

# ELB IN AWS

Elastic Load Balancer (ELB) is a fully managed service provided by AWS to distribute incoming application traffic across multiple targets, such as EC2 instances, containers, and IP addresses. It ensures high availability, scalability, and fault tolerance for your applications.

## Types of Load Balancers:

Application Load Balancer (ALB)

Network Load Balancer (NLB)

Classic Load Balancer (CLB)

## How ELB Works

### Traffic Distribution:

ELB distributes incoming traffic across multiple targets (e.g., EC2 instances) in one or more Availability Zones.

### Health Checks:

ELB periodically checks the health of registered targets and routes traffic only to healthy targets.

### Auto Scaling Integration:

ELB works seamlessly with Auto Scaling to add or remove instances based on traffic load.

### SSL/TLS Termination:

ELB can handle SSL/TLS decryption, offloading the computational burden from your backend instances.

### Logging and Monitoring:

ELB provides access logs and integrates with Amazon CloudWatch for monitoring and alerting.

## First Create Two EC2 Instance

## Then in Additional Setting Set User Data

<input type="checkbox"/>	my-web-server-	i-0db667416e5fc43c2	Terminated	t2.micro	-	<a href="#">View alarms +</a>	us-west-2b
<input type="checkbox"/>	my-web-serve...	i-0f6ddc1a229e9146d	Terminated	t2.micro	-	<a href="#">View alarms +</a>	us-west-2b
<input checked="" type="checkbox"/>	my-web-server 1	i-0fbfe29863f2bf9ff	Running	t2.micro	2/2 checks passed	<a href="#">View alarms +</a>	us-west-2b
<input checked="" type="checkbox"/>	my-web-server 2	i-087207474873c235f	Running	t2.micro	2/2 checks passed	<a href="#">View alarms +</a>	us-west-2b

Then Check Two Instance Are Created

EC2 > Security Groups > sg-0d9dfa0f923e6b69 - launch-wizard-14 > Edit inbound rules

### Edit inbound rules [Info](#)

Inbound rules control the incoming traffic that's allowed to reach the instance.

#### Inbound rules [Info](#)

Security group rule ID	Type <a href="#">Info</a>	Protocol <a href="#">Info</a>	Port range <a href="#">Info</a>	Source <a href="#">Info</a>	Description - optional <a href="#">Info</a>	
sgr-0f97a6c951680d2a2	HTTPS	TCP	443	Cus... 0.0.0.0/0		Delete
sgr-03165f32ac5492346	SSH	TCP	22	Cus... 0.0.0.0/0		Delete
-	HTTP	TCP	80	An... 0.0.0.0/0		Delete

[Add rule](#)

Then In both Instance in security group add  
http to from anywhereip ipv4

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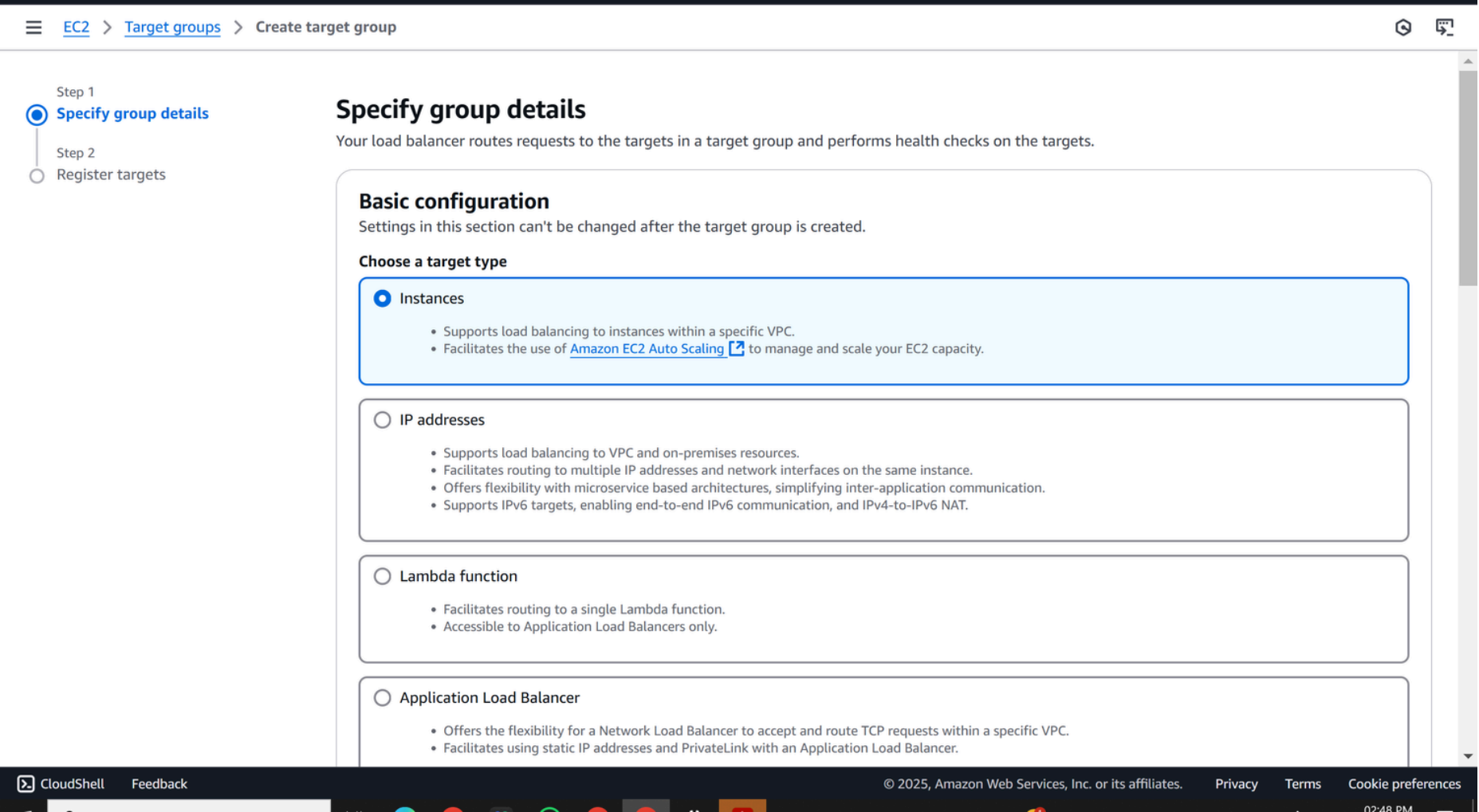
**Hello World from ip-172-32-14-123.us-west-2.compute.internal**

