

Lesson 03 Demo 08

Creating Route Requests in ALB

Objective: To set up routing requests in Amazon Web Services (AWS) using an Application Load Balancer (ALB)

Tools required: Amazon Workspace

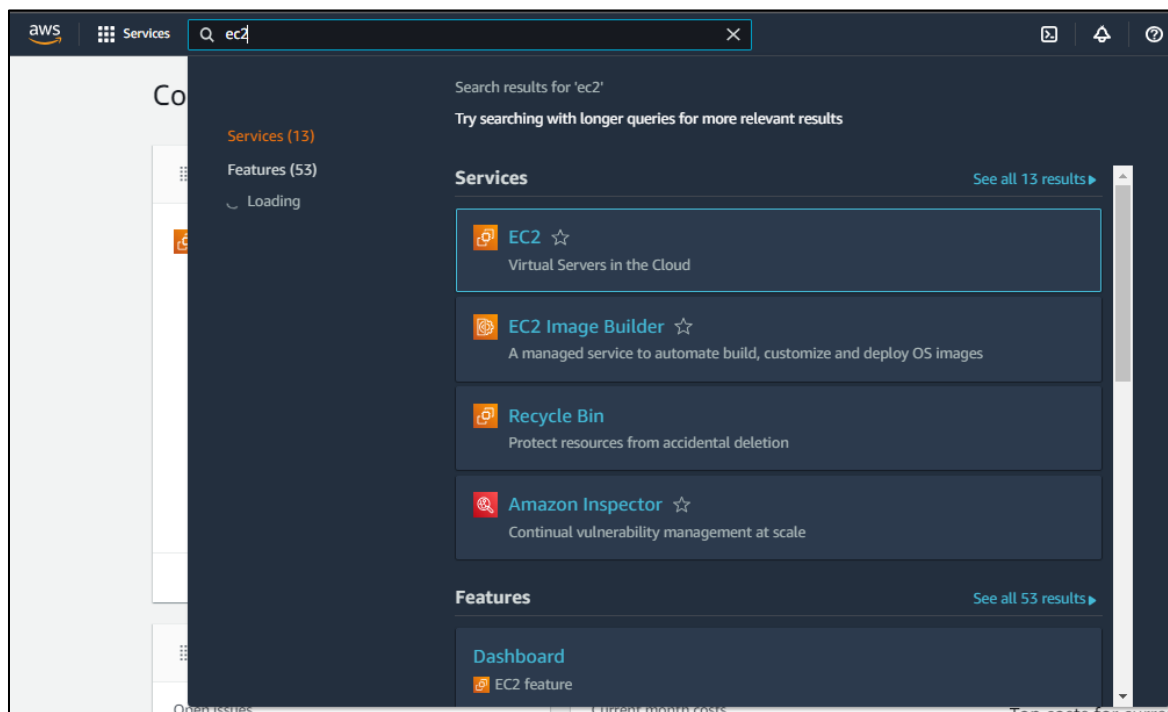
Prerequisites: Amazon account

Steps to be followed:

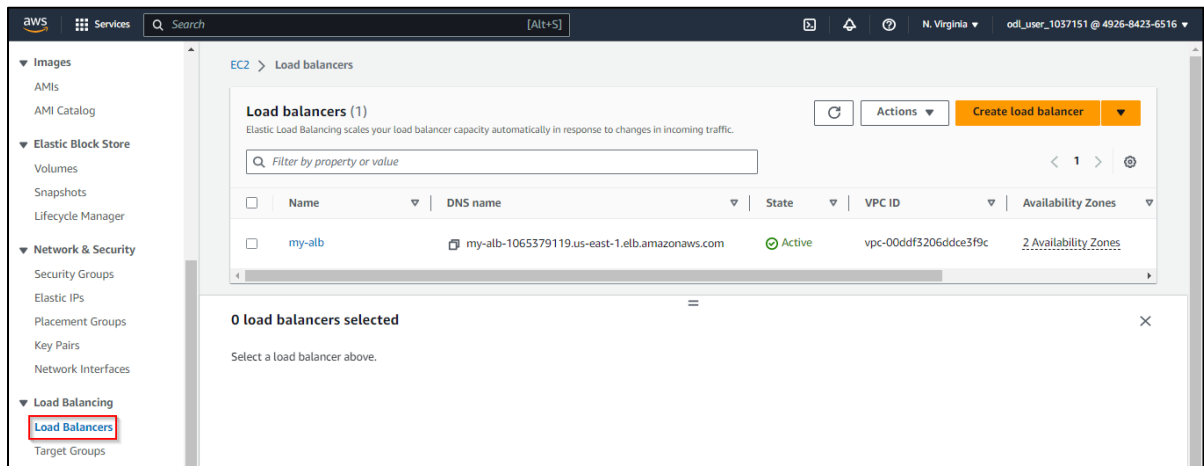
1. Set up the prerequisites for EC2
2. Create a routing request in ALB

