

Class – M.Sc. (Computer Science) Part II- Sem III

Cloud Computing Practical Assignment No 4

Working and Implementation of Infrastructure as a service

Task 1: Launch Your Amazon EC2 Instance.

Write the shell script in User Data box.

The script will:

- Install an Apache web server (httpd)
- Configure the web server to automatically start on boot
- Run the Web server once it has finished installing
- Create a simple web page

Task 2: Monitor Your Instance

Task 3: Update Your Security Group and Access the Web Server

Task 4: Resize Your Instance: Instance Type and EBS Volume

Task 5: Test Termination Protection.

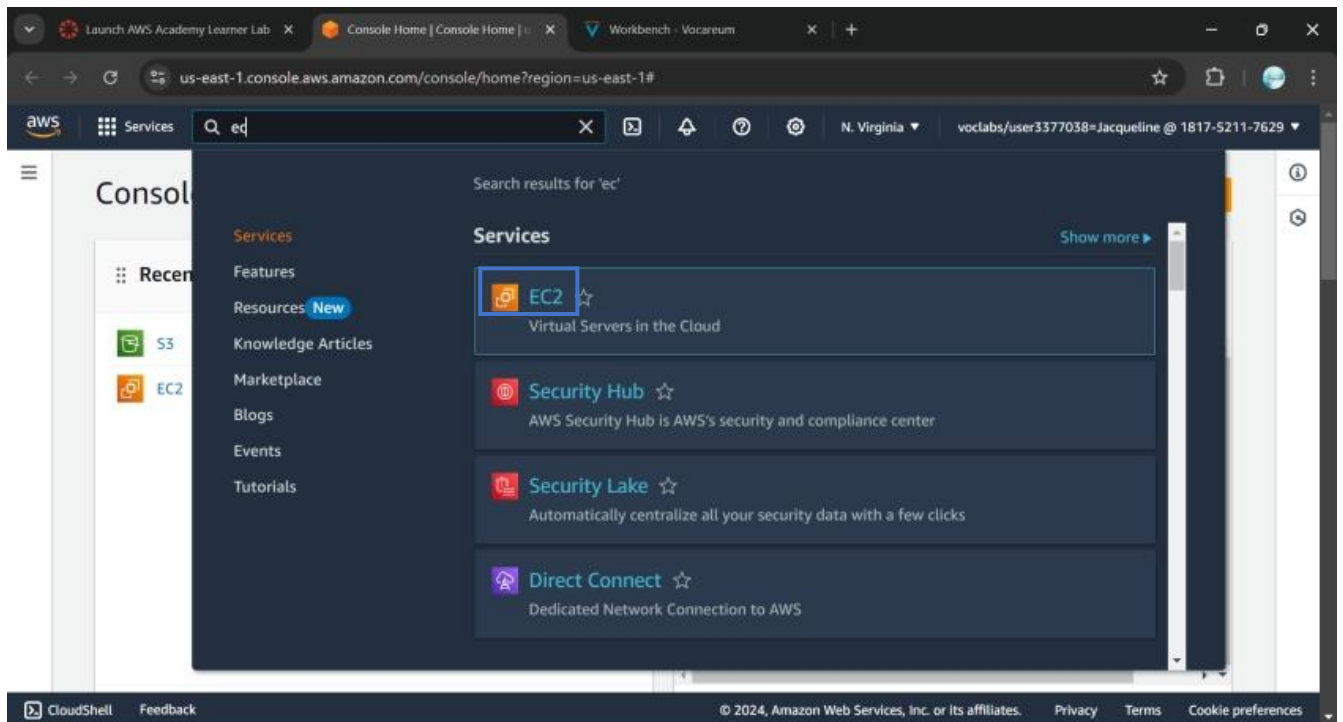
(Use AWS Platform)

Prepare a Screenshots file and write down the steps.

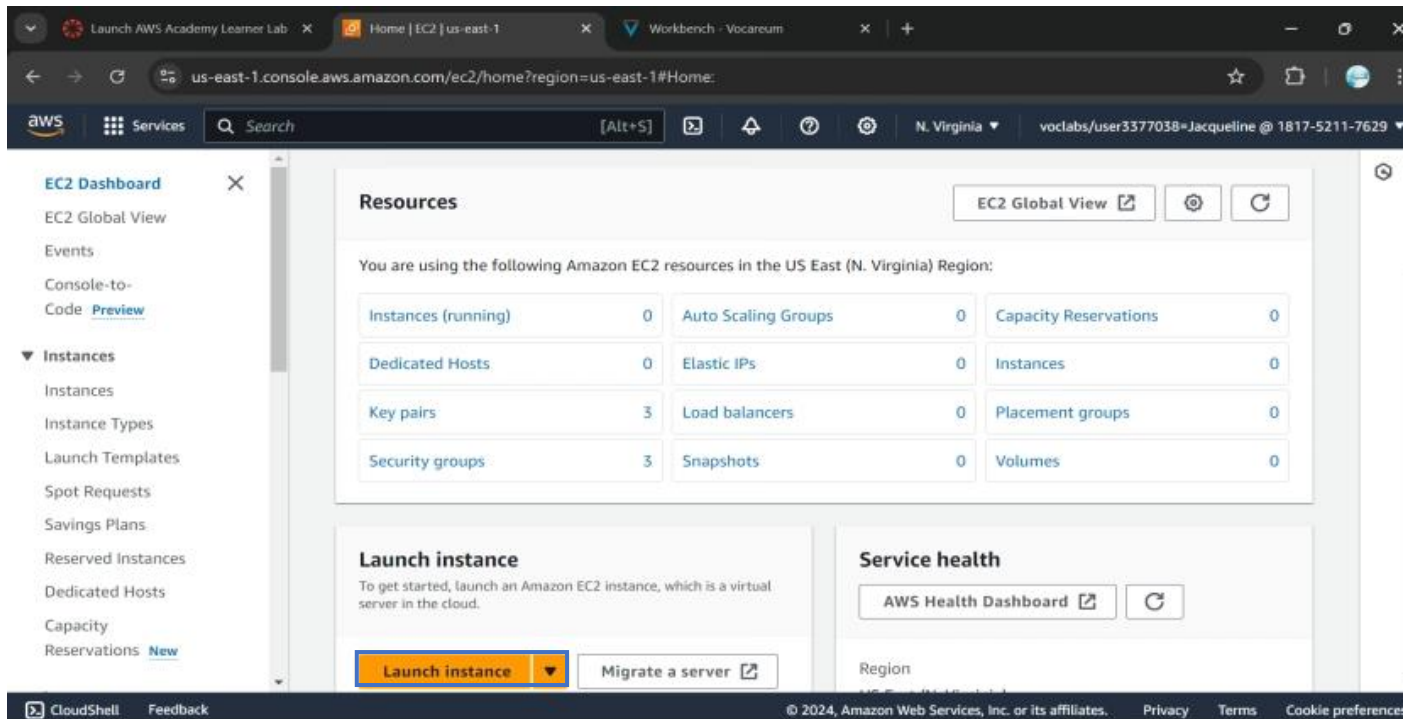
Make a single word or PDF file

Task 1: Launch Your Amazon EC2 Instance.

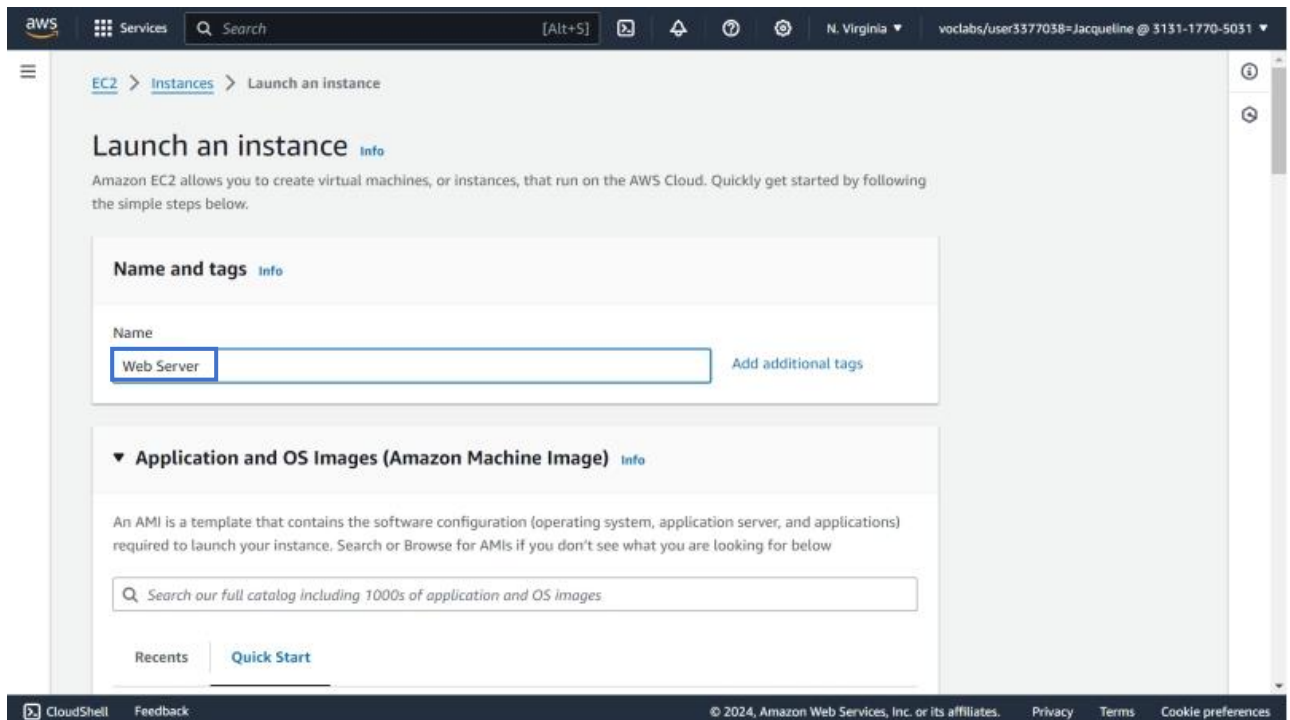
Step 1: Select the Compute Service and in that select EC2.



