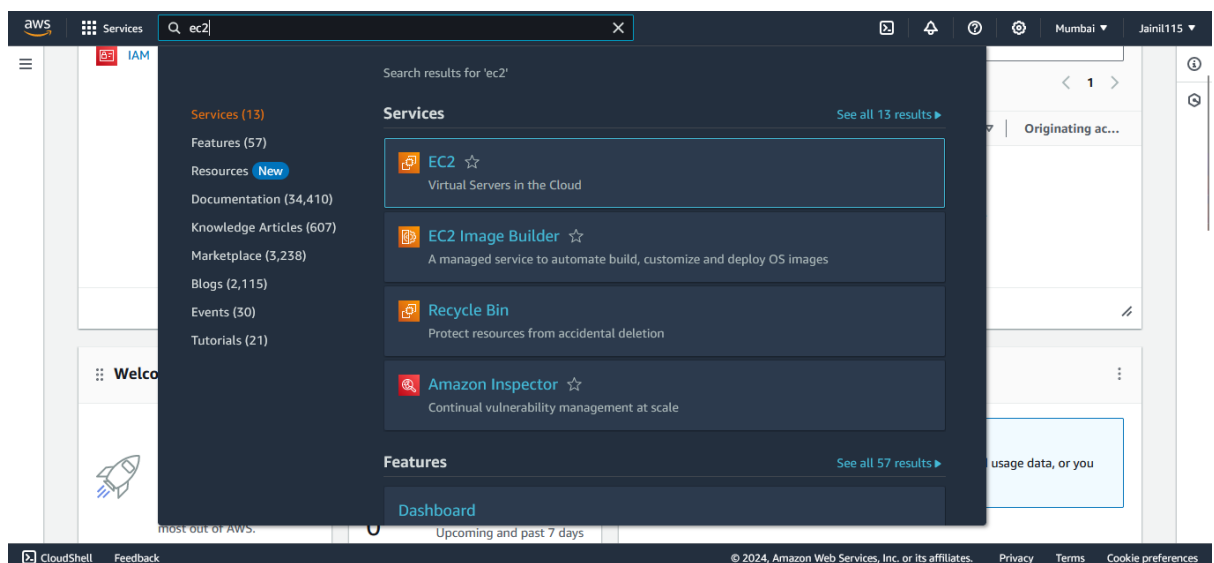


TASK 1: Launch an EC2 Instance:

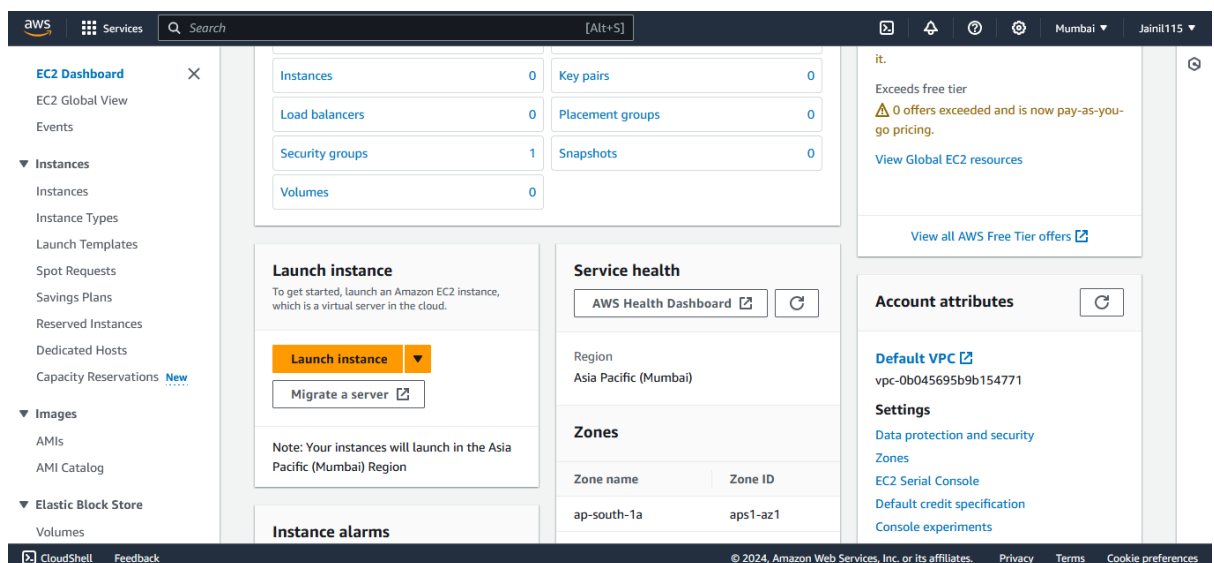
1. Launch a new EC2 instance using the Amazon Linux 2 AMI using AWS console.
2. Configure Security Group:
 1. With 22 and 80 Ports open.
3. Connect to EC2 Instance:
 1. Connect to the newly launched EC2 instance using SSH.

