

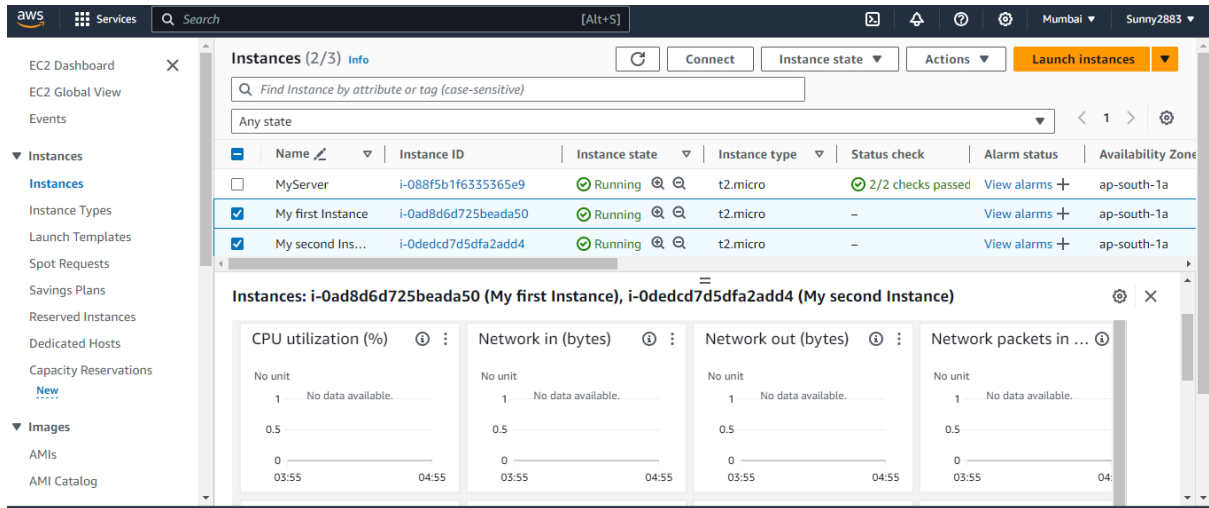
Assignmen:2

Task:4

Create an ALB and map the instances under ALB.

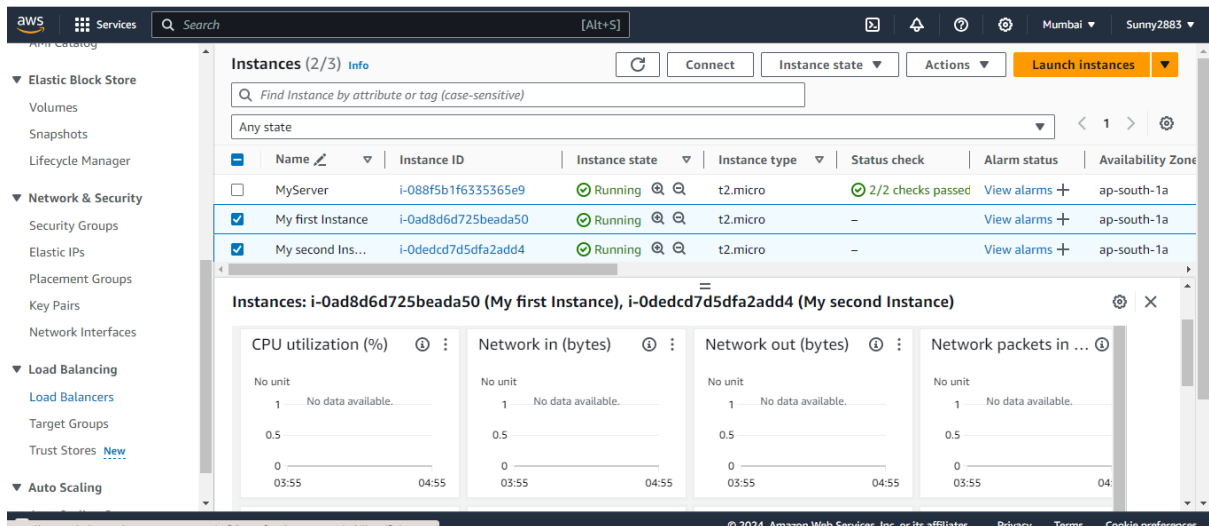
With the DNS of ALB, the webserver should be get accessed.

Create the instances if you do not have instances running.