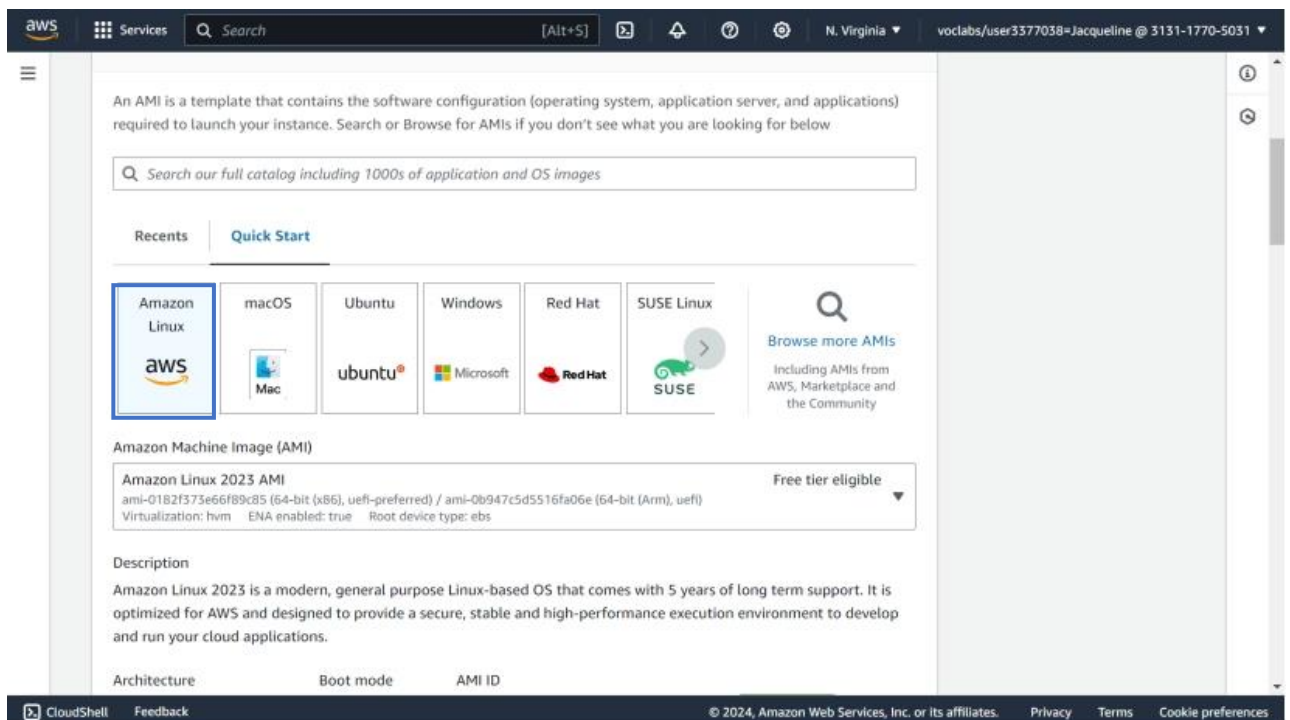
Step 2: Choose the 'Launch instance' menu and select Launch instance.



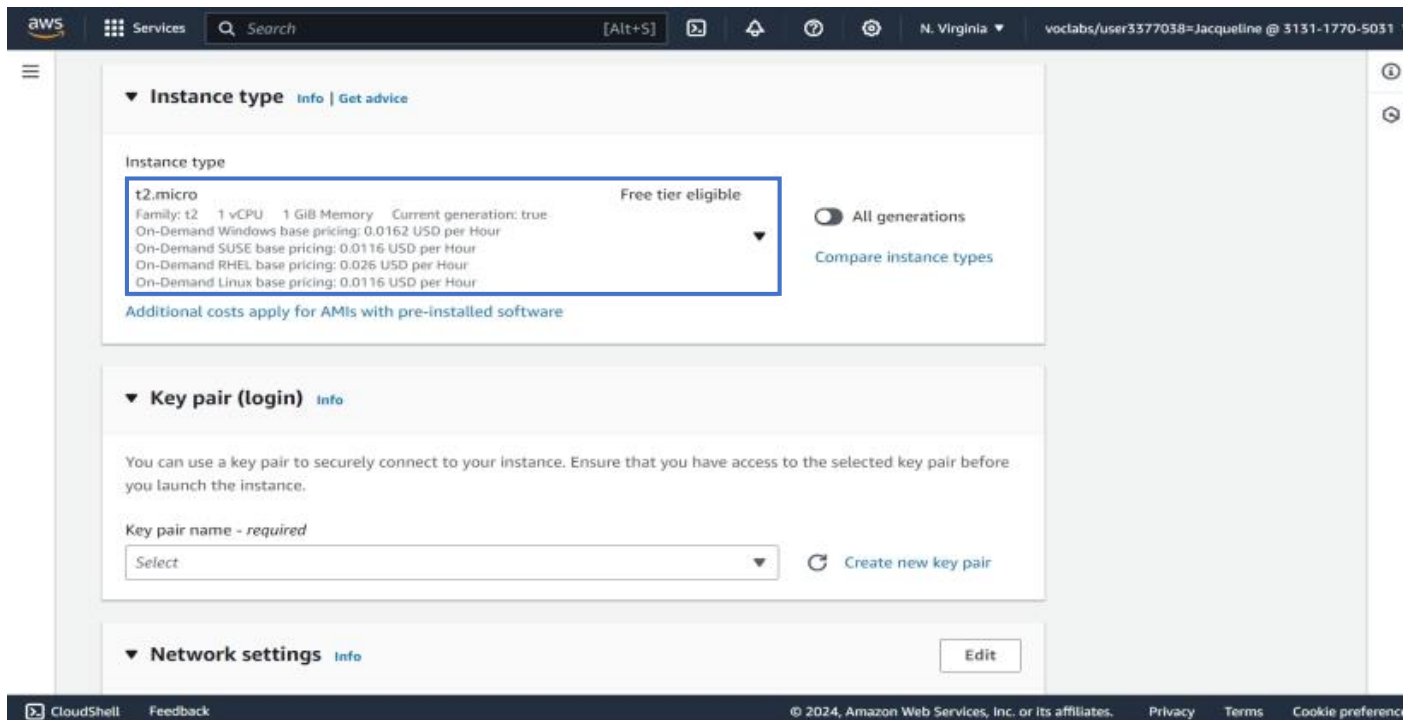
Step 3: Give the name as Web Server.



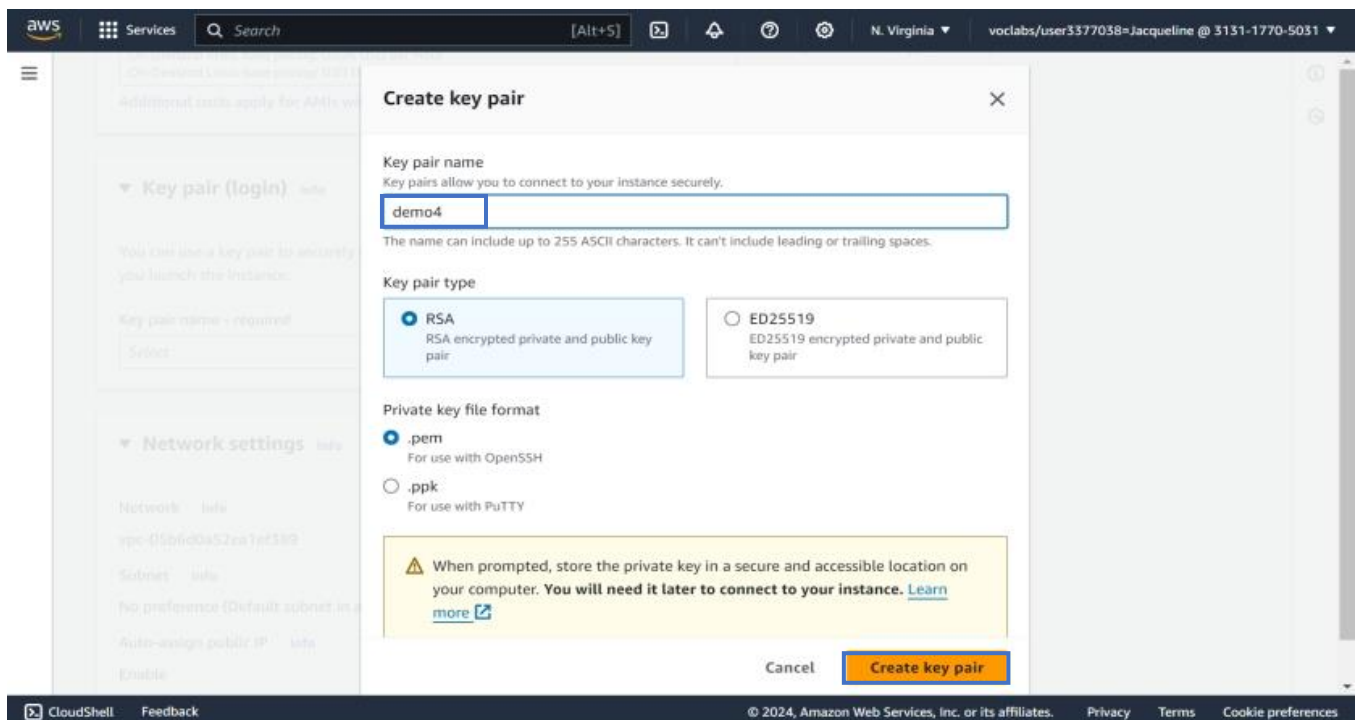
Step 4: Select the AMI as Linux.



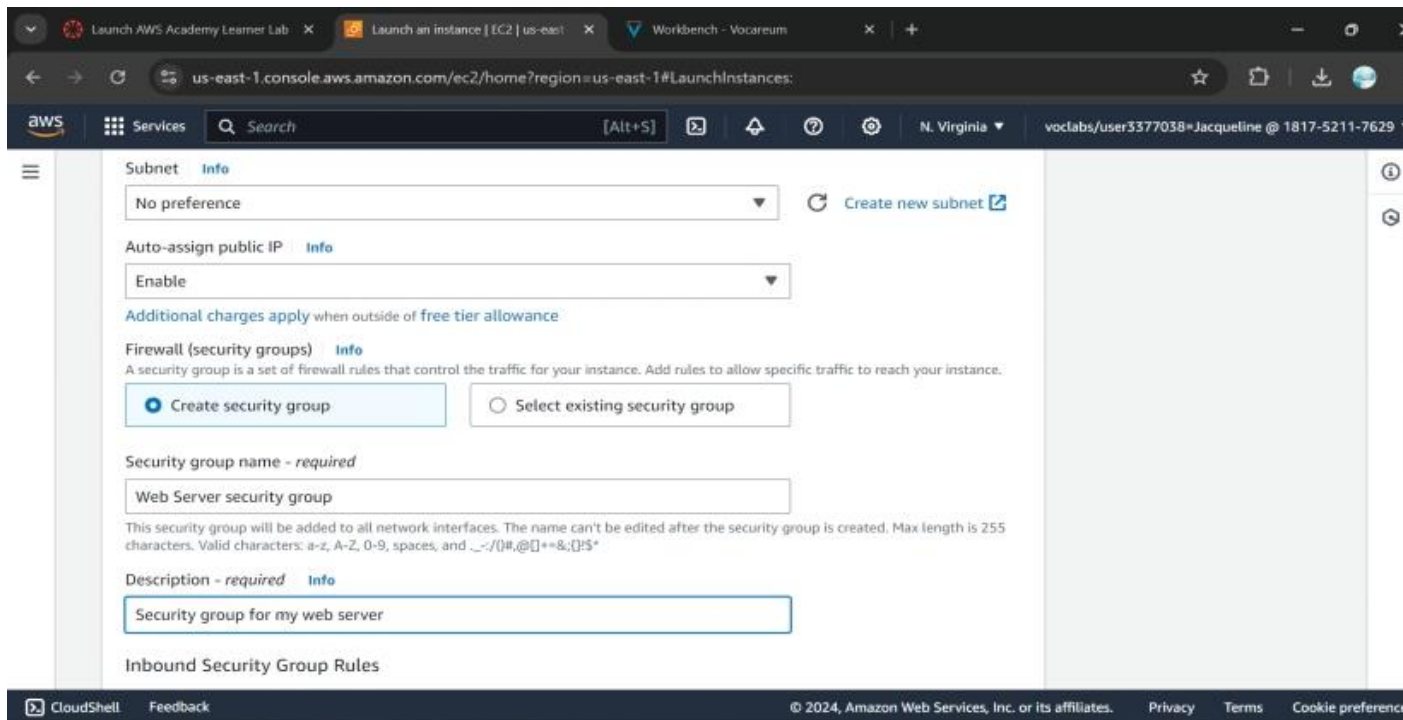
Step 5: Select the instance type as t2.micro.



