Lesson 03 Demo 06

Using a Classic Load Balancer to Distribute Traffic

Objective: To demonstrate the process of creating a Classic Load Balancer in AWS EC2 and deploying it to multiple instances in different availability zones

**Tools required:** AWS Management Console, AWS EC2, and web browser

Prerequisites: None

Steps to be followed:
1. Create a security group
2. Launch instances with different availability zones
3. Create the Classic Load Balancer
4. Deploy the Classic Load Balancer to an EC2 instance
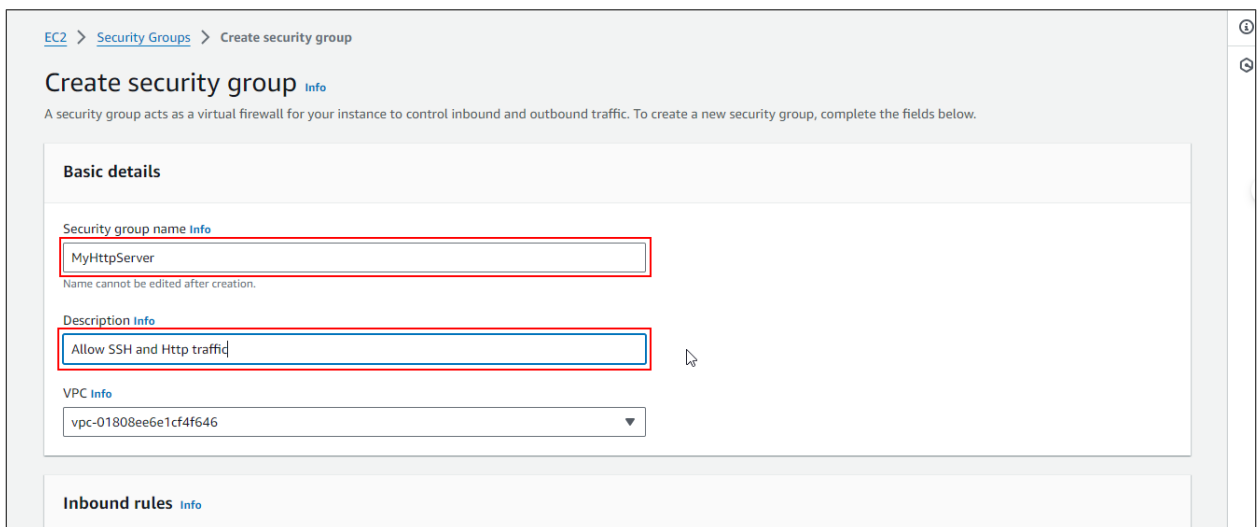
Step 1: Create a security group