Steps to launch a new EC2 instance using the Amazon Linux 2 AMI using AWS console.:

1. Search for ec2 in search tab inside aws console.



2. In EC2 click on “Launch Instance”.



3. After that enter the name of the web server. Then search for Amazon Linux 2 and select Amazon Linux 2 AMI inside the Application and OS images tab. Select instance type

t2.micro. We need to generate key pair in order to access this Virtual machine using SSH. Enter the name of the key and select RSA and .pem file format for the key. Select “Allow SSH traffic and select “Anywhere” and also allow HTTP traffic and configure the security group. In configure storage select 8gb of gp3 volume which is eligible for free tier. Then click on Launch Instance.

This screenshot shows the 'Launch an instance' page in the AWS Management Console, specifically the 'Name and tags' step. The 'Name' field is populated with 'myLinux2Server'. The 'Application and OS Images (Amazon Machine Image)' section shows a search for 'Linux 2' with the 'Amazon Linux 2 AMI (HVM) - Kernel 5.10-hvm-2.0.20240124.0-x86_64-gp3' selected. The 'Summary' panel on the right shows 'Number of instances' as 1, 'Software Image (AMI)' as Amazon Linux 2 AMI (HVM), 'Virtual server type (instance type)' as t2.micro, 'Firewall (security group)' as New security group, and 'Storage (volumes)' as 1 volume(s) - 8 GiB. A 'Free tier' notification box is visible, stating that the first year includes 750 hours of t2.micro usage.

Launch an instance

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags

Name: myLinux2Server

Application and OS Images (Amazon Machine Image)

Search: Linux 2

Amazon Machine Image (AMI): amzn2-ami-kernel-5.10-hvm-2.0.20240124.0-x86_64-gp3

Summary

- Number of instances: 1
- Software Image (AMI): Amazon Linux 2 AMI (HVM) - Kernel 5.10-hvm-2.0.20240124.0-x86_64-gp3
- Virtual server type (instance type): t2.micro
- Firewall (security group): New security group
- Storage (volumes): 1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GiB of snapshots, and 100 GB of bandwidth to the internet.

This screenshot shows the 'Key pair (login)' step of the 'Launch an instance' process. The 'Key pair name' field is populated with 'MyAmazonLinux2KeyPair'. The 'Summary' panel on the right remains the same as in the previous step.

Key pair (login)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required: MyAmazonLinux2KeyPair

Summary

- Number of instances: 1
- Software Image (AMI): Amazon Linux 2 AMI (HVM) - Kernel 5.10-hvm-2.0.20240124.0-x86_64-gp3
- Virtual server type (instance type): t2.micro
- Firewall (security group): New security group
- Storage (volumes): 1 volume(s) - 8 GiB

This screenshot shows the 'Network settings' step of the 'Launch an instance' process. The 'Network' is set to 'vpc-0b045695b9b154771'. The 'Subnet' is set to 'No preference (Default subnet in any availability zone)'. The 'Auto-assign public IP' is set to 'Enable'. The 'Firewall (security groups)' section shows 'Create security group' selected. The 'We'll create a new security group called 'launch-wizard-4' with the following rules:' section shows 'Allow SSH traffic from' checked with 'Anywhere' selected, and 'Allow HTTP traffic from the internet' checked. A warning message states: 'Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.' The 'Summary' panel on the right remains the same.

