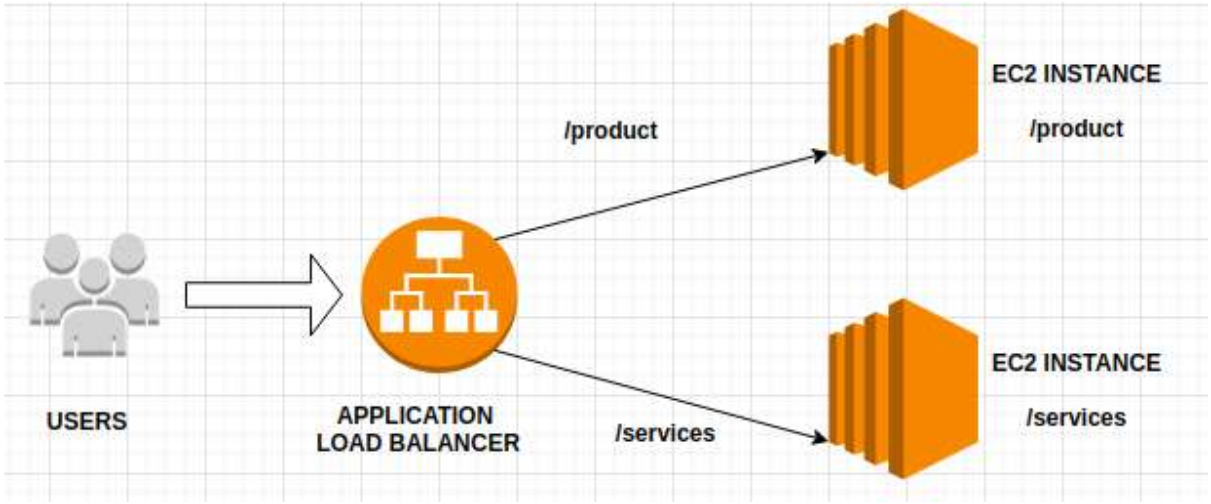
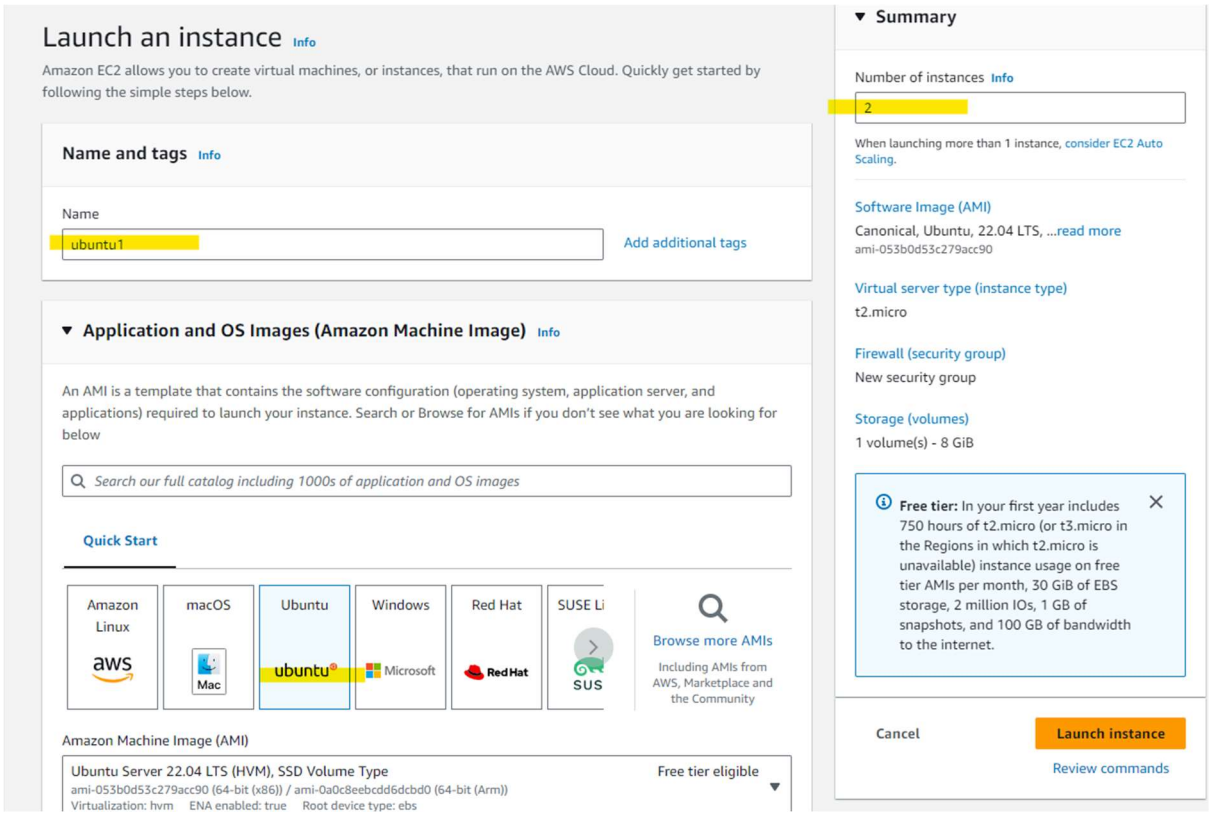
APPLICATION LOAD BALANCER (PATH BASED)



NOTE : WE TOOK EXAMPLE OF ORDERS AND PAYMENTS

Create two EC2 (Ubuntu1 and Ubuntu2)



Create key pair

Key pair name

Key pairs allow you to connect to your instance securely.

key

The name can include upto 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type