1.1 Navigate to the AWS Management Console home page, search for and click on **Security Groups**
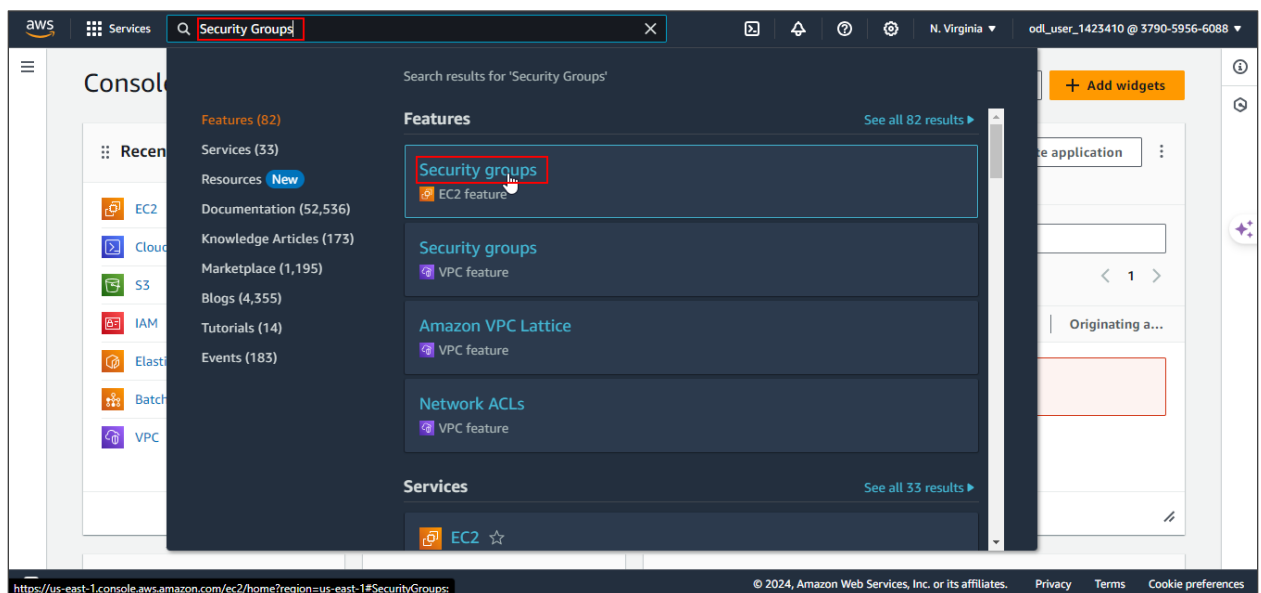
1.2 Click on **Create security group**
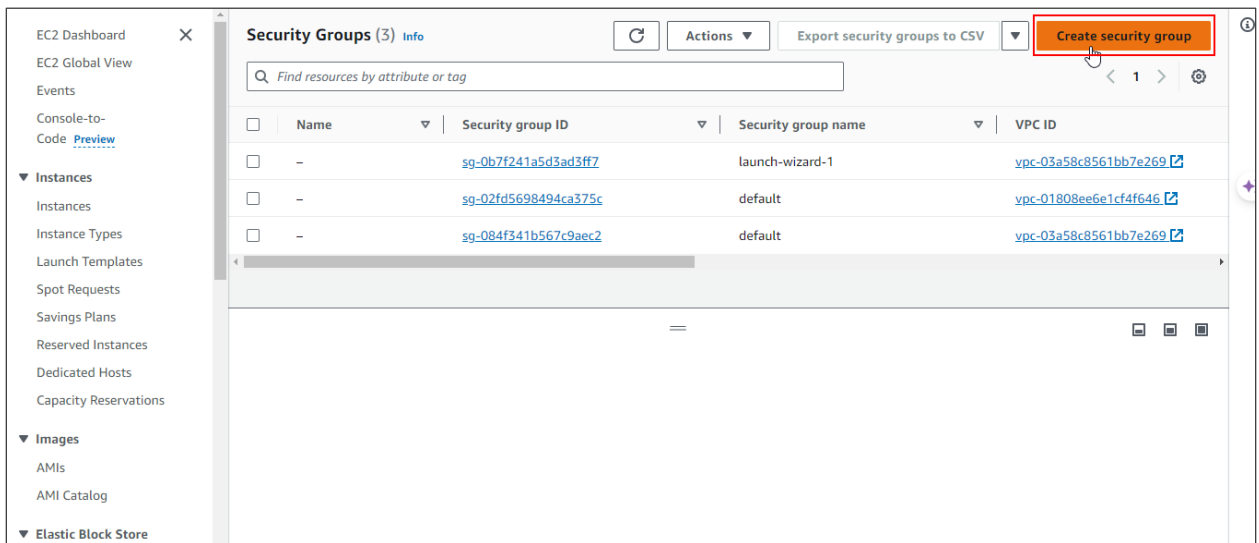
1.3 In the **Create security group** section, add **MyHttpServer** for the Security group name and **Allow SSH and Http traffic** for the Description

1.4 Set the Inbound rules type to **SSH** and **HTTP** with source set to **Anywhere IPv4**

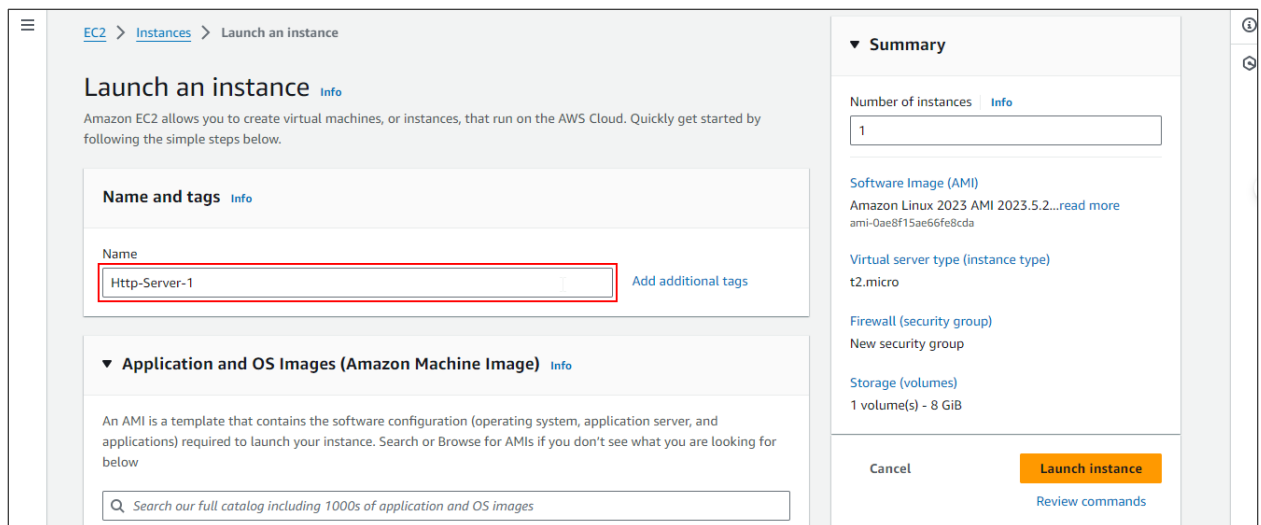## 1.5 Click on **Create security group**

The security group has been created successfully.