Network settings

Network: vpc-0b045695b9b154771

Subnet: No preference (Default subnet in any availability zone)

Auto-assign public IP: Enable

Firewall (security groups): Create security group

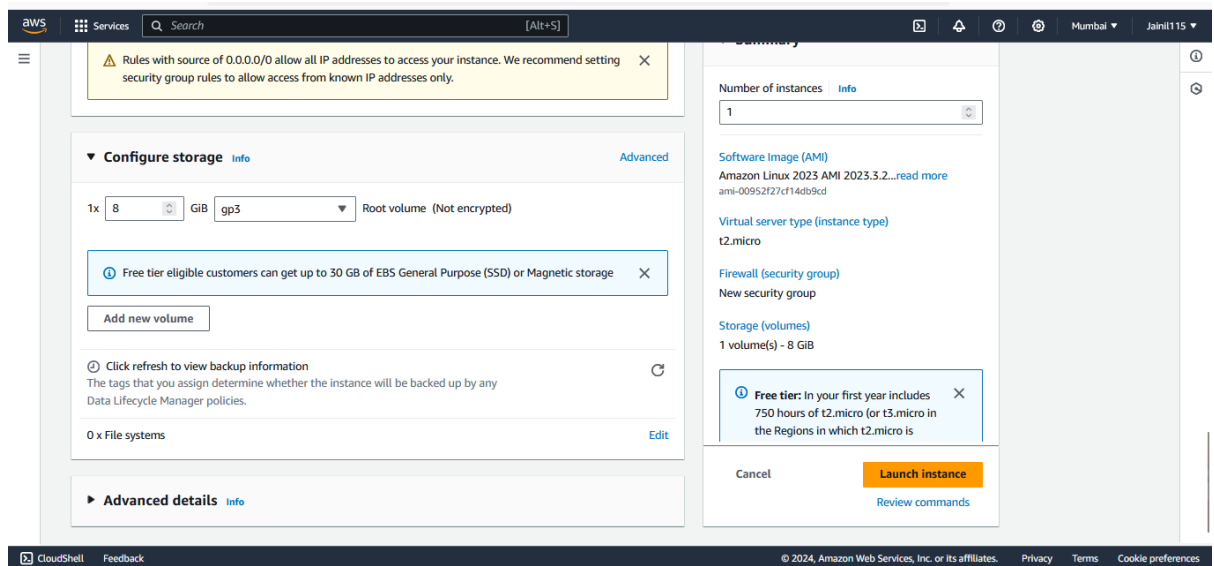
We'll create a new security group called 'launch-wizard-4' with the following rules:

- ☒ Allow SSH traffic from: Anywhere (0.0.0.0/0)
- ☐ Allow HTTPS traffic from the internet
- ☒ Allow HTTP traffic from the internet

