Name: Prasad Deshpande

Enrollment Number: 243341024

MSC(CS) Part I

Cloud Computing Practical Assignment No 3

Working and Implementation of Infrastructure as a service. Create an EC2 Linux Instance, Install an Apache Web Server and run the Hello World page by typing commands on a virtual machine.

First of all open Virtual Lab. After opening the lab, you will get an interface like Fig 1.

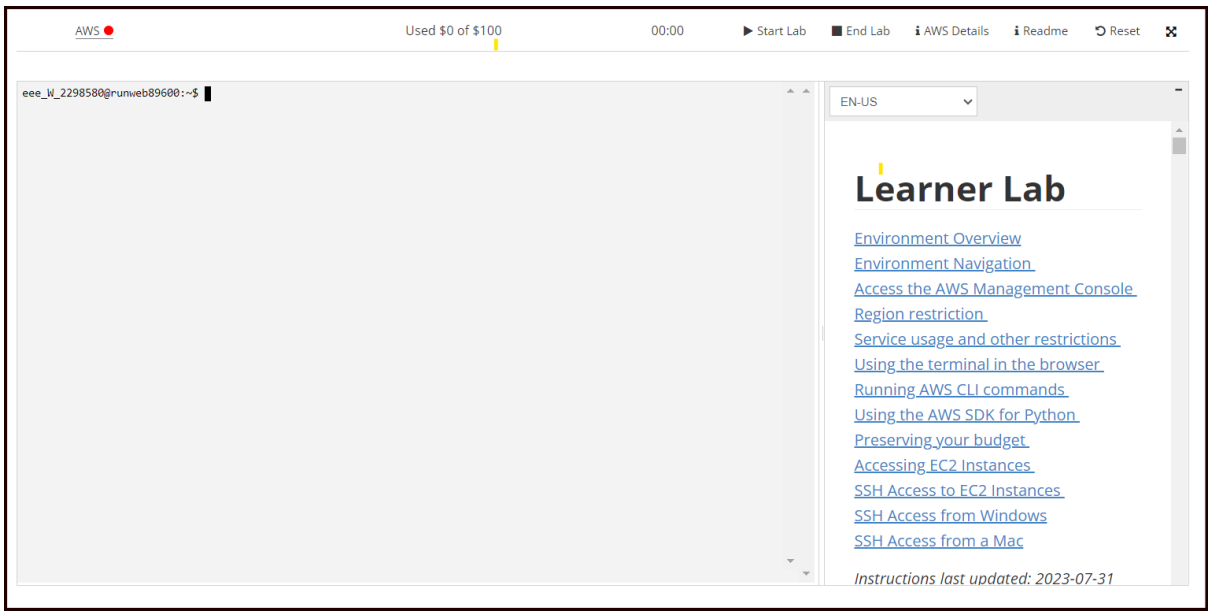

Fig 1

Then click on the Start Lab button. When the circle icon to the right of the AWS link in the upper-left corner turns green, it indicates that the lab environment is ready to use this we can see in Fig 2. To launch the AWS Management Console in a new tab, select the AWS link

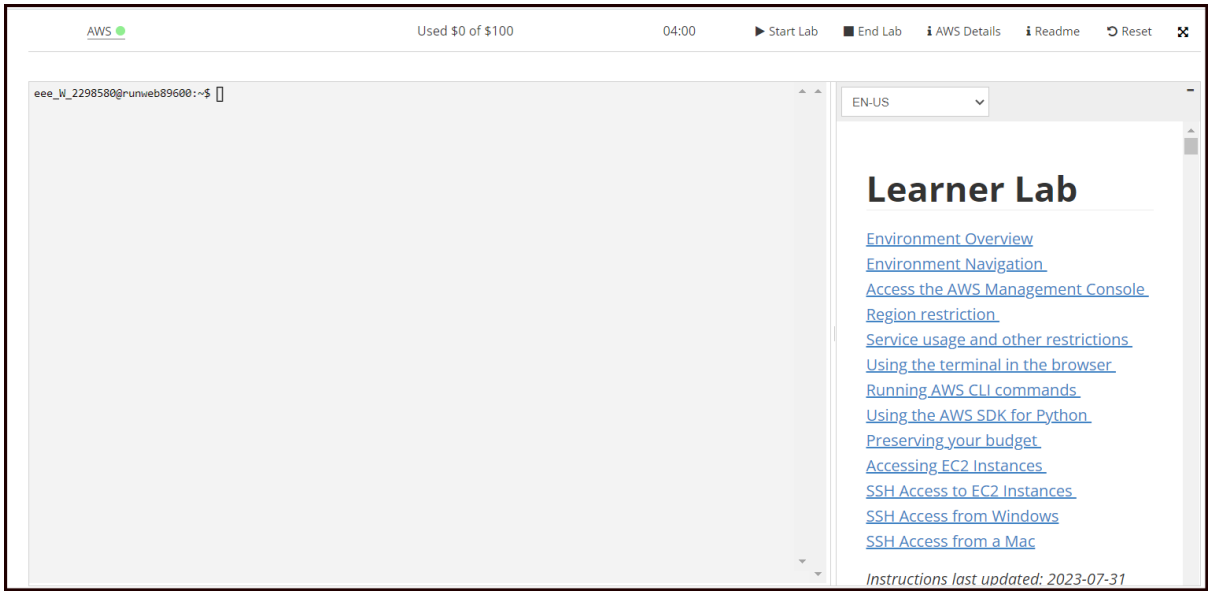

Fig 2

After selecting AWS link new console is open on new tab which we can see in Fig 3. In that we select the EC2 (Elastic Cloud Computing) service. You can see that service in Fig 3. If you have used it before then you can see that service in recently visited service. If you don't see EC2 service then follow the path Services => Compute => EC2.

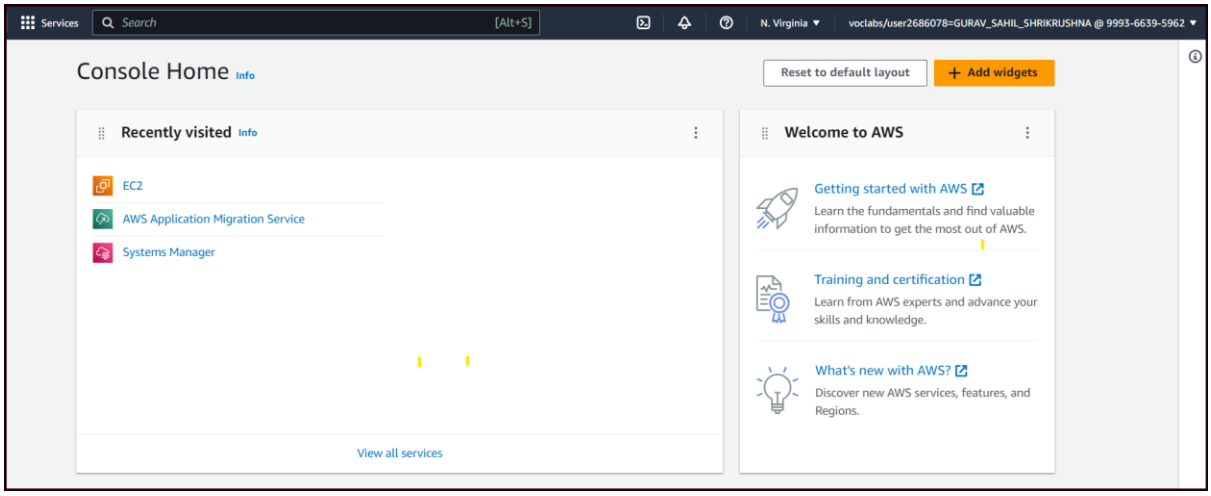

Fig 3

After selecting the EC2 service the new interface will be shown like in Fig 4. In that click on Launch Instance.