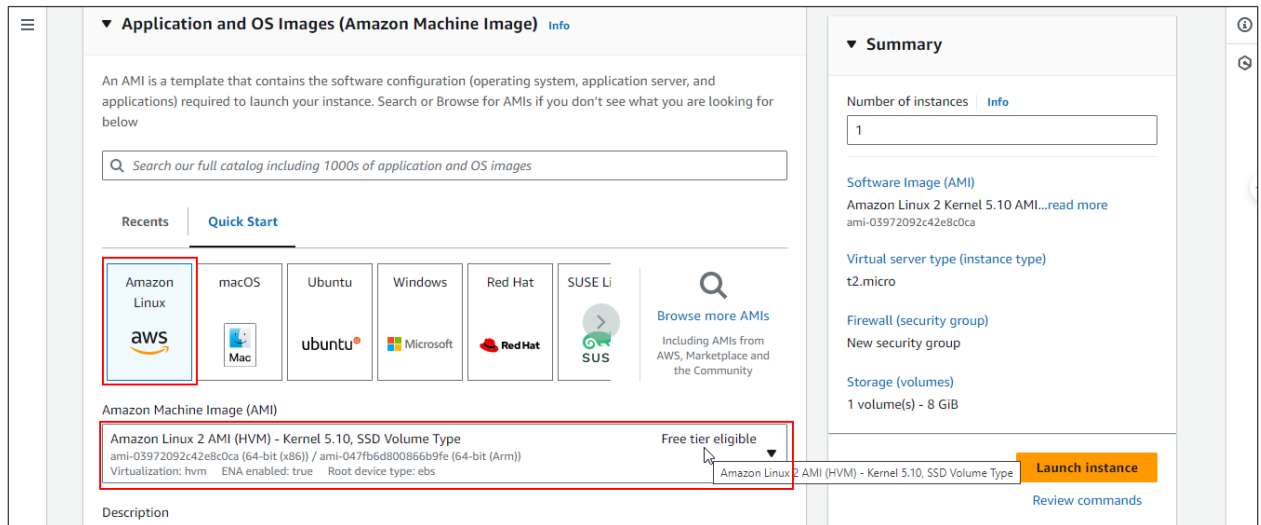## Step 2: Launch instances with different availability zones

2.1 Navigate to **Instances** and click on **Launch instances**
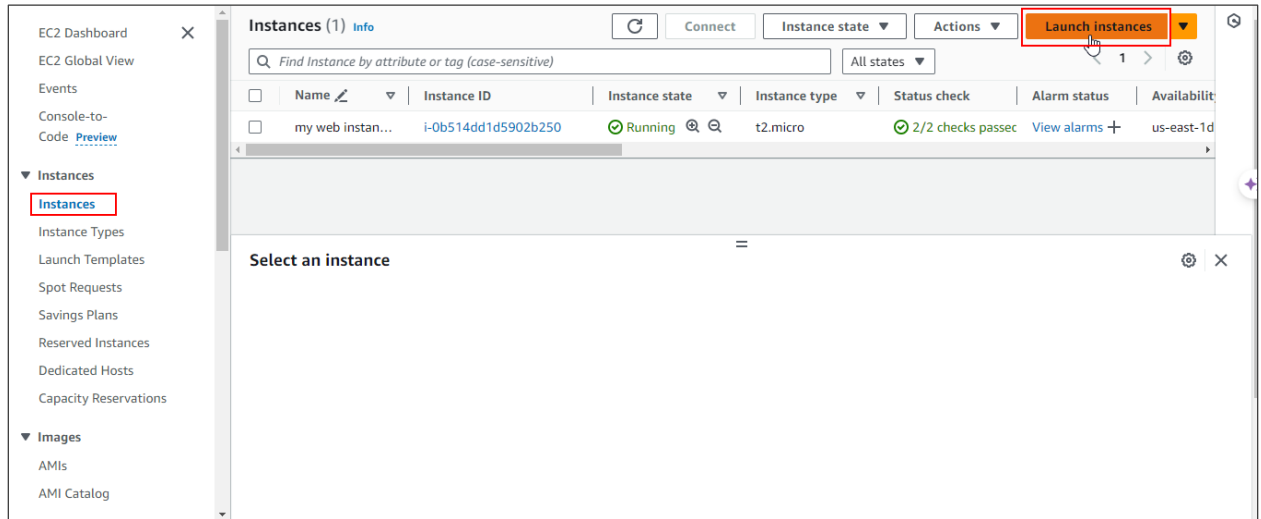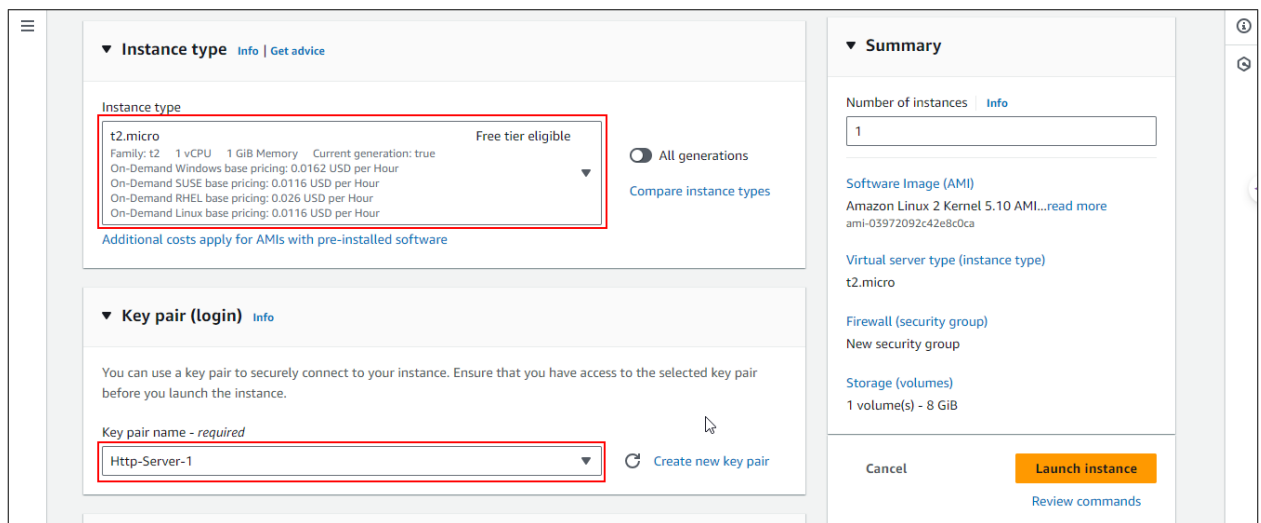

