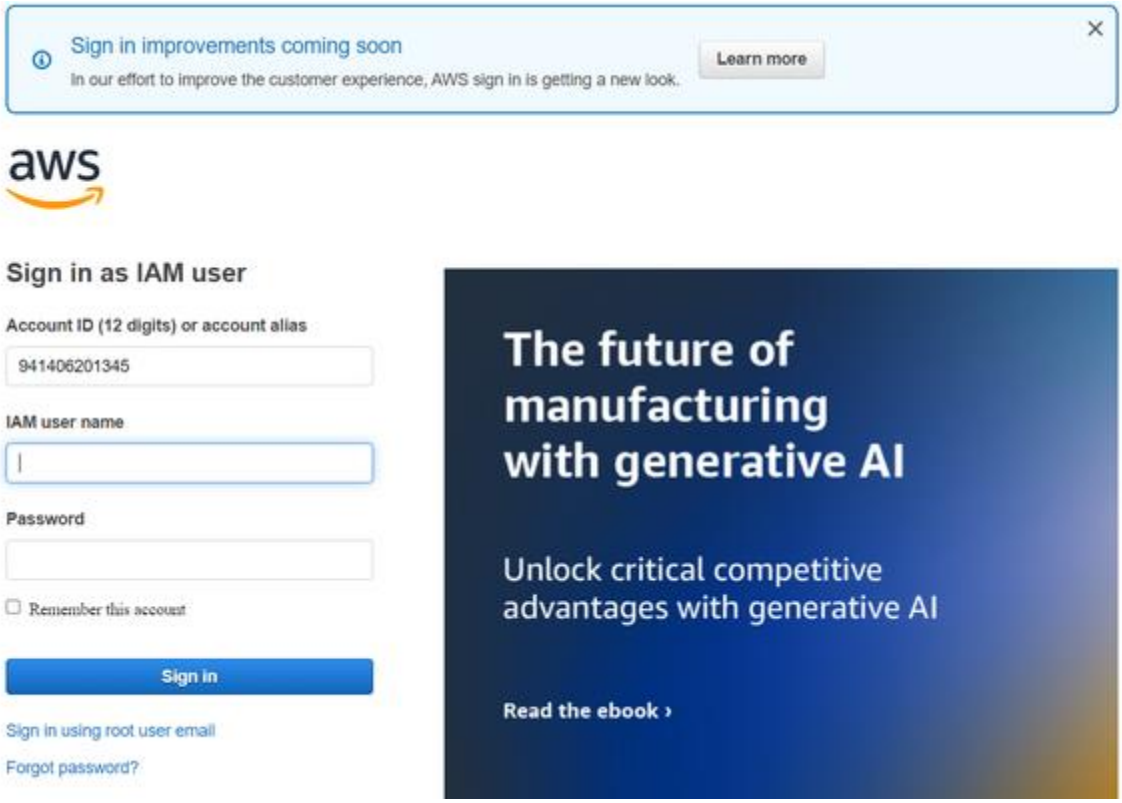
Launch a Linux Server as a Webserver in AWS Cloud step by step

Launching a Linux server as a web server in the AWS Cloud involves several steps, including setting up an EC2 instance, configuring the security group, installing a web server (such as Apache or Nginx), and ensuring everything is properly configured. Here's a step-by-step guide:

Step 1: Launch an EC2 Instance

1. Log in to AWS Management Console:

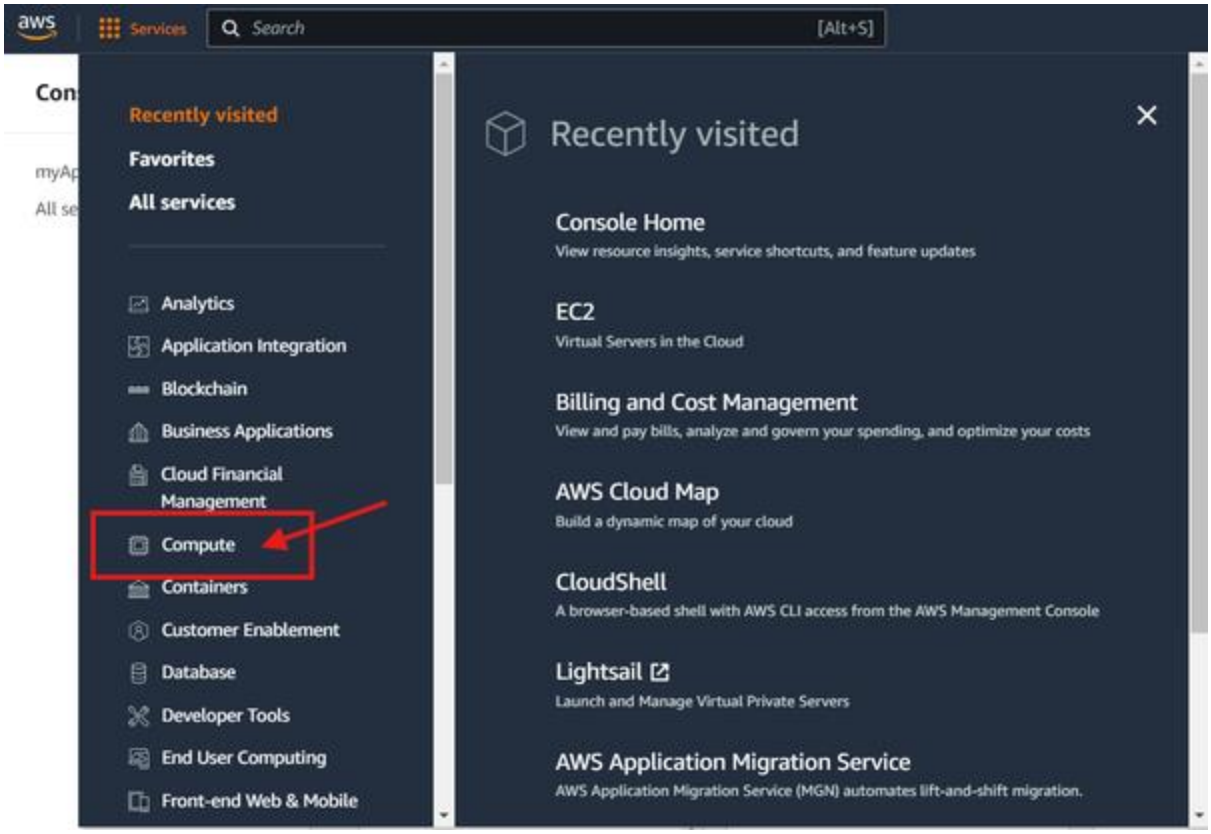
- Go to the AWS Management Console.