Step 1: Set up the prerequisites for EC2

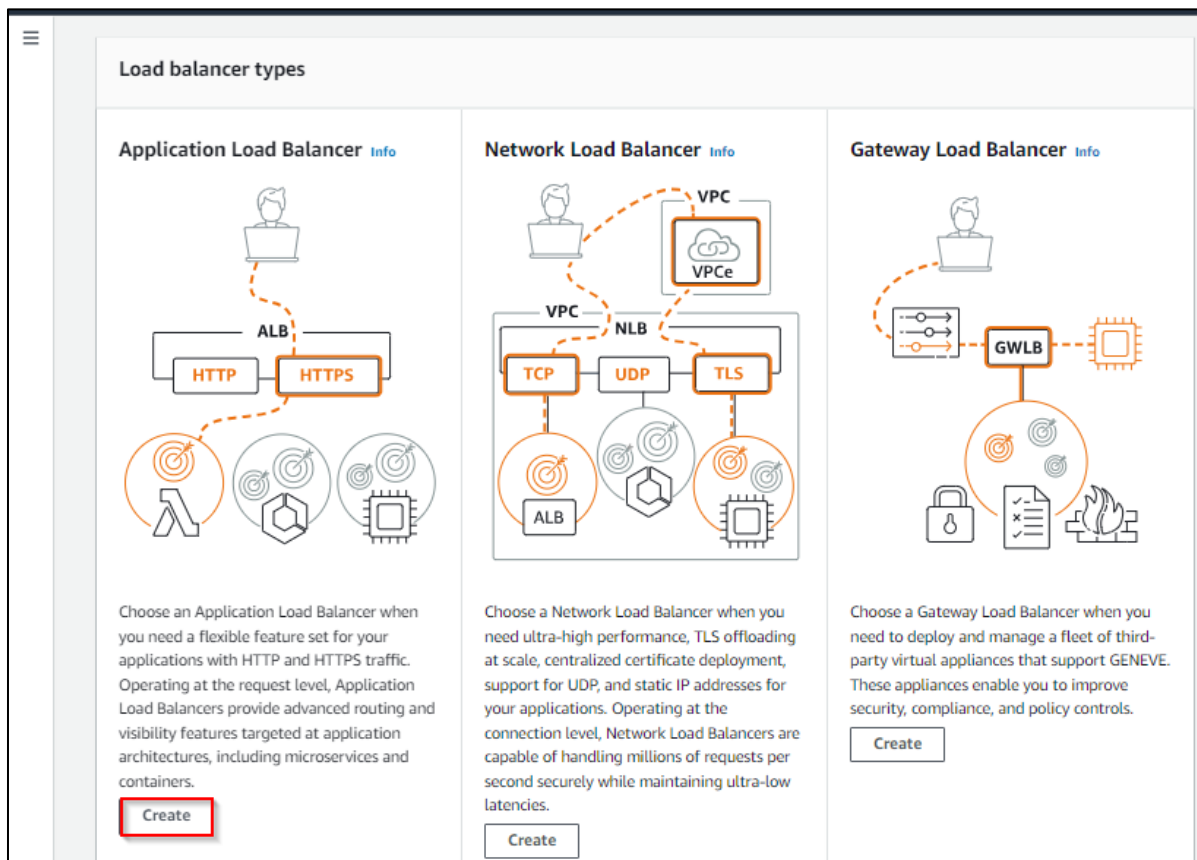
1.1 Navigate to the AWS Console Home and search for **EC2**



1.2 Under the Load Balancers tab, click on Create Load Balancer



1.3 Click on Create



1.4 Enter the Load balancer name as **Demo-1**

How Elastic Load Balancing works

Basic configuration

Load balancer name
Name must be unique within your AWS account and can't be changed after the load balancer is created.
Demo-1
A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.

Scheme [Info](#)
Scheme can't be changed after the load balancer is created.

☒ **Internet-facing**
An internet-facing load balancer routes requests from clients over the internet to targets. Requires a public subnet. [Learn more](#)

☐ **Internal**
An internal load balancer routes requests from clients to targets using private IP addresses.

IP address type [Info](#)
Select the type of IP addresses that your subnets use.

☒ **IPv4**
Recommended for internal load balancers.

☐ **Dualstack**
Includes IPv4 and IPv6 addresses.

1.5 Select the Mappings as **us-east 1a** and **us-east 2b**

Network mapping [Info](#)
The load balancer routes traffic to targets in the selected subnets, and in accordance with your IP address settings.

