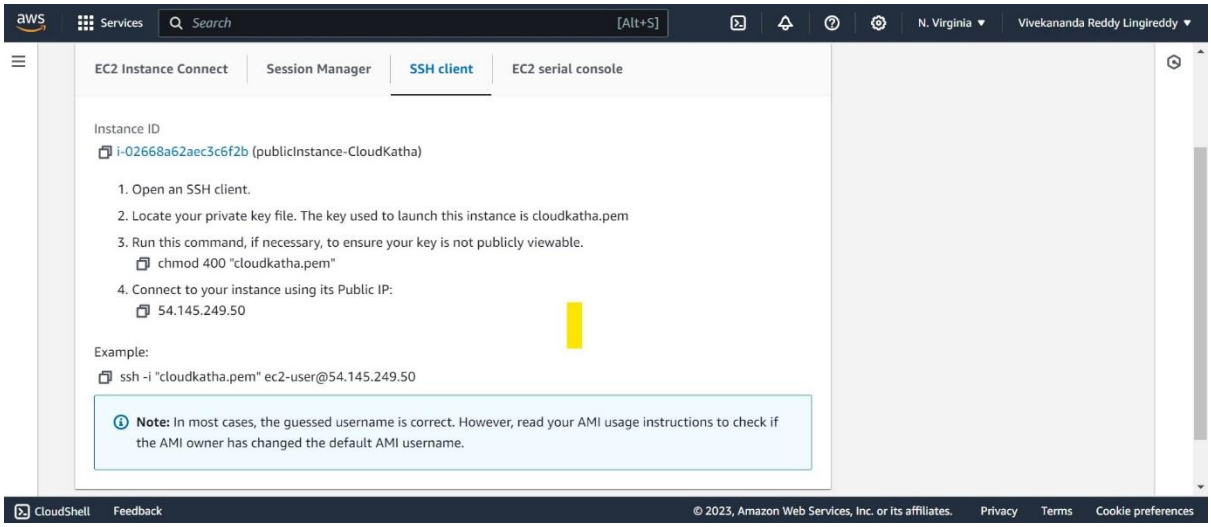
For Putty follow

With Gitbash

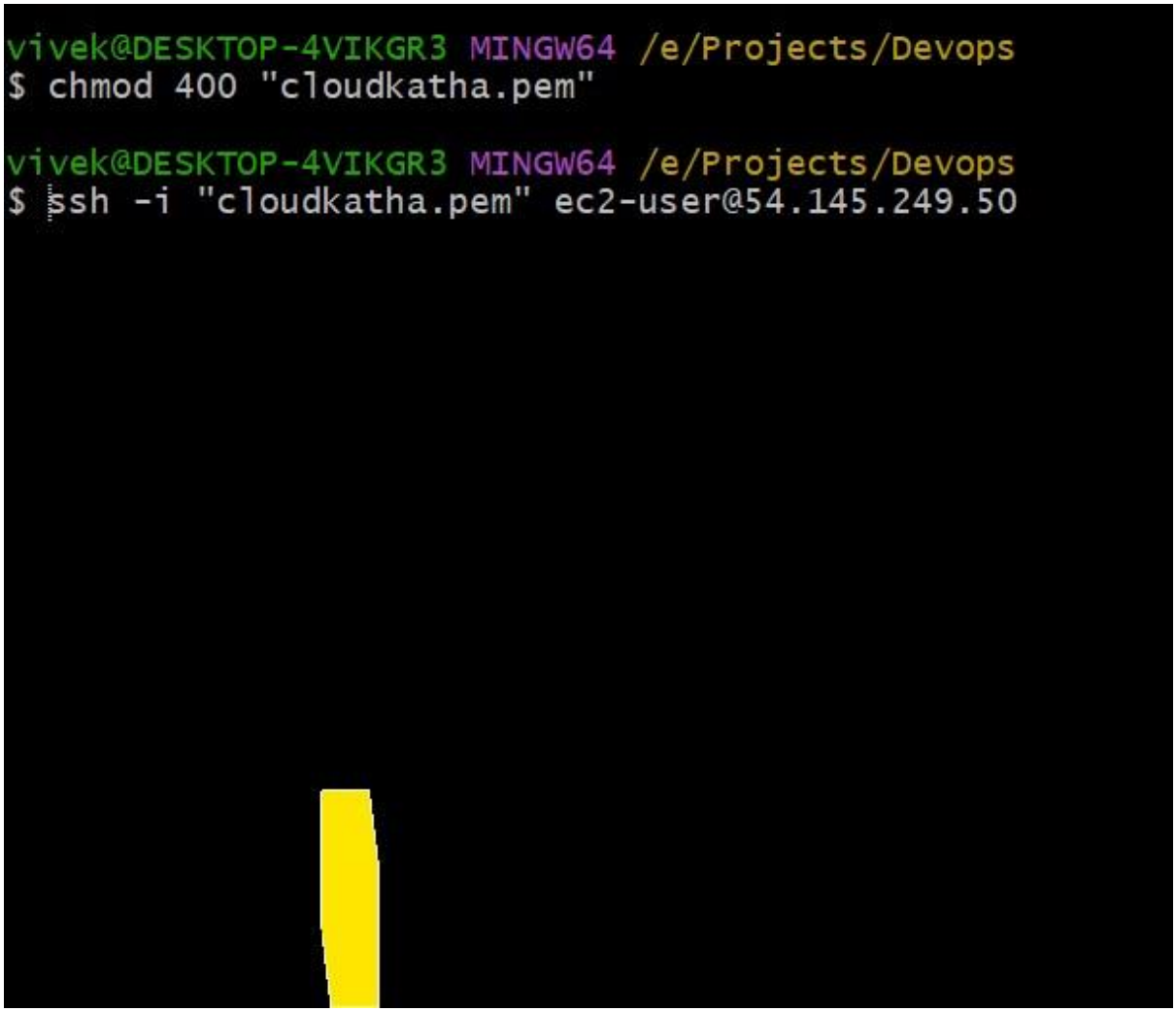
Open Gitbash and locate to your keypair saved location.