2.2 Add the Name as **Http-Server-1**

2.3 Select **Amazon Linux** as the OS and **Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type** as the AMI

Launch the first instance by assigning it a name and specifying the subnet information along with the availability zone

2.4 Select the **Instance type** as **t2.micro**, create a new key pair, and name it **Http-Server-1**

2.5 Enter the network settings details as shown:

2.6 Click on **Select existing security group** and select **MyHttpServer**

2.7 Provide the user data code under the **Advanced details** section to install and start the HTTP server, and click on **Launch instance**

#!/bin/bash

 # Use this for your user data (script from top to bottom)
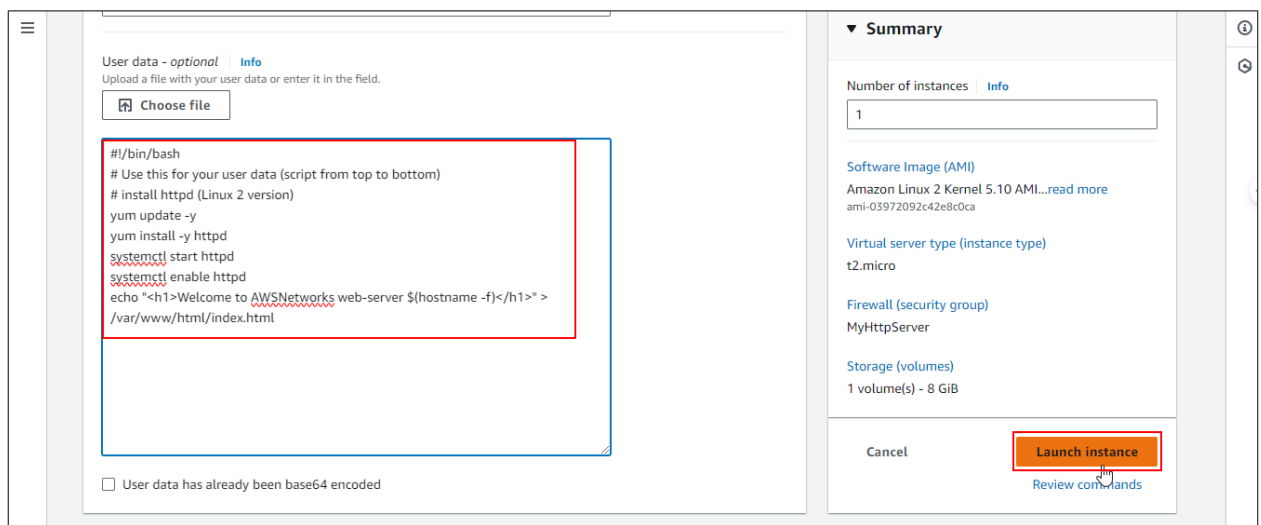
 # install httpd (Linux 2 version)