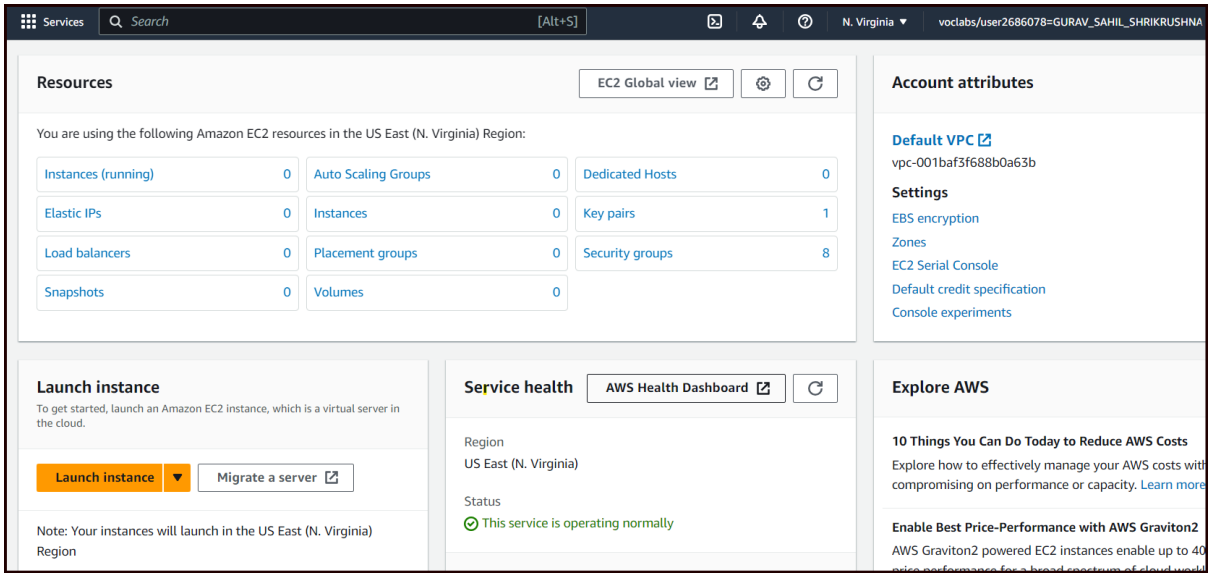

Fig 4

After clicking on Launch Instance some information regarding that instance will appear which we need to fill. That we can see in Fig 5.

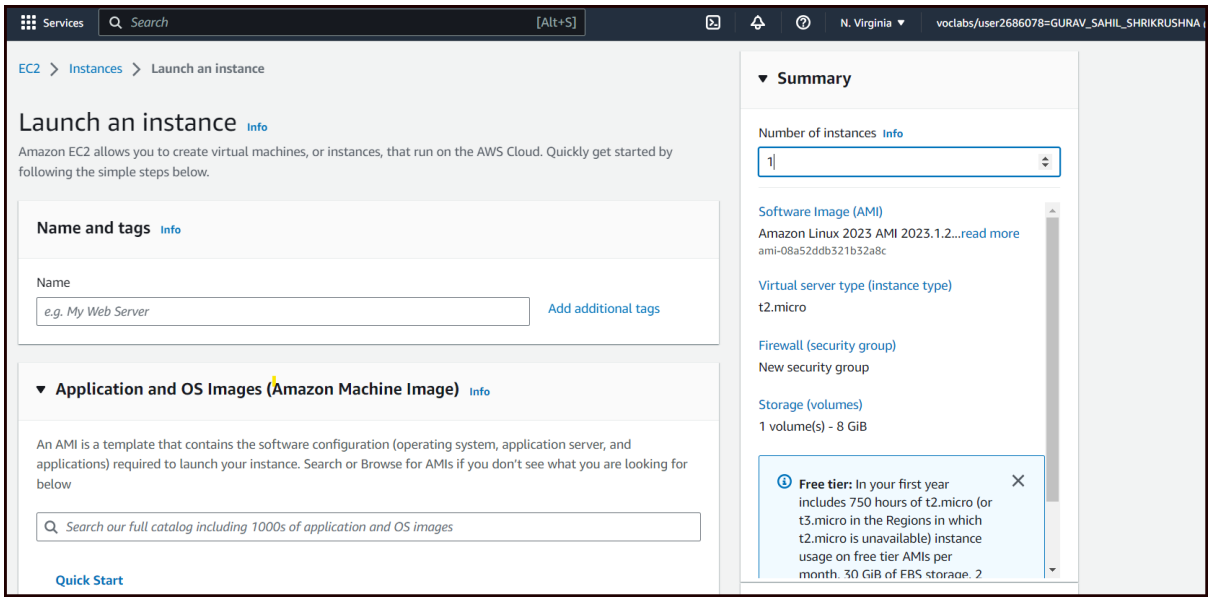

Fig 5

If we create more than one instance then how can we identify our instance? For that reason inside name and tags we write some name for instance so later we can identify them. so here in Fig 6 you can see i named it Linux. Then we need to select the Amazon Machine Image. In this we can specify which operating system (OS) and application server you need to launch in your instance. Here I select Amazon Linux.

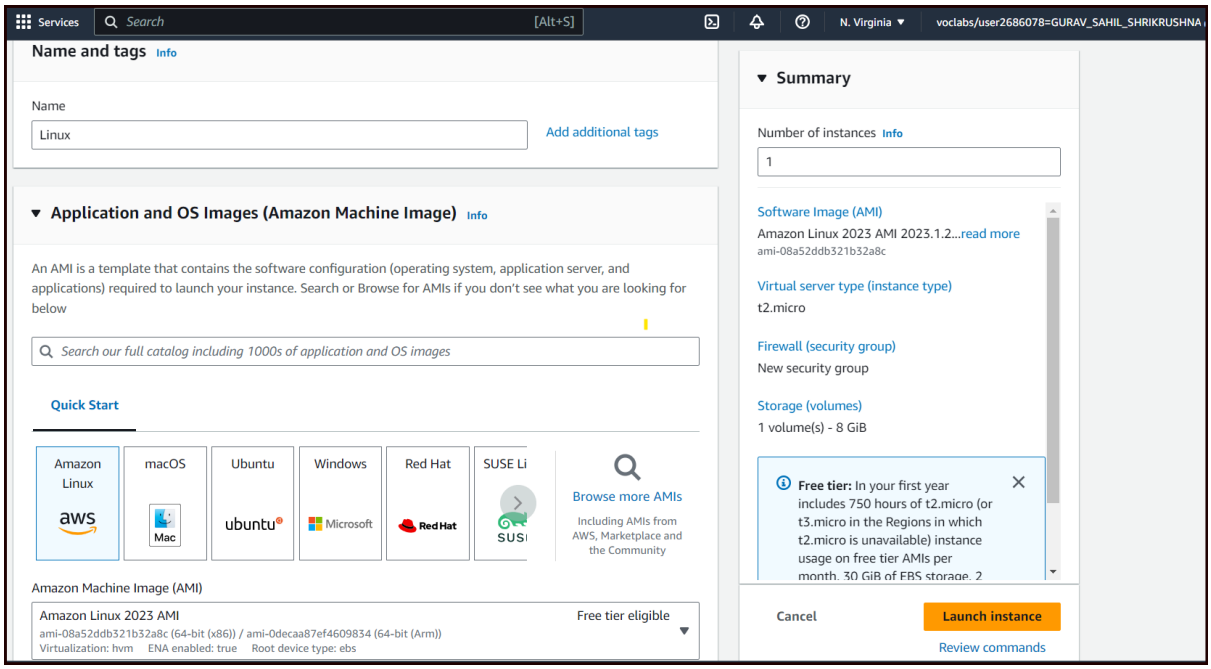

Fig 6

After scrolling the page we will see other details like Fig 7. In instance type we can choose our computing power, memory, networking or storage requirements. Here I have selected default instance type. In t2.micro instance type features 1 virtual CPU and 1 GiB memory. Fig 7 below instance type has key pair (login) it is used for securely connect to your instance. It is a set of security credentials that you use to prove your identity when connecting to an Amazone EC2 instance. There default key pair is available but I will create new key pair for windows EC2 instance. For this click on "Create New Key Pair".