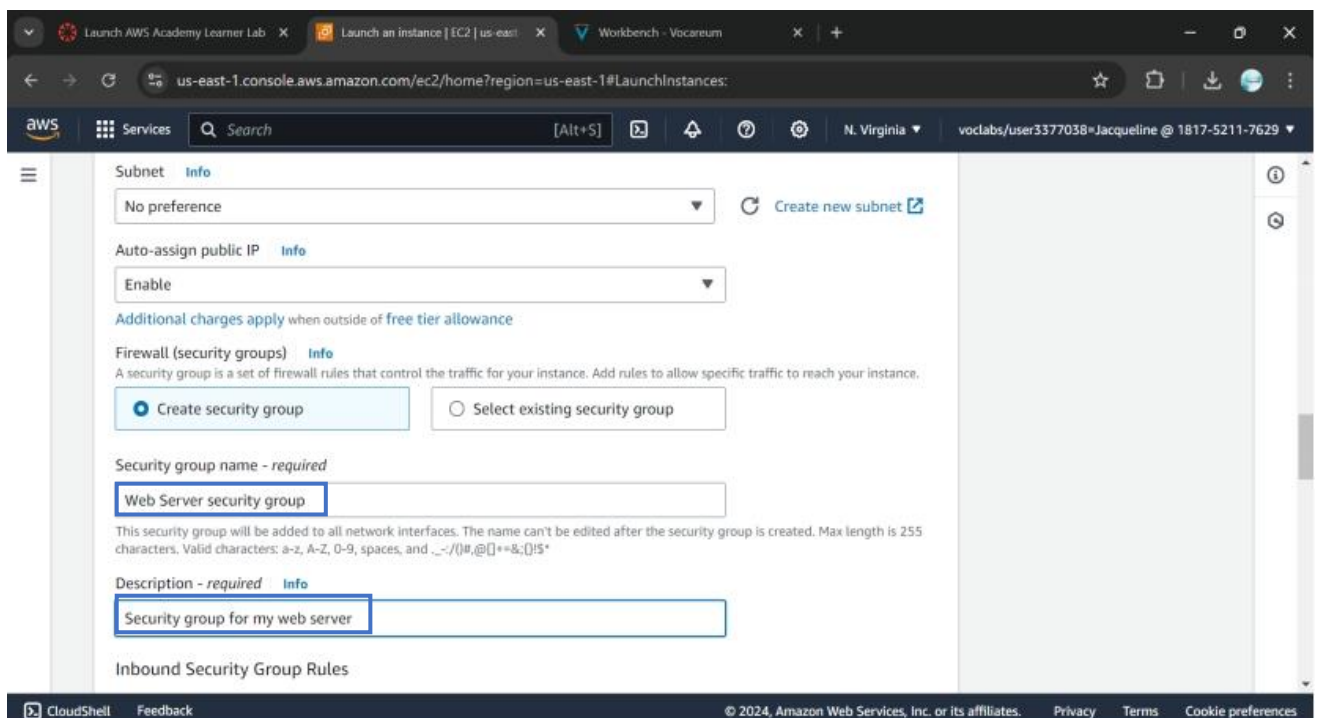
Step 6: Give the key name.



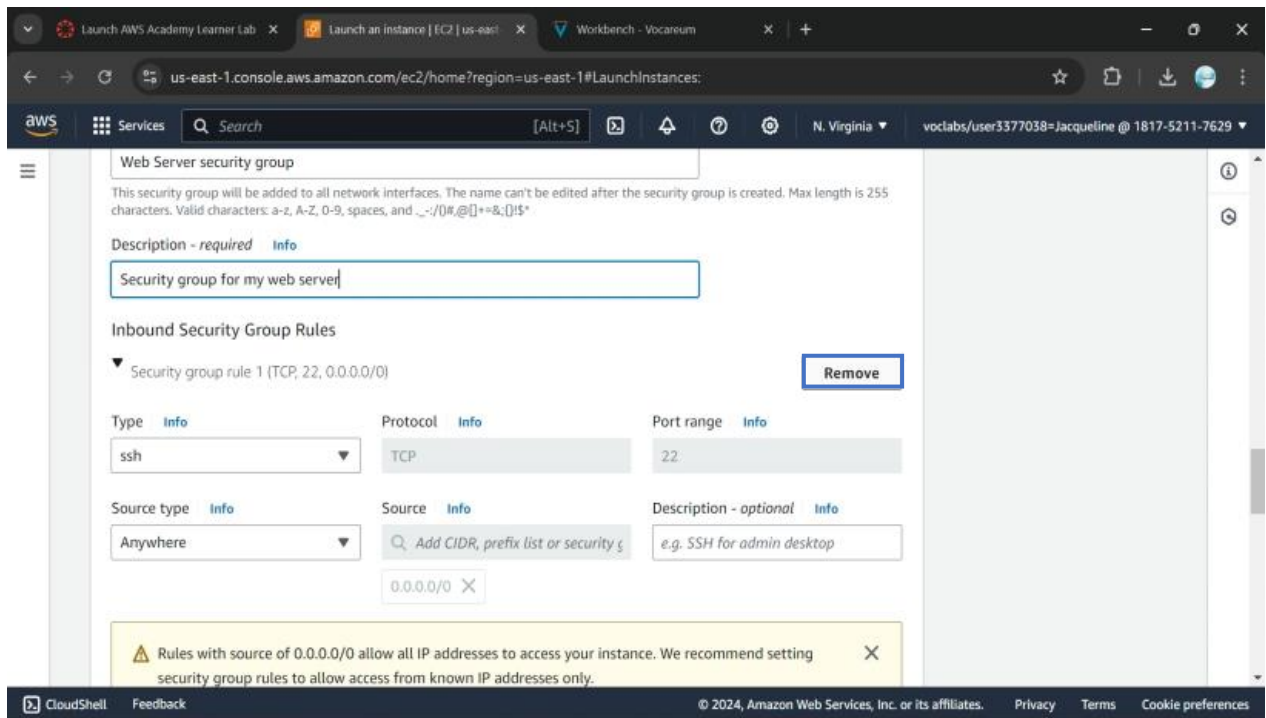
Step 7: In Network Setting choose edit.



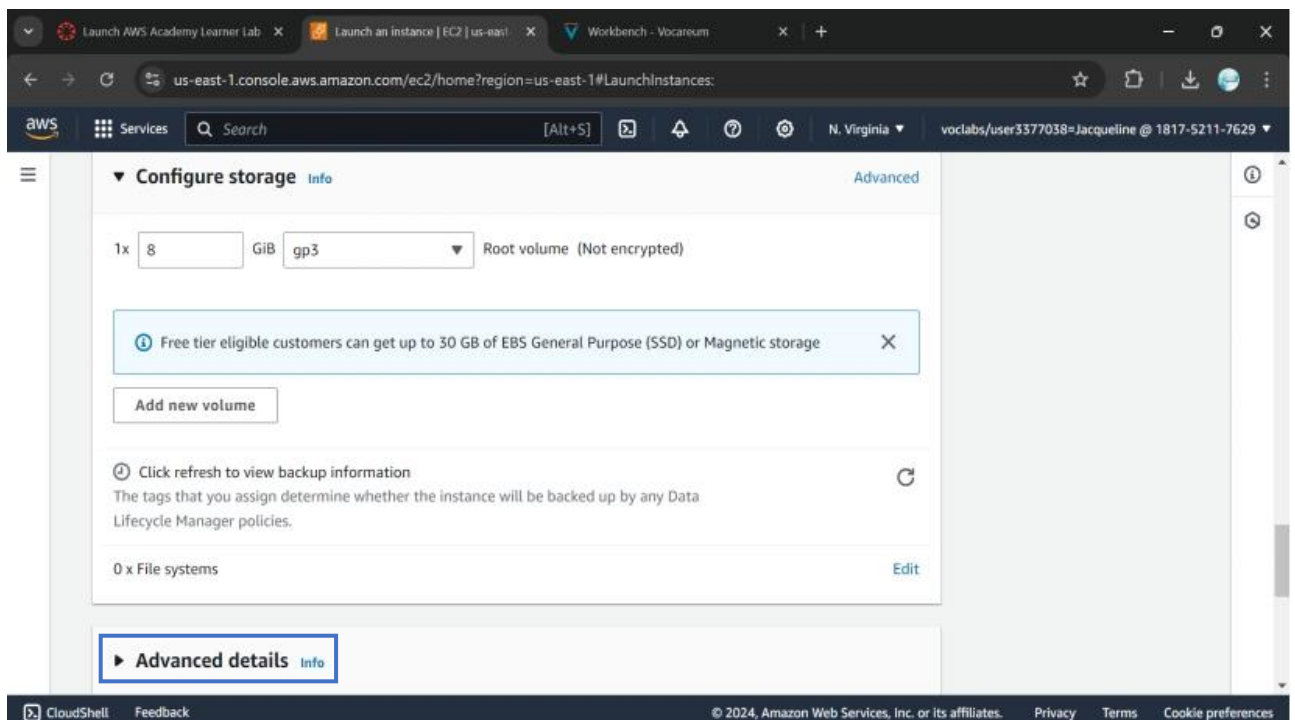
Step 8: In firewall security group change the security group name and description.