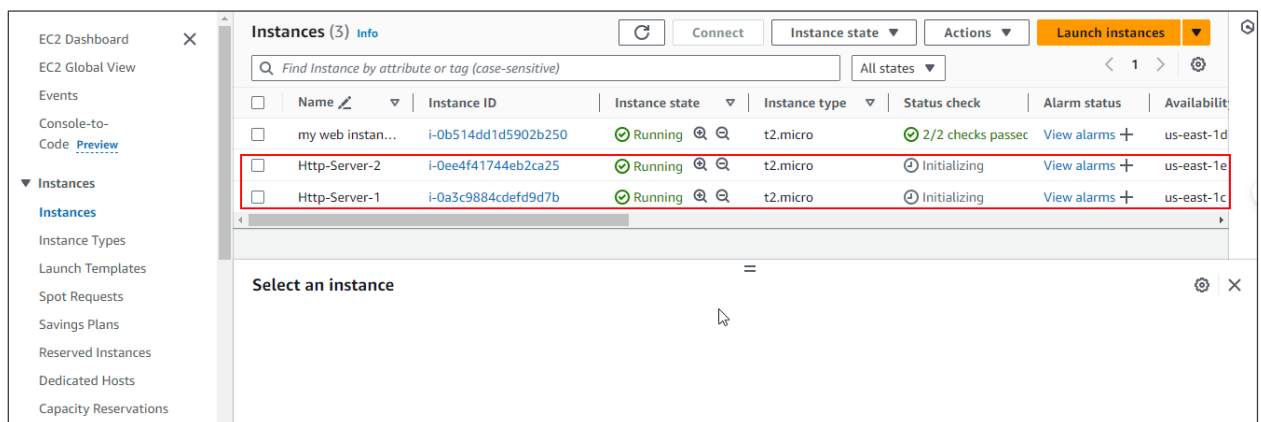**yum update -y**

yum install -y httpd

systemctl start httpd

systemctl enable httpd

echo "<h1>Welcome to AWSNetworks web-server $(hostname -f)</h1>" > /var/www/html/index.html
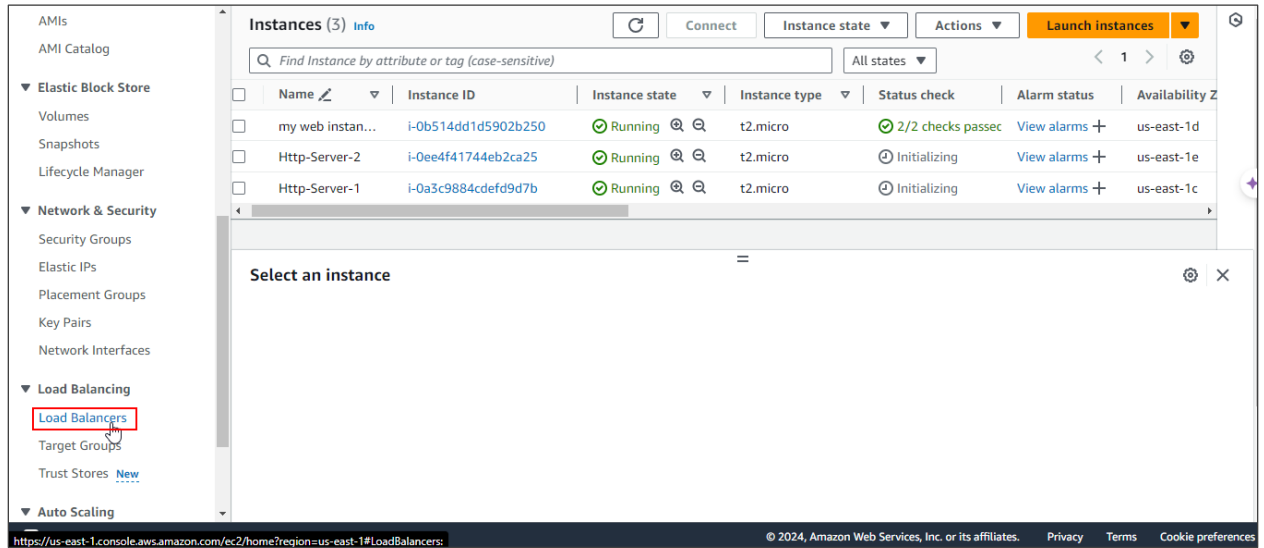

