

Program 6: Setting Up an Elastic Load Balancer with EC2 Instances

Creating an Elastic Load Balancer

Open the EC2 Dashboard

- Navigate to the EC2 Dashboard in the AWS Management Console.

Create a Load Balancer

1. In the navigation pane, under "Load Balancing," select "Load Balancers".
2. Click "Create Load Balancer".
3. Choose the type of load balancer (for this exercise, select "Application Load Balancer").
4. Set the basic configuration:
 - Name your load balancer.
 - Select the same VPC as your EC2 instances.
 - For simplicity, select only one availability zone (which should be the same as your instances).

Configure Security Settings and Listeners

1. Follow the wizard to configure listeners and routing. For HTTP traffic, set the listener to HTTP on port 80.
2. Configure the security settings as prompted.

Configure Routing

1. Create a new target group.
2. Set the target type to "instance".
3. Configure health checks that the load balancer will use to check the health of the EC2 instances.

Register Targets

1. Register the EC2 instances you created earlier with the target group.
2. Finalize the creation of the load balancer.

Testing the Load Balancer

Once the load balancer is created, find its DNS name in the load balancer dashboard.

Test Load Balancing

1. Open a web browser and navigate to the DNS name of the load balancer.
2. Verify that the traffic is routed to your EC2 instances.
3. You can test load balancing by observing the behavior of your application while stopping and starting your EC2 instances.