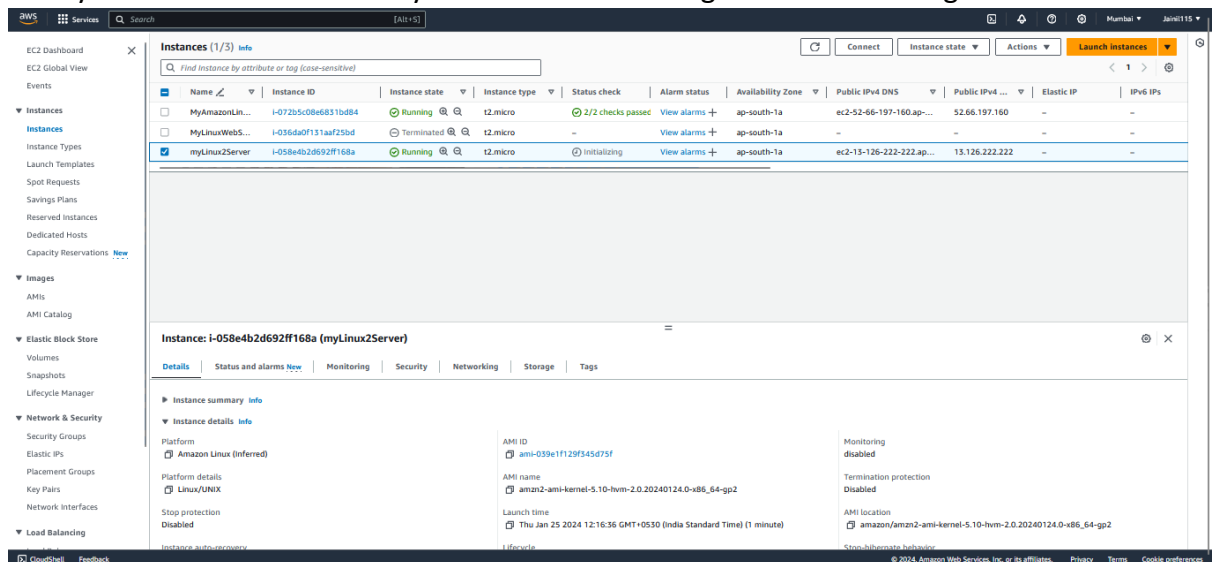
Summary

- Number of instances: 1
- Software Image (AMI): Amazon Linux 2 AMI (HVM) - Kernel 5.10-hvm-2.0.20240124.0-x86_64-gp3
- Virtual server type (instance type): t2.micro
- Firewall (security group): New security group
- Storage (volumes): 1 volume(s) - 8 GiB

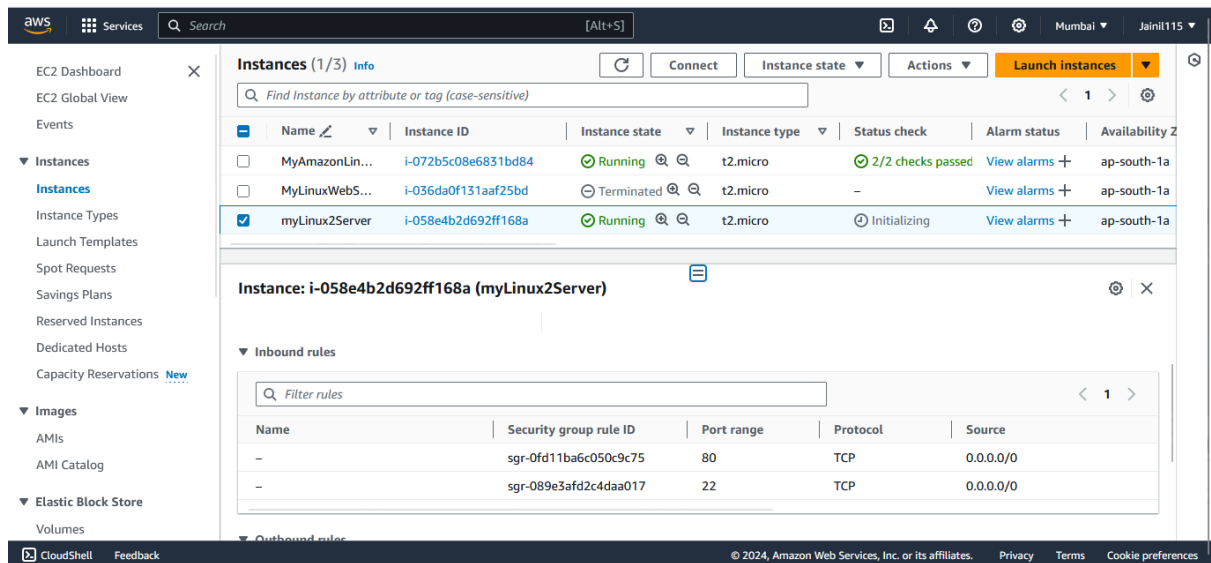
Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GiB of snapshots, and 100 GB of bandwidth to the internet.