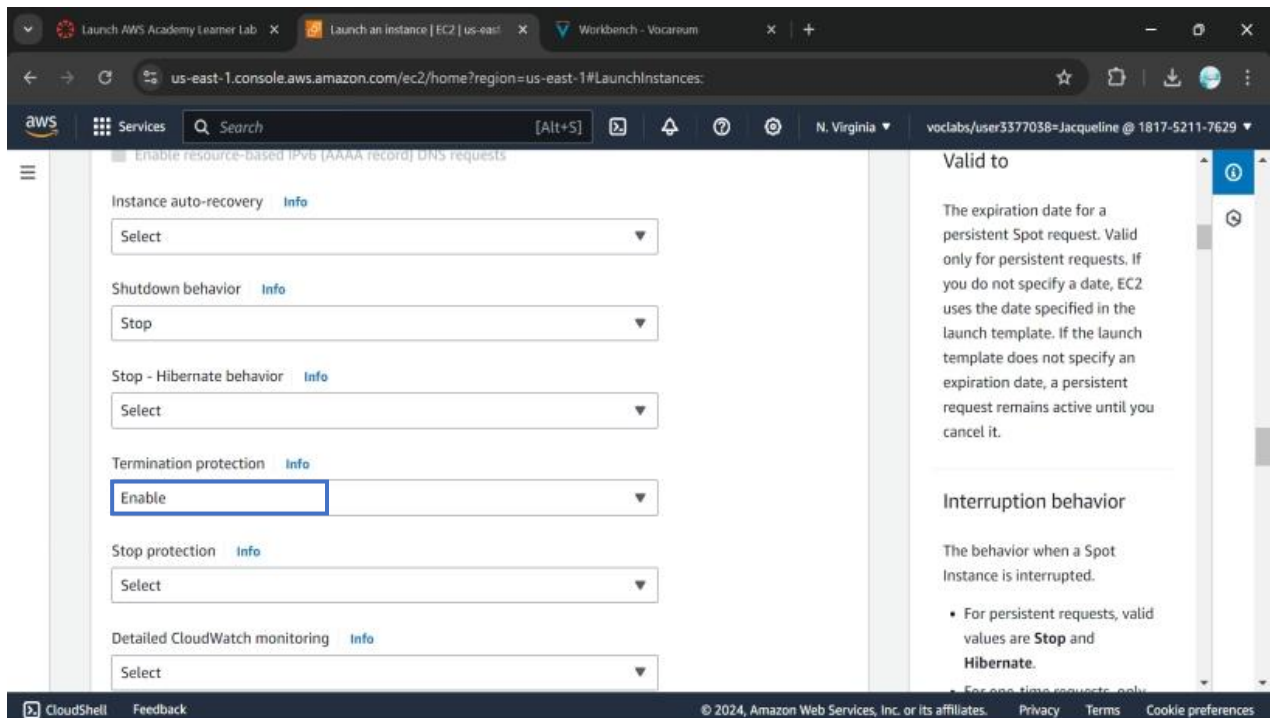


Step 9: In Inbound security group rules there is one rule **Remove** this rule.

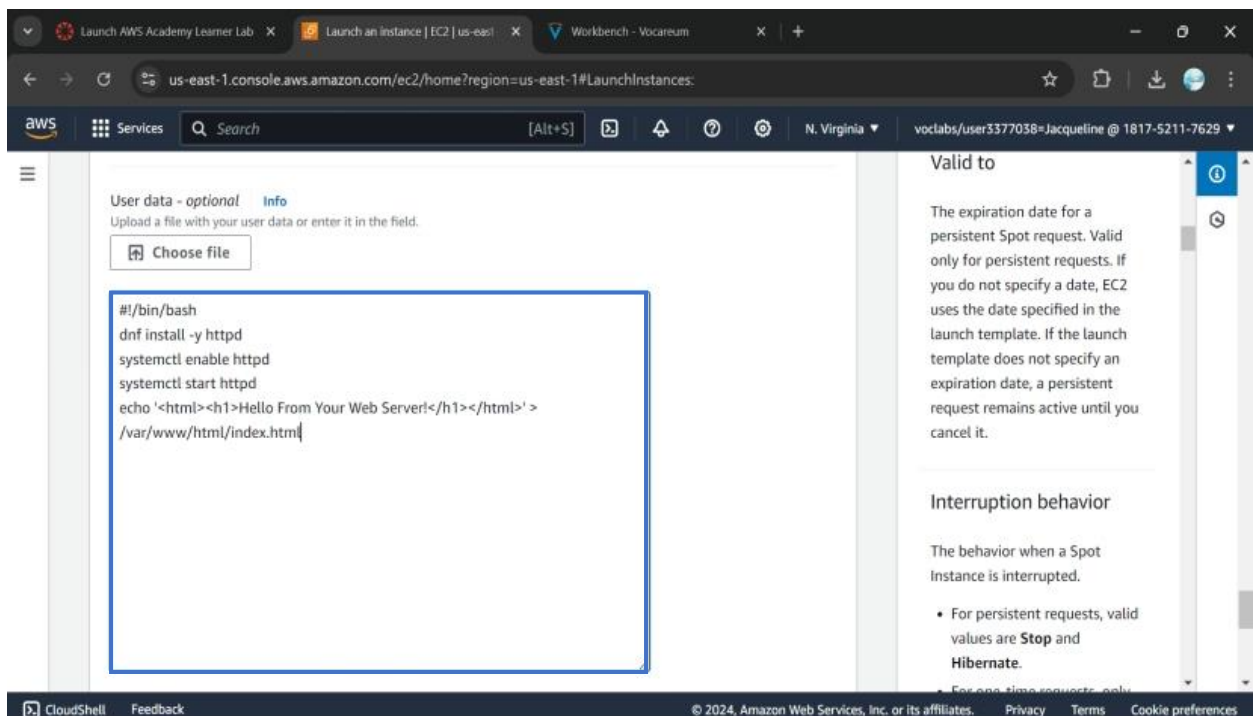


Step 10: In Advanced details enable the termination protection setting.



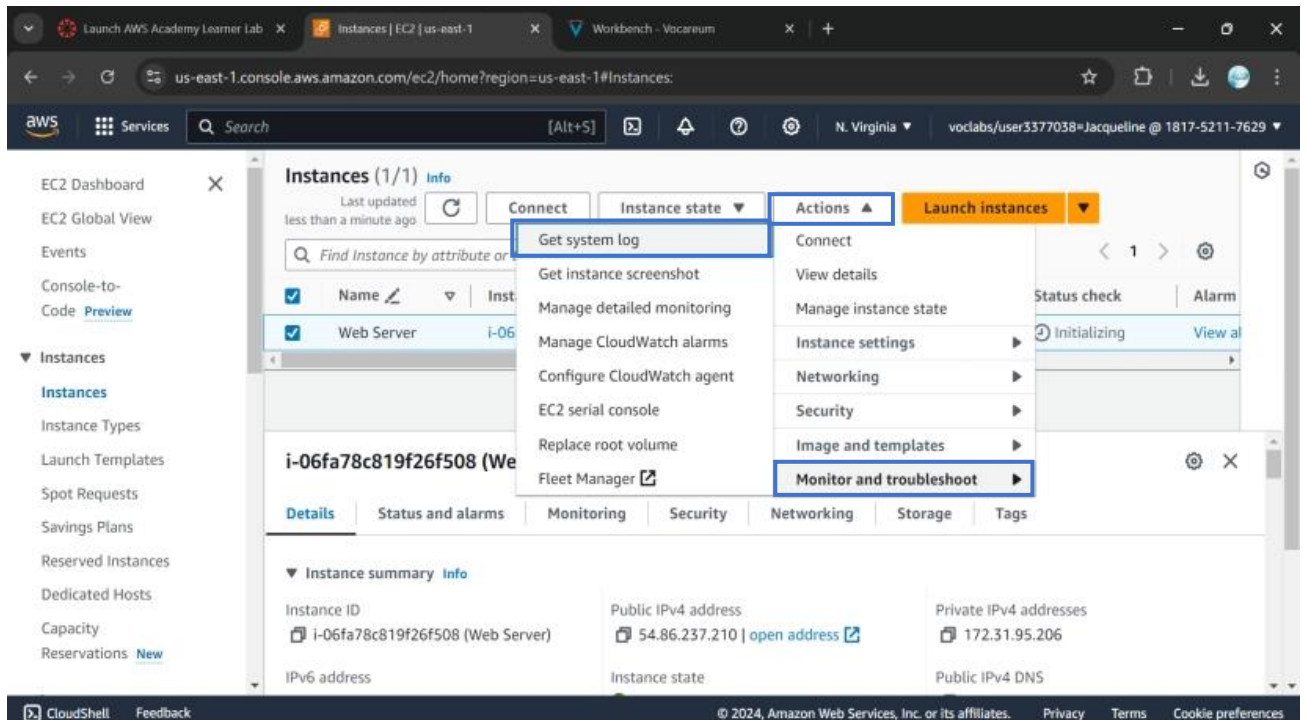


Step 11: In User data section copy the commands and then say launch instance.

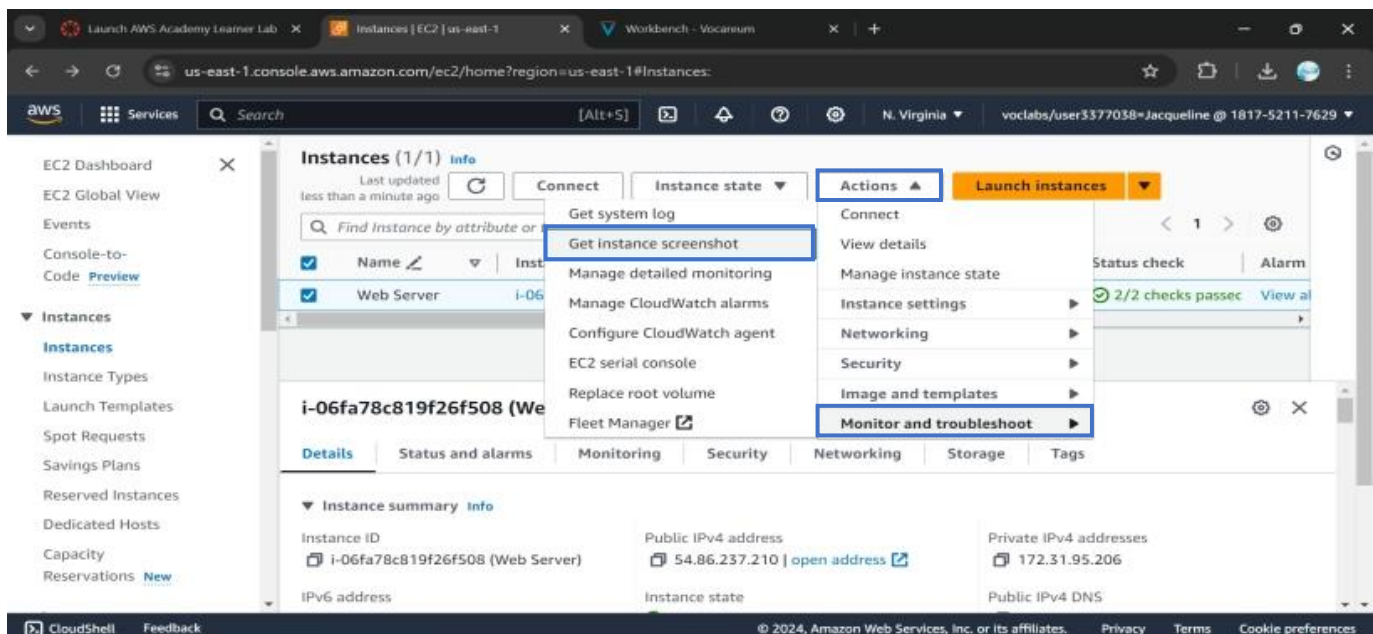


Task 2: Monitor Your Instance

Step 12: Click in action tab and select monitor and troubleshoot and then select Get system log.