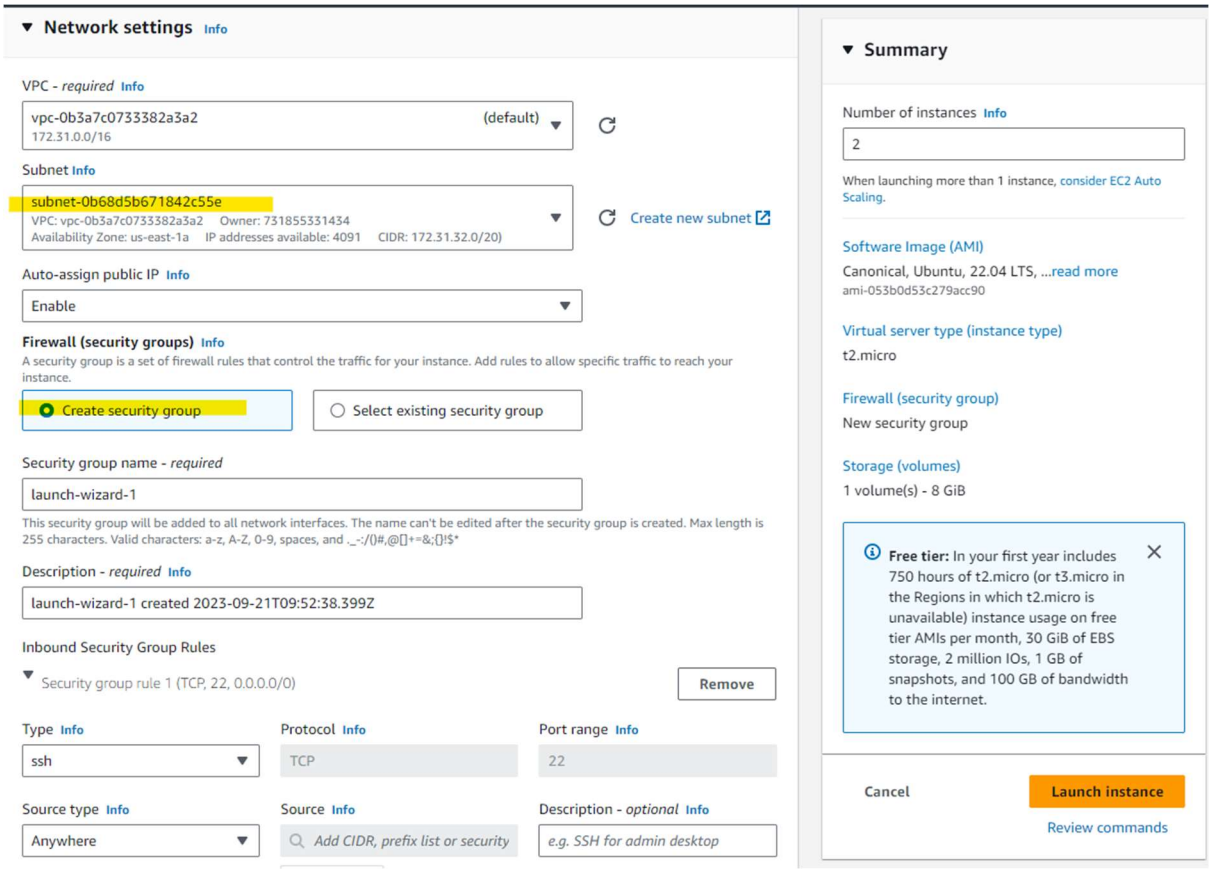
- (•) RSA
  RSA encrypted private and public key pair
- ( ) ED25519
  ED25519 encrypted private and public key pair

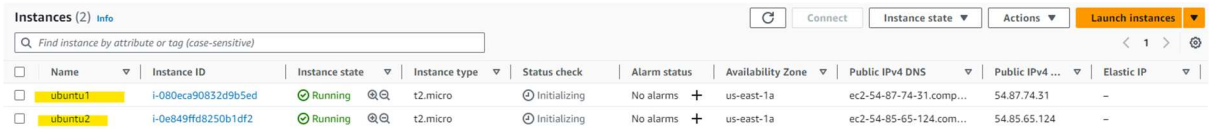
Private key file format

- ( ) .pem
  For use with OpenSSH
- (•) .ppk
  For use with PuTTY

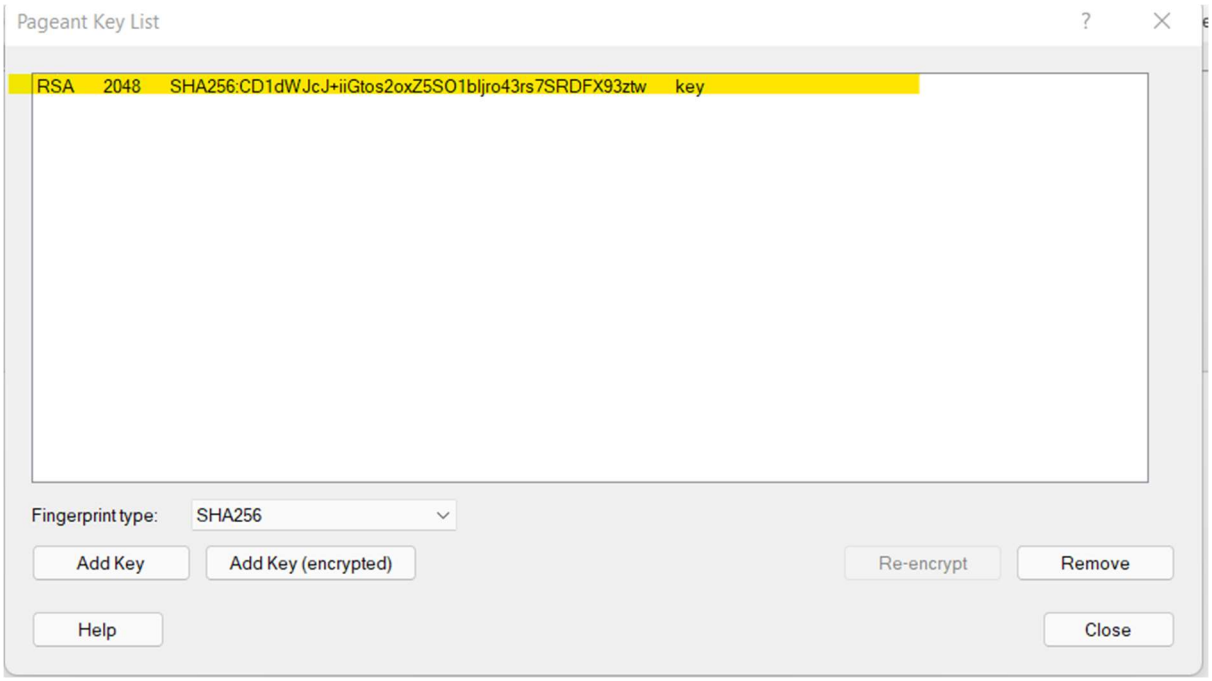
⚠ When prompted, store the private key in a secure and accessible location on your computer. **You will need it later to connect to your instance.** Learn more