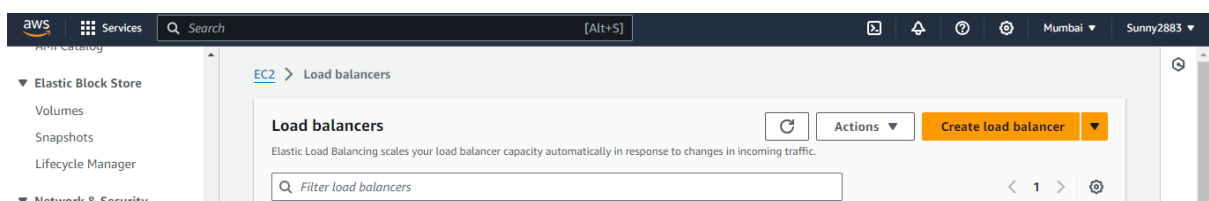


Create an application load balancer.


Step1.In the EC2 dashboard , go to the load balancer section.



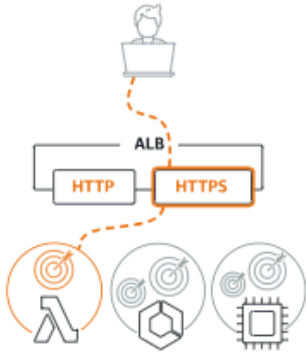
Step2. Click on the create load balancer button.



Step3. Choose Application load balancer.

 **Services** [Alt+S]

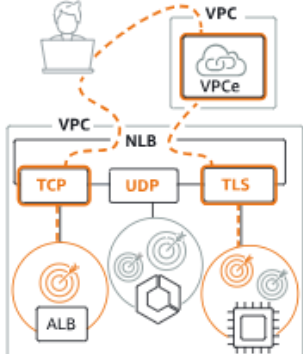
Application Load Balancer [Info](#)



Choose an Application Load Balancer when you need a flexible feature set for your applications with HTTP and HTTPS traffic. Operating at the request level, Application Load Balancers provide advanced routing and visibility features targeted at application architectures, including microservices and containers.


Create

Network Load Balancer [Info](#)



Choose a Network Load Balancer when you need ultra-high performance, TLS offloading at scale, centralized certificate deployment, support for UDP, and static IP addresses for your applications. Operating at the connection level, Network Load Balancers are capable of handling millions of requests per second securely while maintaining ultra-low latencies.


Gateway Load Balancer [Info](#)



Choose a Gateway Load Balancer when you need to deploy and manage a fleet of third-party virtual appliances that support GENEVE. These appliances enable you to improve security, compliance, and policy controls.

Create

Step4. Configure the load balancer setting, such as name, listeners, and availability zones.

 **Services** [Alt+S] Mumbai Sunny2883

How Application Load Balancers work

on request attributes. When the load balancer receives a connection request, it evaluates the listener rules in priority order to determine which rule to apply, and if applicable, it selects a target from the target group for the rule action.

Basic configuration

Load balancer name
Name must be unique within your AWS account and can't be changed after the load balancer is created.

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.

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 VPC can't be changed after the load balancer is created. To confirm the VPC for your targets, view your [target groups](#).

vpc-06988e5057435e138

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 are not supported by the load balancer or the VPC are not available for selection.

☒

ap-south-1a (aps1-az1)

Subnet

subnet-0e6cdf2a06c9753a9

↕

IPv4 address

Assigned by AWS

☒

ap-south-1b (aps1-az3)

Subnet

subnet-09f49a063032e5715

↕

IPv4 address

Assigned by AWS

☒

ap-south-1c (aps1-az2)

Subnet

subnet-0c714c65c4325ac96

↕

IPv4 address

Assigned by AWS

Step5. In the configure security setting and configure setting groups steps configure security setting or choose or create a security group.

☰

EC2 > Load balancers > Create Application Load Balancer

Create Application Load Balancer

Info

The Application Load Balancer distributes incoming HTTP and HTTPS traffic across multiple targets such as Amazon EC2 instances, microservices, and containers, based on request attributes. When the load balancer receives a connection request, it evaluates the listener rules in priority order to determine which rule to apply, and if applicable, it selects a target from the target group for the rule action.

▶ How Application Load Balancers work

Basic configuration

Load balancer name

Name must be unique within your AWS account and can't be changed after the load balancer is created.

DemoALB

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

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 VPC can't be changed after the load balancer is created. To confirm the VPC for your targets, view your [target groups](#).

-
vpc-06988e5057435e138
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 are not supported by the load balancer or the VPC are not available for selection.

☒ ap-south-1a (aps1-az1)

Subnet

subnet-0e6cdf2a06c9753a9

IPv4 address

Assigned by AWS

☒ ap-south-1b (aps1-az3)

Subnet

subnet-09f49a063032e5715

IPv4 address

Assigned by AWS

☒ ap-south-1c (aps1-az2)

Step6. Create a Target group.

i) Choose create target group.