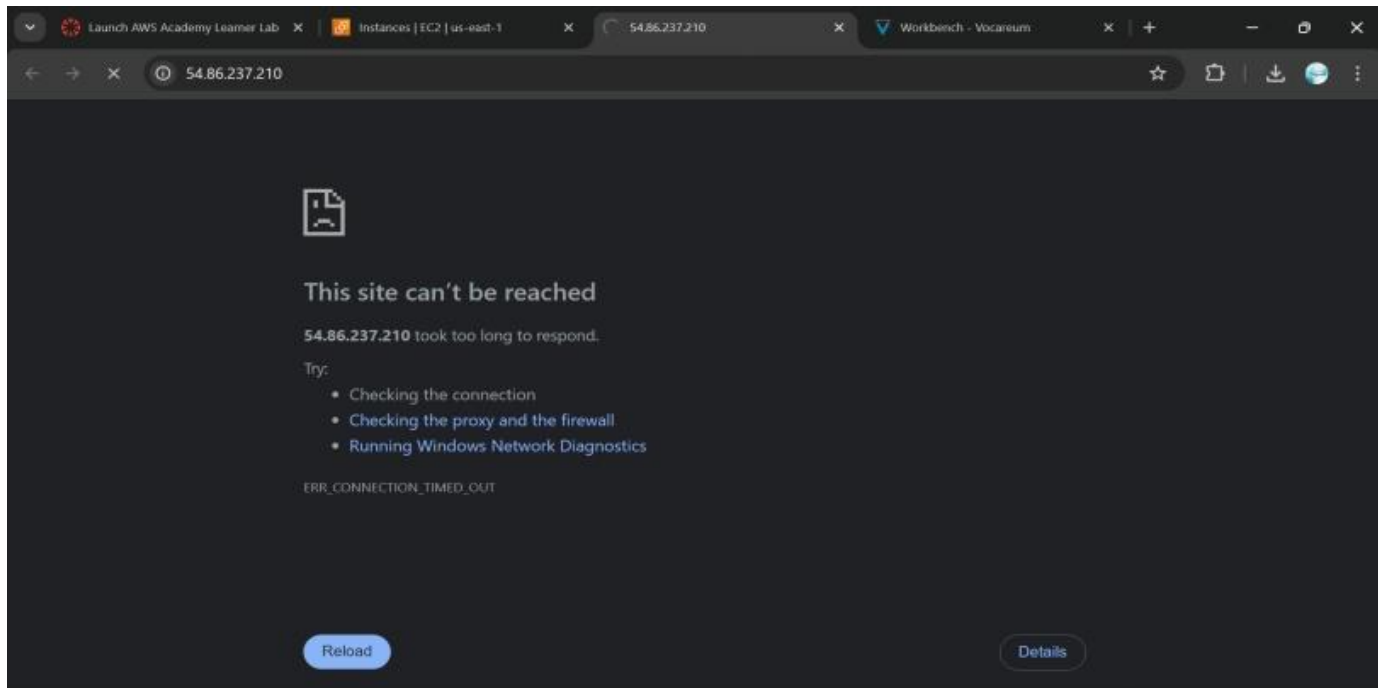


Step 13: After monitoring the system log say cancel and then again go to action tab and select monitor and troubleshoot and then say Get Instance screenshot.

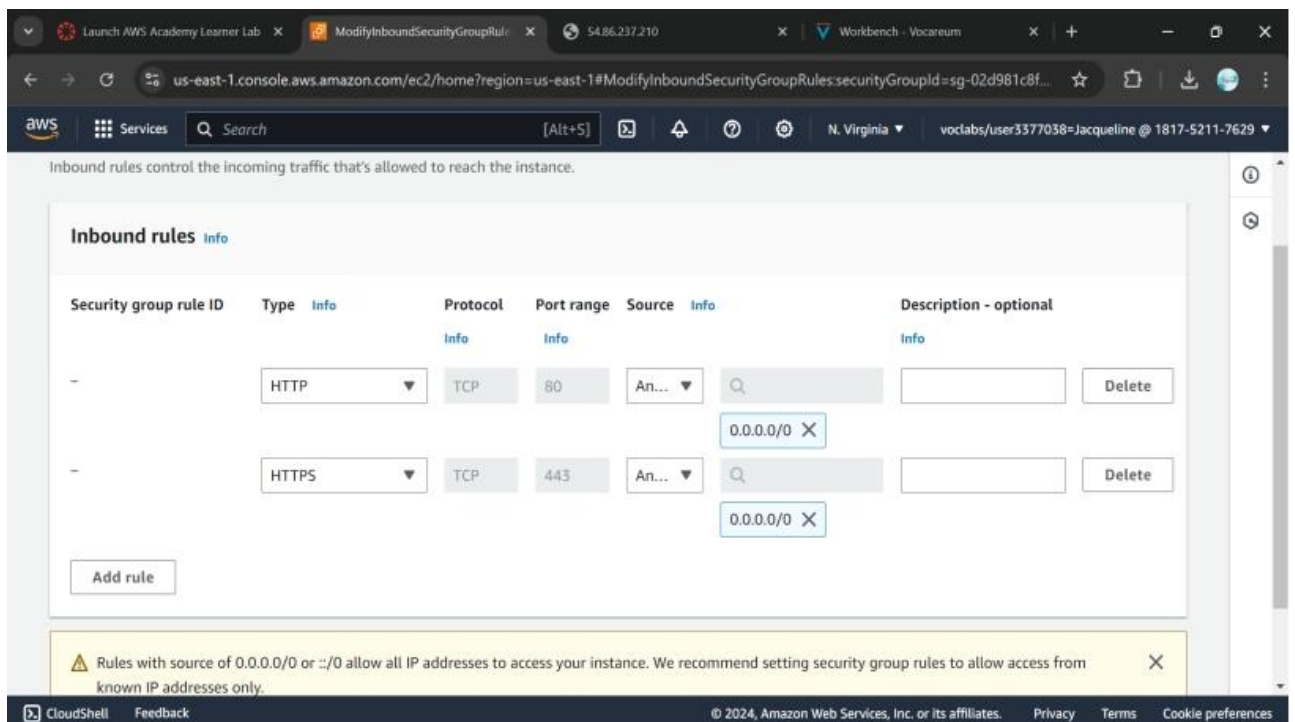


Task 3: Update Your Security Group and Access the Web Server

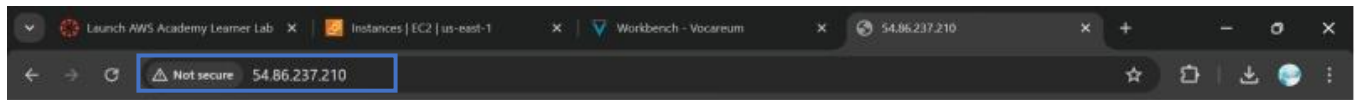
Step 15: Now select the web server and copy the IPv4 address in new browser and press enter it will show the error message.



Step 16: Now go to security group and add rule and then save the rules those are added.



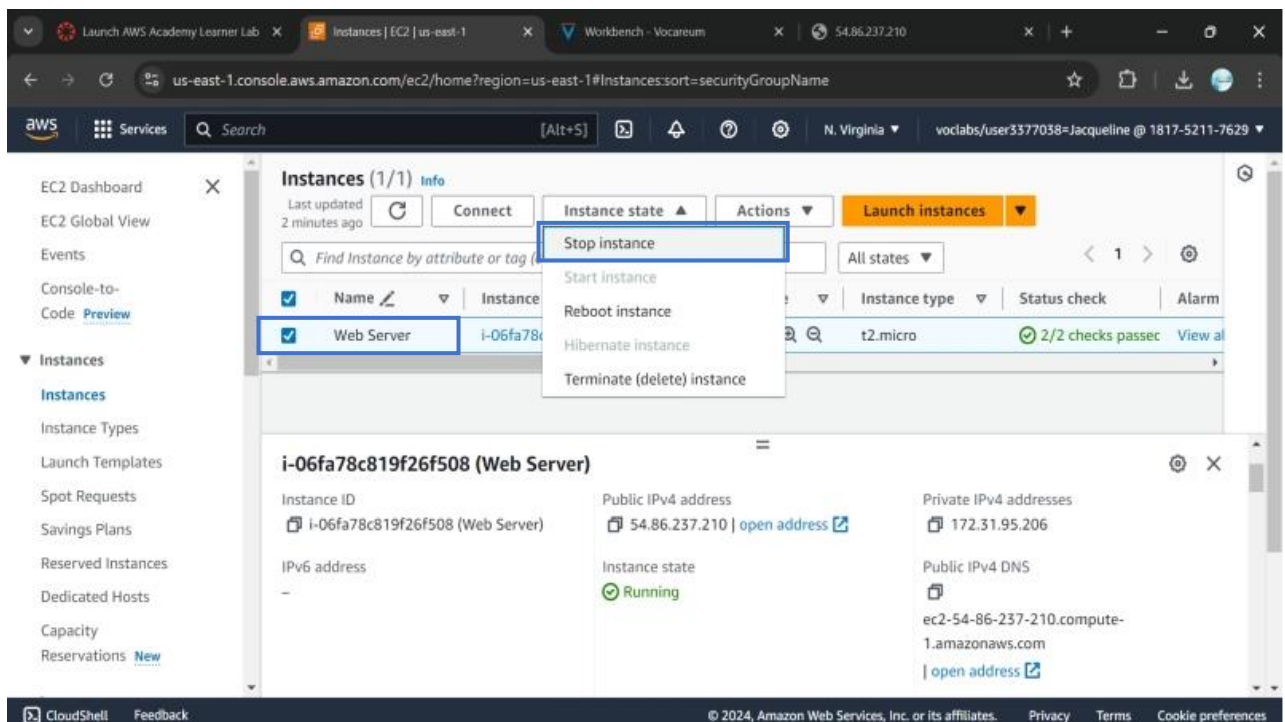
Step 17: Now go to the browser where the IPv4 address was copied and refresh it, it will show the following message.



