

Lesson 03 Demo 09

Creating a Network Load Balancer

Objective: To create a Network Load Balancer (NLB) in the Amazon Web Services (AWS) environment for distributing traffic across the specified availability zones using multiple listeners and target groups

Tools required: Amazon Workspace

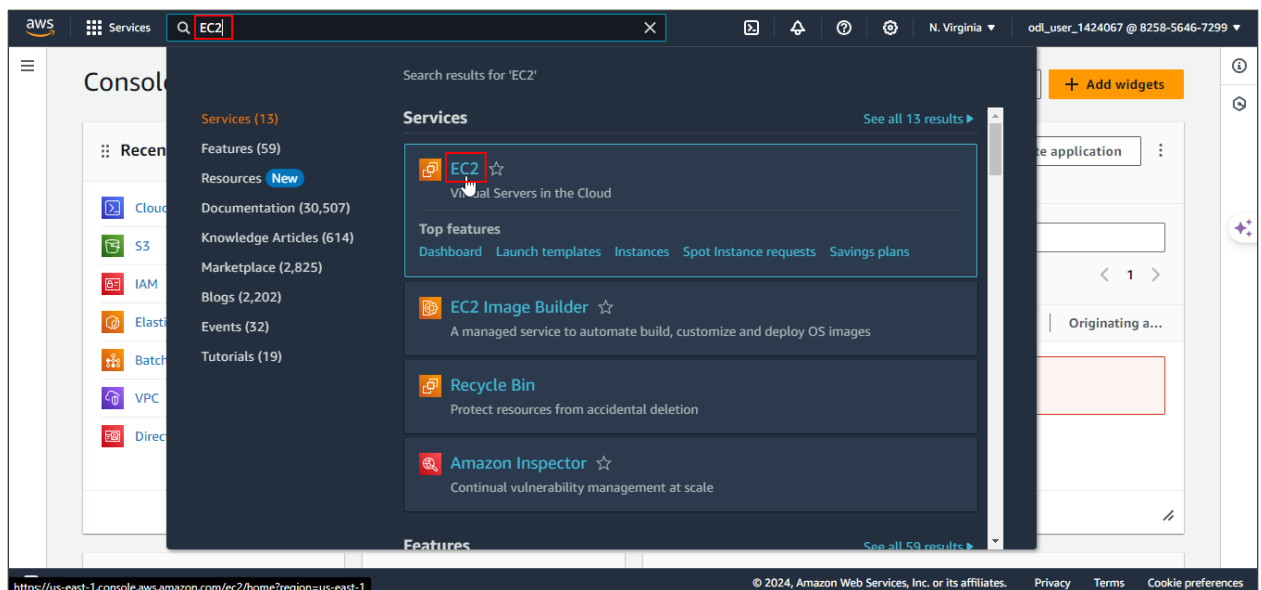
Prerequisites: Amazon account

Steps to be followed:

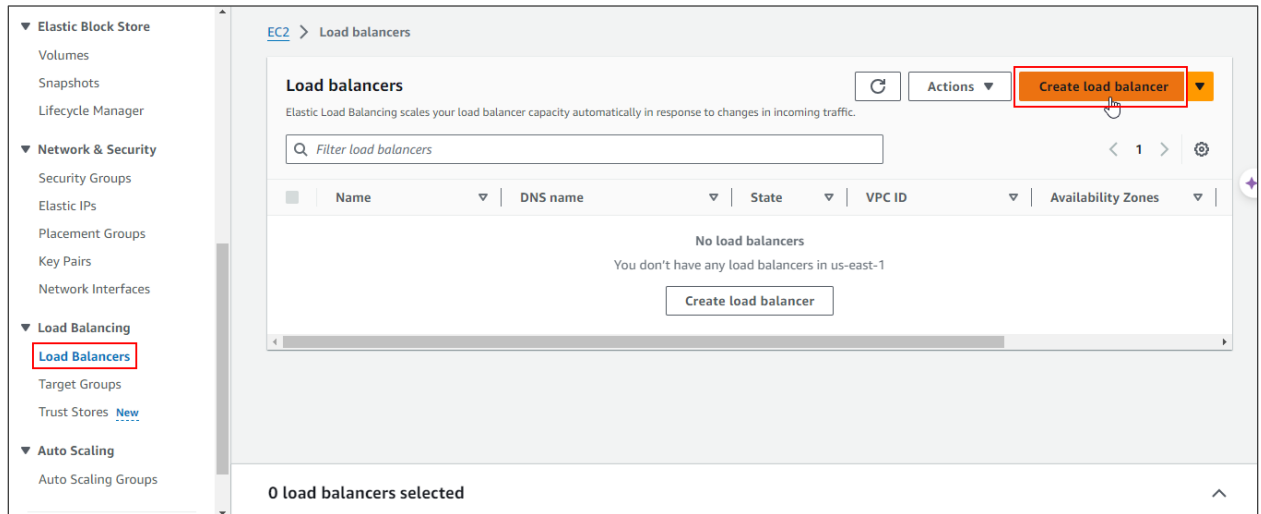
1. Set up the Network Load Balancer

Step 1: Set up the Network Load Balancer

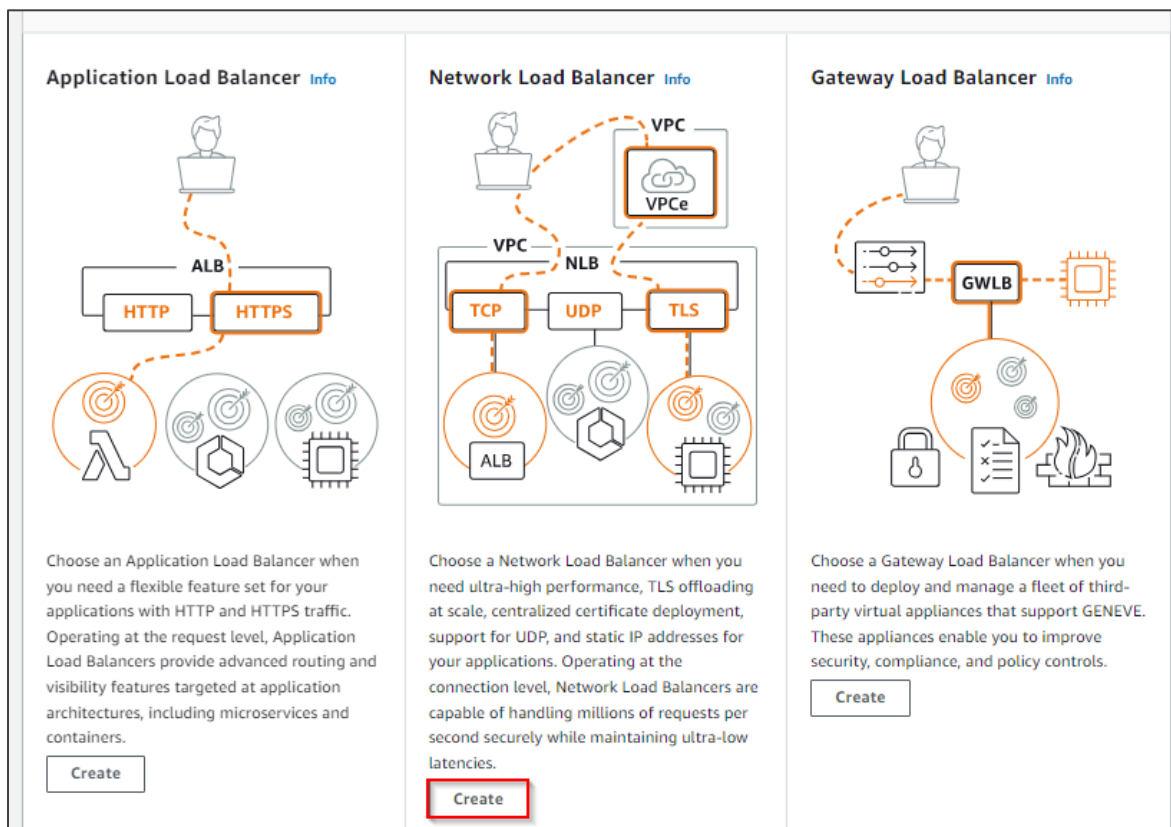
1.1 Navigate to the AWS console home dashboard, search for and click on EC2



1.2 Navigate to **Load Balancers** under the **Load Balancing** section and click **Create load balancer**



1.3 Choose **Network Load Balancer** and click on **Create**



1.4 Enter the Load balancer name as Demo-4

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-4

A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.

Scheme

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.