▼ Listener HTTP:80 Remove

Protocol: HTTP Port: 80 Default action: Forward to Select a target group Refresh

1-65535 Create target group

ii) chose a target type .

Specify group details

Your load balancer routes requests to the targets in a target group and performs health checks on the targets.

Basic configuration

Settings in this section can't be changed after the target group is created.

Choose a target type

☒ **Instances**

- Supports load balancing to instances within a specific VPC.
- Facilitates the use of [Amazon EC2 Auto Scaling](#) to manage and scale your EC2 capacity.

☐ **IP addresses**

- Supports load balancing to VPC and on-premises resources.
- Facilitates routing to multiple IP addresses and network interfaces on the same instance.
- Offers flexibility with microservice based architectures, simplifying inter-application communication.
- Supports IPv6 targets, enabling end-to-end IPv6 communication, and IPv4-to-IPv6 NAT.

☐ **Lambda function**

- Facilitates routing to a single Lambda function.
- Accessible to Application Load Balancers only.

iii) fill the details.

Target group name

Demo-tg-ali

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

Protocol : Port

Choose a protocol for your target group that corresponds to the Load Balancer type that will route traffic to it. Some protocols now include anomaly detection for the targets and you can set mitigation options once your target group is created. This choice cannot be changed after creation.

HTTP 80

1-65535

IP address type

Only targets with the indicated IP address type can be registered to this target group.

☒ IPv4

Each instance has a default network interface (eth0) that is assigned the primary private IPv4 address. The instance's primary private IPv4 address is the one that will be applied to the target.

☐ IPv6

Each instance you register must have an assigned primary IPv6 address. This is configured on the instance's default network interface (eth0). [Learn more](#)

VPC

Select the VPC with the instances that you want to include in the target group. Only VPCs that support the IP address type selected above are available in this list.

vpc-06988e5057435e138

IPv4: 172.31.0.0/16

Protocol version

☒ HTTP1

Send requests to targets using HTTP/1.1. Supported when the request protocol is HTTP/1.1 or HTTP/2.

iv) select next.

v) Select instances.

Step 2

Register targets

Available instances (2/3)

Filter instances

Instance ID	Name	State	Security groups	Zone
<input checked="" type="checkbox"/> i-0ad8d6d725beada50	My first Instance	Running	launch-wizard-1	ap-south-1a
<input checked="" type="checkbox"/> i-0dedcd7d5dfa2add4	My second Instance	Running	launch-wizard-1	ap-south-1a
<input type="checkbox"/> i-088f5b1f63535365e9	MyServer	Running	launch-wizard-1	ap-south-1a

2 selected

Ports for the selected instances

Ports for routing traffic to the selected instances.

80

1-65535 (separate multiple ports with commas)

Include as pending below

vi) Select create target group.

Review targets

Targets (2)

Filter targets

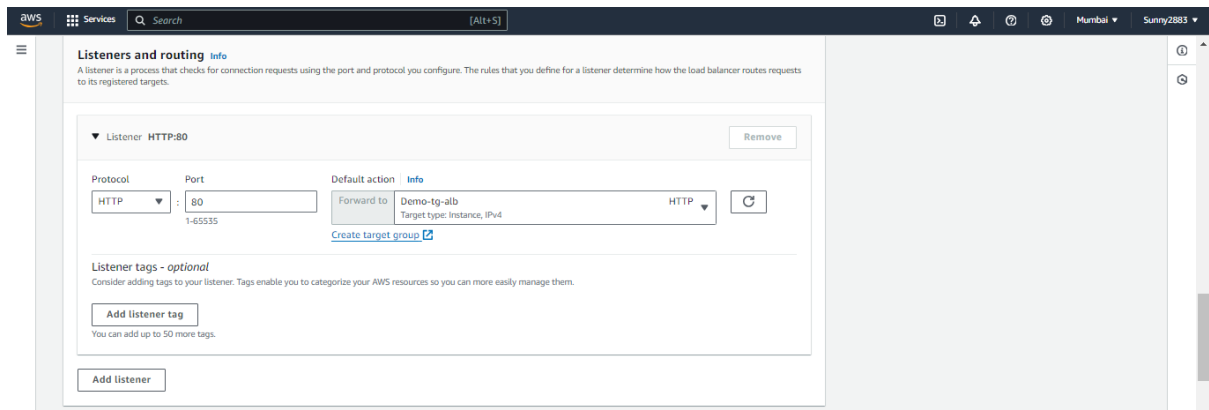
Show only pending

Instance ID	Name	Port	State	Security groups	Zone	Private IPv4 address	Subnet ID
i-0ad8d6d725beada50	My first Instance	80	Running	launch-wizard-1	ap-south-1a	172.31.41.216	subnet-0e6cdf2a06c9753a9
i-0dedcd7d5dfa2add4	My second Instance	80	Running	launch-wizard-1	ap-south-1a	172.31.42.239	subnet-0e6cdf2a06c9753a9