VPC [Info](#)
Select the virtual private cloud (VPC) for your targets or you can [create a new VPC](#). Only VPCs with an internet gateway are enabled for selection. The selected the load balancer is created. To confirm the VPC for your targets, view your [target groups](#).

vpc-00ddf3206ddce3f9c
IPv4: 172.31.0.0/16

Mappings [Info](#)
Select at least two Availability Zones and one subnet per zone. The load balancer routes traffic to targets in these Availability Zones only. Availability Zones that a balancer or the VPC are not available for selection.

☒ **us-east-1a (use1-az6)**

Subnet
subnet-0e75d0b7dfae62e68

IPv4 address
Assigned by AWS

1.6 Select Security groups as default

Security groups [Info](#)

A security group is a set of firewall rules that control the traffic to your load balancer. Select an existing security group, or you can [create a new security group](#).

Security groups

Select up to 5 security groups

default
sg-084b3d4d8edc54690 VPC: vpc-00ddf3206ddce3f9c

Successfully created target group: Demo-1

EC2 > Target groups

Target groups (1/2) [Info](#)

Search or filter target groups

	Name	ARN	Port	Protocol	Target type
<input checked="" type="checkbox"/>	Demo-1	arn:aws:elasticloadbalanci...	80	HTTP	Instance
<input type="checkbox"/>	Test1	arn:aws:elasticloadbalanci...	80	HTTP	Instance

Target groups is created successfully; refer to the previous demos to know how to create target groups.

1.7 Select Default action as Demo-1

Listener HTTP:80 [Remove](#)

Protocol: HTTP Port: 80

Default action: [Info](#)

Forward to: Demo-1 Target type: Instance, IPv4

[Create target group](#)

Listener tags - optional

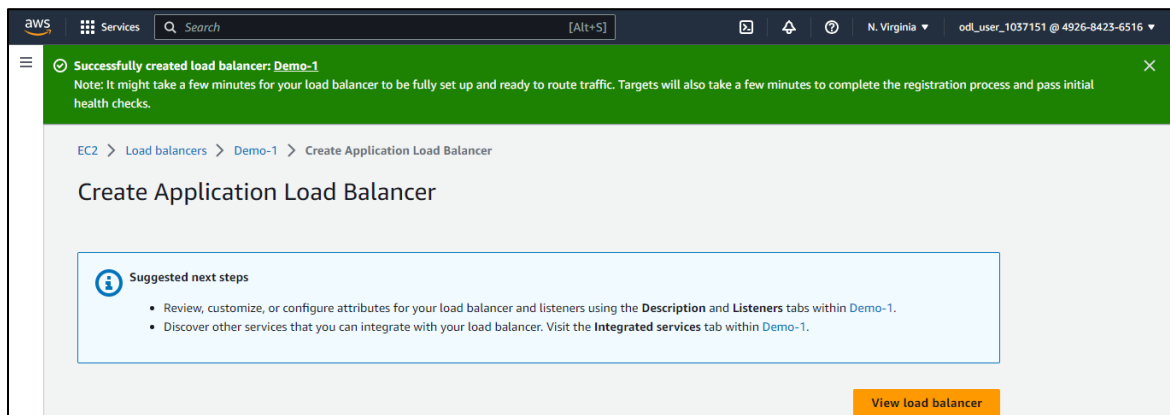
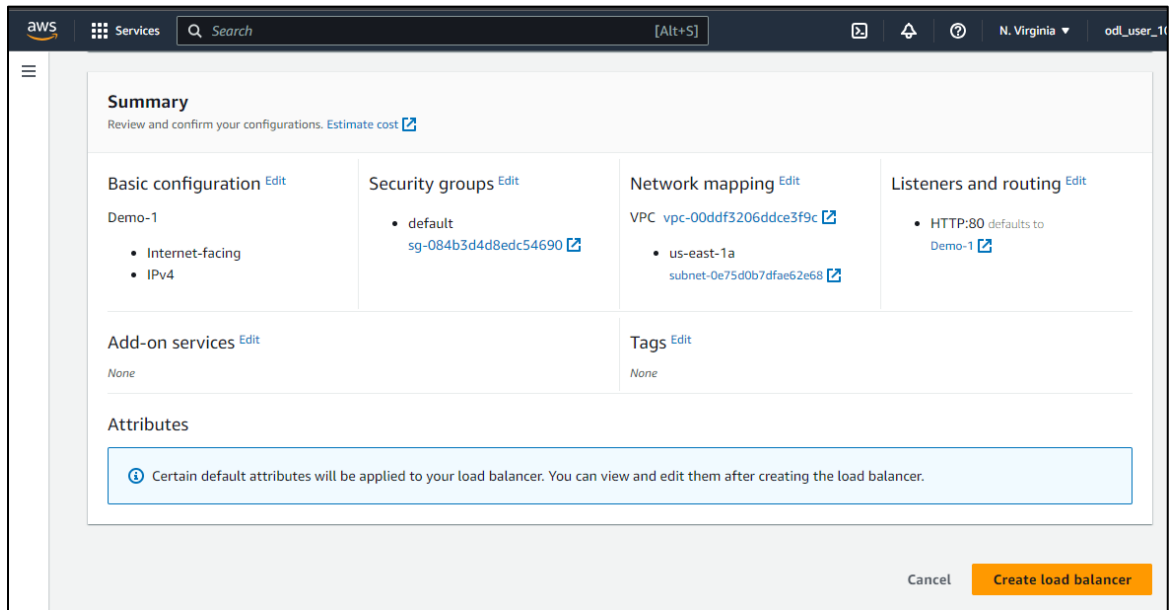
Consider adding tags to your listener. Tags enable you to categorize your AWS resources so you can more easily manage them.