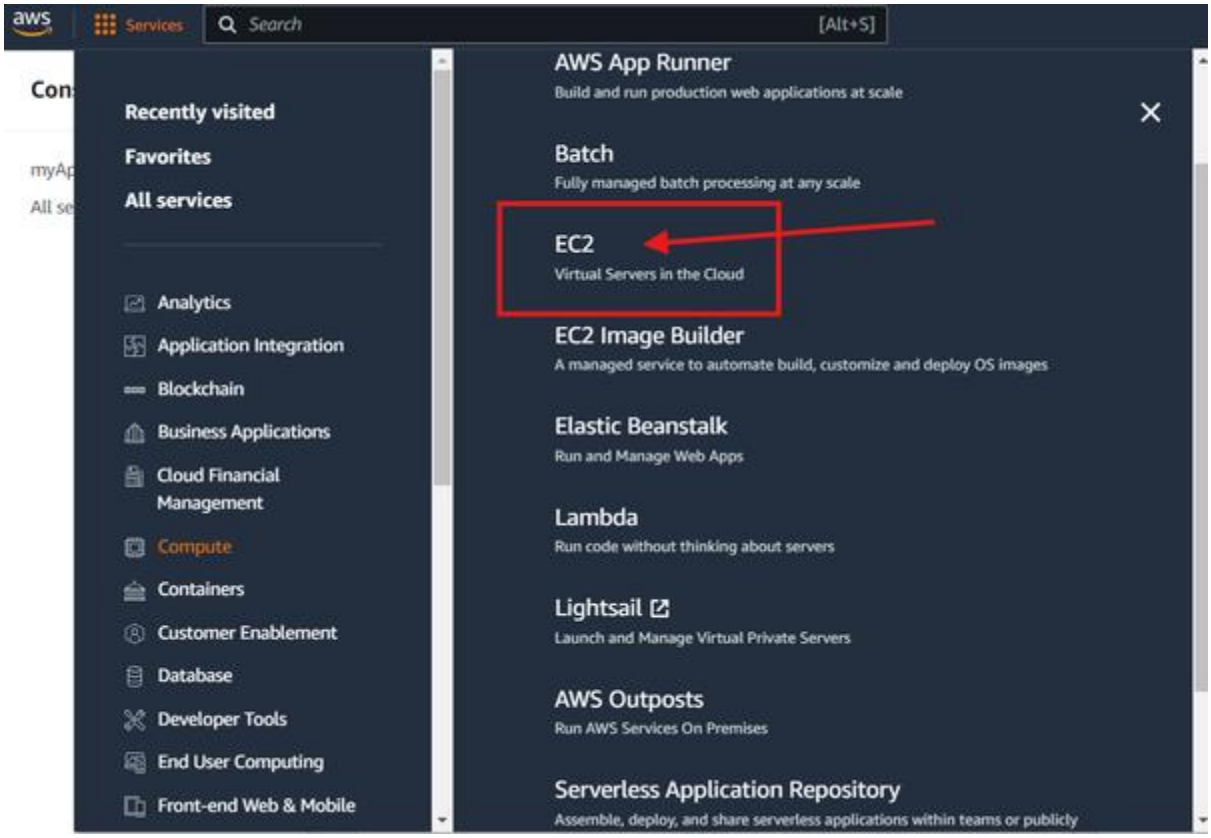


- Log in with your AWS account credentials.

2. Navigate to EC2 Dashboard:

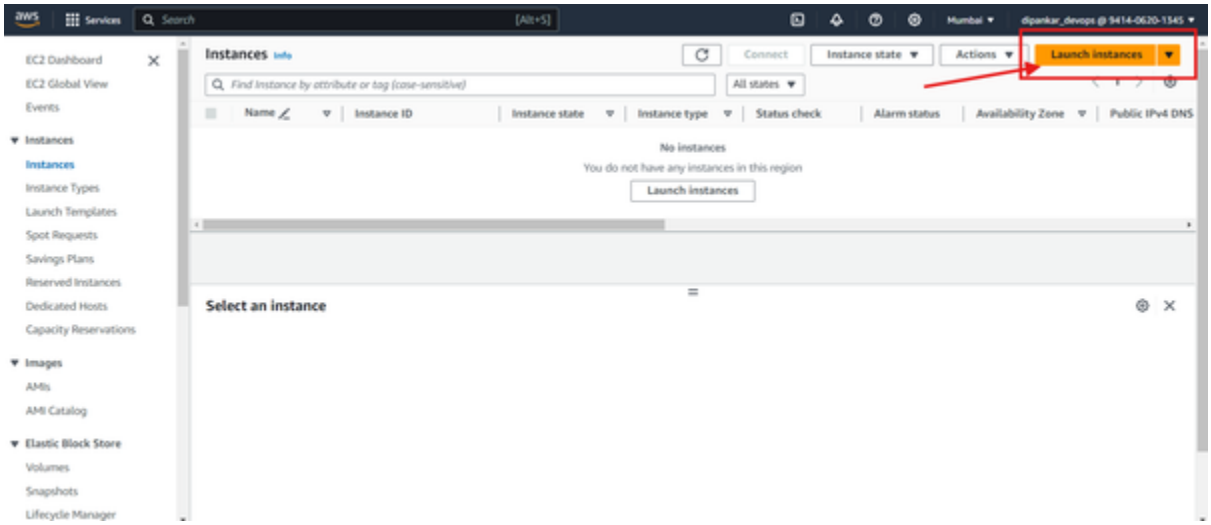
- In the AWS Management Console, find and click on "EC2" under the "Compute" section.



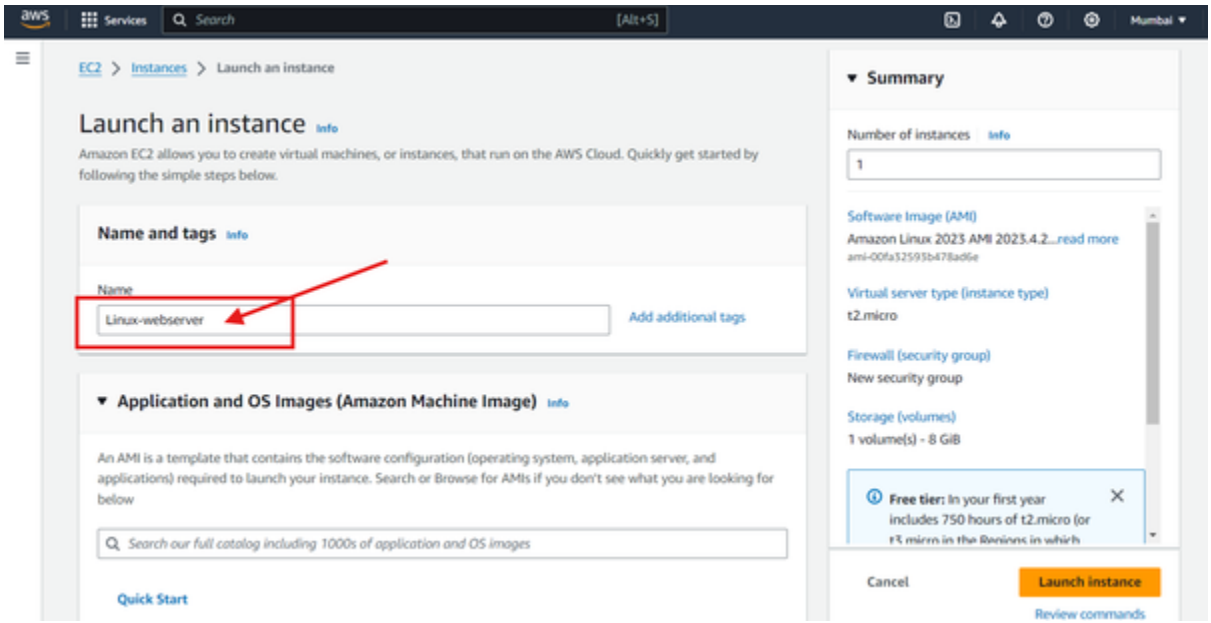


3. Launch an Instance:

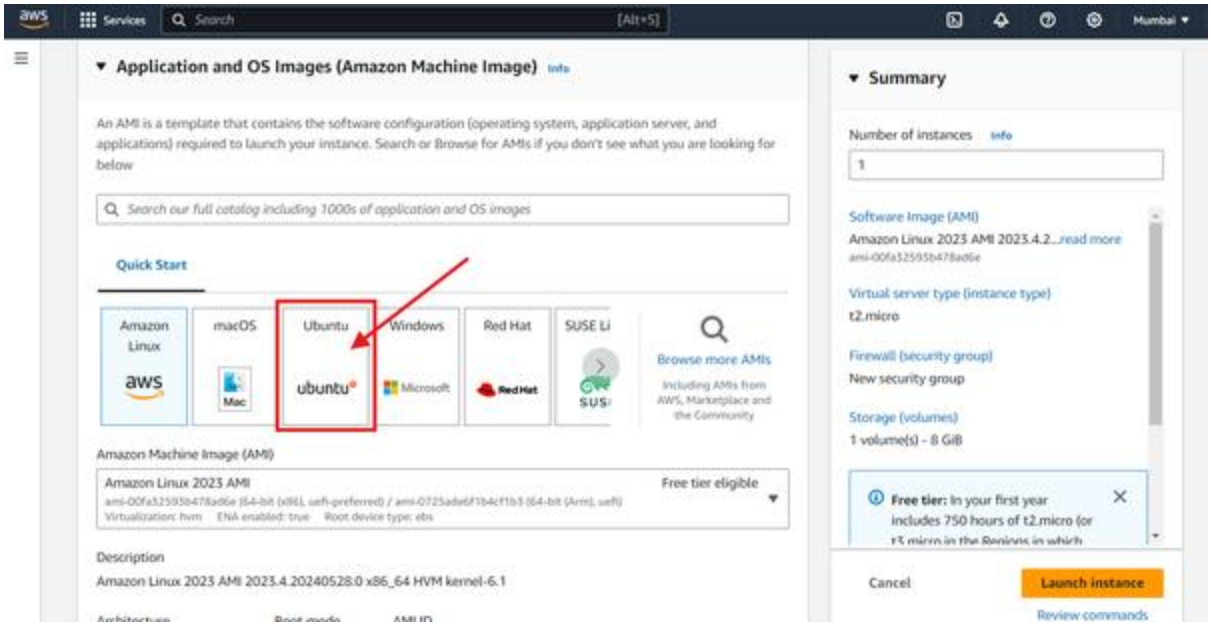
- Click on the "Launch Instance" button.