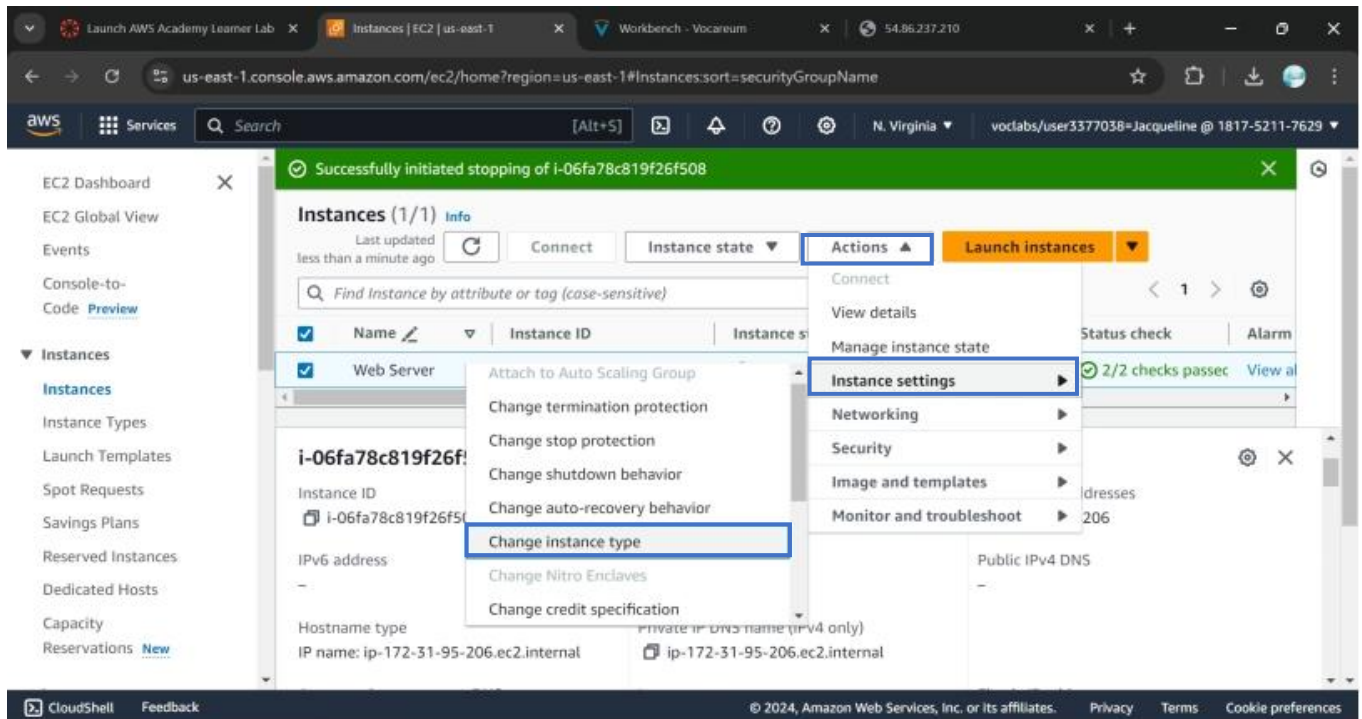
Hello From Your Web Server!

Task 4: Resize Your Instance: Instance Type and EBS Volume

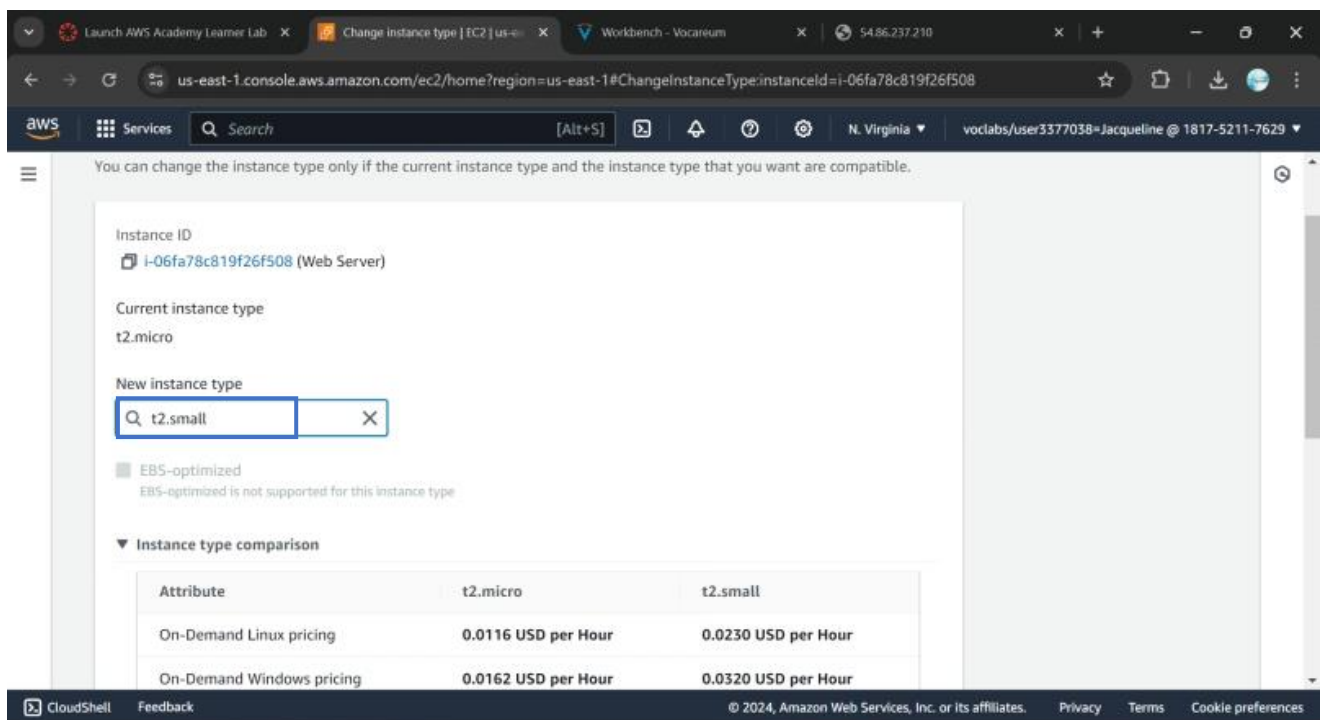
Step 18: Now stop the selected instance.



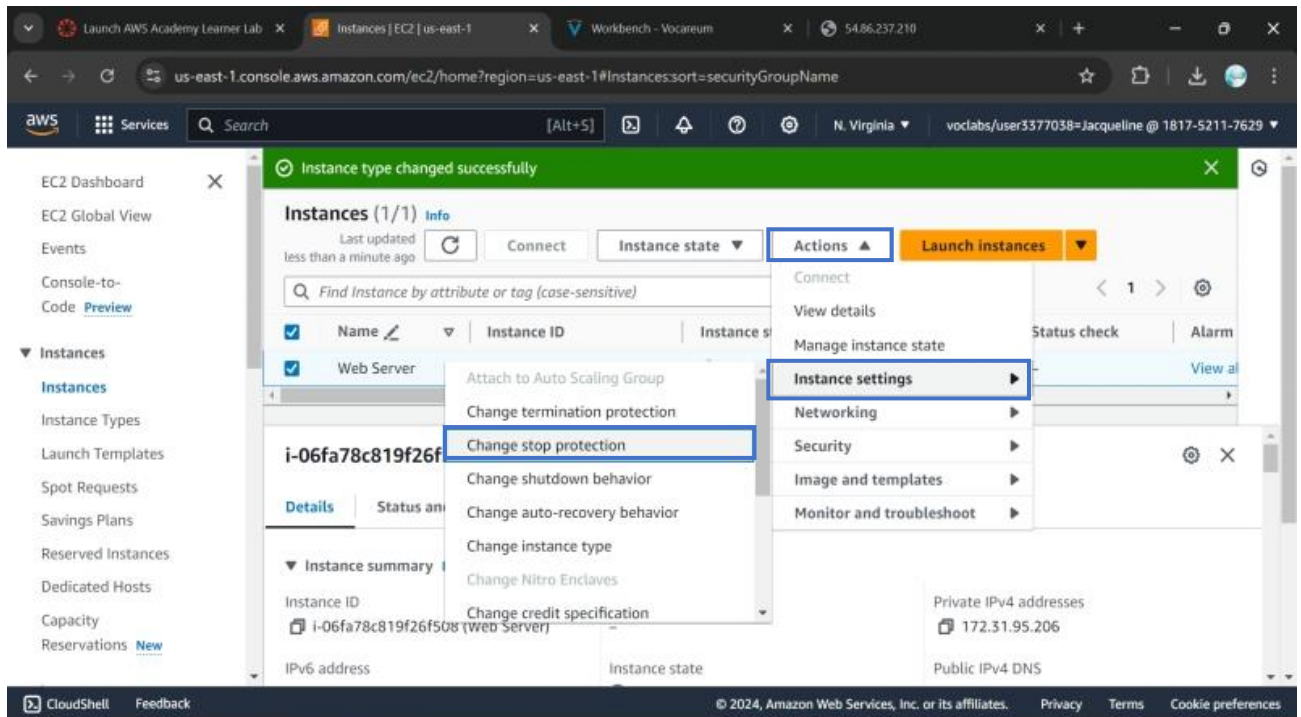
Step 19: Now go to Actions menu and select 'instance settings' and in that select 'change instance type'



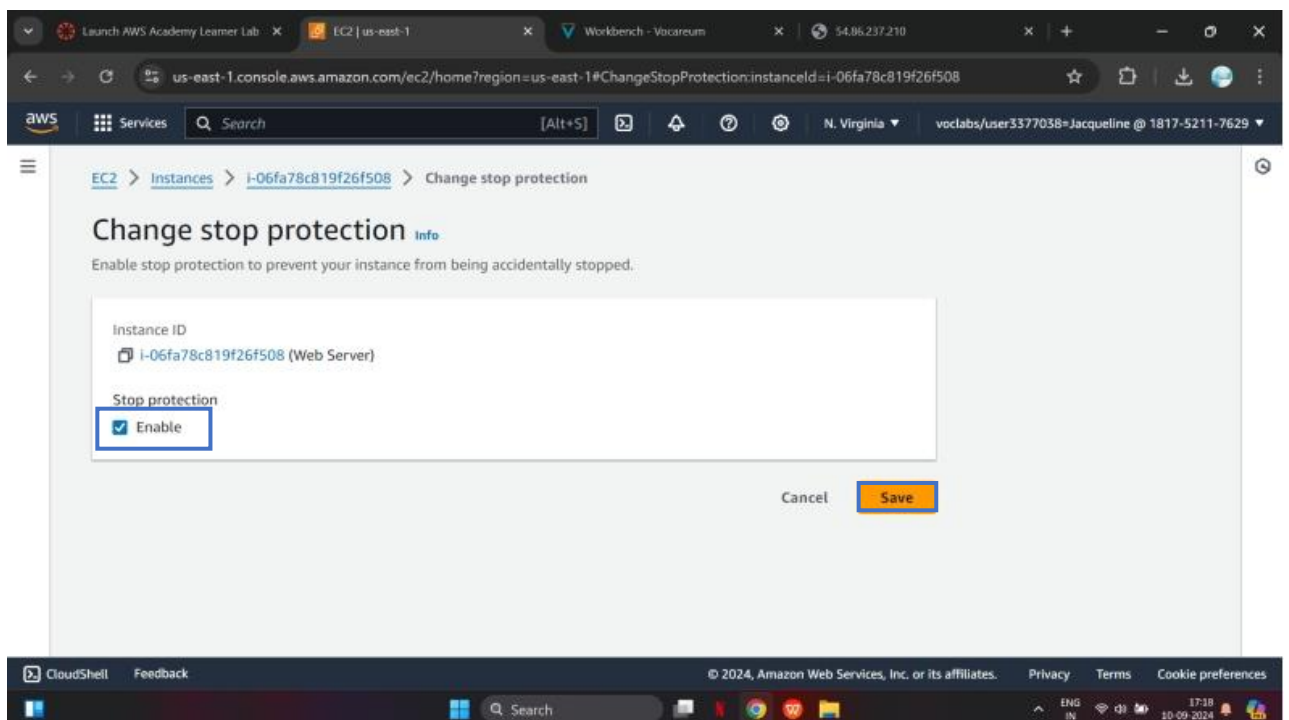
Step 20: Now select the instance type as t2.small and say apply.