[Add listener tag](#)

You can add up to 50 more tags.

[Add listener](#)

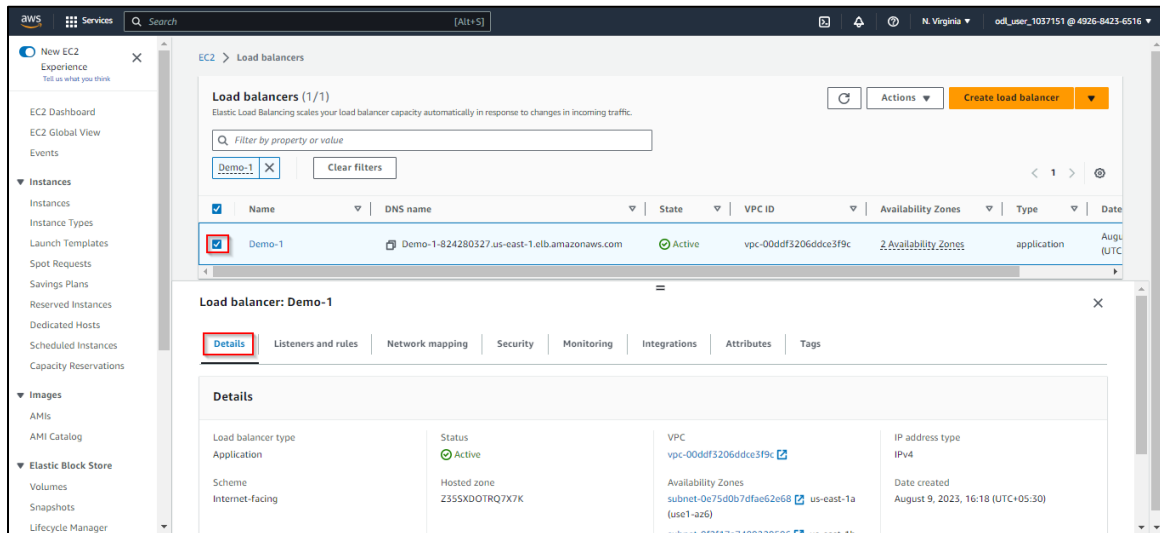
1.8 Click on **Create load balancer**



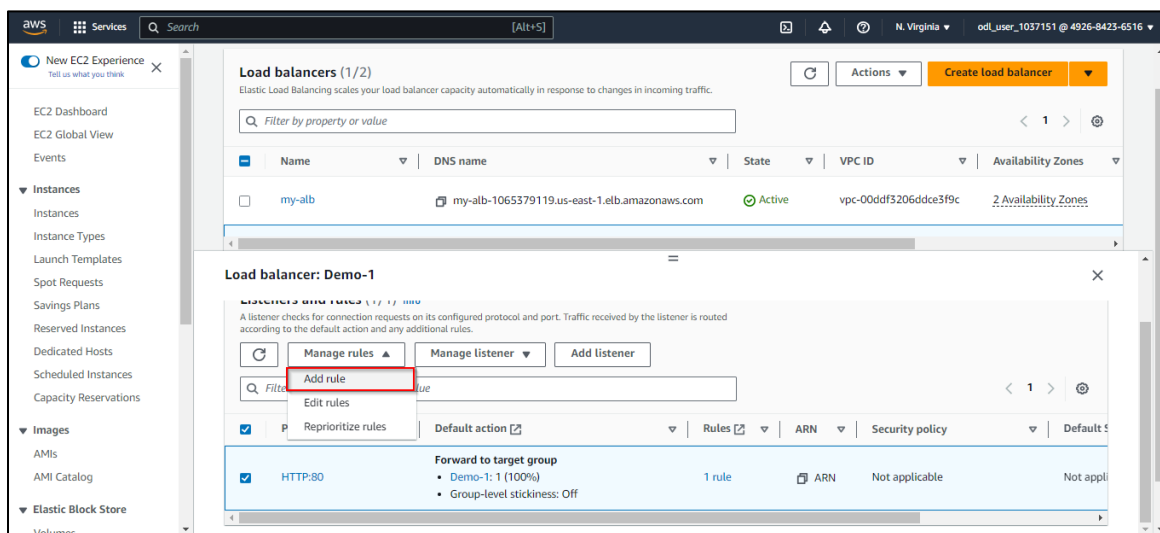
The **Application Load balancer** is successfully created.