Load balancer IP address type [Info](#)

Select the front-end IP address type to assign to the load balancer. The VPC and subnets mapped to this load balancer must include the selected IP address types.

☒ IPv4

Includes only IPv4 addresses.

☐ Dualstack

Includes IPv4 and IPv6 addresses.

Network mapping [Info](#)

1.5 Select the Mappings, us-east-1a and us-east-1b

Mappings

Select one or more Availability Zones and corresponding subnets. Enabling multiple Availability Zones increases the fault tolerance of your applications. The load balancer routes traffic to targets in the selected Availability Zones only. Availability Zones that are not supported by the load balancer or the VPC are not available for selection.

Availability Zones

☒ us-east-1a (use1-az4)

Subnet

subnet-08219e2328d8d7c3b

IPv4 subnet CIDR: 172.31.16.0/20

☒ us-east-1b (use1-az6)

Subnet

subnet-0081290ff8abfd41f

IPv4 subnet CIDR: 172.31.32.0/20

☐ us-east-1c (use1-az1)

Subnet

subnet-0081290ff8abfd41f

IPv4 subnet CIDR: 172.31.32.0/20

☐ us-east-1d (use1-az2)

Subnet

subnet-0081290ff8abfd41f

IPv4 subnet CIDR: 172.31.32.0/20

IPv4 address

The front-end IPv4 address of the load balancer in the selected Availability Zone.

☒ Assigned by AWS
 ☐ Use an Elastic IP address

1.6 Click on **Create target group**

Listeners and routing [Info](#)

A listener is a process that checks for connection requests using the port and protocol you configure. The rules that you define for a listener determine how the load balancer routes requests to its registered targets.

▼ Listener TCP:80 [Remove](#)

Protocol: TCP Port: 80 Default action: [Info](#)

Forward to: Select a target group [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](#)

► **Load balancer tags - optional**

Consider adding tags to your load balancer. Tags enable you to categorize your AWS resources so you can more easily manage them. The 'Key' is required, but 'Value' is optional. For

On the **Listeners and routing** tab, add more than one listener and select the **target group name**. Refer to the previous demos to learn how to create target groups.

1.7 Select **Target-1** as the **Default action**

are enforced on PrivateLink traffic; however, you can turn off inbound rule evaluation after creation within the load balancer's Security tab or using the API.

Select up to 5 security groups [Info](#)

default sg-090bc234051f0d039 VPC: vpc-0aa7186b9a5af0f6d [X](#)

Listeners and routing [Info](#)

A listener is a process that checks for connection requests using the port and protocol you configure. The rules that you define for a listener determine how the load balancer routes requests to its registered targets.

▼ Listener TCP:80 [Remove](#)

Protocol: TCP Port: 80 Default action: [Info](#)

Forward to: Target-1 Target type: Instance, IPv4 TCP [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.

1.8 Add **Target-2** as another **Default** action

Protocol: TCP, Port: 80, Default action: Target-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.

▼ Listener TCP:81 [Remove](#)

Protocol: TCP, Port: 81, Default action: Target-2 (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.

1.9 Click on **Create load balancer**

Basic configuration [Edit](#)
Demo-4
• Internet-facing
• IPv4

Security groups [Edit](#)
• default [sg-090bc234051f0d039](#)

Network mapping [Edit](#)
VPC [vpc-0aa7186b9a5af0f6d](#)
• us-east-1a [subnet-08219e2328d8d7c3b](#)
• us-east-1b [subnet-0081290ff8abfd41f](#)

Listeners and routing [Edit](#)
• TCP:80 defaults to [Target-1](#)
• TCP:81 defaults to [Target-2](#)