Cancel | Create key pair

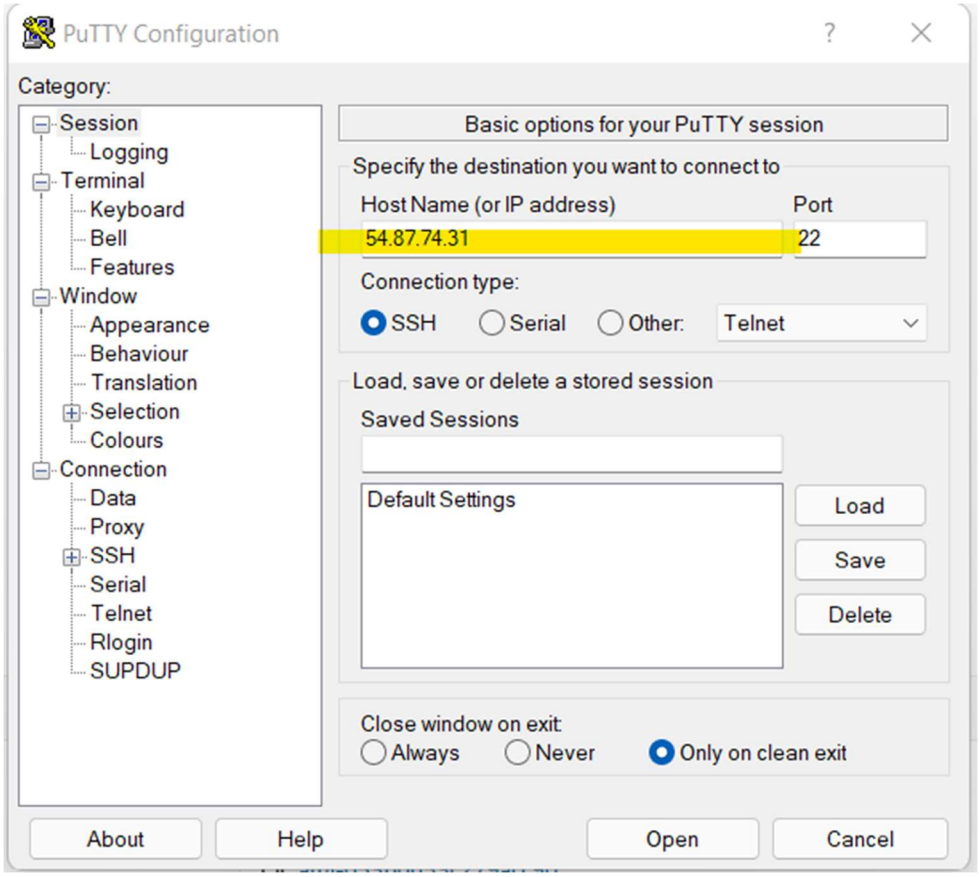


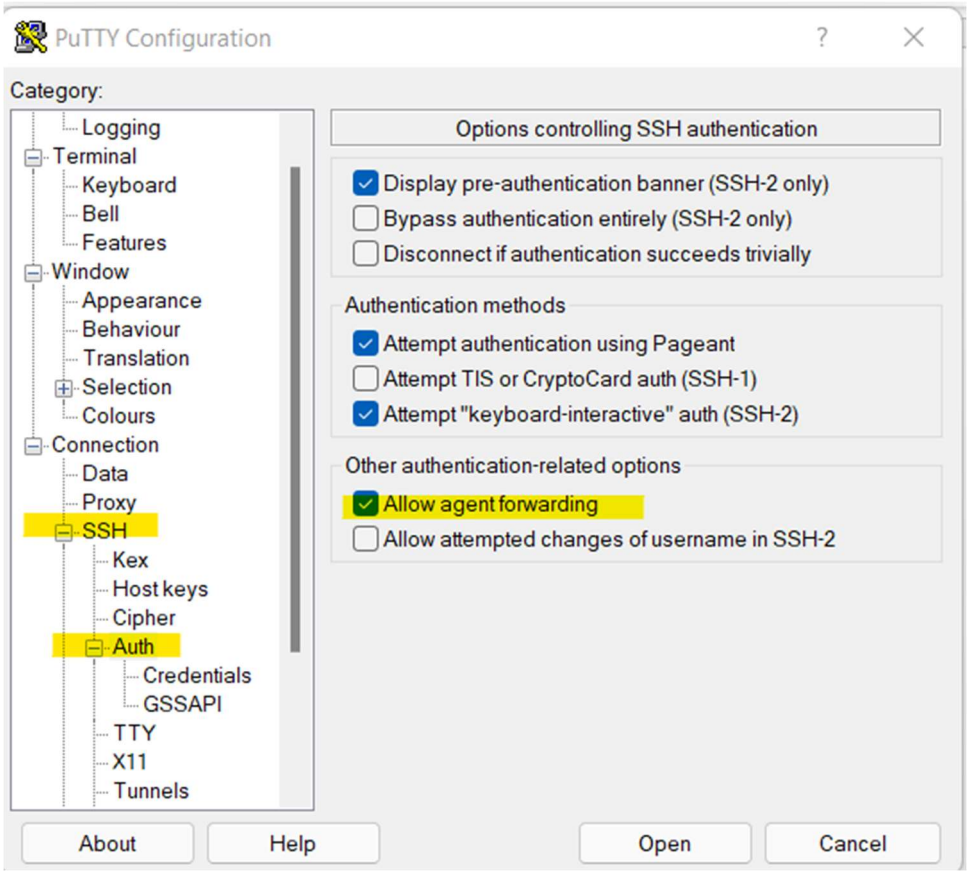


Add key to pageant



Connect through Putty





Once connected use below commands:-

Sudo su

Apt update

Apt install apache2

Systemctl restart apache2

Systemctl enable apache2

Cd /var/www/html

Nano index.html

To remove :- rm index.html

Vi index.html

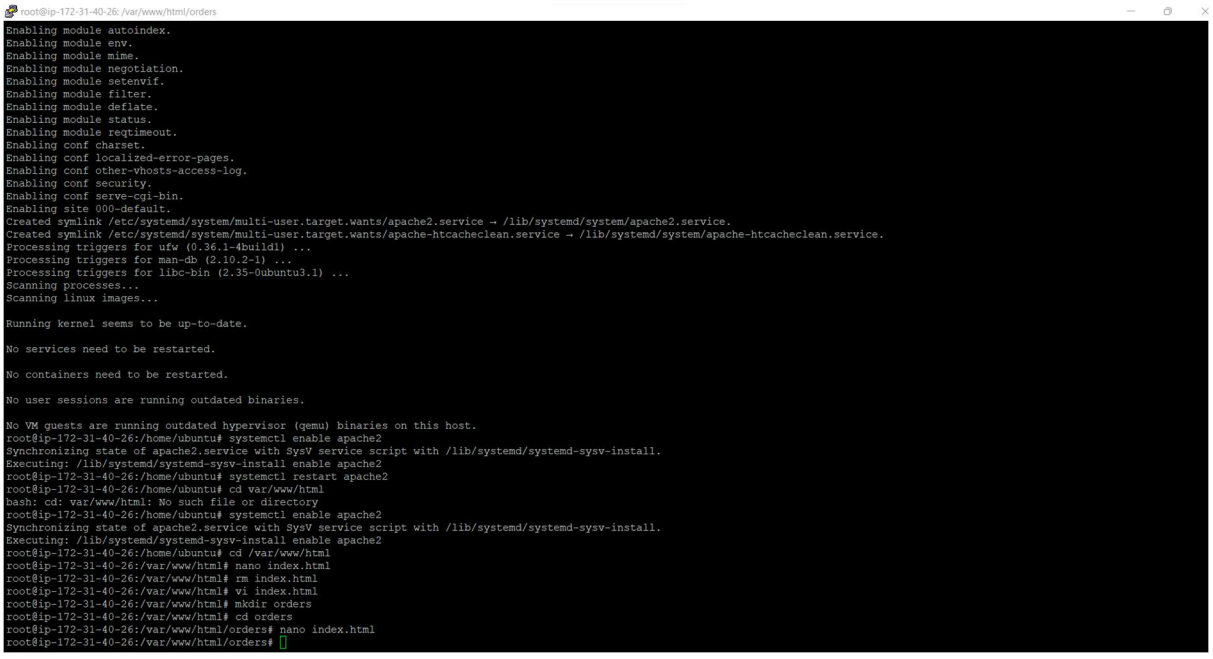
To save : escape, shift semi colon,wq enter