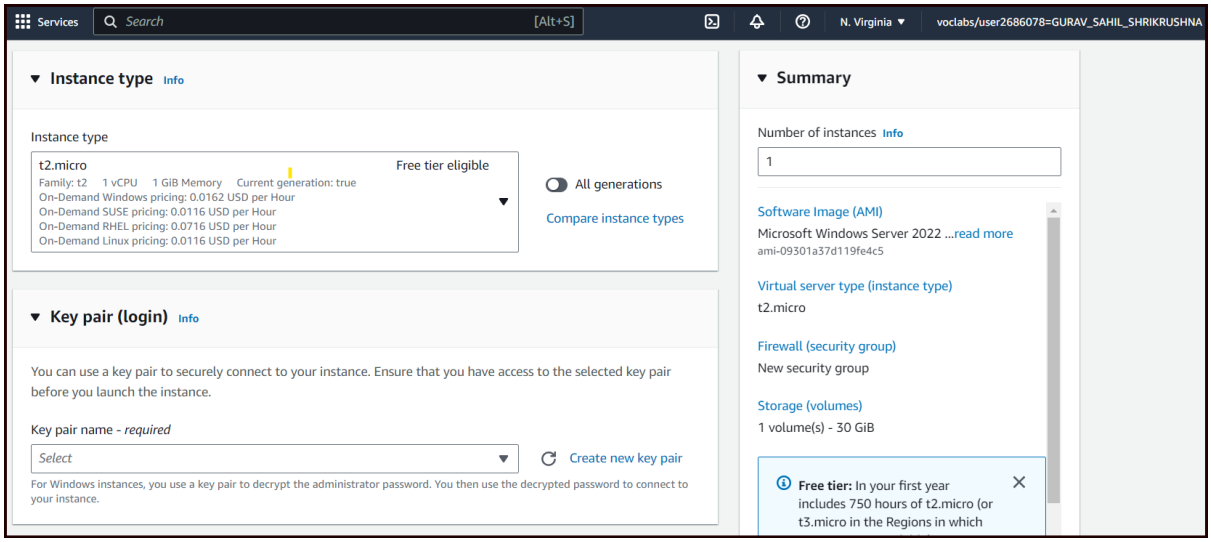

Fig 7

After clicking on "Create New Key Pair" we will get an interface like Figure 8. We can create n number of keys. To identify the key later, we need to give it a name. so here i will give name Linux_key. Other options we choose according to our usage. Here I use default values. Then click "Generate Key Pair".

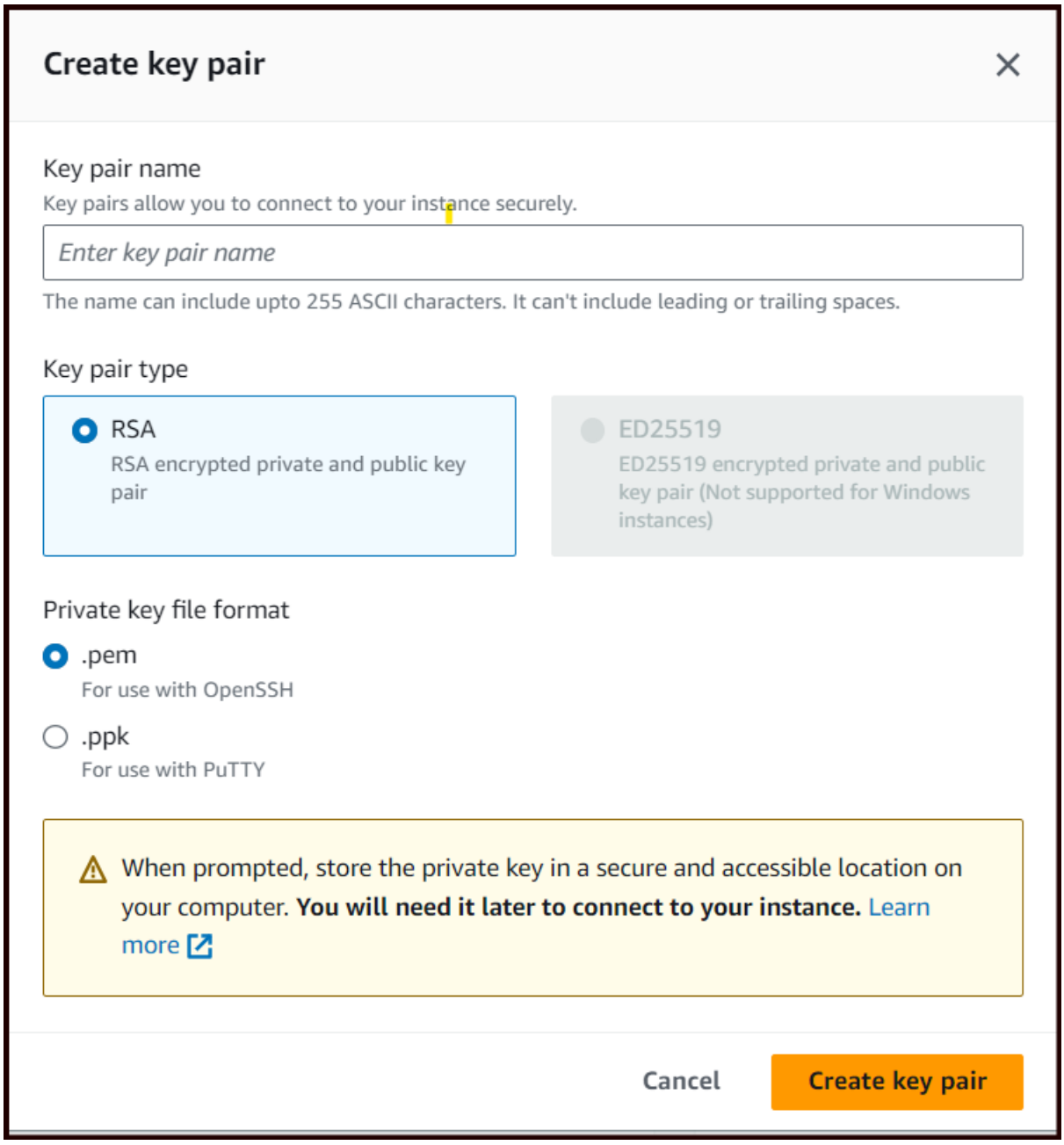

Fig 8

After clicking on "Generate Key Pair" we get the key. we can see in figure 9.

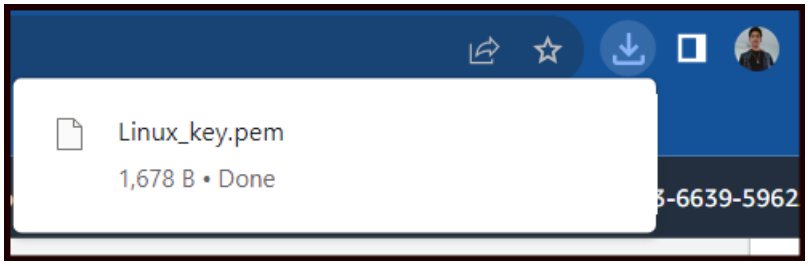

Fig 9

After downloading the key we will get an interface like Figure 10. We haven't changed anything in that network setting, it's default