Step 2: Create a routing request in ALB

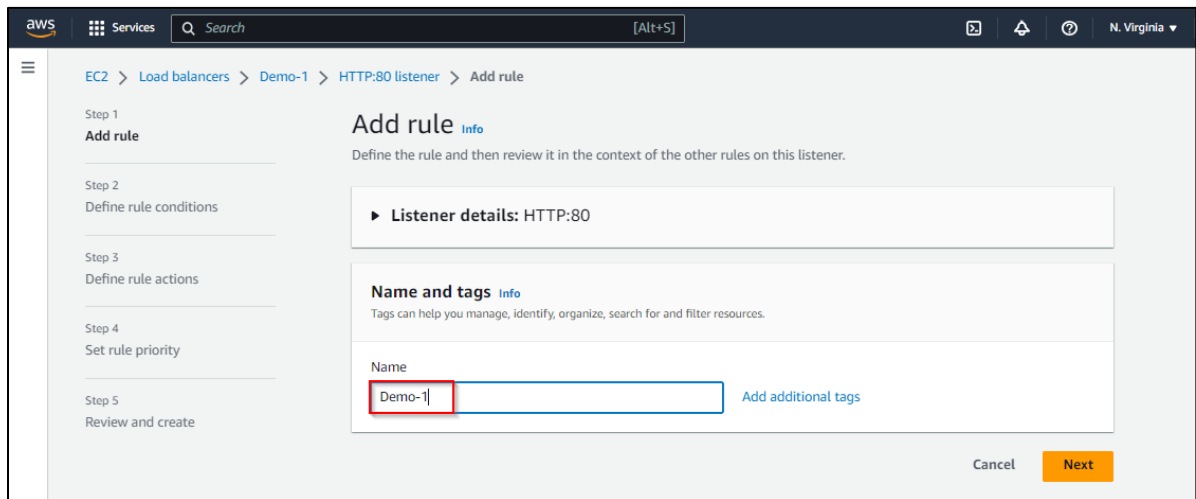
2.1 Click on the **Demo-1 > details**



2.2 Click on Listeners, select the Listener ID, and click on **Add rule**



2.3 Enter the name as **Demo-1**, and click on **Next**



aws Services Search [Alt+S] N. Virginia

EC2 > Load balancers > Demo-1 > HTTP:80 listener > Add rule

Step 1
Add rule

Step 2
Define rule conditions

Step 3
Define rule actions

Step 4
Set rule priority

Step 5
Review and create

Add rule [Info](#)

Define the rule and then review it in the context of the other rules on this listener.

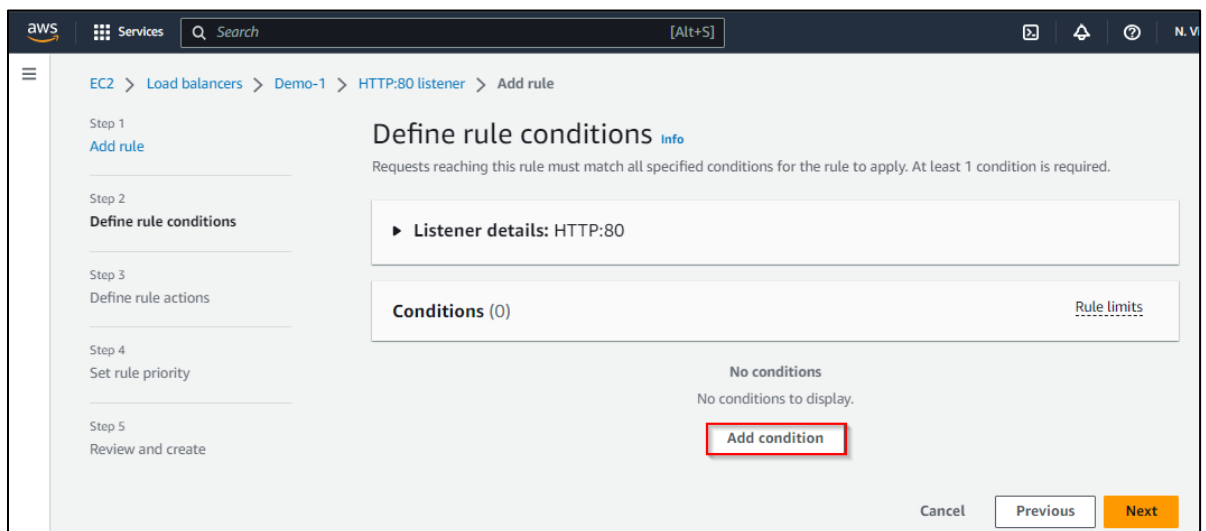
► Listener details: HTTP:80

Name and tags [Info](#)
Tags can help you manage, identify, organize, search for and filter resources.

