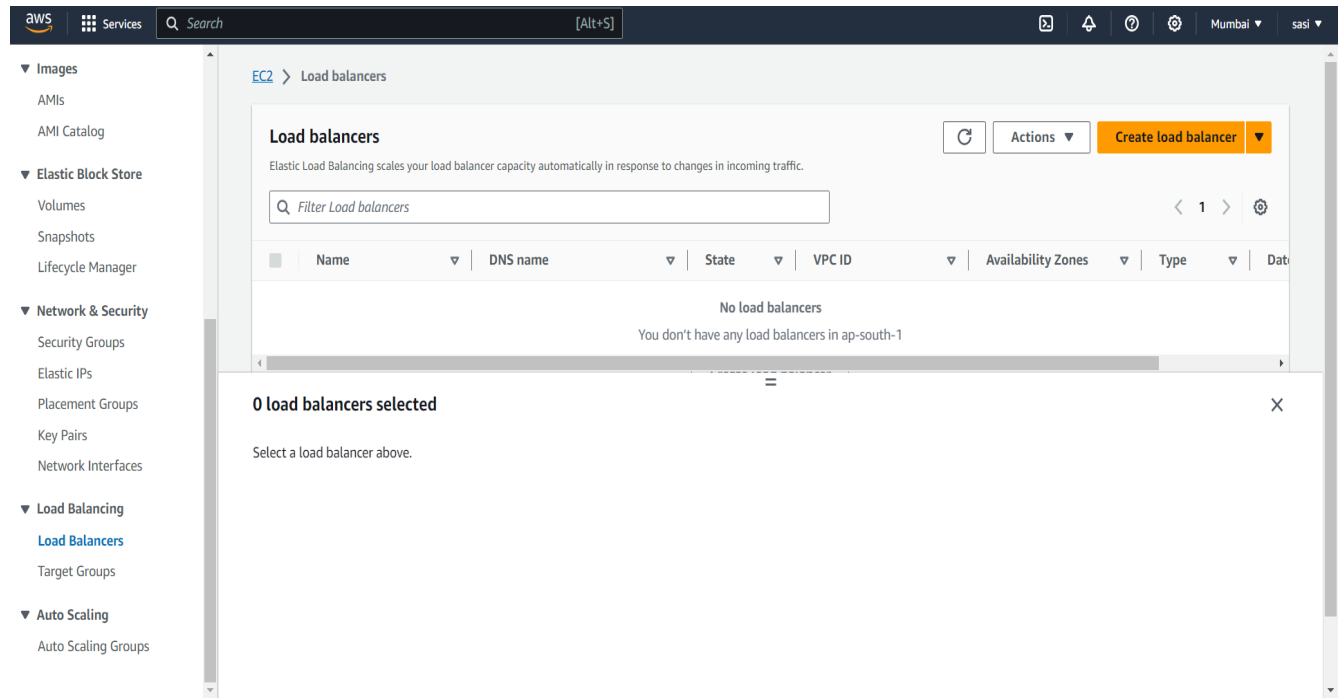
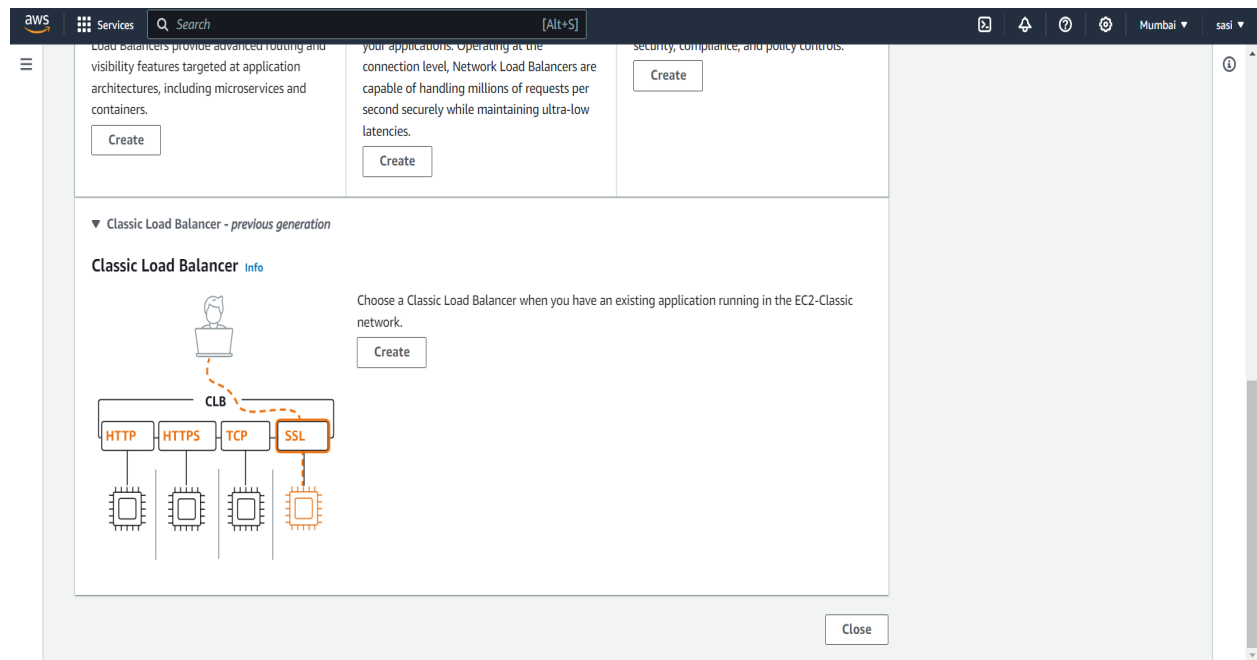