Mkdir (foldername) -------- mkdir orders

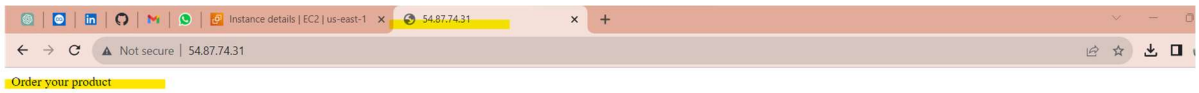
Cd (foldername) ---------- cd orders

Nano index.html

Save



Copy public IP and paste it in browser



Now connect another EC2 through putty

Once connected use these commands:-

Sudo su

Apt update

Apt install apache2

Systemctl restart apache2

Systemctl enable apache2

Cd /var/www/html

Nano index.html

To remove :- rm index.html

Vi index.html

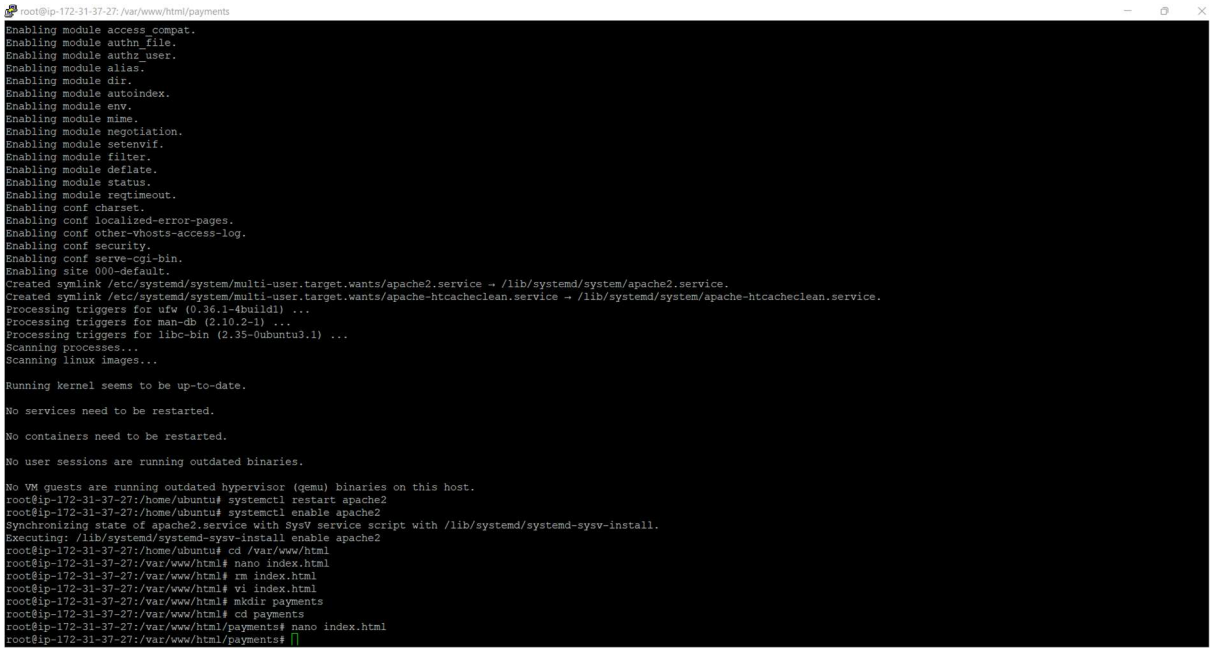
To save :- escape, semi colon,wq, enter

Mkdir (folder name) ---------- mkdir payments

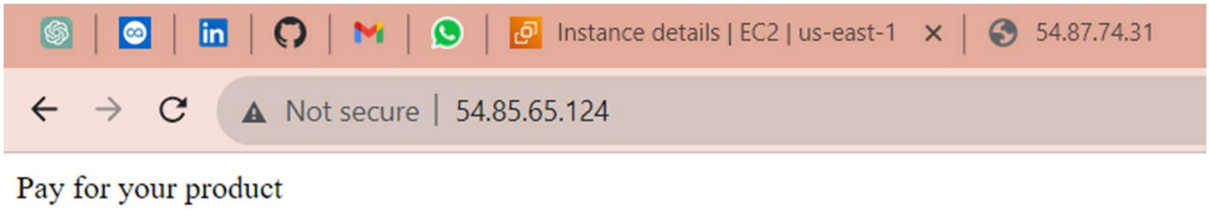
Cd (folder name) ---------- cd payments

Nano index.html

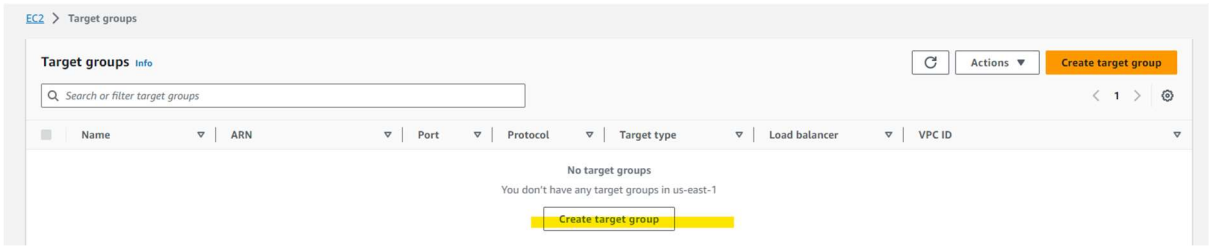
Save



Copy public ip and browse



Create Target group



Basic configuration

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

Choose a target type

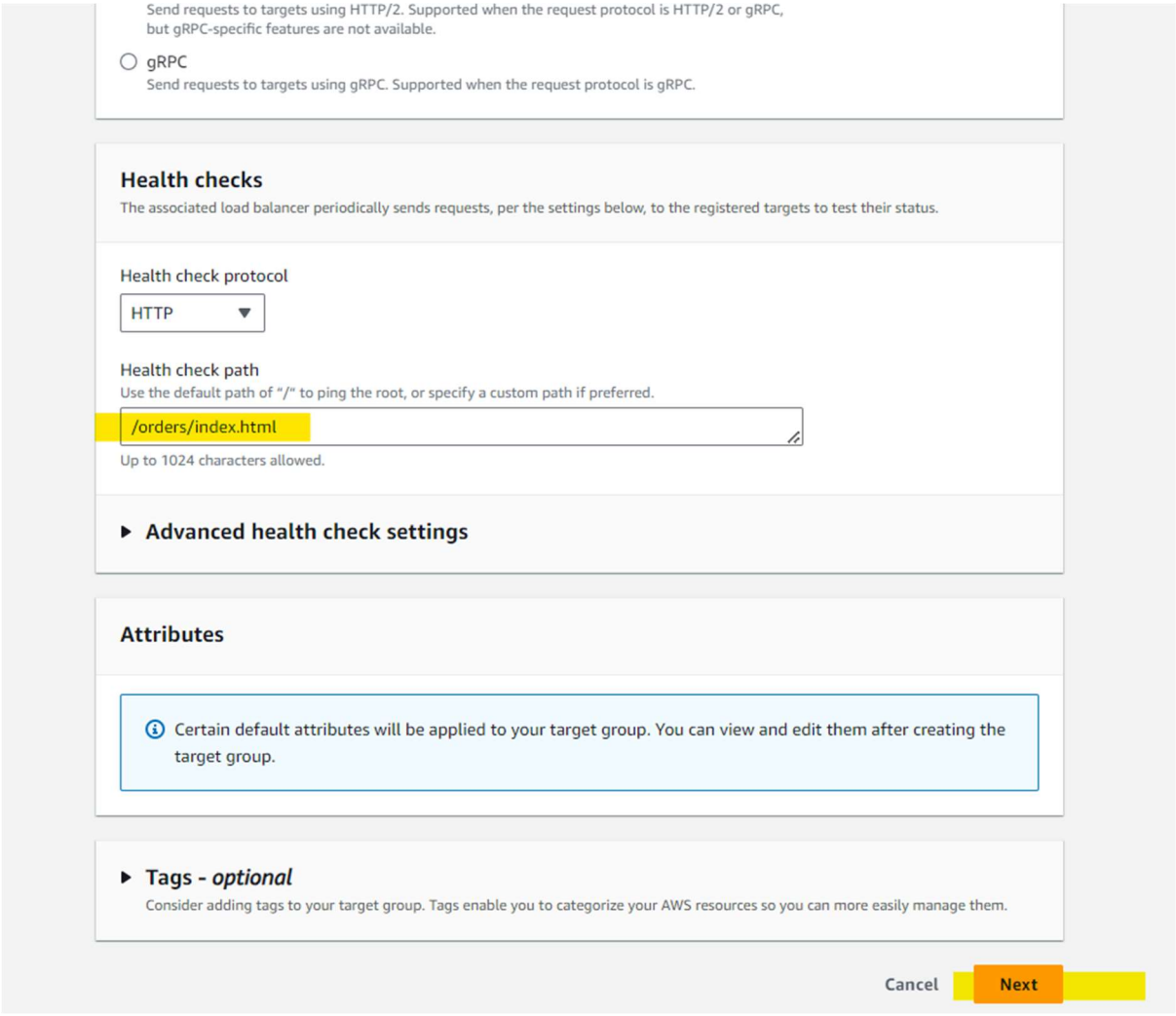
- (•) **Instances**
  - Supports load balancing to instances within a specific VPC.
  - Facilitates the use of Amazon EC2 Auto Scaling to manage and scale your EC2 capacity.
- ( ) **IP addresses**
  - Supports load balancing to VPC and on-premises resources.