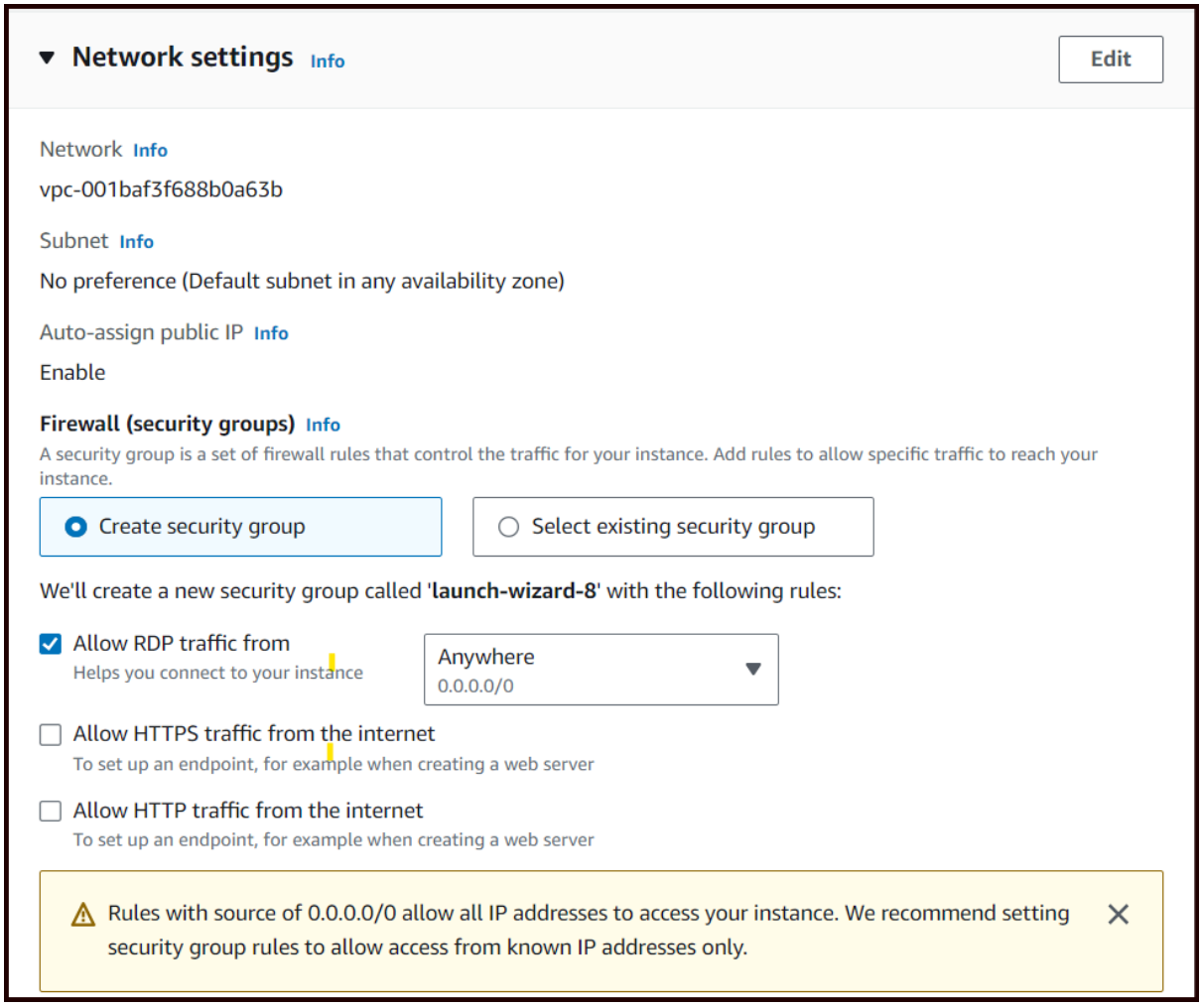

Fig 10

After setting the network, we will get the interface like Figure 11. We have not changed anything in that configuration storage, it is default. Then click on "Launch instance".

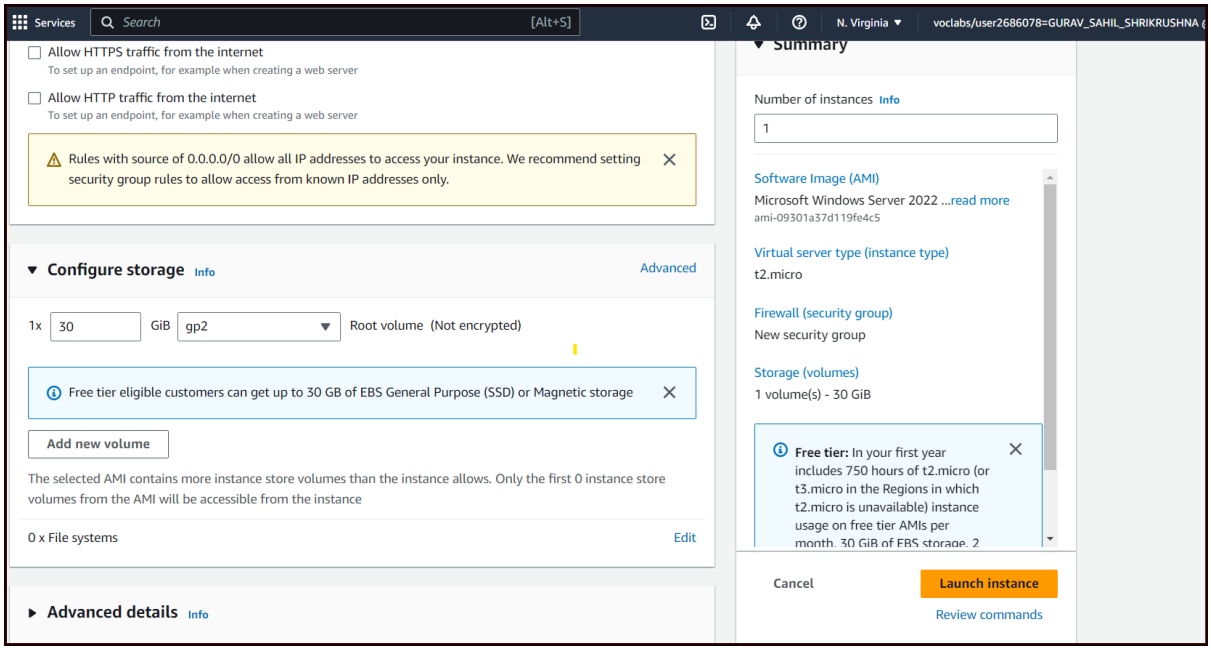

Fig 11

After clicking on "Instances". we can see in the Fig 12 windows instance is created

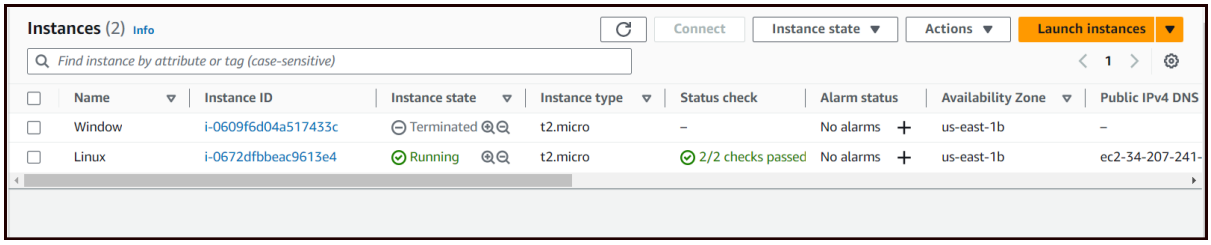

Fig 12

Click on the check box of the given example as in Figure 13 to see the details of the instance. In that we can see information regarding instance details, Security, networking, storage, status check, Monitoring and tags. But in status check we can see that the instance is initializing.