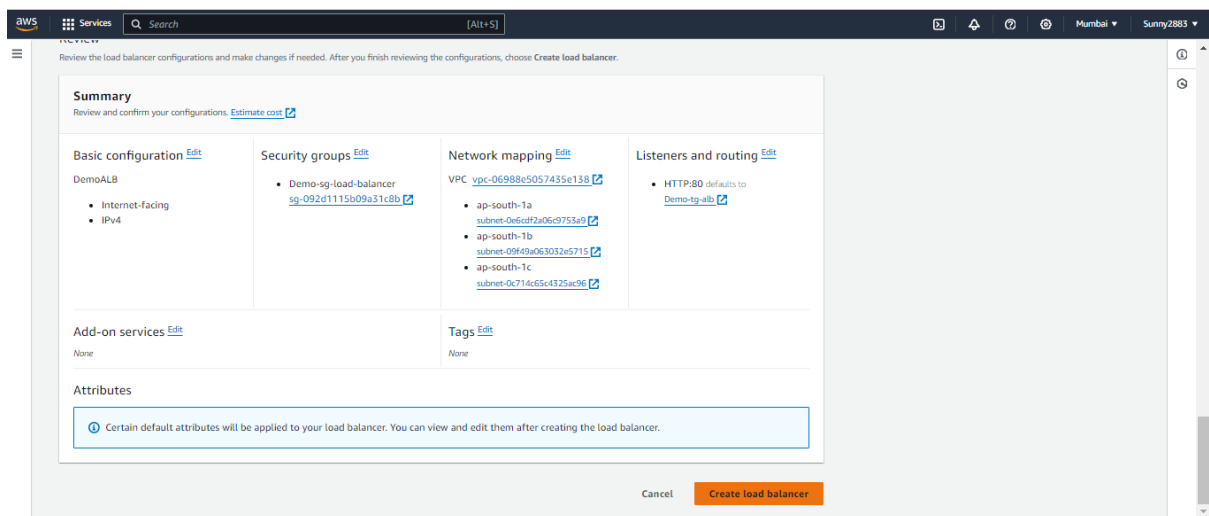
2 pending

Cancel Previous Create target group

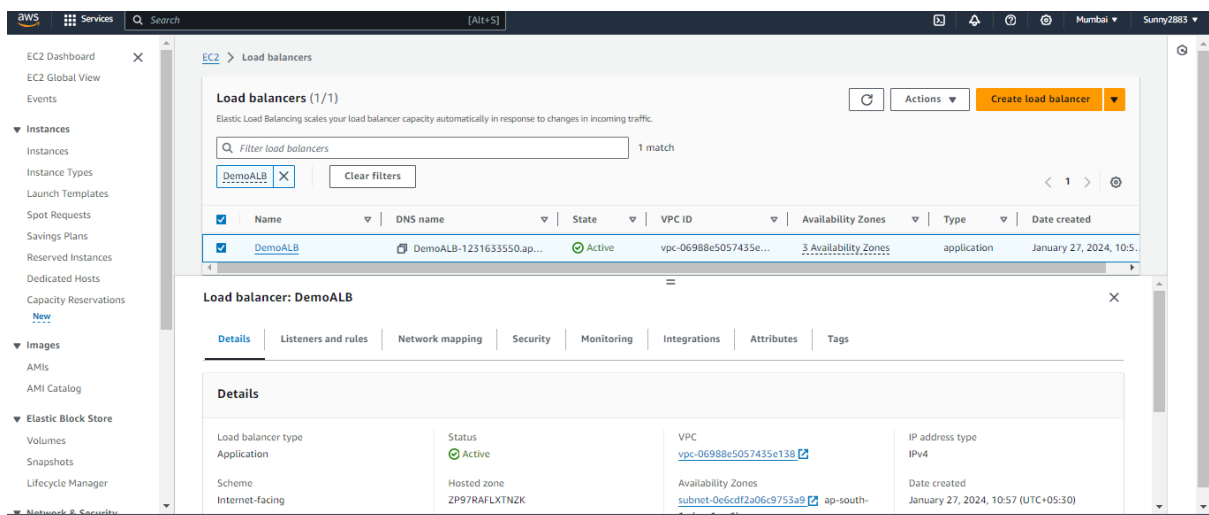
Step7. Select the target group .



Step8. Review your configuration and click create to create the ALB.



Step9. Load balancer dashboard.



Step10. DNS of ALB

DemoALB-1231633550.ap-south-1.elb.amazonaws.com

First instance.



Second Instance.