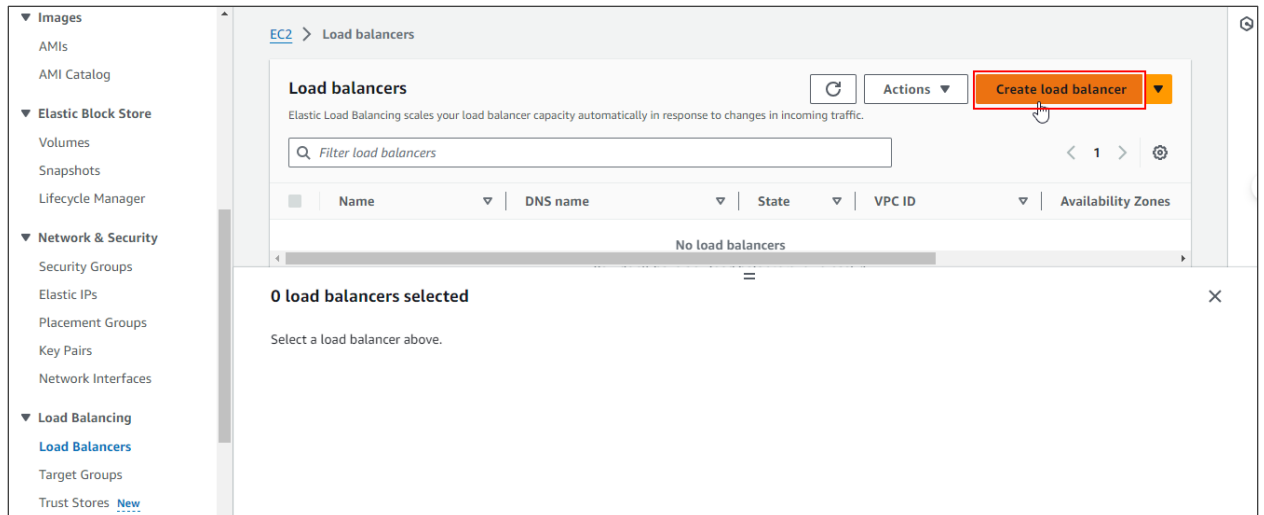2.8 Repeat the steps to launch the second instance with a different availability zone

The instances with different availability zones have been launched successfully.
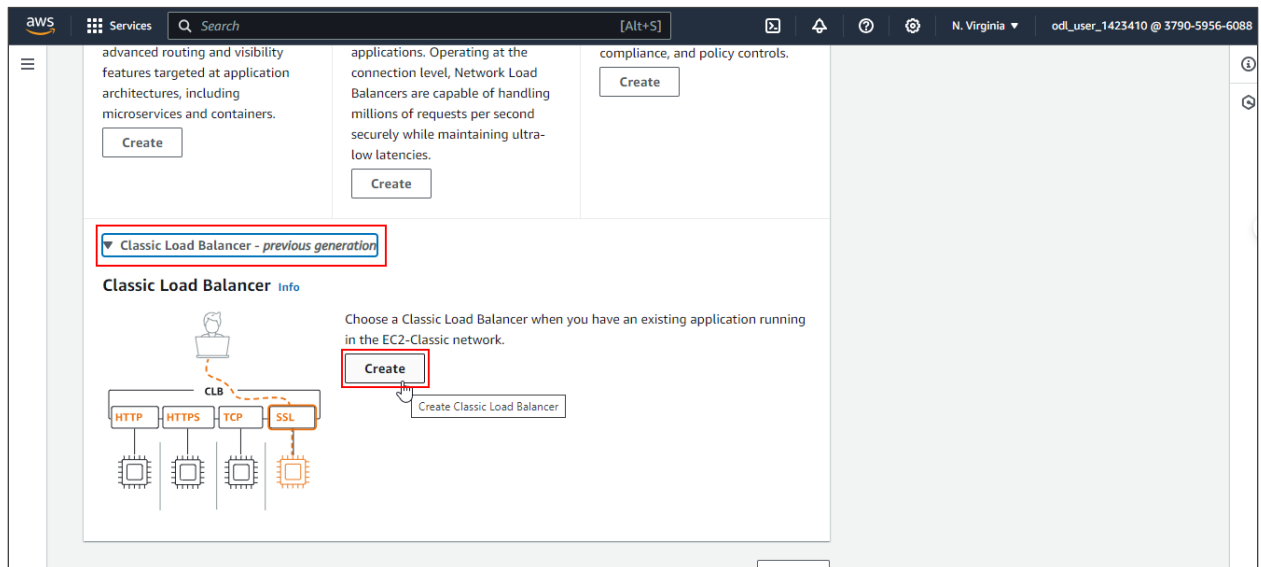
Step 3: Create the Classic Load Balancer