Change the file permissions to readable only with

Chmod command as below, copy it and paste it terminal.



Now SSH via below command



Type yes

Connected to instance inside the public subnet.

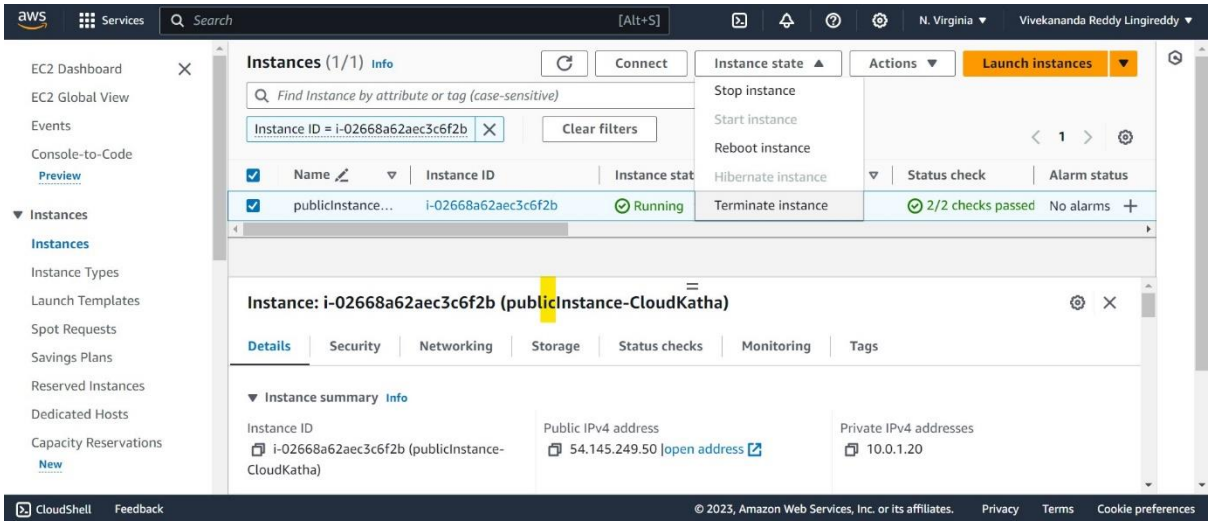
This way you can create multiple instances on your vpc and load resources.

Hope you found this interesting…but…….wait one last step

Step 7: Termination

You had enough practice with VPC I hope. But if we don't Terminate, will be charged enough.

Go to Ec2 terminate instance



Go to Subnets delete subnets

Go to route tables delete them

Go internet gateways, detach the vpn and delete it

Finally delete the VPC.