4. Now you will be able to see “myLinux2Server” running inside the running instances.

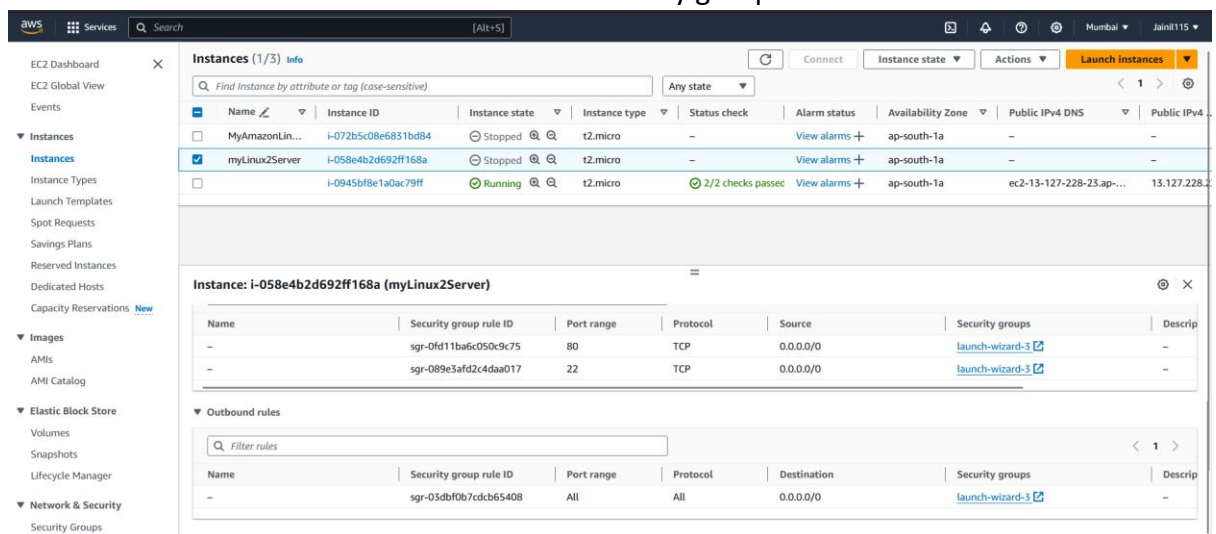


5. Now click on “myLinux2Server” to view details about that instance. Inside that click on security tab and scroll down to inbound rules, where we can see that port 22 and 80 are open.