Service integrations [Edit](#)
AWS Global Accelerator: None

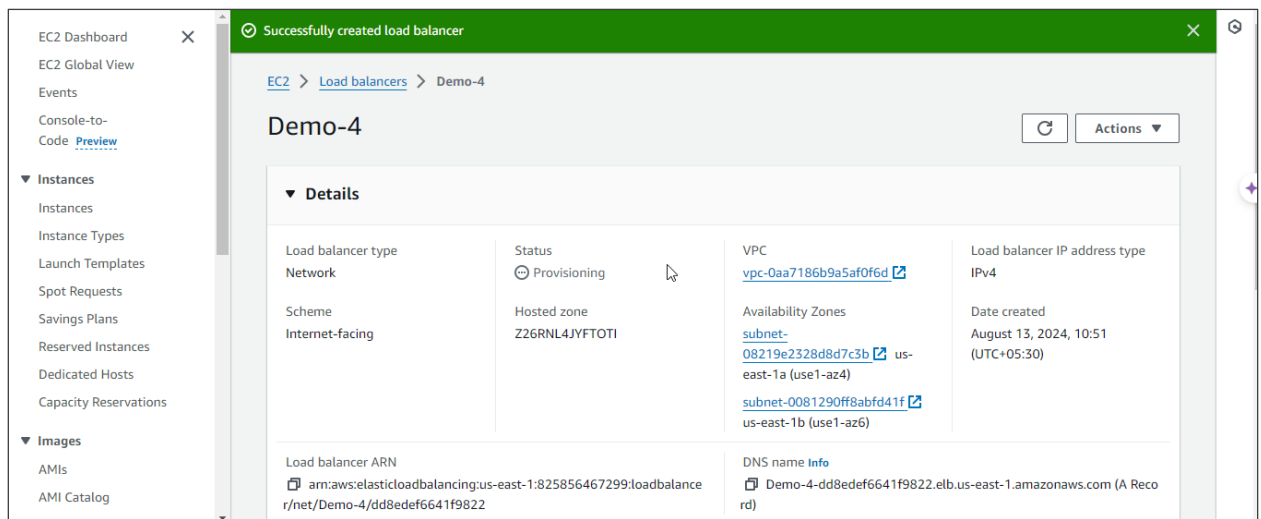
Tags [Edit](#)
None

Attributes
ⓘ Certain default attributes will be applied to your load balancer. You can view and edit them after creating the load balancer.

Creation workflow and status

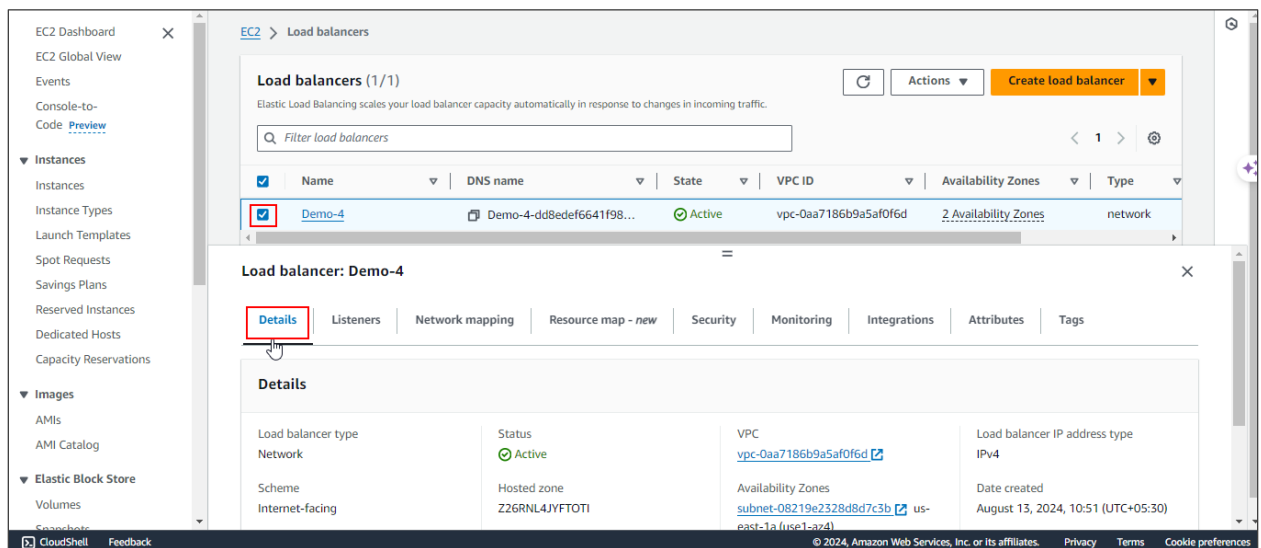
► **Server-side tasks and status**
After completing and submitting the above steps, all server-side tasks and their statuses become available for monitoring.

[Cancel](#) [Create load balancer](#)



The load balancer **Demo-4** has been successfully created.

1.10 Select the load balancer and click on **Details** to access the VPC and DNS name



By following these steps, you have successfully created a Network Load Balancer to distribute traffic across the specified availability zones using multiple listeners and target groups.