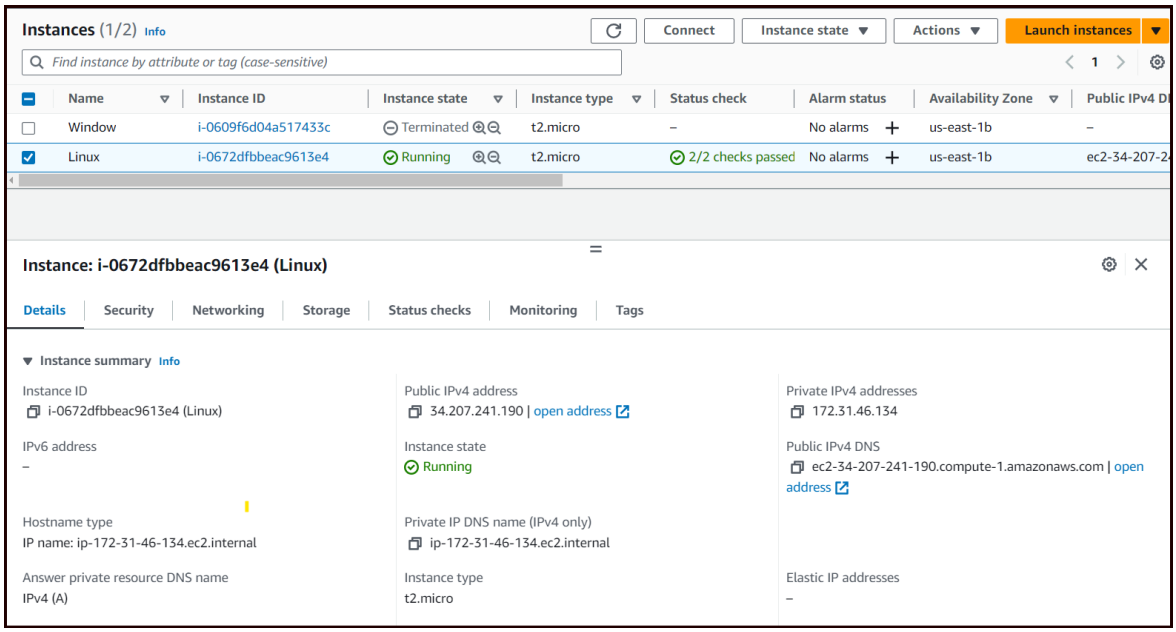

Fig 13

Download PuttyGen. Then open PuTTY Key Generator which is showing interface like Fig 14

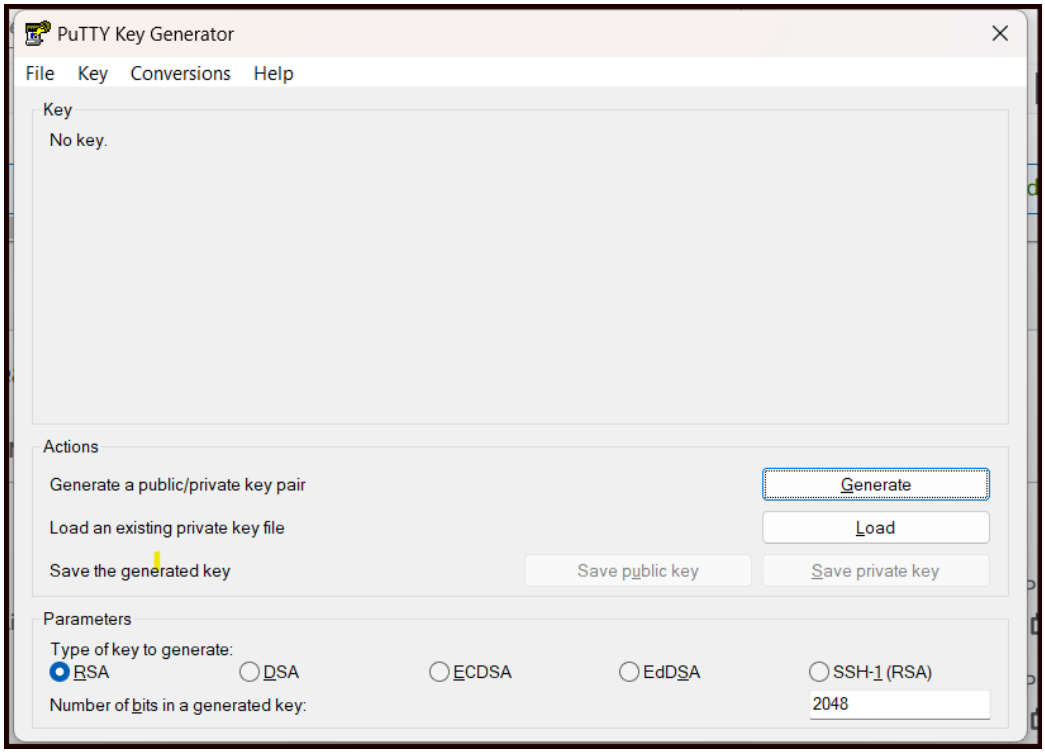

Fig 14

Then click on load, then select the file that we have already downloaded, show in picture 9. Then we will get an interface similar to Figure 15. Then click ok.

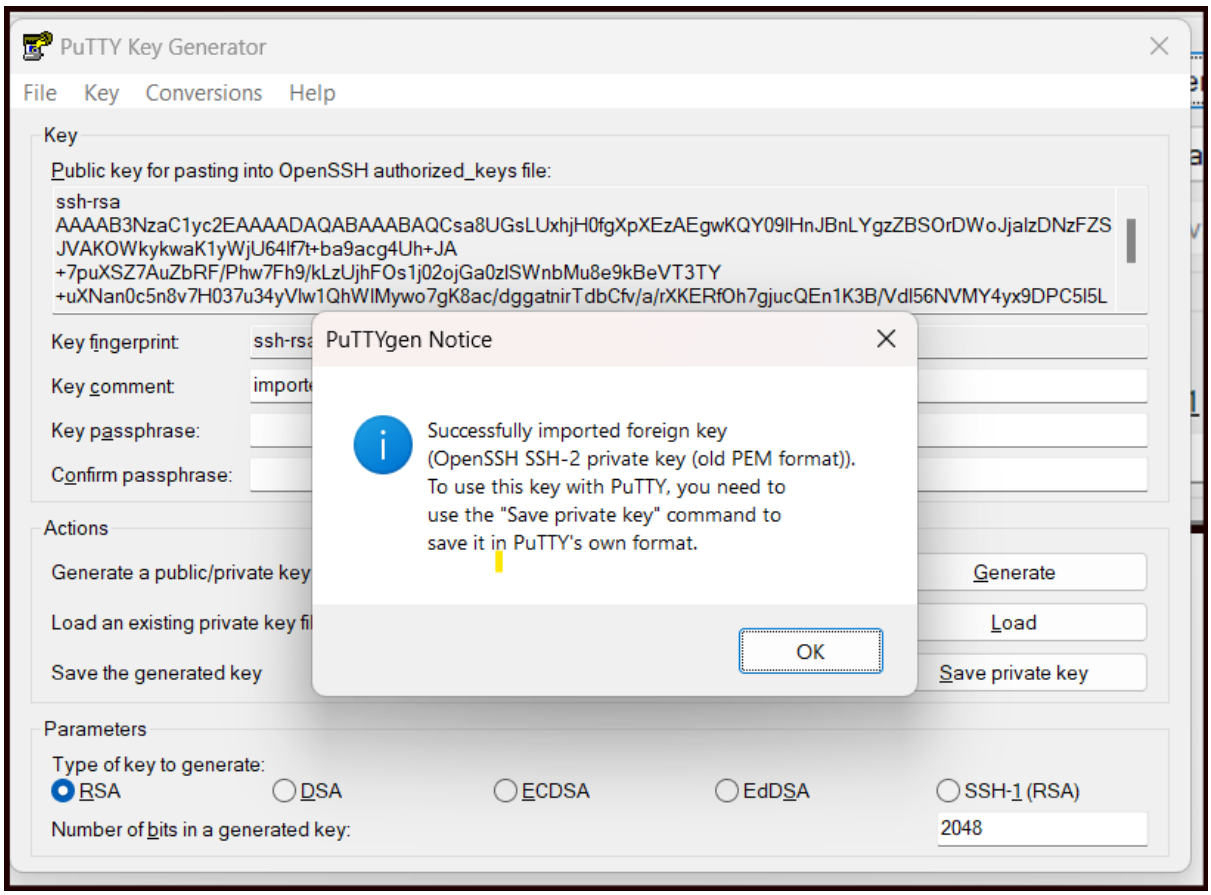

Fig 15

After click on ok we get interface similar to Fig 16. Then Click on “Save private key” and give some name to that file. Here I give that file name is key. And then close the PuTTY key generator.