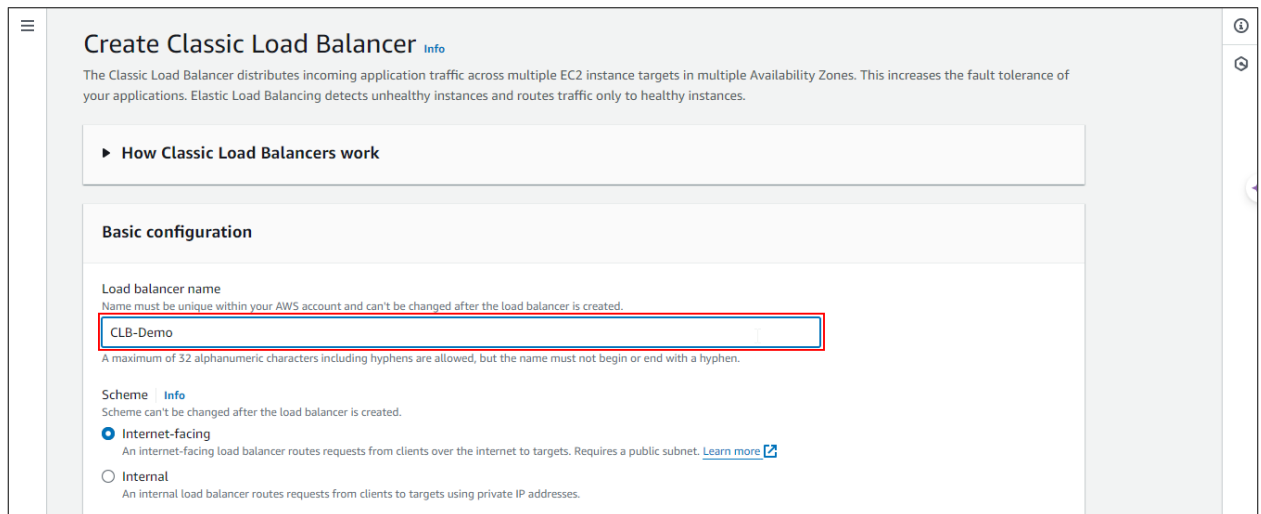3.1 Navigate to **Load Balancers** on the left pane and click on it

3.2 Click on the **Create Load Balancer** button

3.3 Select **Classic Load Balancer** and click on **Create**

3.4 Enter **CLB-Demo** as the **Load Balancer Name**

3.5 Select **us-east-1c** and **us-east-1e** as the **Availability Zones** in the **Mappings** section

3.6 Select the existing security groups **MyHttpServer** and **default**

3.7 Change the Response timeout to **5** seconds and the Interval timeout to **30** seconds in the **Health checks** domain

3.8 Click on **Add instances**

3.9 Select both instances and click on **Confirm**

3.10 Click on **Add new tag** in the **Load balancer tags - optional** section

3.11 Provide a **Key** and **Value** name for the tags, then verify the details
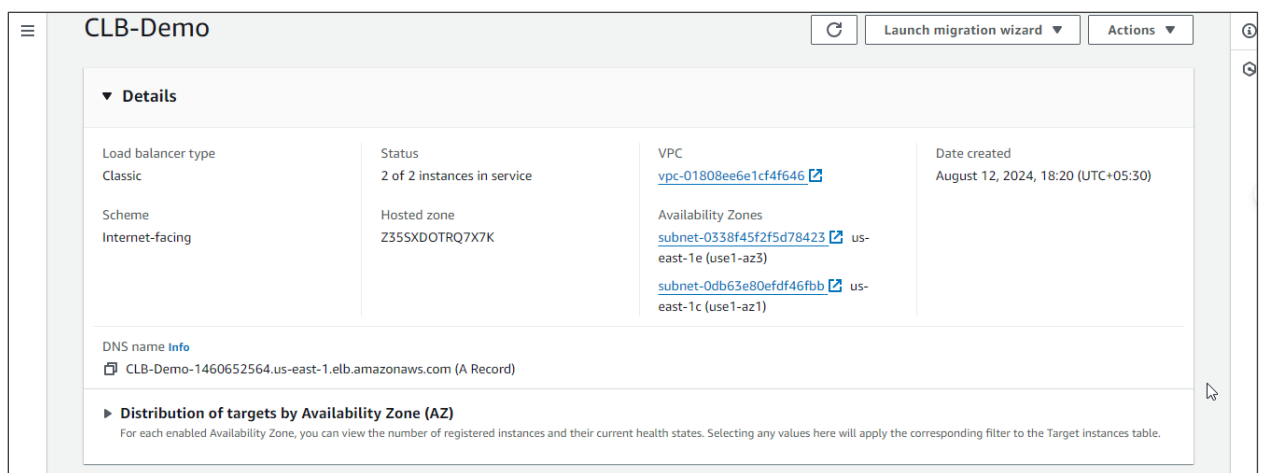

3.12 Click on **Create load balancer**

The load balancer has been created successfully.