Name
Demo-1 Add additional tags

Cancel Next

2.4 Click on **Add condition**



aws Services Search [Alt+S] N. V

EC2 > Load balancers > Demo-1 > HTTP:80 listener > Add rule

Step 1
[Add rule](#)

Step 2
Define rule conditions

Step 3
Define rule actions

Step 4
Set rule priority

Step 5
Review and create

Define rule conditions [Info](#)

Requests reaching this rule must match all specified conditions for the rule to apply. At least 1 condition is required.

► Listener details: HTTP:80

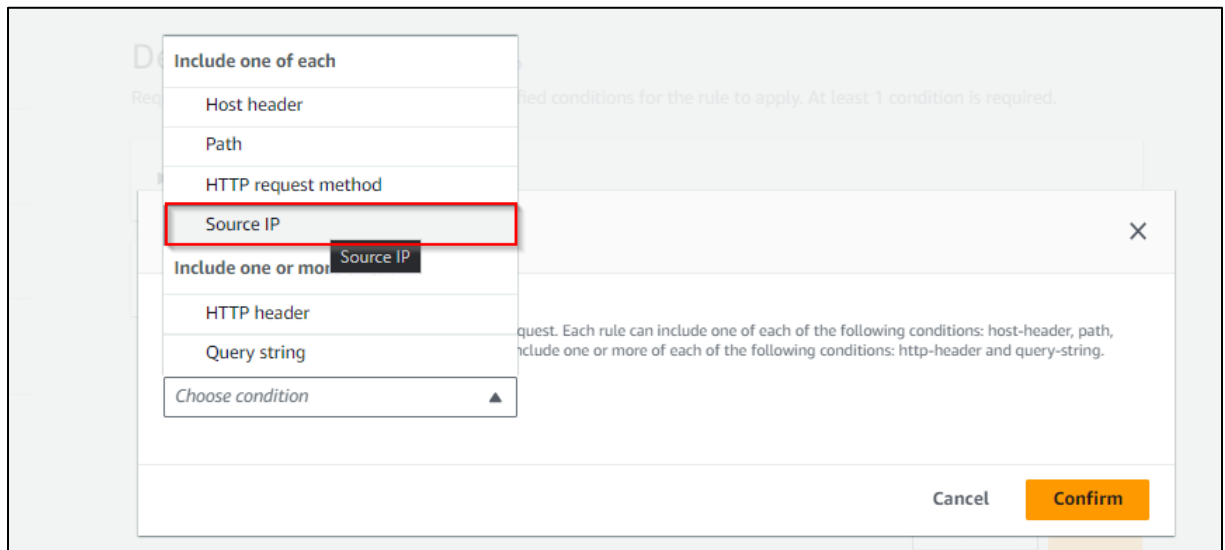
Conditions (0) [Rule limits](#)

No conditions
No conditions to display.