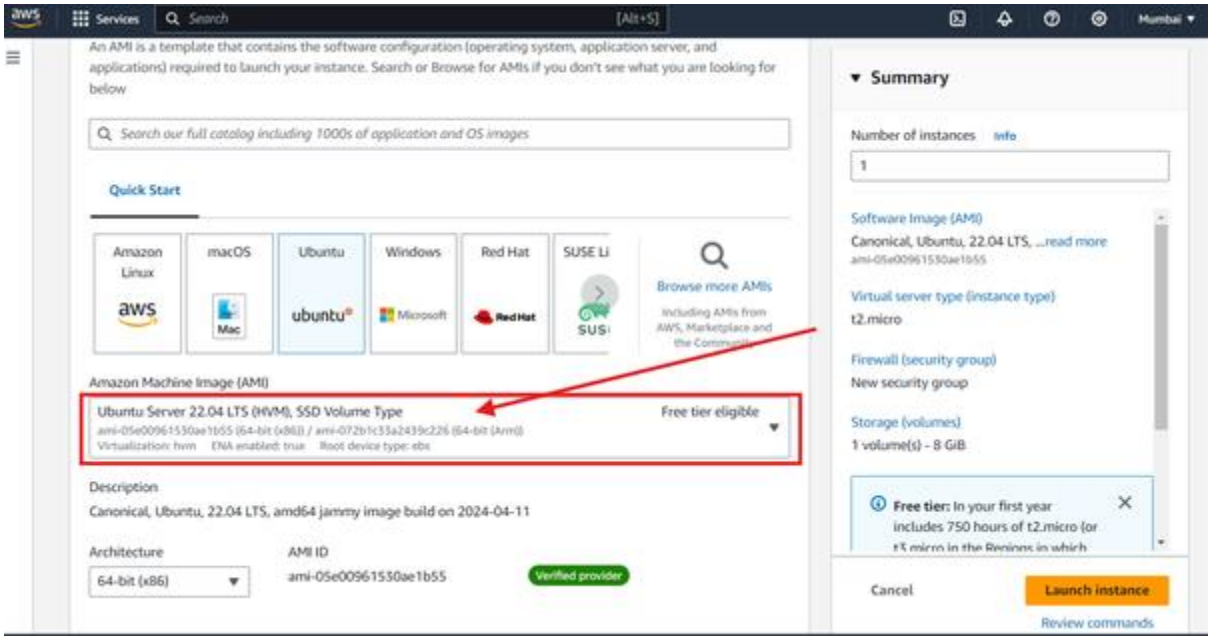
- Give the Name and tags.



- Choose an Amazon Machine Image (AMI):

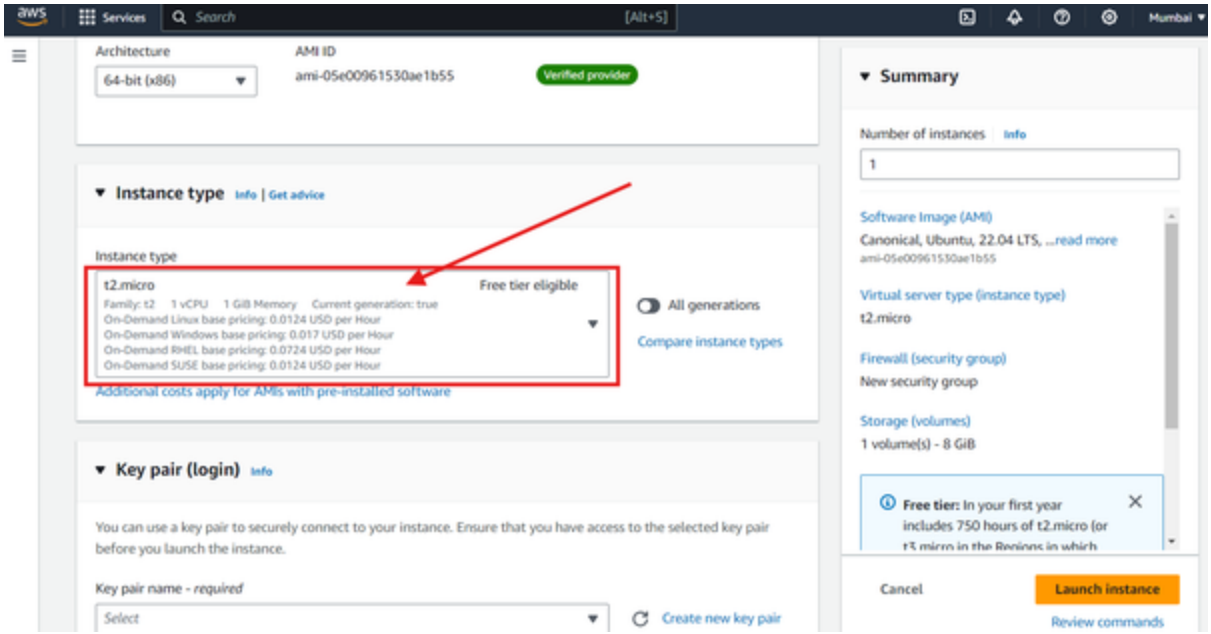


- Select an appropriate AMI



*** Choose an Instance Type:

- Select an instance type, such as `t2.micro`, which is free tier eligible.

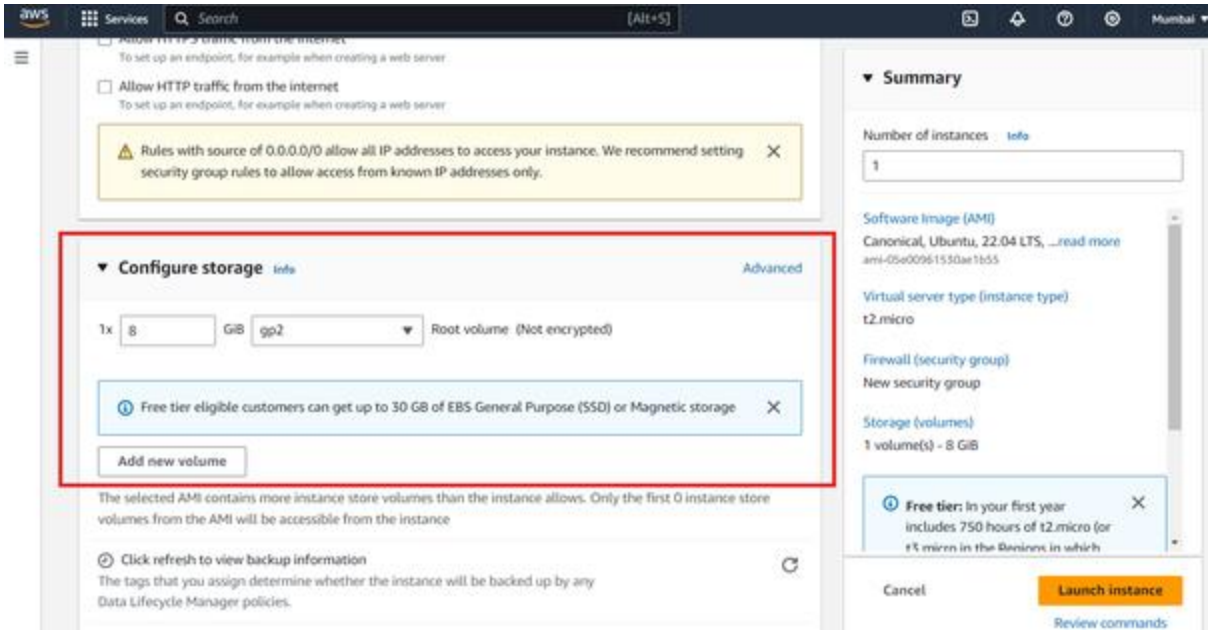


*** Configure Instance Details:

- You can accept the default settings or configure as needed.

*** Add Storage:

- You can accept the default settings or increase the size as needed.