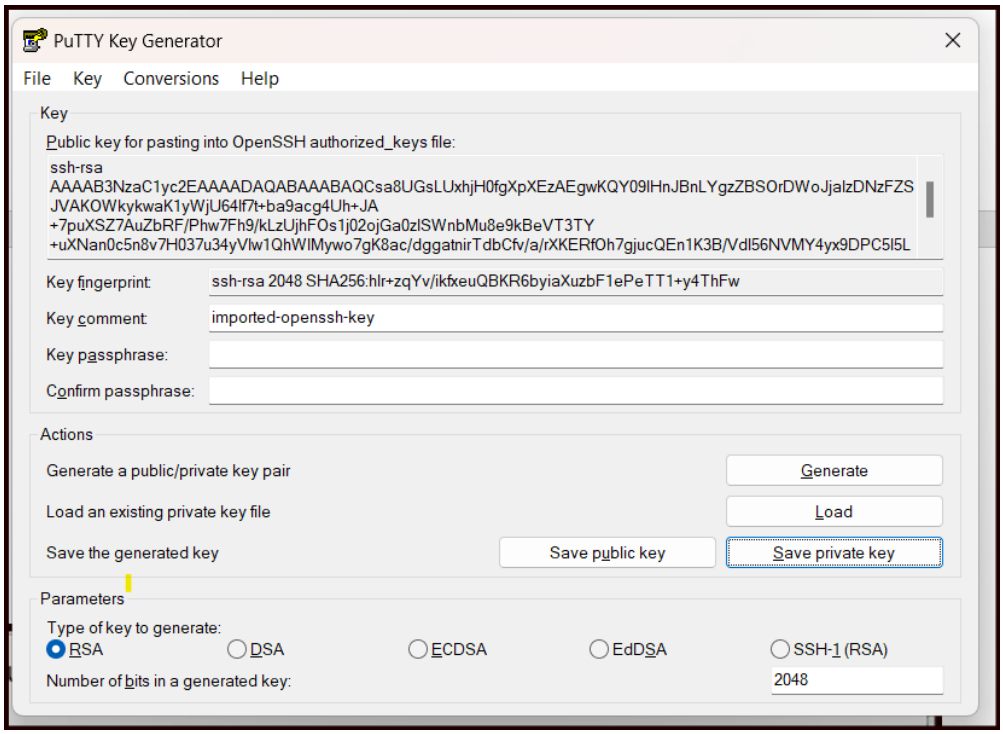

Fig 16

After closing the PuTTY key generator open the PuTTY configuration similar to Fig 17. Copy the public IPv4 address from Fig 13 and then click on SSH -> Auth -> Credentials, then we get an interface like Fig 14.

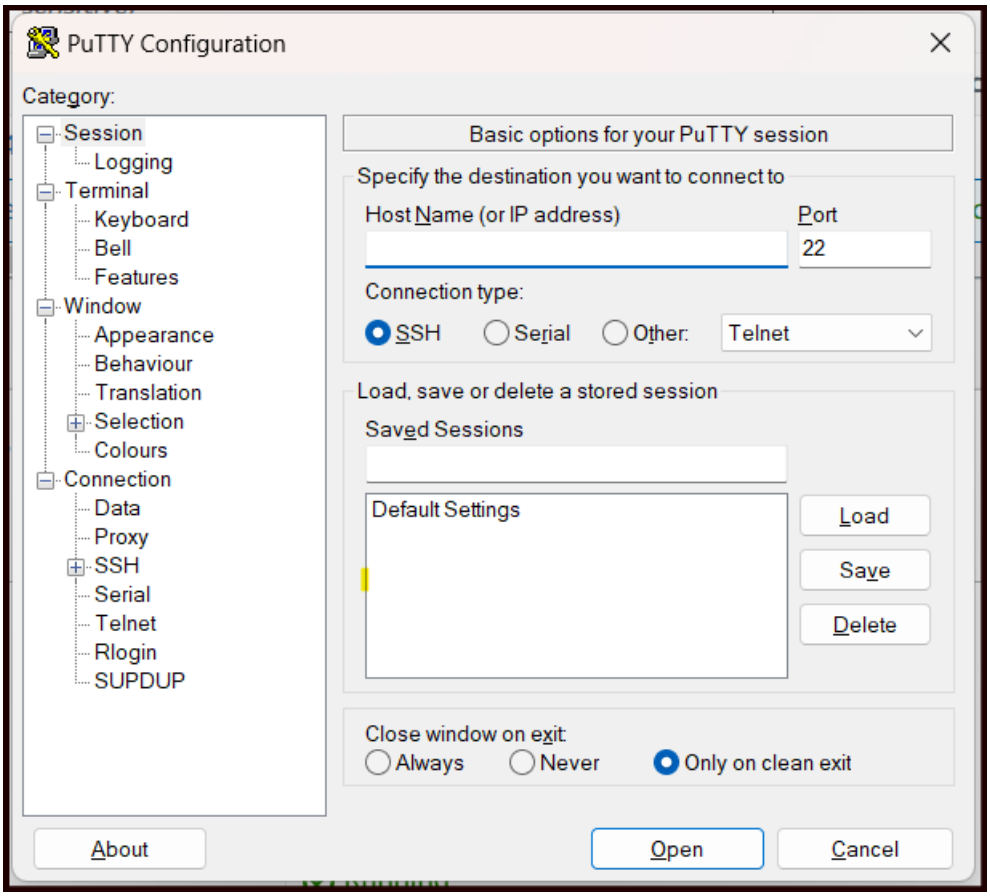

Fig 17

Then select browse button from private key file for authentication and select the file which is already downloaded in Fig 16 we save as file name key. Then click on open.