Step 21: Now go again in Actions tab and select instance settings and then select Change stop protection.



Step 22: Say enable and then save it.



Step 23: Now go to storage menu and then select the volume ID and then go to actions tab and select modify volume.

The screenshot shows the AWS Management Console interface. The left sidebar contains navigation links for various services. The main content area displays the 'Volumes (1/1)' page. A table lists the volume with columns for Name, Volume ID, Type, and Size. The volume 'vol-0be8c3b7398578bbd' is selected. The 'Actions' dropdown menu is open, showing options like 'Modify volume', 'Create snapshot', and 'Delete volume'. The 'Modify volume' option is highlighted. Below the table, the 'Volume ID: vol-0be8c3b7398578bbd' is shown, along with tabs for 'Details', 'Status checks', 'Monitoring', and 'Tags'. The 'Details' tab is active, showing fields for Volume ID, Size (8 GiB), Type (gp3), and Volume status (Okay).

Step 24: Now change the size from 8 to 10 and say modify.

The screenshot shows the 'Modify volume' page in the AWS Management Console. The page title is 'Volume details'. The 'Volume ID' is 'vol-0be8c3b7398578bbd'. The 'Volume type' is 'General Purpose SSD (gp3)'. The 'Size (GiB)' field is set to '10'. The 'IOPS' field is set to '3000'. The 'Throughput (MiB/s)' field is set to '125'. The 'Size (GiB)' field is highlighted with a blue border. The 'IOPS' field is also highlighted with a blue border. The 'Throughput (MiB/s)' field is also highlighted with a blue border. The 'Size (GiB)' field has a note: 'Min: 1 GiB, Max: 16384 GiB. The value must be an integer.' The 'IOPS' field has a note: 'Min: 3000 IOPS, Max: 16000 IOPS. The value must be an integer.'

Step 25: Now start the resized instance again.

The screenshot shows the AWS Management Console for the 'us-east-1' region. The 'Instances' page is active, displaying a list of instances. The instance 'Web Server' with ID 'i-06fa78c819f26f508' is selected. The 'Instance state' dropdown menu is open, showing options: Stop instance, Start instance, Reboot instance, Hibernate instance, and Terminate (delete) instance. The 'Start instance' option is highlighted. A green notification bar at the top says 'Enabled stop protection for i-06fa78c819f26f508'.

| Name | Instance ID | Instance type | Status check | Alarm |
|------------|---------------------|---------------|--------------|---------|
| Web Server | i-06fa78c819f26f508 | t2.small | - | View al |

i-06fa78c819f26f508 (Web Server)

Instance summary

| Instance ID | Public IPv4 address | Private IPv4 addresses |
|----------------------------------|---------------------|------------------------|
| i-06fa78c819f26f508 (Web Server) | - | 172.31.95.206 |

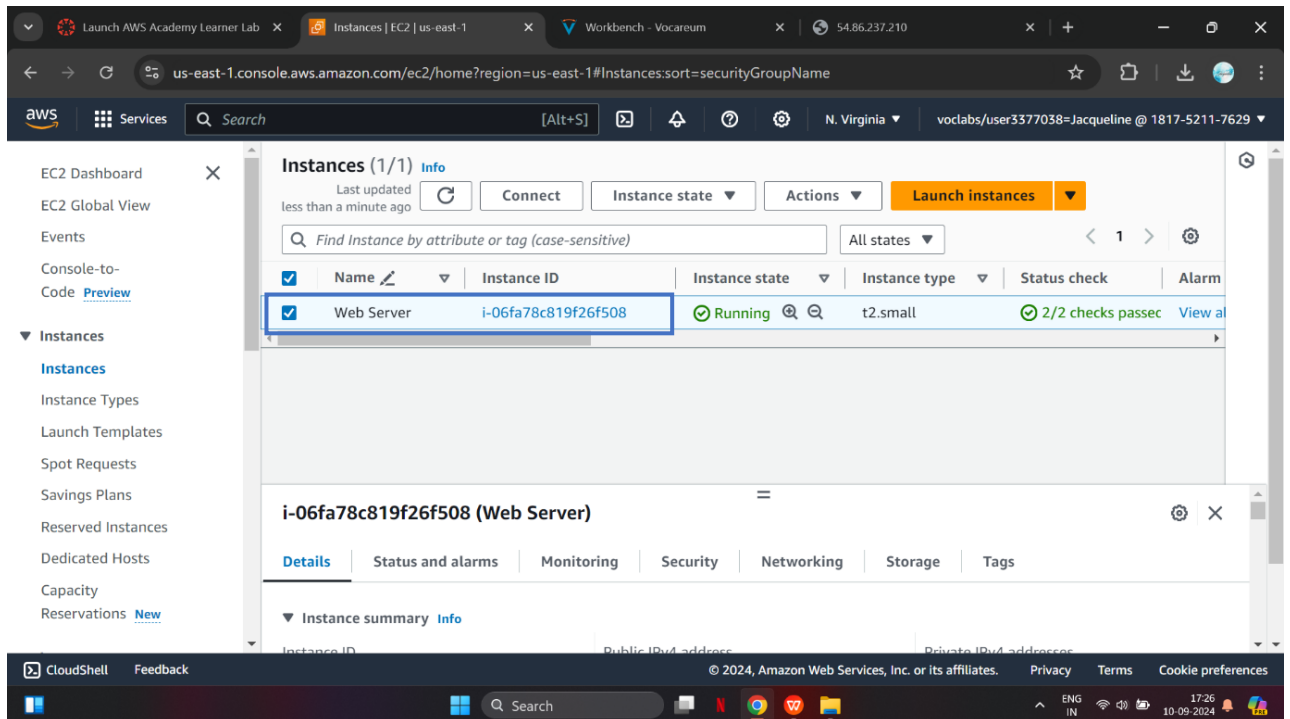
IPv6 address: Instance state: Public IPv4 DNS:

The screenshot shows the AWS Management Console for the 'us-east-1' region. The 'Instances' page is active, displaying a list of instances. The instance 'Web Server' with ID 'i-06fa78c819f26f508' is now in the 'Running' state. A green notification bar at the top says 'Successfully initiated starting of i-06fa78c819f26f508'. The 'Instance state' dropdown menu is open, showing the 'Running' state.

| Name | Instance ID | Instance state | Instance type | Status check | Alarm |
|------------|---------------------|----------------|---------------|--------------|---------|
| Web Server | i-06fa78c819f26f508 | Running | t2.small | Initializing | View al |

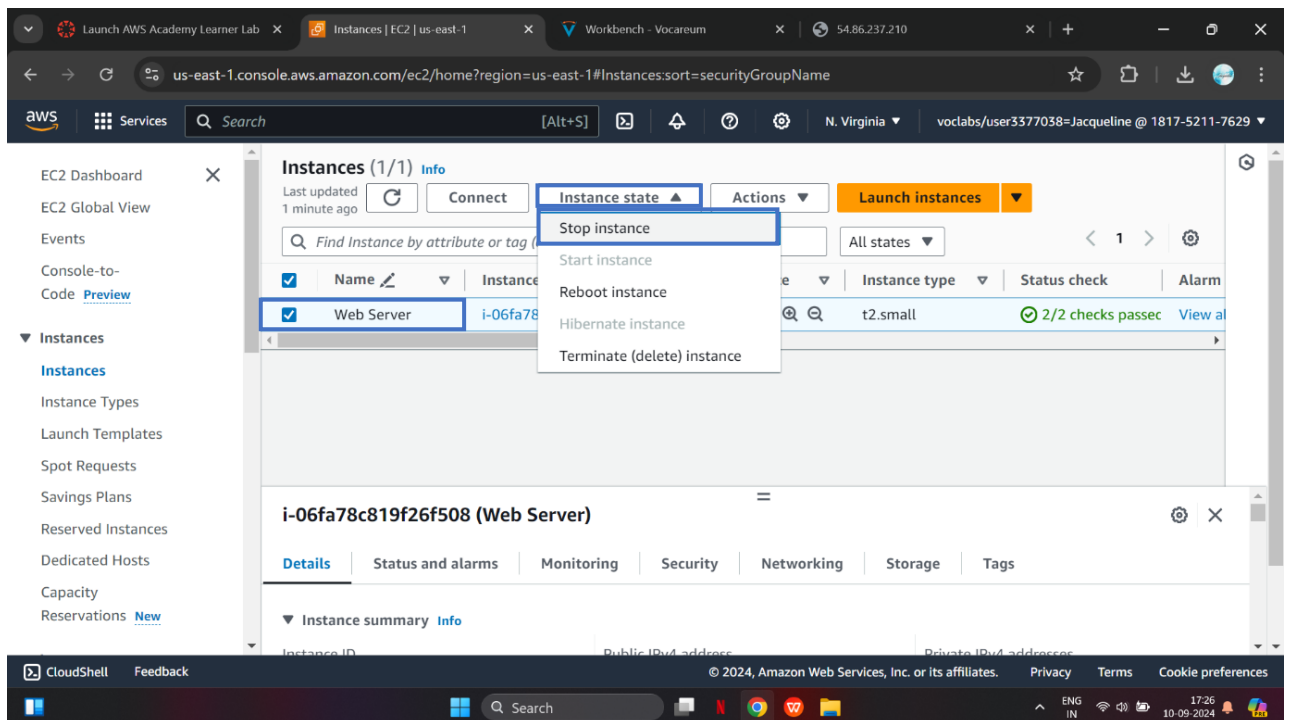
Select an instance

Step 26: Now go to search bar and search for EC2 console and go to instances and select the web server.