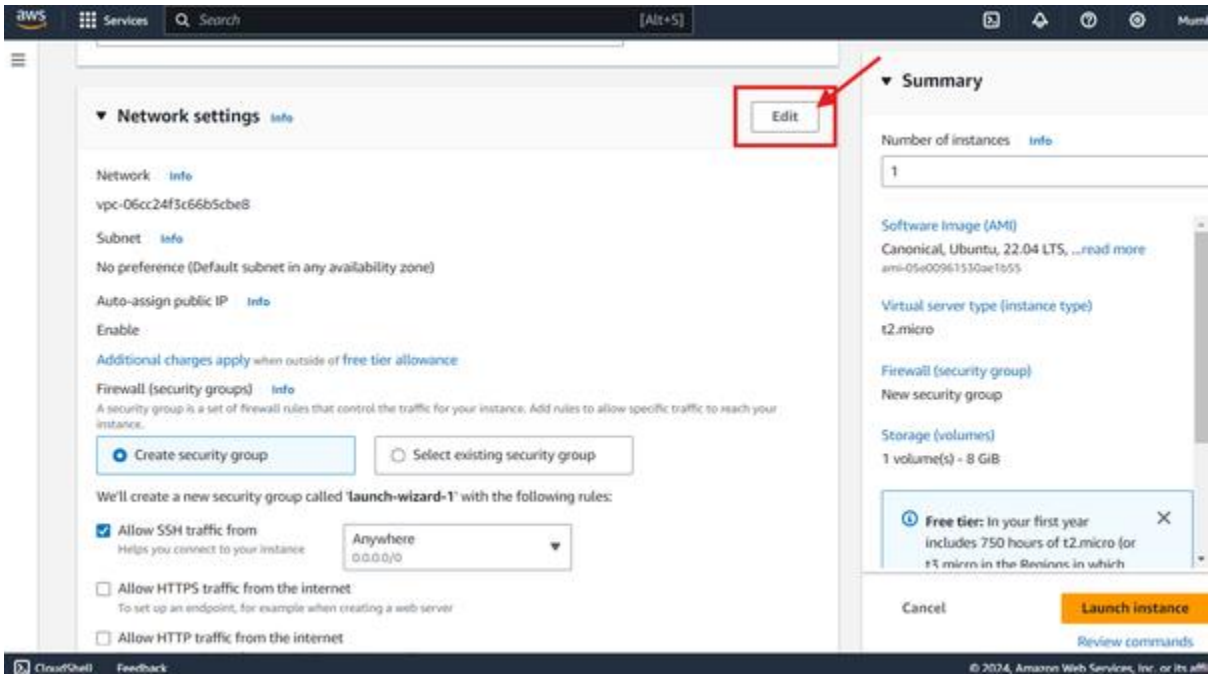


*** Add Tags:

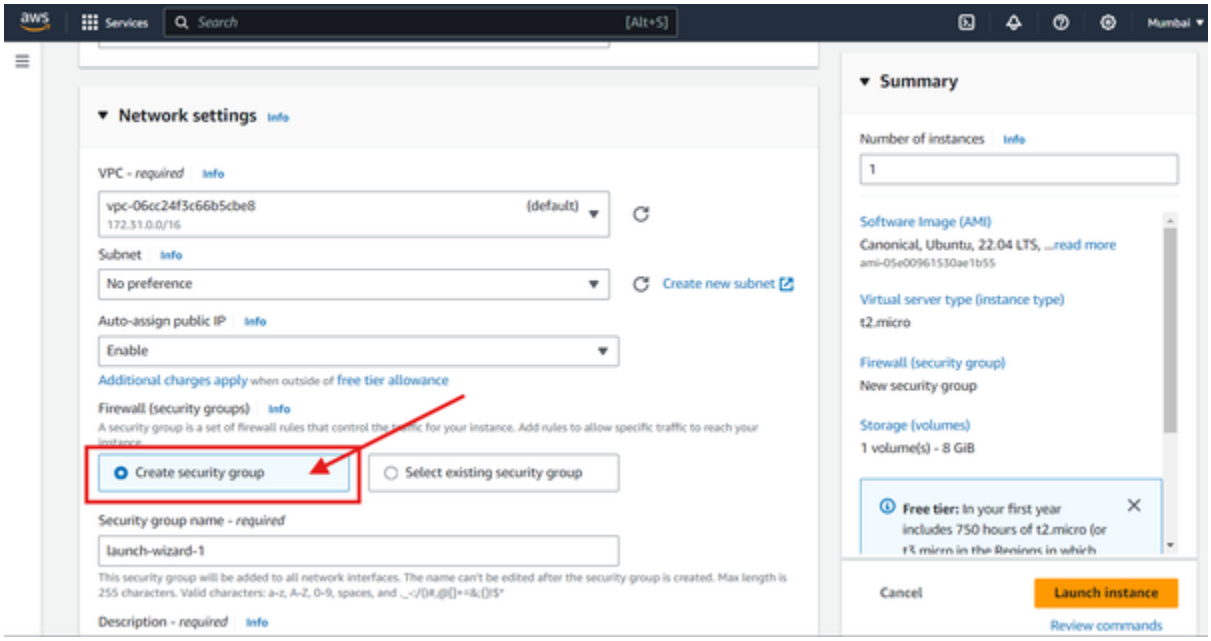
- Optionally add tags to your instance.

*** Configure Security Group:

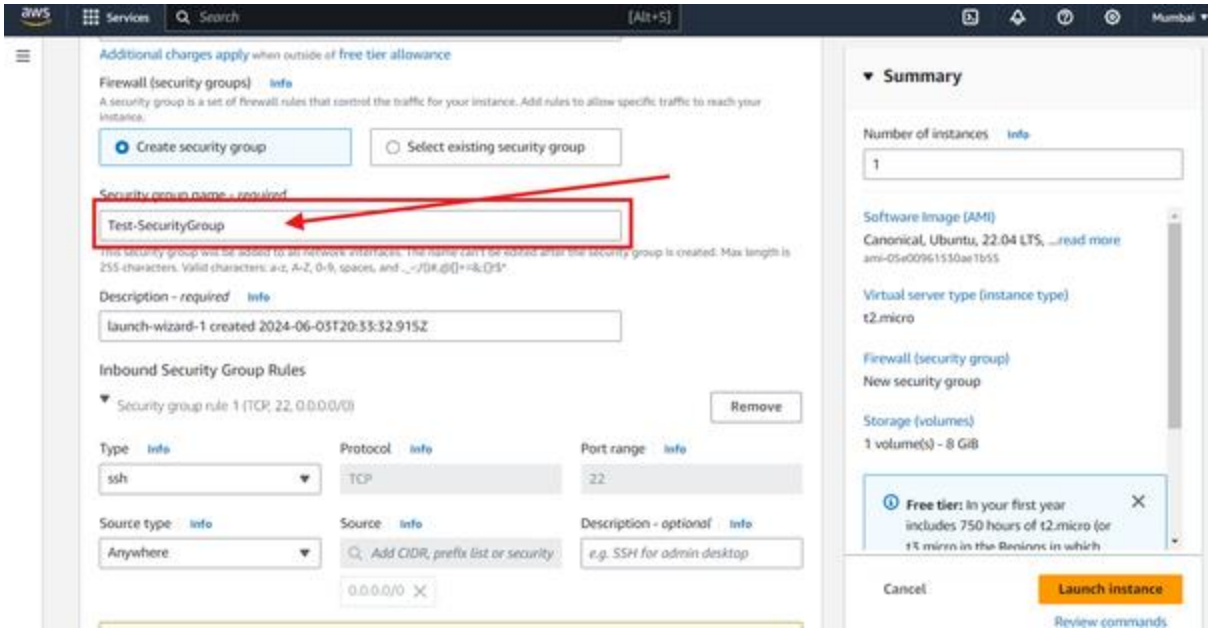
- Go to the Netwok Settings and Click on Edit option.



- Create a new security group.