Add condition

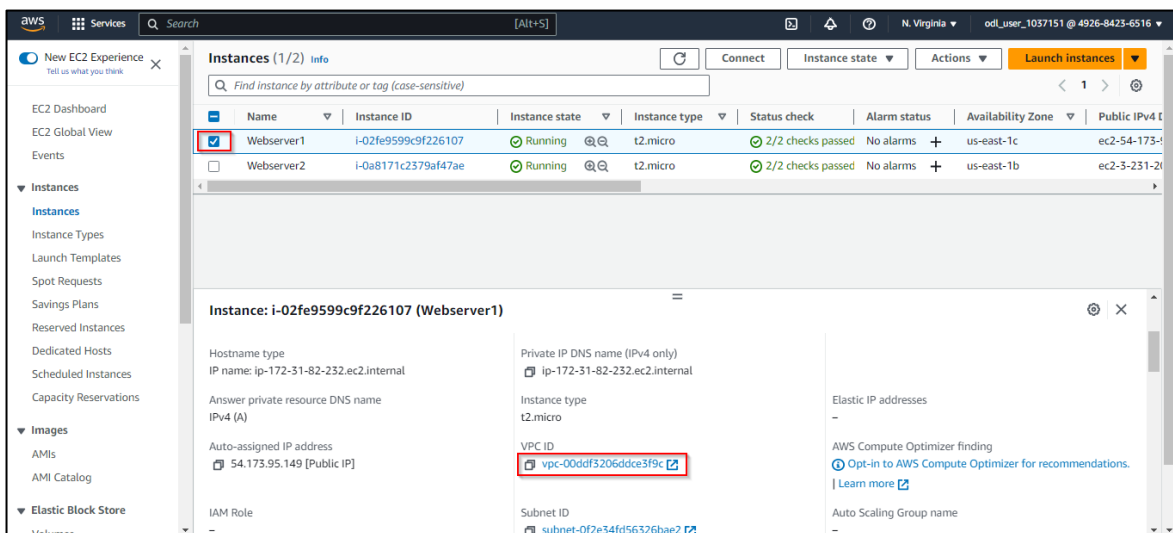
Cancel Previous Next

2.5 Select Rule condition types as **Source IP**

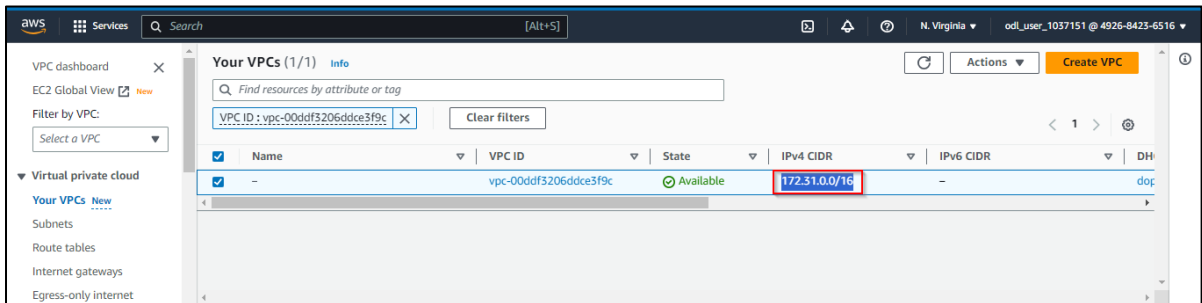


2.6 Enter the **Source IP** address:

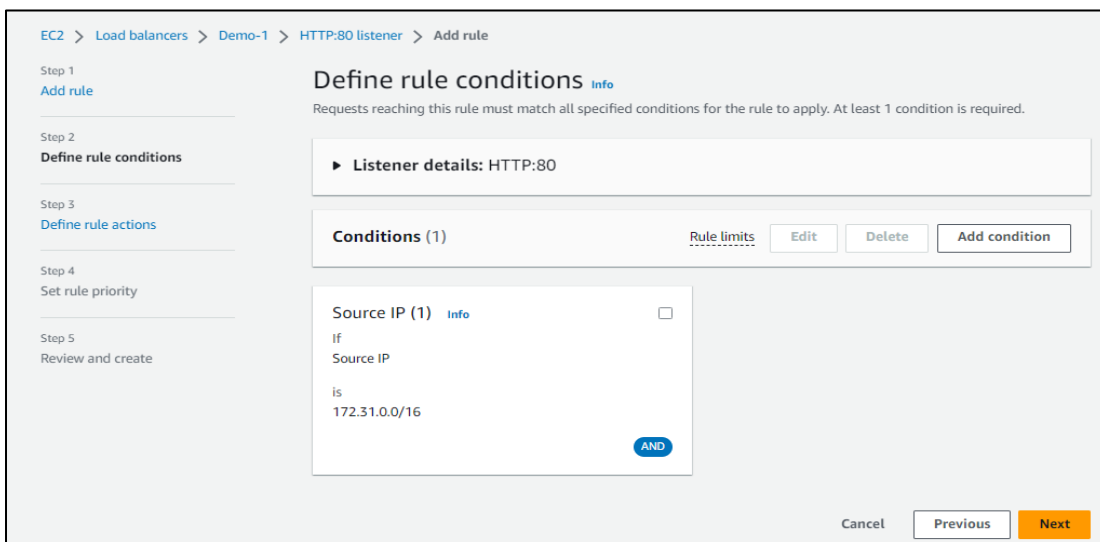
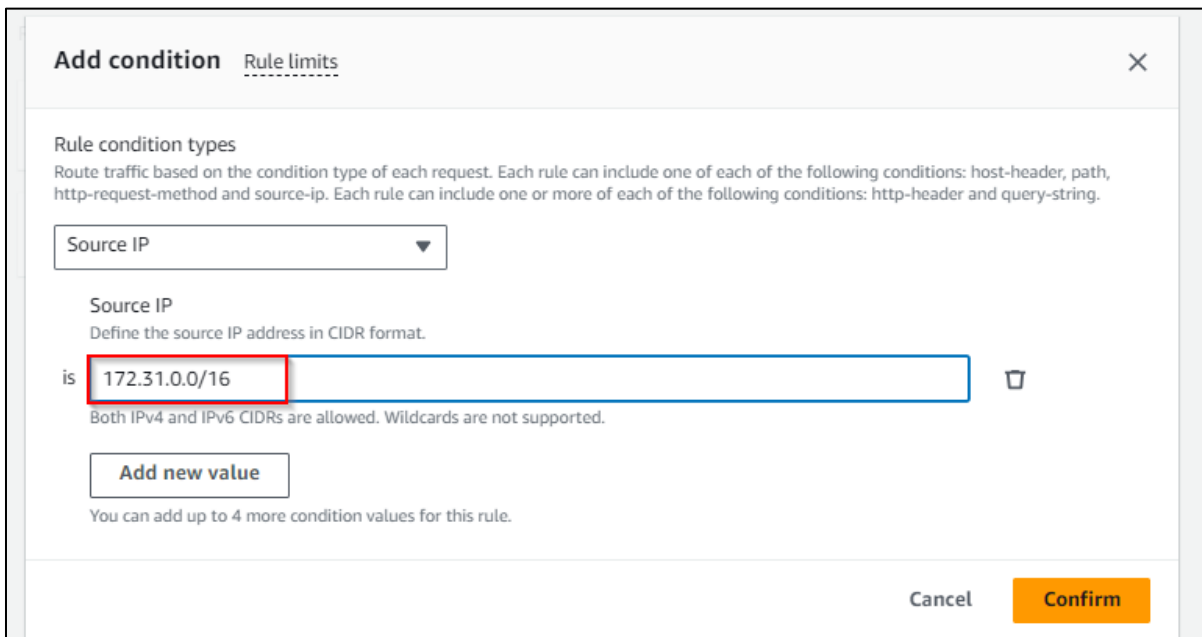
- Open a duplicate tab, navigate to the EC2 instances dashboard, and select **Webserver1** that was created in previous demos
- Under the Details tab, scroll down and click on **VPC ID**