  - Facilitates routing to multiple IP addresses 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.
- ( ) **Application Load Balancer**
  - Offers the flexibility for a Network Load Balancer to accept and route TCP requests within a specific VPC.
  - Facilitates using static IP addresses and PrivateLink with an Application Load Balancer.

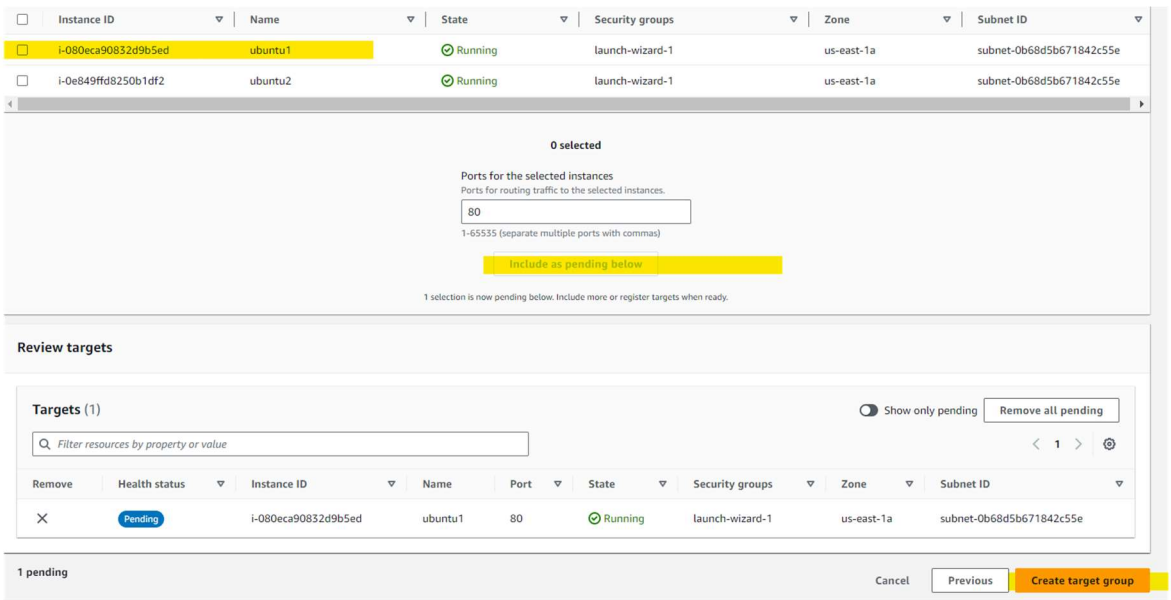
Target group name

target1

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

Protocol: HTTP : Port: 80





Create another target

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.

Application Load Balancer

- Offers the flexibility for a Network Load Balancer to accept and route TCP requests within a specific VPC.
- Facilitates using static IP addresses and PrivateLink with an Application Load Balancer.

Target group name

target2

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

Protocol: HTTP : Port: 80

1-65535

VPC

Health checks

The associated load balancer periodically sends requests, per the settings below, to the registered targets to test their status.

Health check protocol

HTTP

Health check path

Use the default path of "/" to ping the root, or specify a custom path if preferred.

/payments/index.html

Up to 1024 characters allowed.