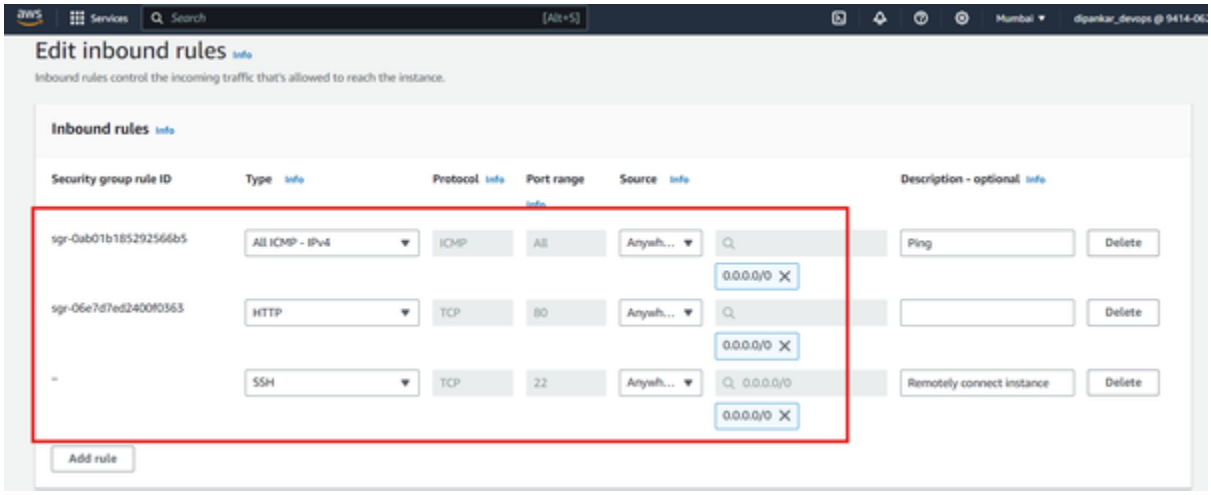


- Give the Name of the Security Group

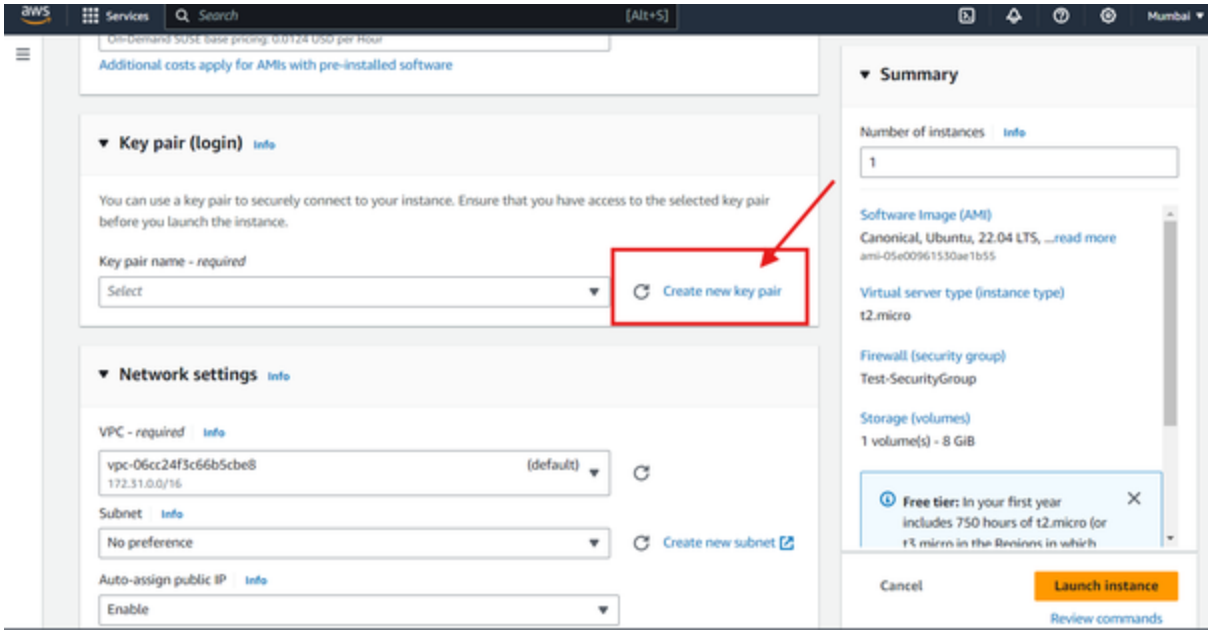


*** Set the following rules in the Security Group. (Inbound rules)

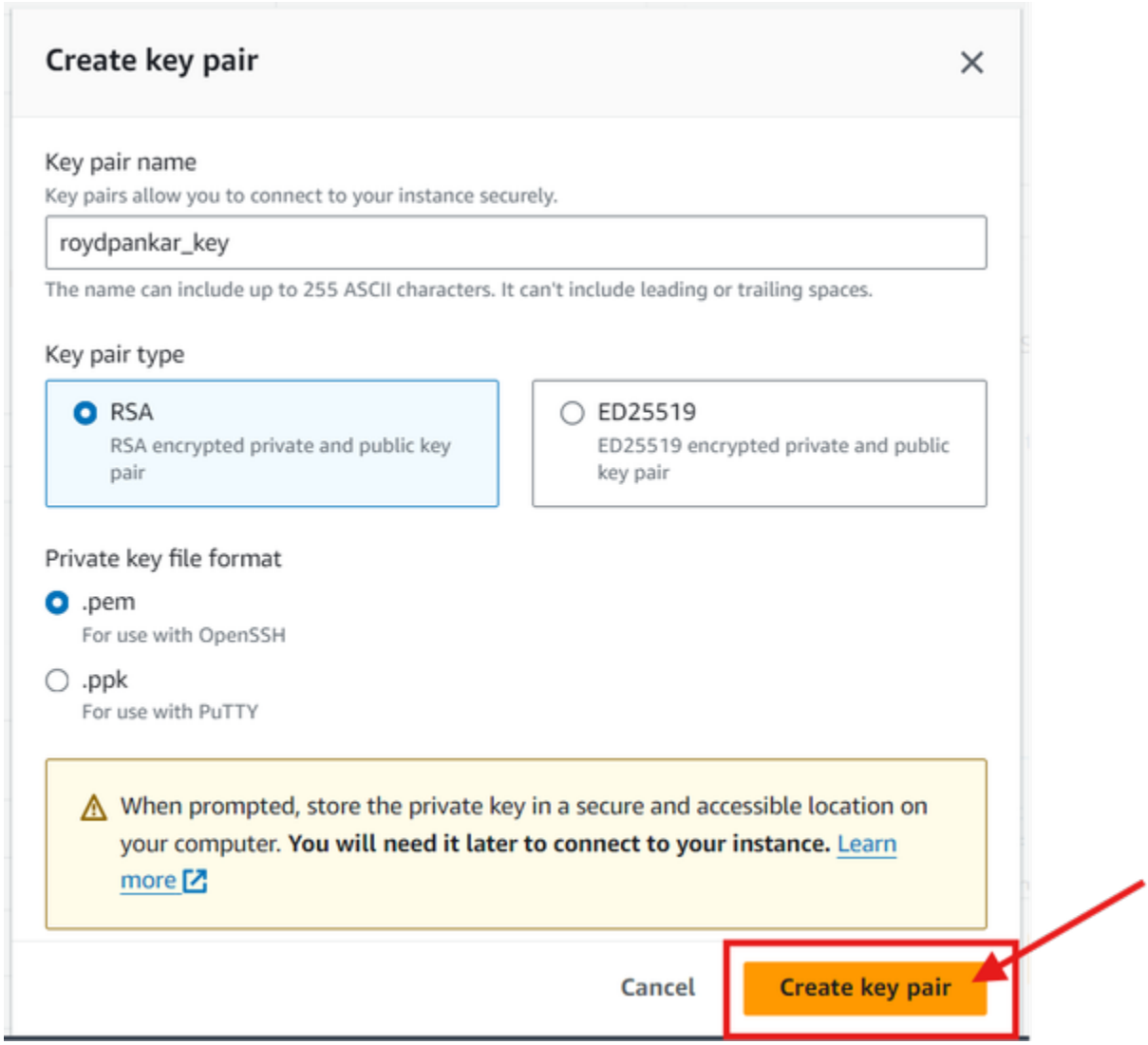
- HTTP: TCP, Port 80, Source: Anywhere (0.0.0.0/0)
- SSH: TCP, Port 22, Source: Anywhere (0.0.0.0/0) or your IP (for security).
- All ICMP - IPv4: ICMP, Port All, Source: Anywhere (0.0.0.0/0) or your IP (for security).



- Create new key pair .pem format.