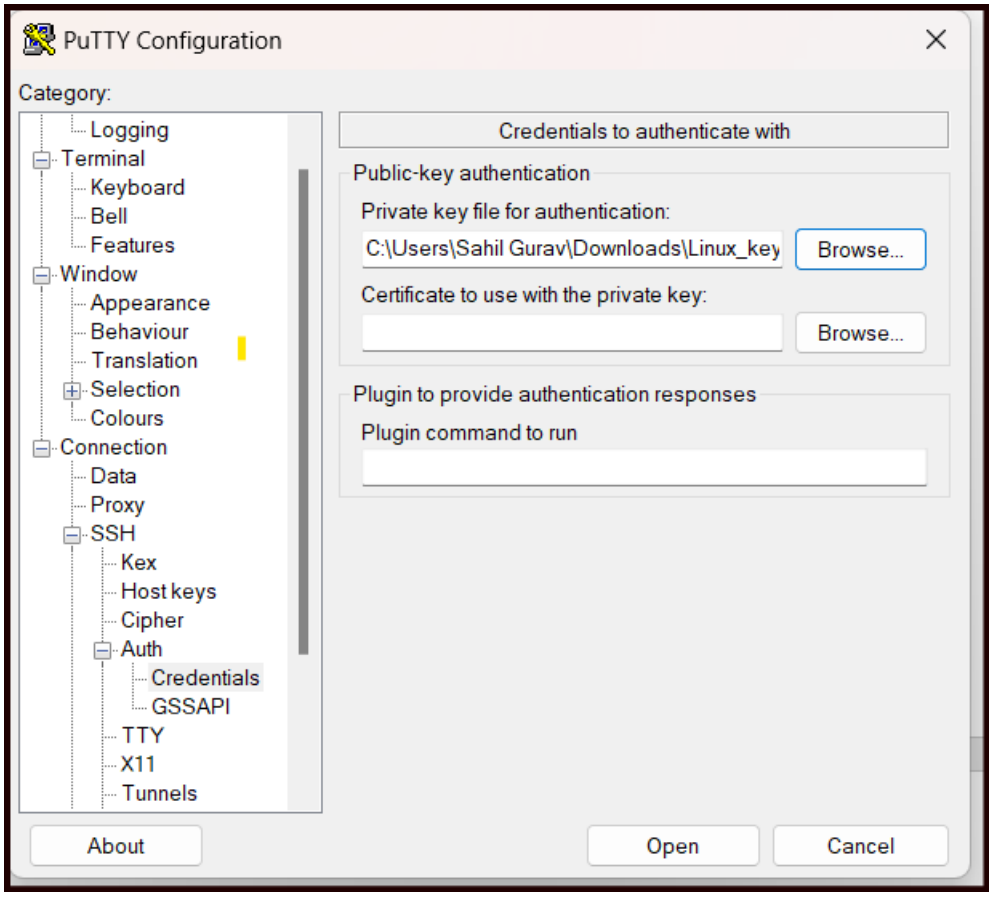

Fig 18

After clicking on Open, the interface like Fig 19 opens. In this we have to type command ec2-user then we get image of bird similar to Fig 19

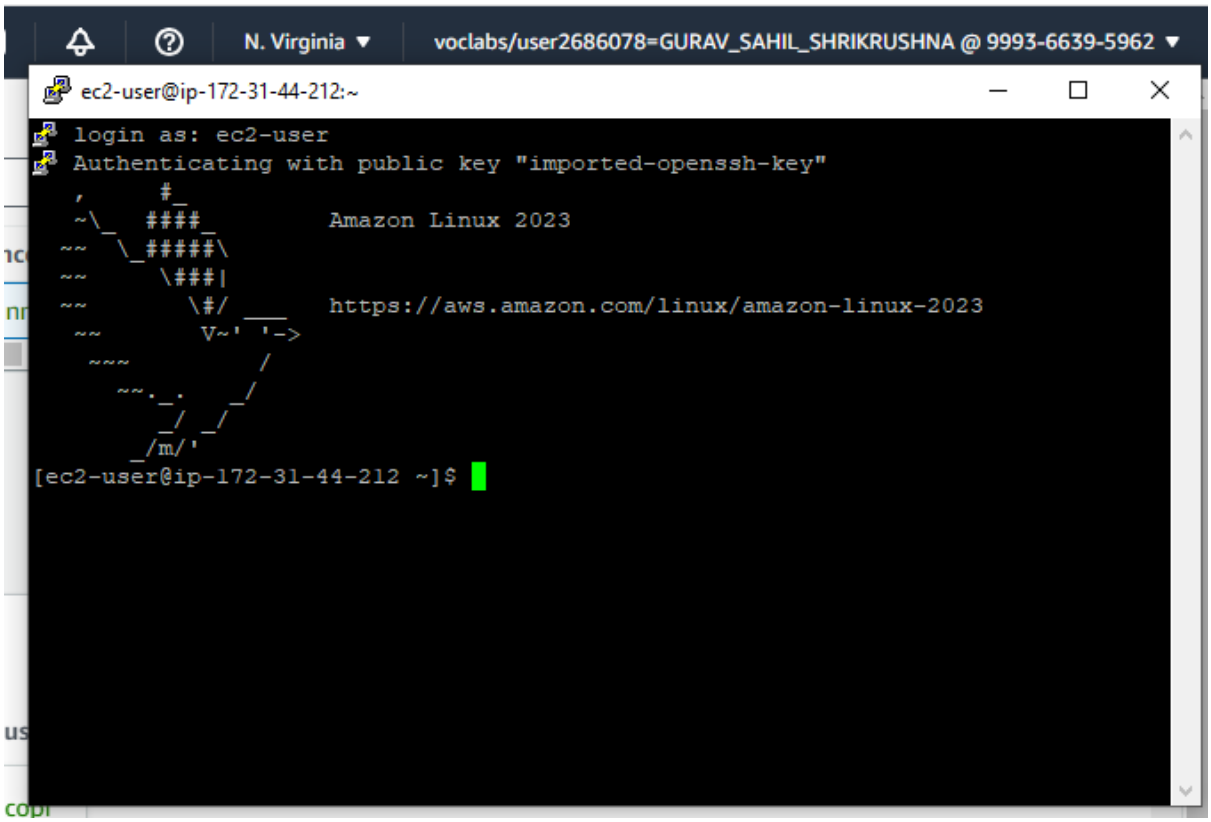

Fig 19

Enter given commands as shown in Fig 20

sudo su :- This command gives you root privileges, which are required to install and configure the Apache web server

yum update -y :- updates all installed packages and their dependencies

yum install httpd -y :- installs the Apache web server. The -y flag tells yum to answer yes to all prompts

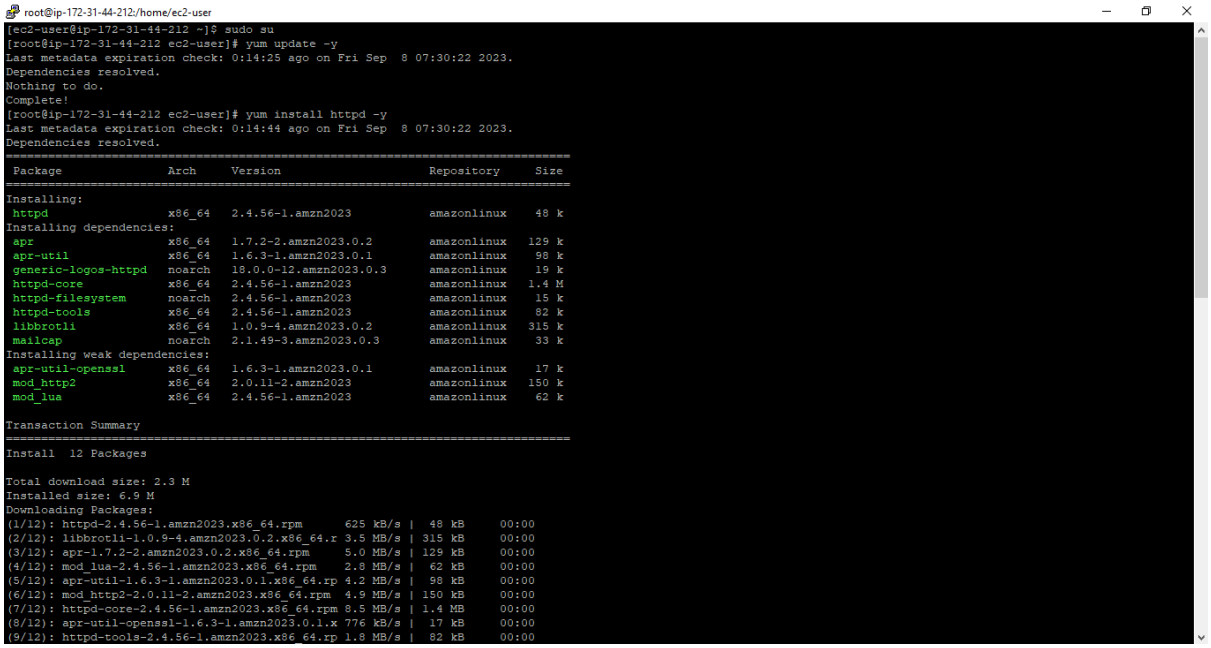

Fig 20

Enter given commands as shown in Fig 21

cd /var/www/html :- changes to the /var/www/html directory, which is the default directory for web content

echo “Welcome sahil”> index.html :- creates a file called index.html and writes the text "Welcome sahil" to it.

ls :- lists the contents of the current directory

service httpd start :- starts the Apache web server

chkconfig httpd on :- enables the Apache web server to start automatically when the system boots