2.7 Copy the IPv4 CIDR from the selected VPC



2.8 Paste it in the is section of Source IP, and click on Confirm and Next



2.9 Select **forward to target groups** and target group **Demo-1**

These actions will be applied to requests matching the rule conditions.

Listener details: HTTP:80

Actions

Action types

☒ Forward to target groups ☐ Redirect to URL ☐ Return fixed response

Forward to target group [Info](#)
Choose a target group and specify routing weight or [Create target group](#)

Select a target group

Demo-1
Target type: Instance, IPv4 HTTP

In use

Test1
Target type: Instance, IPv4 HTTP

Weight: 1 Percent: 100%

0-999

for the duration of the session. Individual target stickiness is

Cancel Previous Next

2.10 Set Priority as **2** and click on **Next**

Step 4
Set rule priority

Step 5
Review and create

Priority
Rule priority controls the evaluation order of a rule within the listener's set of rules. You can leave gaps in priority numbers.

2

1 - 50000

Listener rules (2) [Info](#)
Traffic received by the listener is routed according to the default action and any additional rules. Rules are evaluated in priority order from the lowest value to the highest value.

Rule limits

Filter rules by property or value

Name tag	Priority	Conditions (If)	Actions (Then)	ARN
Demo-1	2	Source IP is 172.31.0.0/16	Forward to target group • Demo-1: 1 (100%) • Group-level stickiness: Off	Pending
Default	Last (default)	If no other rule applies	Forward to target group • Demo-1: 1 (100%) • Group-level stickiness: Off	ARN

Cancel Previous Next

2.11 Click on the **Create** button

Review and create

Step 1: Add rule
Step 2: Define rule conditions
Step 3: Define rule actions
Step 4: Set rule priority
Step 5: Review and create

Listener details: HTTP:80

Rule details: Demo-1 Edit

Priority	Conditions (If)	Actions (Then)
2	If request matches all: Source IP is 172.31.0.0/16	Forward to target group <ul style="list-style-type: none"> Demo-1: 1 (100%) Group-level stickiness: Off

Rule ARN: Pending

Rule tags (1) Edit

Tags can help you manage, identify, organize, search for and filter resources.

Key	Value
Name	Demo-1

Cancel Previous Create

Successfully created rule "Demo-1" on listener HTTP:80.

EC2 > Load balancers > Demo-1 > HTTP:80 listener

HTTP:80 Info Refresh Actions

Details

A listener checks for connection requests using the protocol and port that you configure. The default action and any additional rules that you create determine how the Application Load Balancer routes requests to its registered targets.

Protocol:Port	Load balancer	Default actions
HTTP:80	Demo-1	Forward to target group <ul style="list-style-type: none"> Demo-1: 1 (100%) Group-level stickiness: Off

Listener ARN
arn:aws:elasticloadbalancing:us-east-1:492684236516:listener/app/Demo-1/70036c954752b2d6/6eb982d6f0ca07f9

HTTP:80 listener is created successfully.

By following these steps, you will be able to successfully create a routing request in an Application Load Balancer (ALB) on Amazon Web Services (AWS).