Then Copy that Instance ip and check in chrome its showing helloworld content and hostname

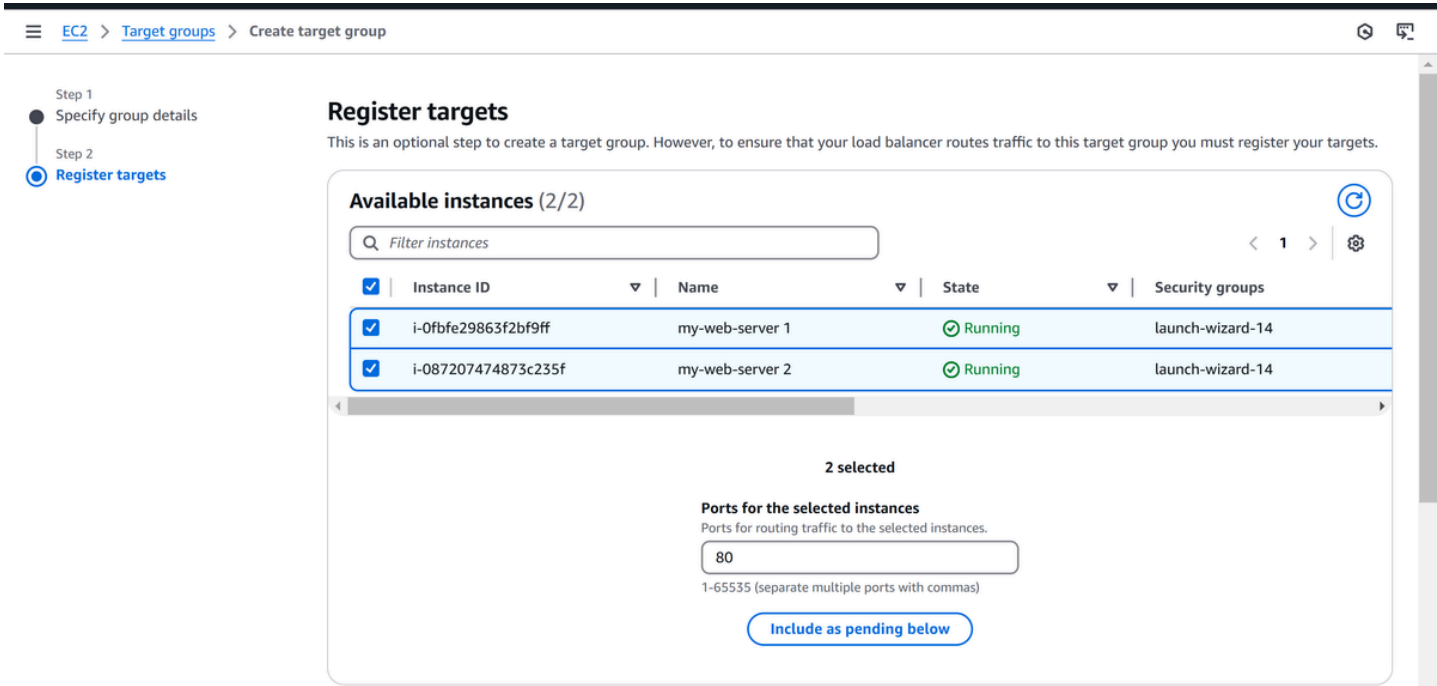
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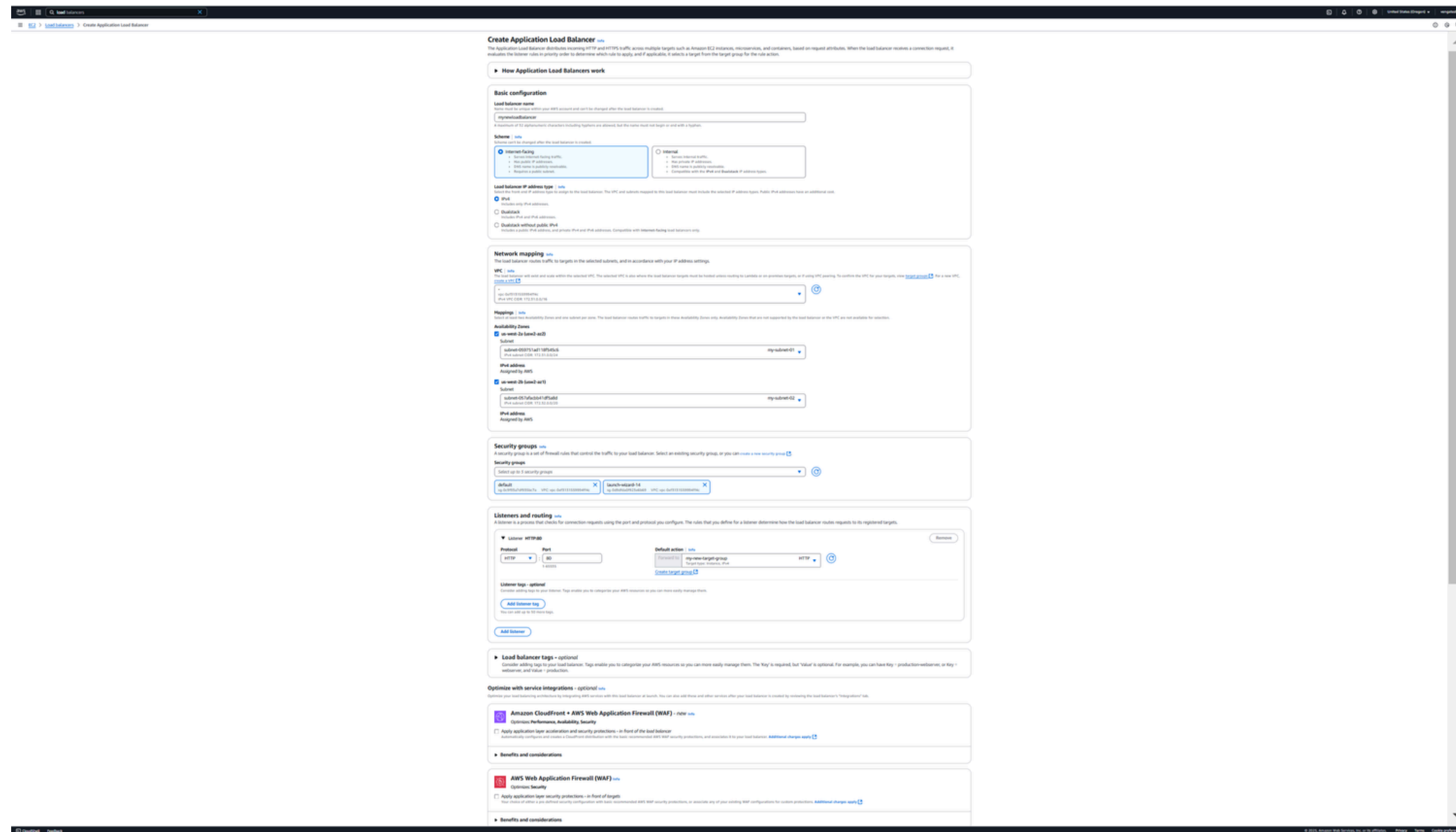
**Hello World from ip-172-32-12-253.us-west-2.compute.internal**

Then Copy that Instance ip and check in chrome its showing helloworld content and hostname



Then Create Target Group For Both Instance





Create Application Load Balancer  
Then Select all availability Zone  
Then Select EC2 Instance security group  
Then in Listeners add a created target group  
Then Create Load Balancer

Load balancers (1/1)

Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.

Filter load balancers

Actions

Create load balancer

< 1 >

<input checked="" type="checkbox"/>	Name	DNS name	State	VPC ID	Availability Zones	Type	Date created
<input checked="" type="checkbox"/>	mynewloadbalancer	mynewloadbalancer-12205...	Active	vpc-0ef3131559994ff4c	2 Availability Zones	application	February 18, 2025, 15:09 (UTC+05:30)

Then Check Loadbalancer is activated after copy the dns name and past in google and check it



Finally Check That its working and reload anothe ip will be show Then loadbalancer is working