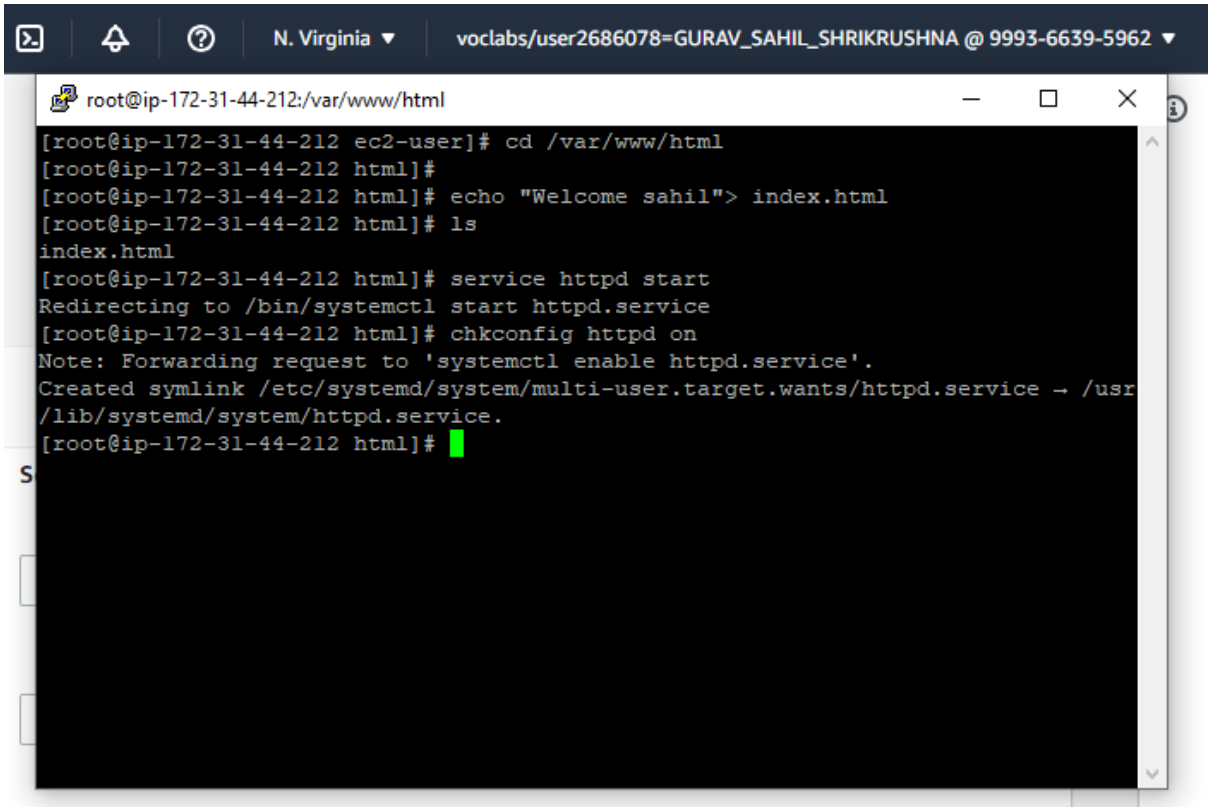

Fig 21

Then open the inbound rule and add rule. In that Type is “HTTP” and Source is “Anywhere IPV4” as shown in Fig 22

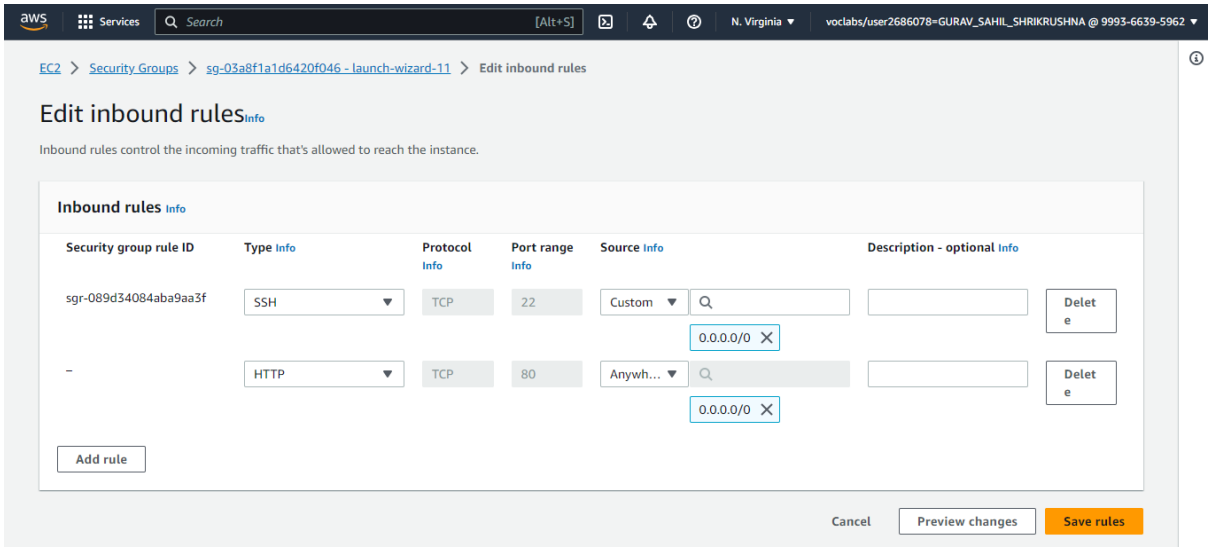

Fig 22

Copy the public IPV4 address and paste on new tab with prefix http:/ followed by IPV4 address as shown in Fig 23

Fig 23

We get an interface like in Fig 24. Then click on "Instance State" select the option as per your choice. Here I select "Terminate Instance".

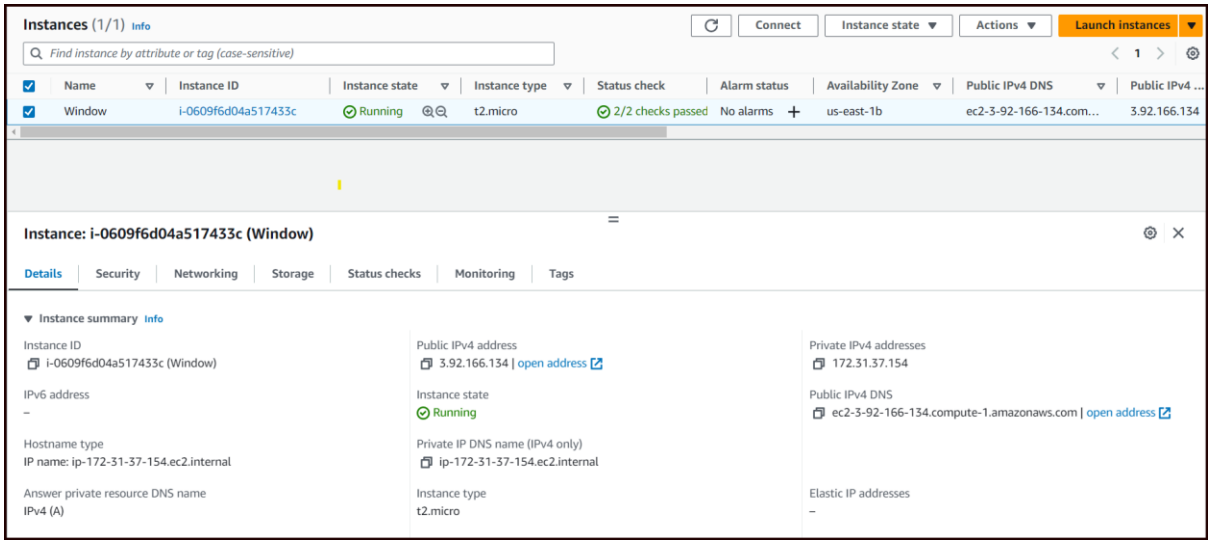

Fig 24