▶ **Advanced health check settings**

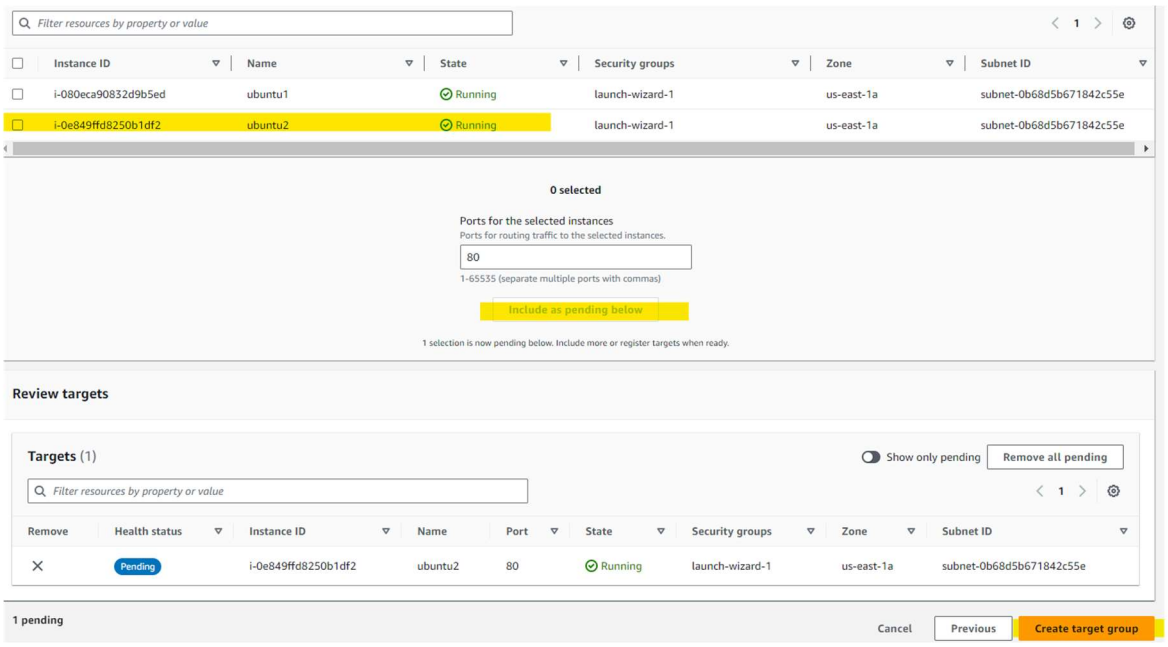
Attributes

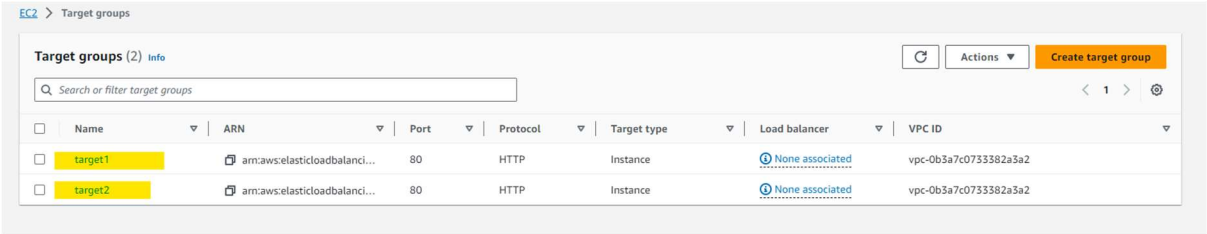
Certain default attributes will be applied to your target group. You can view and edit them after creating the target group.

▶ **Tags - *optional***

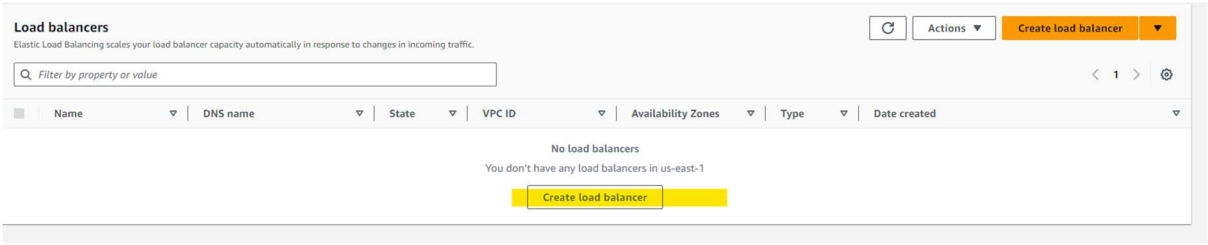
Consider adding tags to your target group. Tags enable you to categorize your AWS resources so you can more easily manage them.

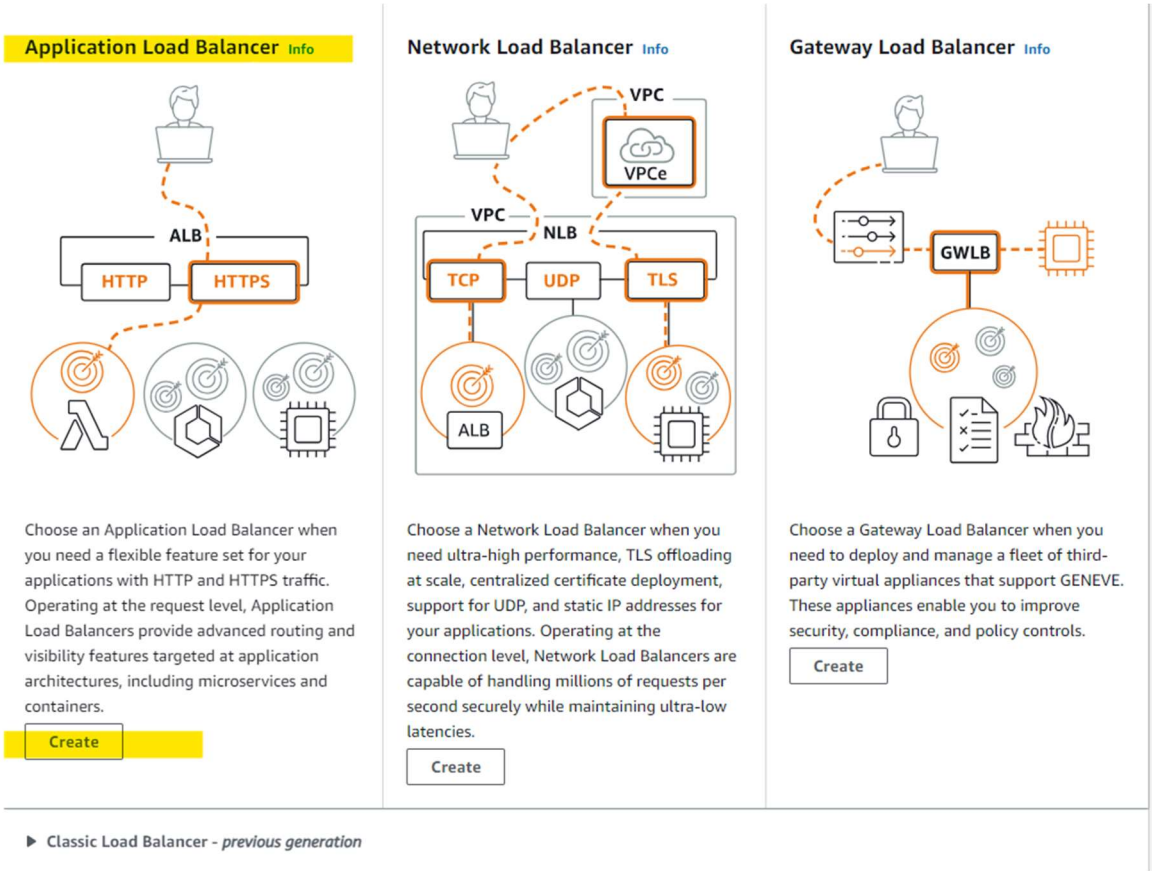
Cancel **Next**





Create 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 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.

myalb

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.

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

IPv4 address
Assigned by AWS

[x] us-east-1e (use1-az3)

Subnet
subnet-01c5e1c75865f314e

IPv4 address
Assigned by AWS

[x] us-east-1f (use1-az5)

Subnet
subnet-0f4a51626a92f783d

IPv4 address
Assigned by AWS

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

launch-wizard-1
sg-0a50a9f0b5f26aa6c VPC: vpc-0b3a7c0733382a3a2

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 HTTP:80 — Remove

Protocol	Port	Default action Info
HTTP	80 (1-65535)	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

▼ Add-on services - *optional*

Additional AWS services can be integrated with this load balancer at launch. You can also add these and other services after your load balancer is created by reviewing the "Integrated Services" tab for the selected load balancer.