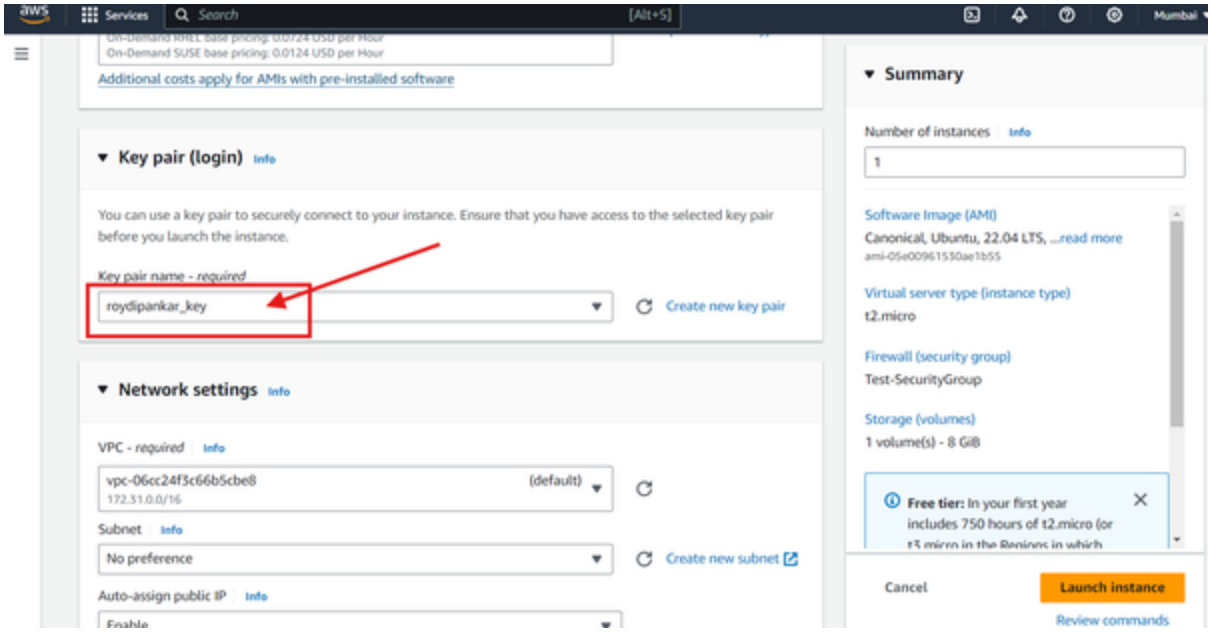


- Give the Name and Click on create key pair.

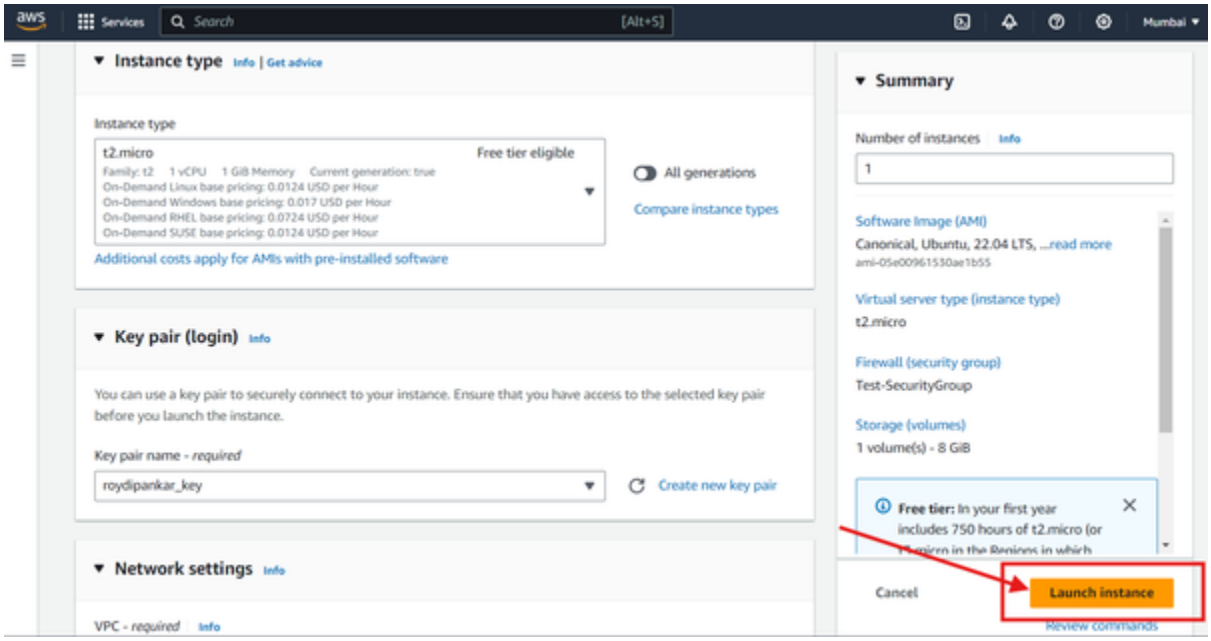


4. Review and Launch:

- Review your settings and click "Launch".
- Select an existing key pair or create a new key pair, download it, and keep it secure.

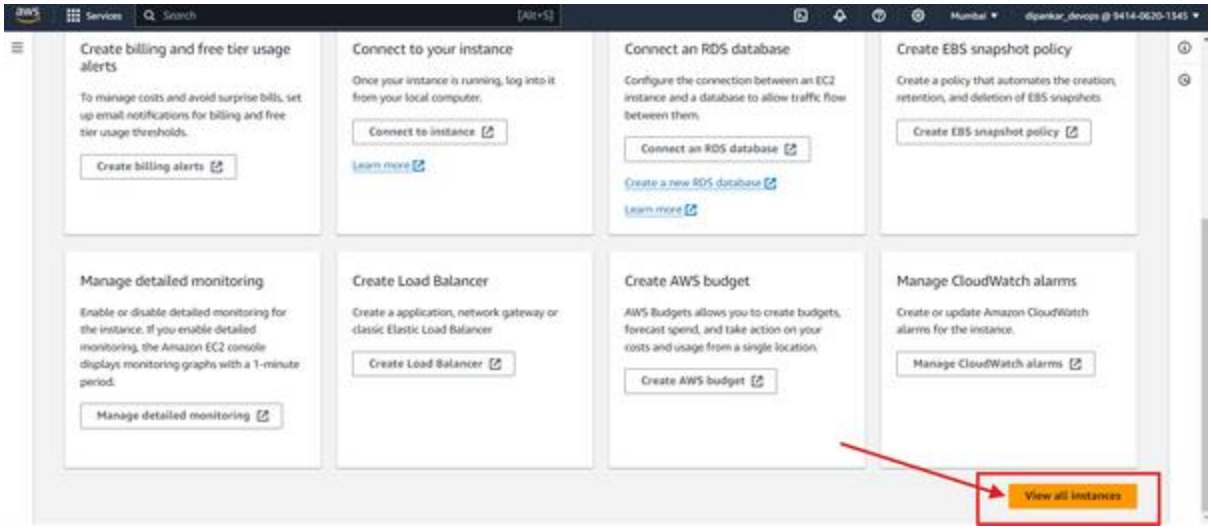


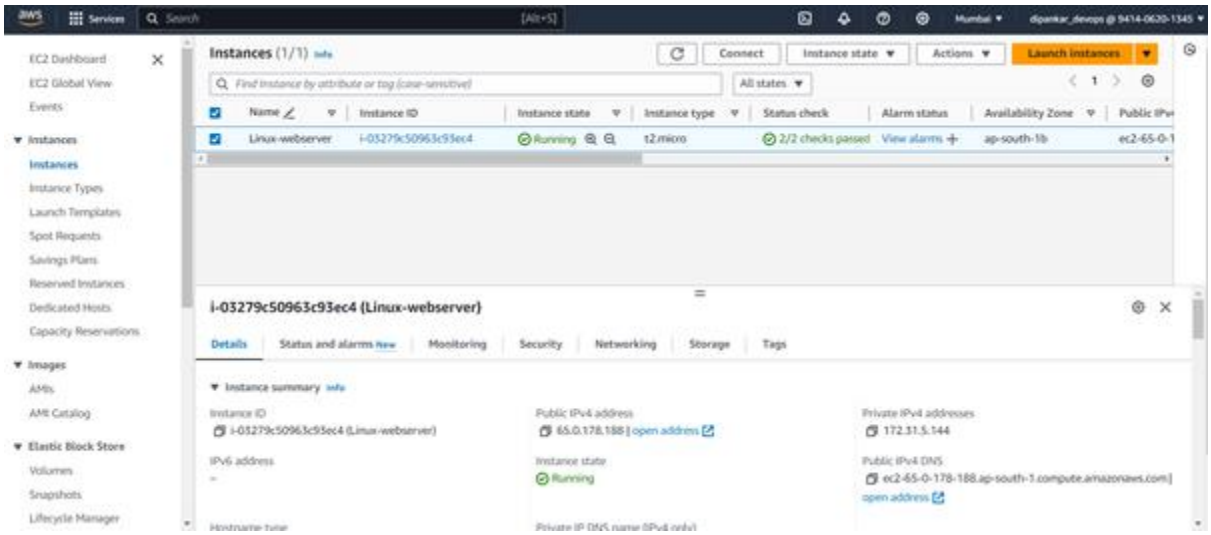
- Click "Launch Instances".