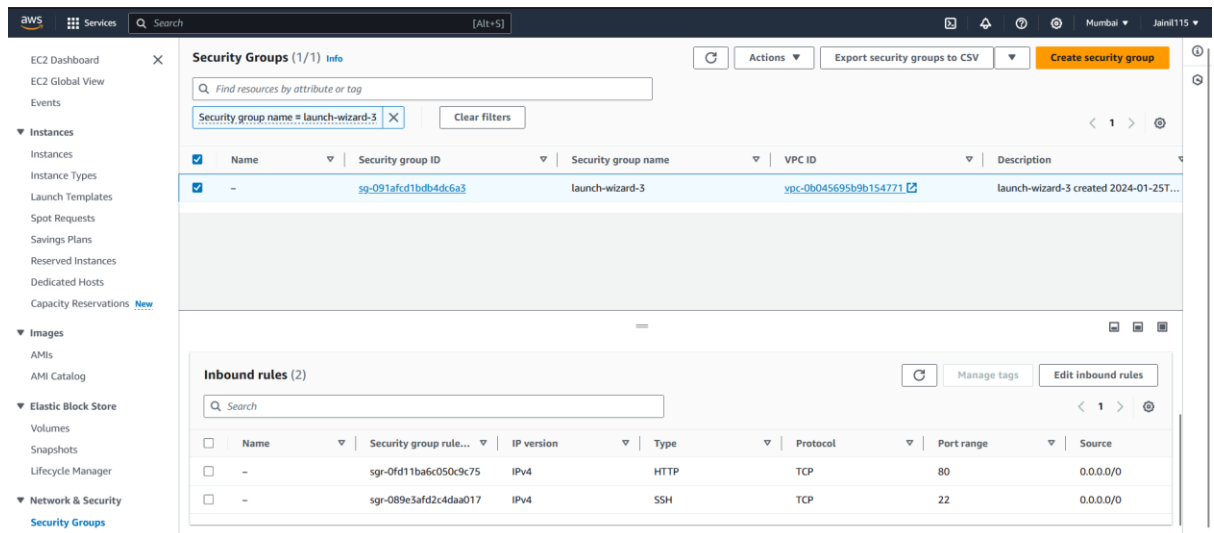


Steps to configure Security group with port 22 and 80 open (can be done during the creation of the EC2 Instance):

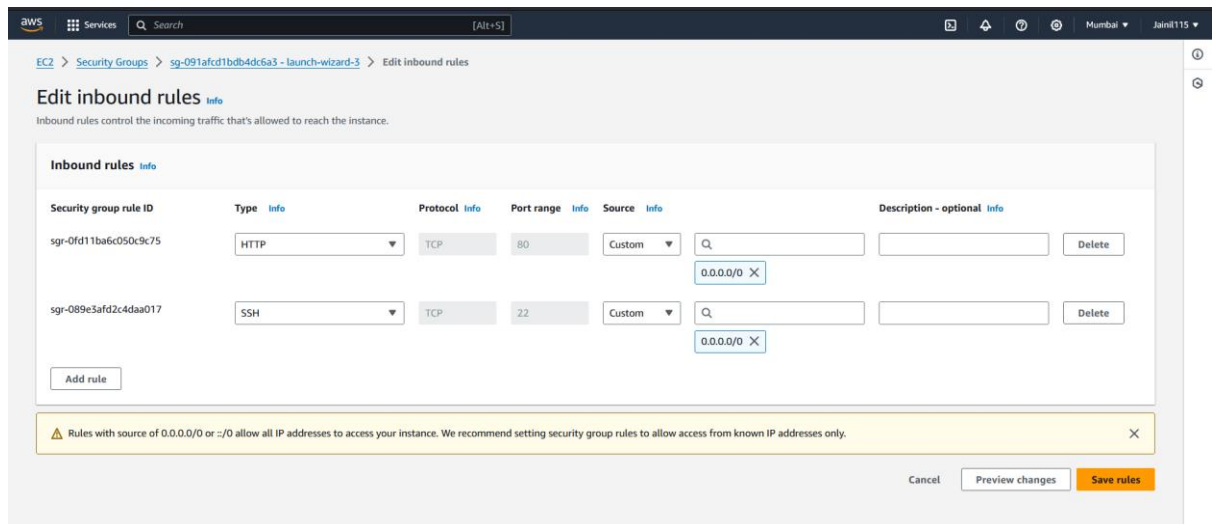
1. Select EC2 instance "myLinux2Server", Then select security group in myLinux2Server's details. Then click on launch-wizard-3 under security group.



2. Now select the security group and click on Inbound rules and then click on edit inbound rules.



- Here add HTTP and SSH rules and their port numbers are 80 and 22 respectively. After that click on save rules.



Steps to connect to the newly launched EC2 instance using SSH:

Steps:

- Open PowerShell and navigate to the folder where the "MyAmazonLinux2KeyPair.pem" is located.