AWS Global Accelerator Info

☐ Create an accelerator to get static IP addresses and improve the performance and availability of your applications. Additional charges apply

Summary

Review and confirm your configurations. Estimate cost

Basic configuration Edit

myalb

- Internet-facing
- IPv4

Security groups Edit

- launch-wizard-1
  sg-0a50a9f0b5f26aa6c

Network mapping Edit

VPC vpc-0b3a7c0733382a3a2

- us-east-1a
  subnet-0b68d5b671842c55e
- us-east-1b
  subnet-02b47ec2ae9a2fc01
- us-east-1c
  subnet-0350fae0bb1b25397
- us-east-1d
  subnet-07d4bafe13ce33956
- us-east-1e
  subnet-01c5e1c75865f314e
- us-east-1f
  subnet-0f4a51626a92f783d

Listeners and routing Edit

- HTTP:80 defaults to
  target1

Add-on services Edit

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.

Cancel — Create load balancer

Load balancers (1)

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

Actions ▼ — Create load balancer ▼

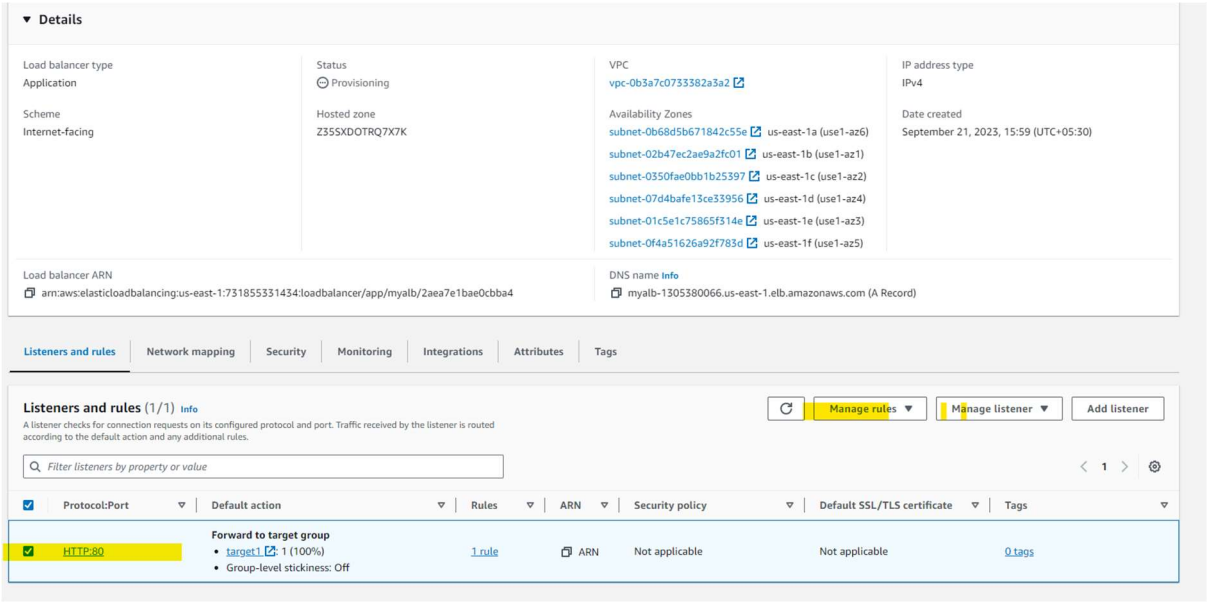
Filter by property or value

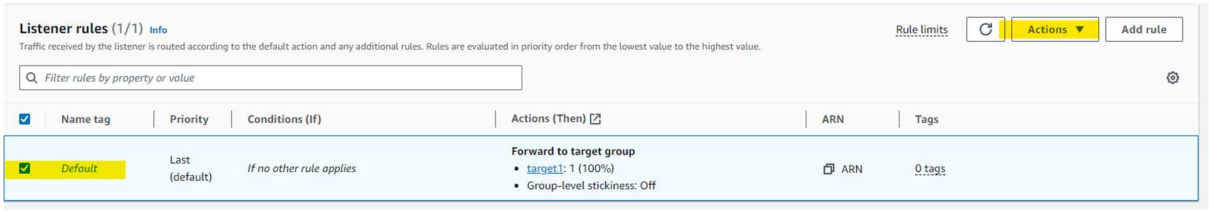
myalb ✕ — Clear filters

1

Name	DNS name	State	VPC ID	Availability Zones	Type	Date created
myalb	myalb-1305380066.us-eas...	Provisioning	vpc-0b3a7c0733382a3a2	6 Availability Zones	application	September 21, 2023, 15:59 (UTC+05:30)

Add rule


Details
Load balancer type
Application
Status
Provisioning
VPC
vpc-0b3a7c0733382a3a2
IP address type
IPv4
Scheme
Internet-facing
Hosted zone
Z35SXDOTRQ7X7K
Availability Zones
subnet-0b68d5b671842c55e us-east-1a (use1-az6)
subnet-02b47ec2ae9a2fc01 us-east-1b (use1-az1)
subnet-0350fae0bb1b25397 us-east-1c (use1-az2)
subnet-07d4bafe13ce33956 us-east-1d (use1-az4)
subnet-01c5e1c75865f314e us-east-1e (use1-az3)
subnet-0f4a51626a92f783d us-east-1f (use1-az5)
Date created
September 21, 2023, 15:59 (UTC+05:30)
Load balancer ARN
arn:aws:elasticloadbalancing:us-east-1:731855331434:loadbalancer/app/myalb/2aea7e1bae0cbba4
DNS name Info
myalb-1305380066.us-east-1.elb.amazonaws.com (A Record)
Listeners and rules
Network mapping
Security
Monitoring
Integrations
Attributes
Tags
Listeners and rules (1/1) Info
A listener checks for connection requests on its configured protocol and port. Traffic received by the listener is routed according to the default action and any additional rules.
Manage rules
Manage listener
Add listener
Filter listeners by property or value
Protocol:Port
Default action
Rules
ARN
Security policy
Default SSL/TLS certificate
Tags
HTTP:80
Forward to target group
target1: 1 (100%)
Group-level stickiness: Off
1 rule
ARN
Not applicable
Not applicable
0 tags


Listener rules (1/1) 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
Actions
Add rule
Filter rules by property or value
Name tag
Priority
Conditions (If)
Actions (Then)
ARN
Tags
Default
Last (default)
If no other rule applies
Forward to target group
target1: 1 (100%)
Group-level stickiness: Off
ARN
0 tags

Listener 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.

Listener ARN

arn:aws:elasticloadbalancing:us-east-1:731855331434:listener/app/myalb/2aea7e1bae0cbba4/891f98080a257cc5

Protocol : Port

The listener will be identified by the protocol and port.

HTTP | 80

1-65535

Default actions Info

The default action is used if no other rules apply. Choose the default action for traffic on this listener.

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.