5. View Instances:

- Click "View all Instances" to see your running instances.





Step 2: Connect to Your EC2 Instance

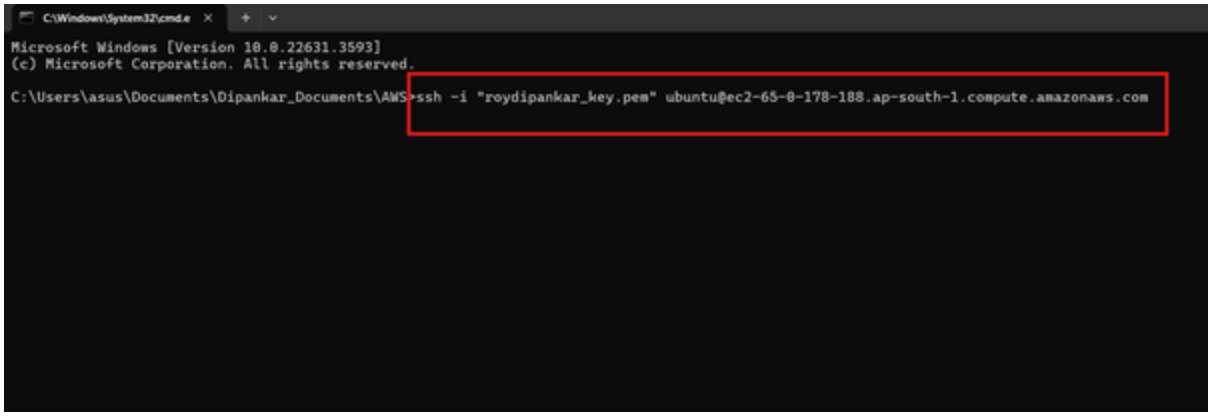
1. Open Terminal or Command Prompt:

- On your local machine, open the terminal (Linux/Mac) or Command Prompt (Windows).

2. Connect to the Instance:

- Navigate to the directory where your key pair file is located.
- Use the following command to connect to your instance (replace `<key-pair-file>` and `<instance-public-dns>` with your key file and instance's public DNS):

ssh -i <key-pair-file>.pem ec2-user@<instance-public-dns>



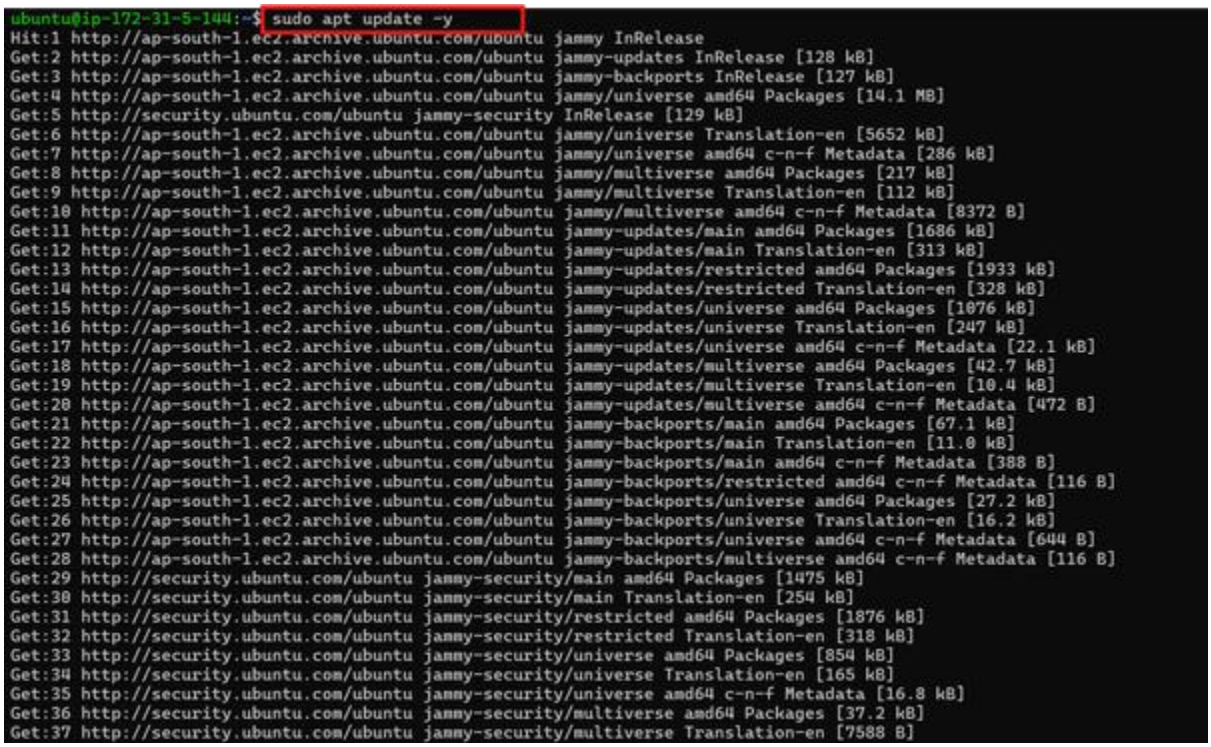
Step 3: Install a Web Server (Apache)

1. Update the Package Index:

- Run the following command to update the package index:

sudo yum update -y —→> [RHEL/Amazon Linux]

sudo apt update -y —→> [Ubuntu]

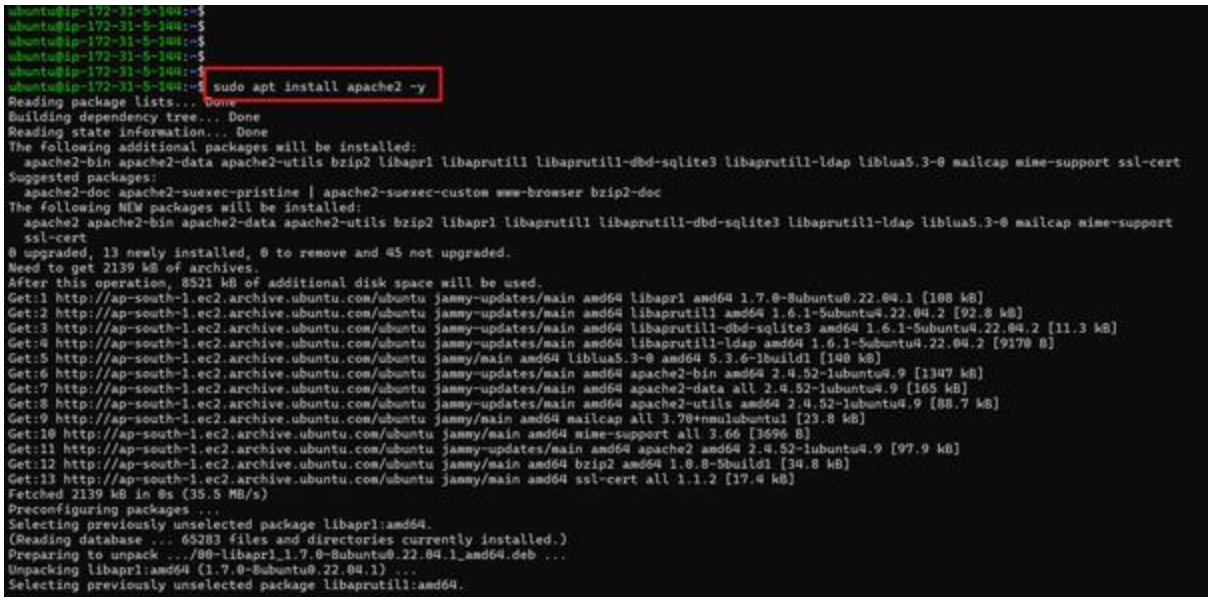


2. Install Apache (h**tt**pd):

- Install Apache web server with the following command:

sudo yum install h**tt**pd -y —→> [RHEL/Amazon Linux]

sudo apt install apache2 -y —→> [Ubuntu]