Step 4: Deploy the Classic Load Balancer to an EC2 instance

4.1 Click on the **CLB-Demo** load balancer
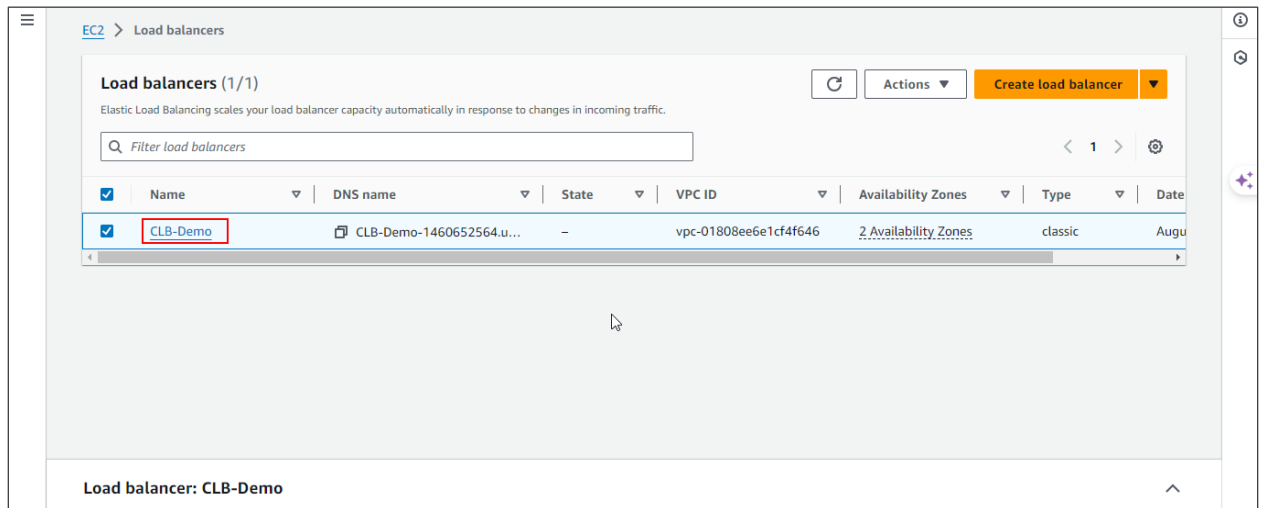
4.2 Verify the details

4.3 Click on the **Target instances** tab and check the status of both instances

The status needs to be **In-service,** which means that both instances are running successfully.

4.4 Copy the **DNS name** and paste it into the browser to view the output

Welcome to AWSNetworks web-server ip-172-31-50-174.ec2.internal
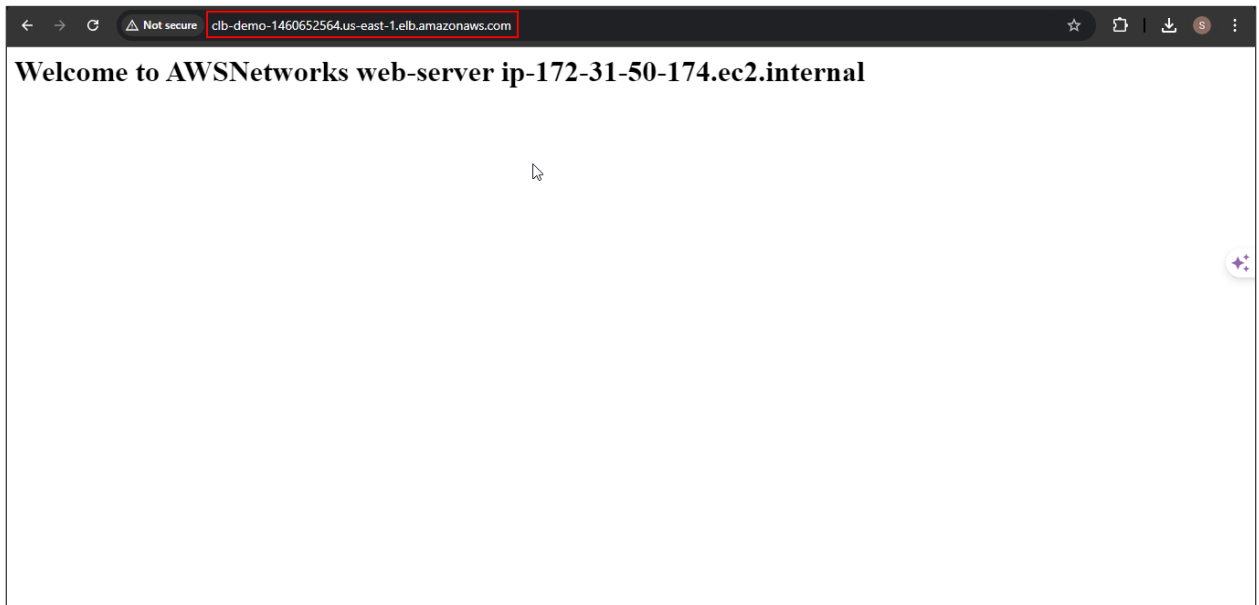
> **Note:** The user data script running on the instances will display a welcome message when accessing the Load Balancer's DNS name in the browser.

By following these steps, you have successfully deployed a Classic Load Balancer and distributed traffic across EC2 instances.