		Weight	Percent
target1 Target type: Instance, IPv4	HTTP	1 0-999	100%

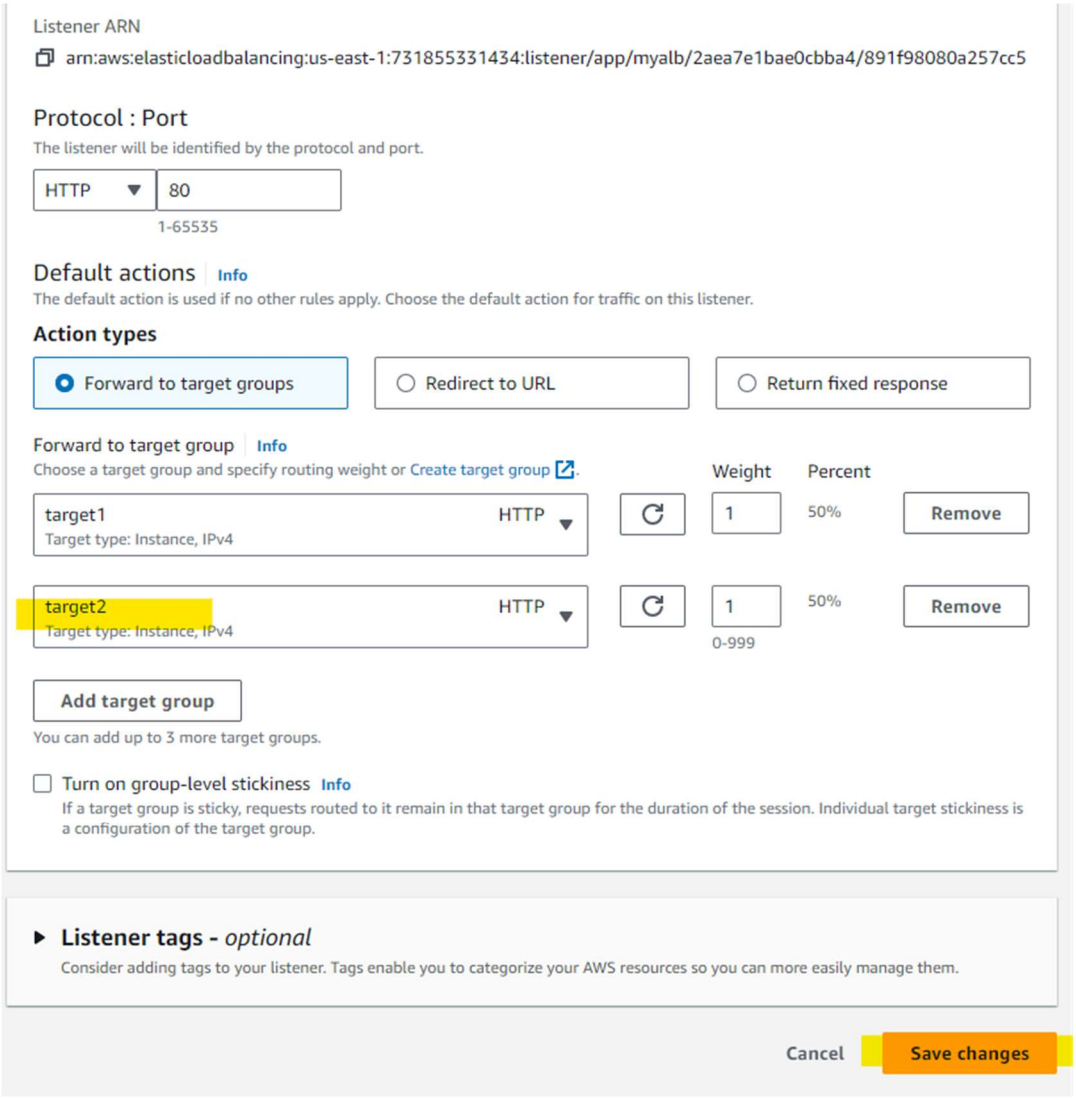
Add target group

You can add up to 4 more target groups.

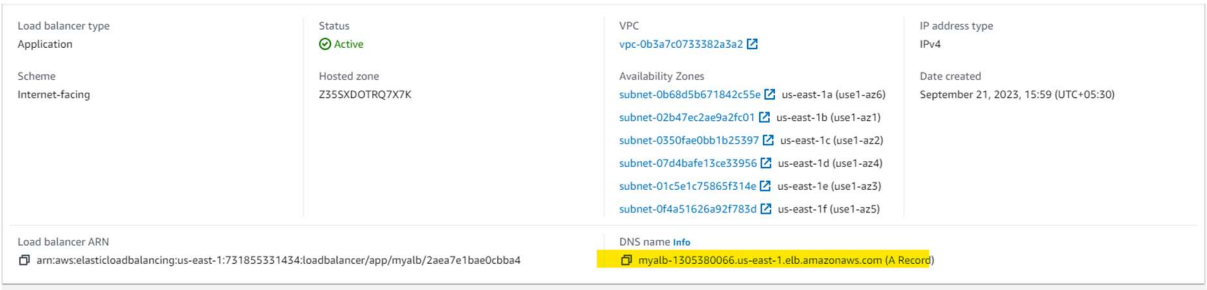
[ ] Turn on group-level stickiness Info

If a target group is sticky, requests routed to it remain in that target group for the duration of the session. Individual target stickiness is a configuration of the target group.

▶ **Listener tags - *optional***

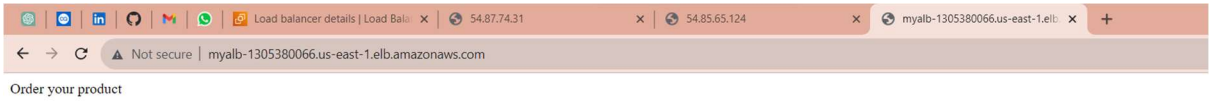


Copy load balance DNS

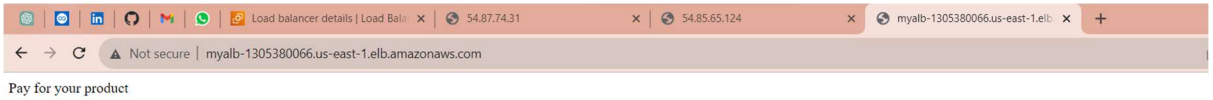


Paste it in browser

Based on health check page will be switched



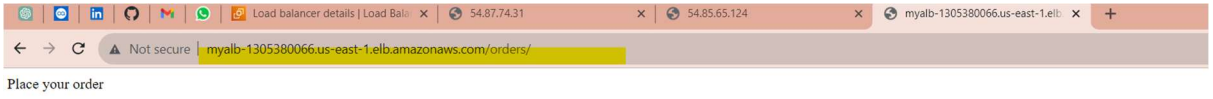
Order your product



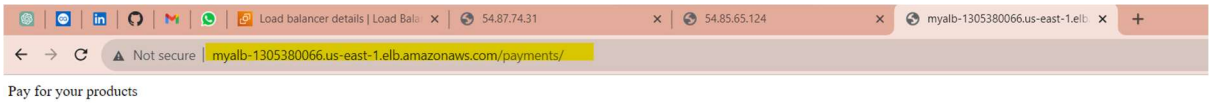
Pay for your product

Above is application load balancer

Now will try path based



Place your order



Pay for your products