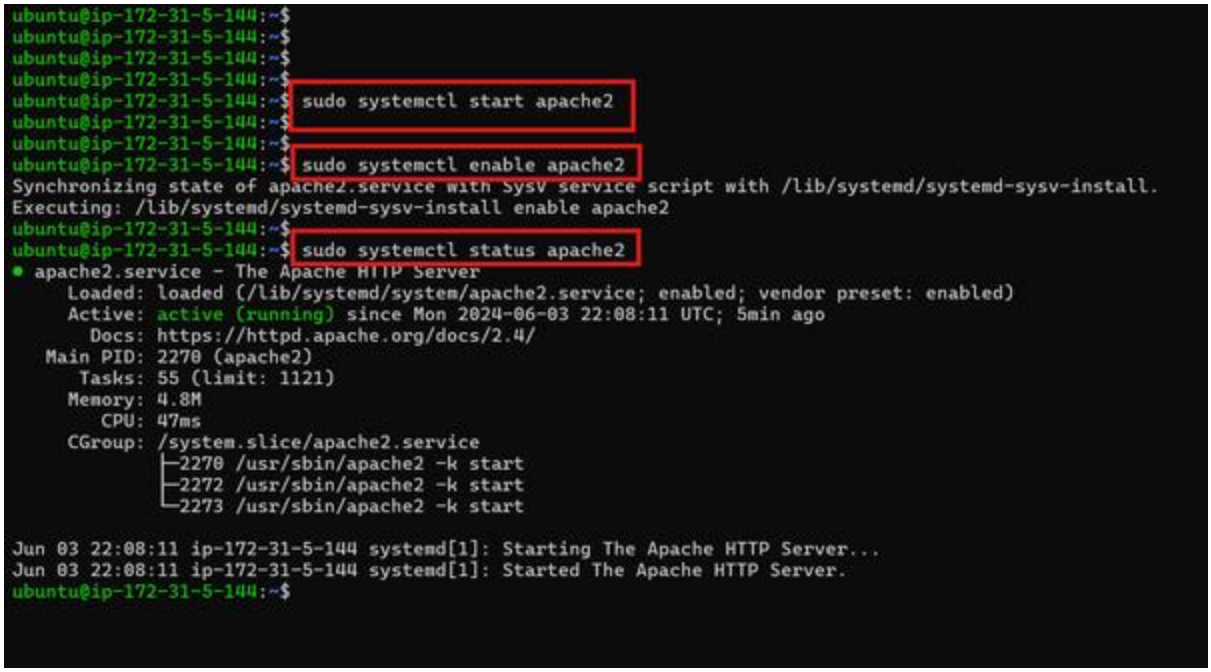
3. Start the Apache Service:

- Start Apache and ensure it starts on boot:

sudo systemctl start apache2

sudo systemctl enable apache2

sudo systemctl status apache2



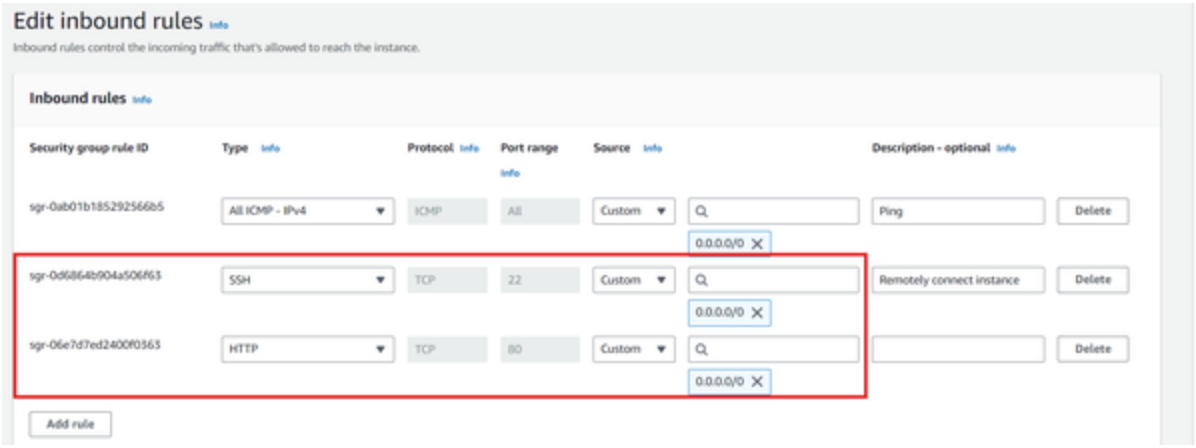
Step 4: Configure Security Group (If Not Done During Launch)

1. Navigate to Security Groups:

- In the EC2 Dashboard, click on "Security Groups" in the left-hand menu.

2. Edit Inbound Rules:

- Select your instance's security group and click on the "Inbound rules" tab.
- Ensure that there are rules for HTTP (port 80) and SSH (port 22).



Step 5: Host a Web Page

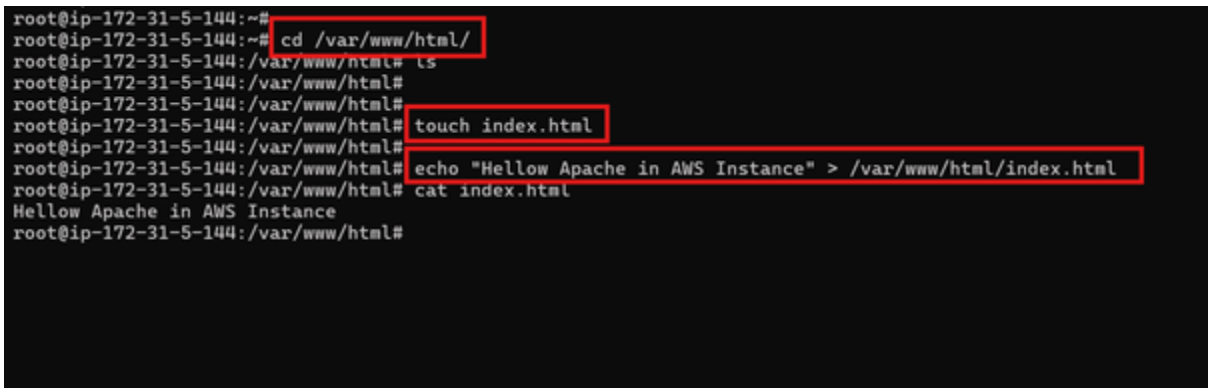
1. Create a Web Page:

- Create a simple HTML file in the Apache web root directory:

cd /var/www/html

touch index.html

echo "Hellow Apache in AWS Instance" > /var/www/html/index.html



2. Restart Apache:

- Restart Apache to ensure it picks up the new page:

sudo systemctl restart apache2

sudo systemctl status apache2

```
root@ip-172-31-5-144:~#
root@ip-172-31-5-144:~#
root@ip-172-31-5-144:~#
root@ip-172-31-5-144:~# sudo systemctl restart apache2
root@ip-172-31-5-144:~#
root@ip-172-31-5-144:~#
root@ip-172-31-5-144:~#
root@ip-172-31-5-144:~# sudo systemctl status apache2
● apache2.service - The Apache HTTP Server
     Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
     Active: active (running) since Mon 2024-06-03 22:36:09 UTC; 11s ago
       Docs: https://httpd.apache.org/docs/2.4/
    Process: 2853 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
   Main PID: 2859 (apache2)
      Tasks: 55 (limit: 1121)
     Memory: 4.8M
        CPU: 26ms
     CGroup: /system.slice/apache2.service
             ├─2859 /usr/sbin/apache2 -k start
             ├─2860 /usr/sbin/apache2 -k start
             └─2861 /usr/sbin/apache2 -k start

Jun 03 22:36:09 ip-172-31-5-144 systemd[1]: Starting The Apache HTTP Server...
Jun 03 22:36:09 ip-172-31-5-144 systemd[1]: Started The Apache HTTP Server.
root@ip-172-31-5-144:~#
```

3. Verify the Web Page:

- Open a web browser and navigate to your instance’s public DNS or IP address. You should see the "Hellow Apache in AWS Instance" message.

Conclusion

You've successfully launched a Linux server in AWS, configured it as a web server, and hosted a simple web page. You can now start developing and deploying your web applications on this server. Remember to manage your server responsibly, including monitoring performance, applying security updates, and optimizing configurations as needed.