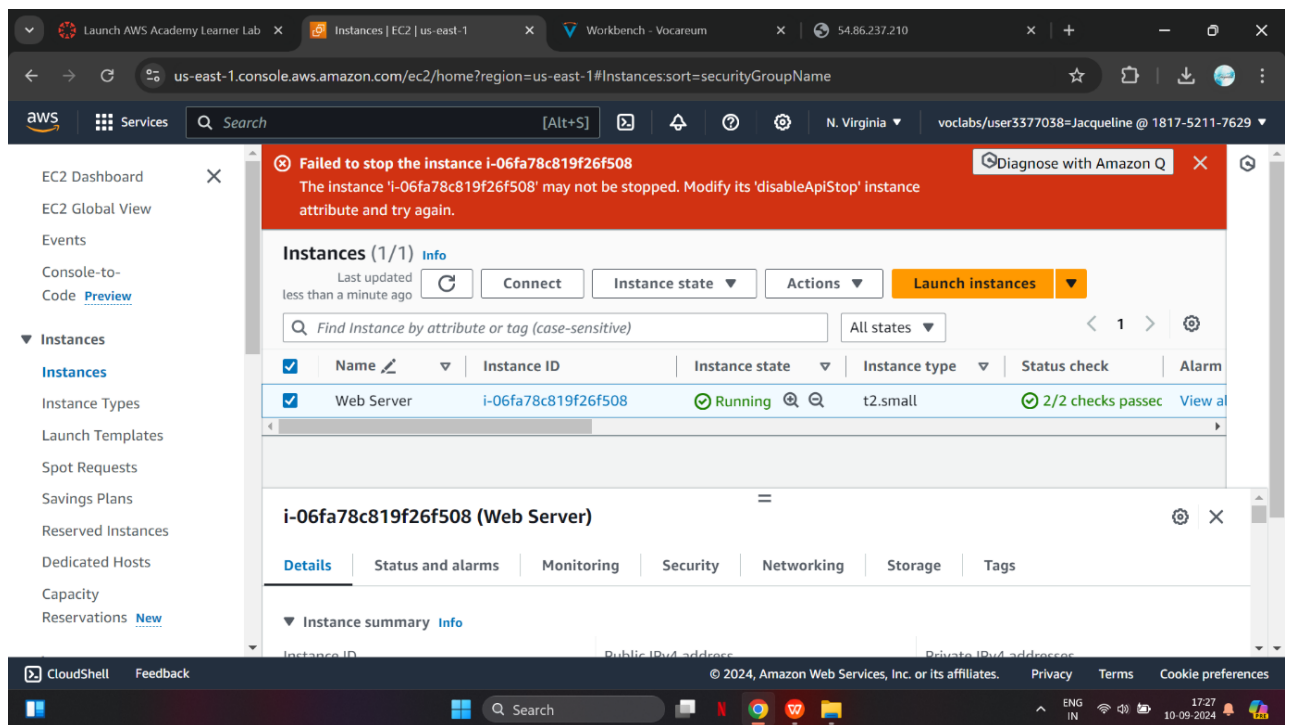


Task 5: Test Termination Protection

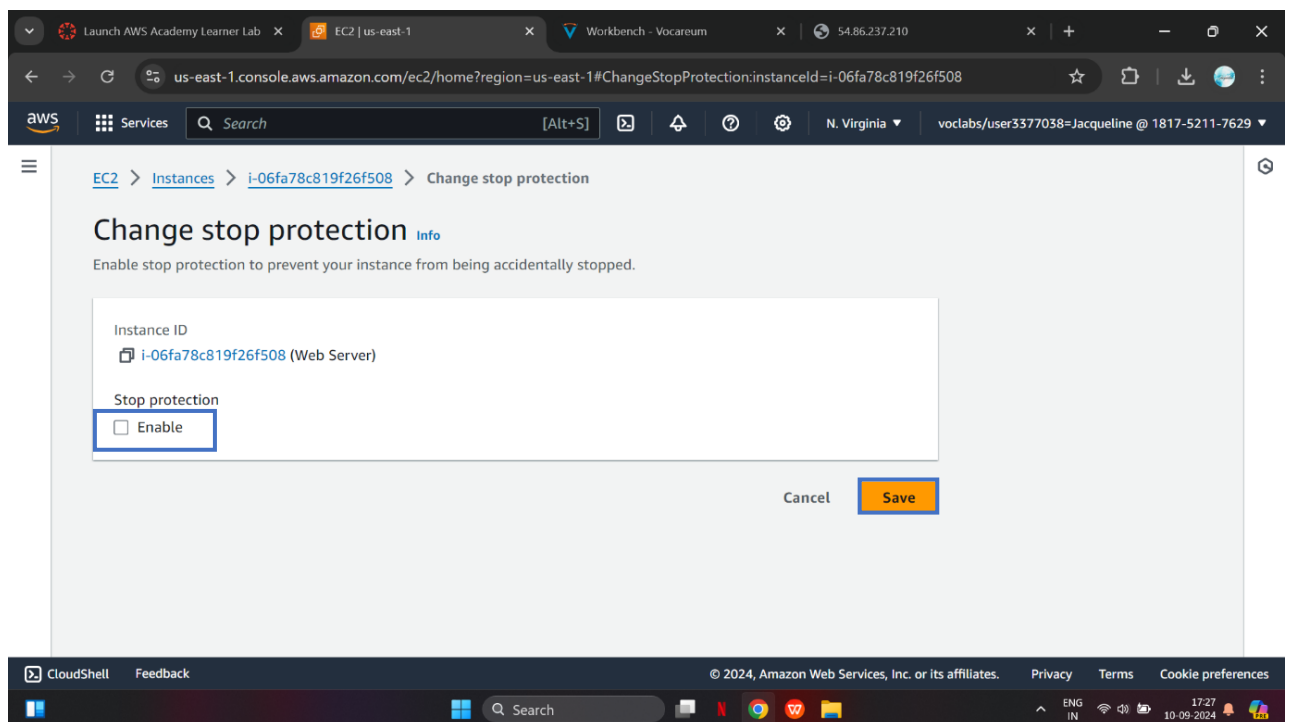
Step 27: Now go to instance state and select stop instance.



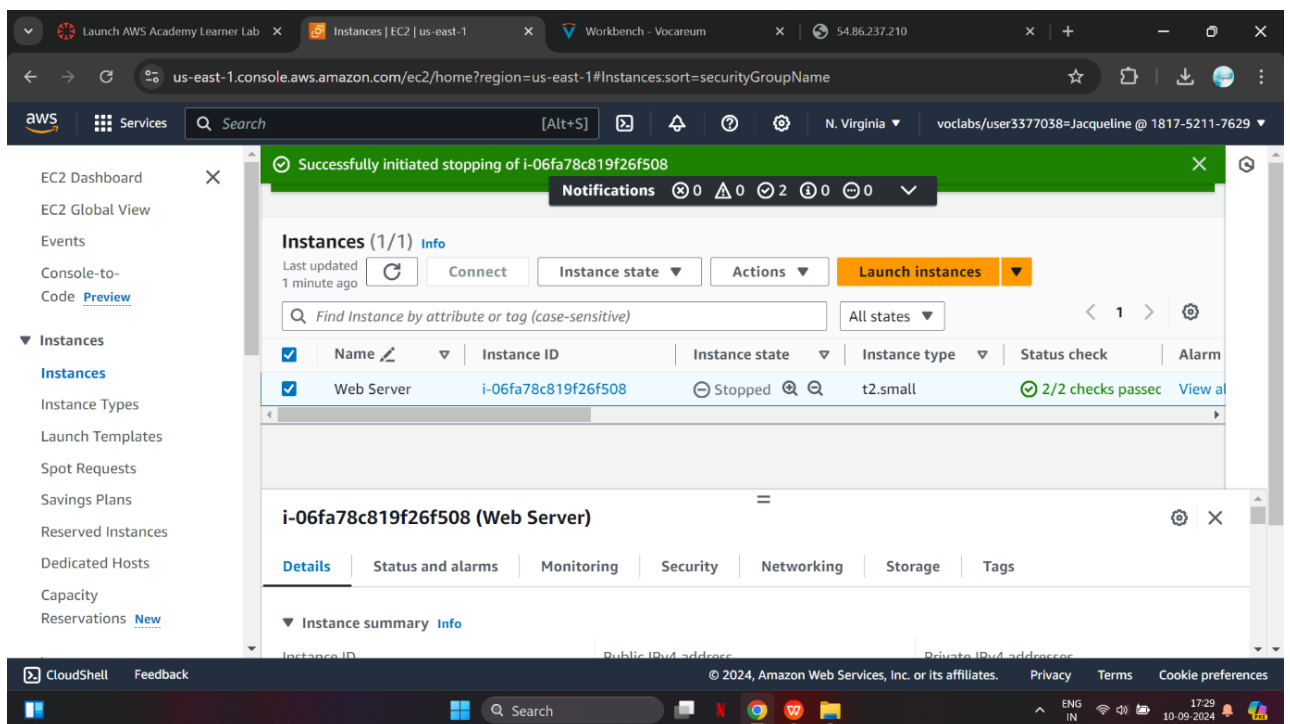
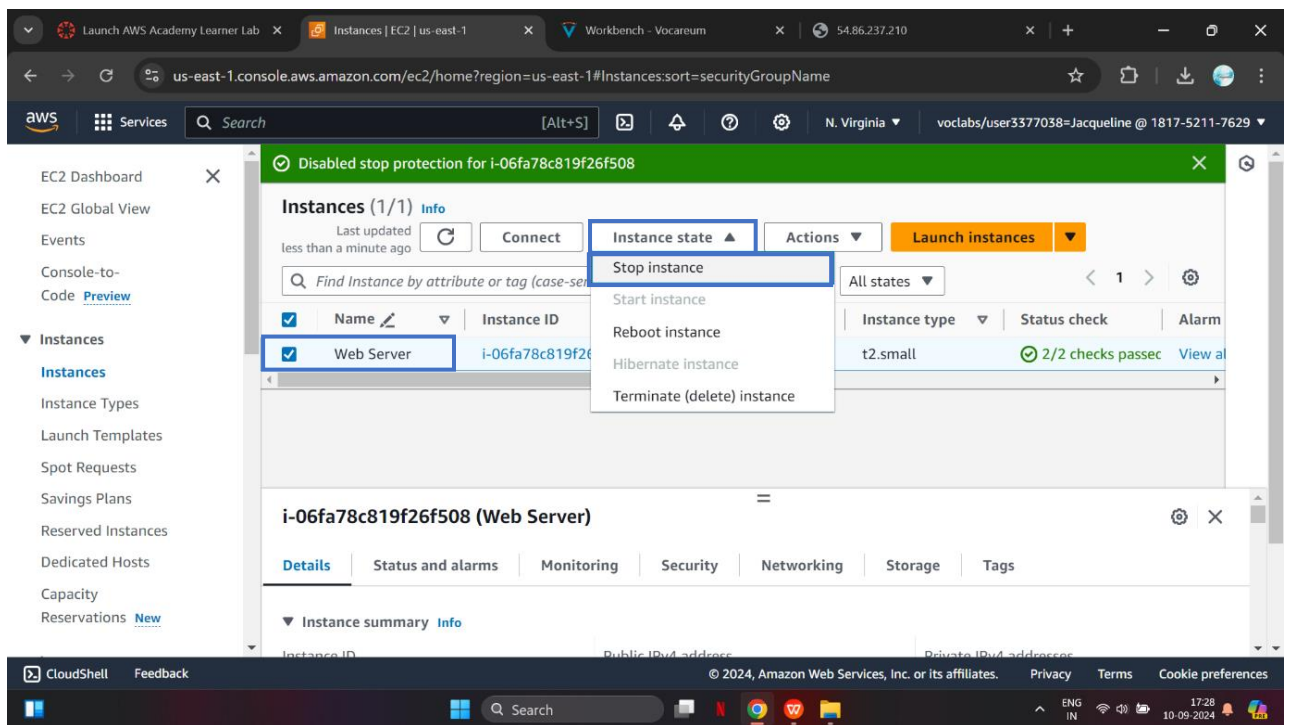
Step 28: It will show this message as we have enabled the stop protection.



Step 29: Now go again in action menu and select change stop protection and remove the enabled checkbox which is selected and then say save.



Step 30: Now go back again to instance menu and stop the web server instance.



Step 31: At the end sign out from this console and end the learner lab.