1. Create a Classic Load Balancer



Click on load balancers

There you will find types of load balancers



Click on classic load balancer.

aws

Services

Search

[Alt+S]

Mumbai

sasi

EC2 > Load balancers > Create Classic Load Balancer

Create Classic Load Balancer [Info](#)

The Classic Load Balancer distributes incoming application traffic across multiple EC2 instance targets in multiple Availability Zones. This increases the fault tolerance of your applications. Elastic Load Balancing detects unhealthy instances and routes traffic only to healthy instances.

► How Classic 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.

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.

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Scheme: Internet-facing

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.

Network mapping [Info](#)

The load balancer routes traffic to targets in the selected subnets, and in accordance with your network 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 available for selection. The selected VPC cannot be changed after the load balancer is created. When selecting a VPC for your load balancer, ensure each subnet has a CIDR block with at least a /27 bitmask and at least 8 free IP addresses. [Learn more](#)

vpc-05900351591efe7d4

IPv4: 172.31.0.0/16

Mappings

Select at least one Availability Zone and one subnet for each zone. We recommend selecting at least two Availability Zones. The load balancer will route traffic only to targets in the selected Availability Zones. 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-0218af047ce3c1038

IPv4 address

Select the sub nets and regions.

aws

Services

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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 example, you can have Key = production-webserver, or Key = webserver, and Value = production.

Summary

Review and confirm your configurations. [Estimate cost](#)

<div>Basic configuration Edit</div> <div>MyELB</div> <ul style="list-style-type: none">Internet-facing	<div>Network mapping Edit</div> <div>VPC vpc-05900351591efe7d4</div> <ul style="list-style-type: none">ap-south-1a subnet-0218af047ce3c1038	<div>Security groups Edit</div> <ul style="list-style-type: none">default sg-070a69fa0fbb0178	<div>Listeners and routing Edit</div> <ul style="list-style-type: none">HTTP:80
<div>Health checks Edit</div> <div>HTTP:80/index.html</div> <ul style="list-style-type: none">Timeout: 2 secondsInterval: 5 secondsUnhealthy threshold: 2Unhealthy threshold: 10	<div>Instances Edit</div> <div>No instances added yet</div>	<div>Attributes Edit</div> <ul style="list-style-type: none">Cross-zone load balancing: OnConnection draining: OnConnection draining timeout: 300 seconds	<div>Tags Edit</div> <div>None</div>

Cancel

Create load balancer

aws

Services

Search

[Alt+S]

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Successfully created load balancer: MyELB

Note: it might take a few minutes for your load balancer to be fully set up and ready to route traffic. Targets will also take a few minutes to complete the registration process and pass initial health checks.

EC2 > Load balancers > MyELB > Create Classic Load Balancer

Create Classic Load Balancer

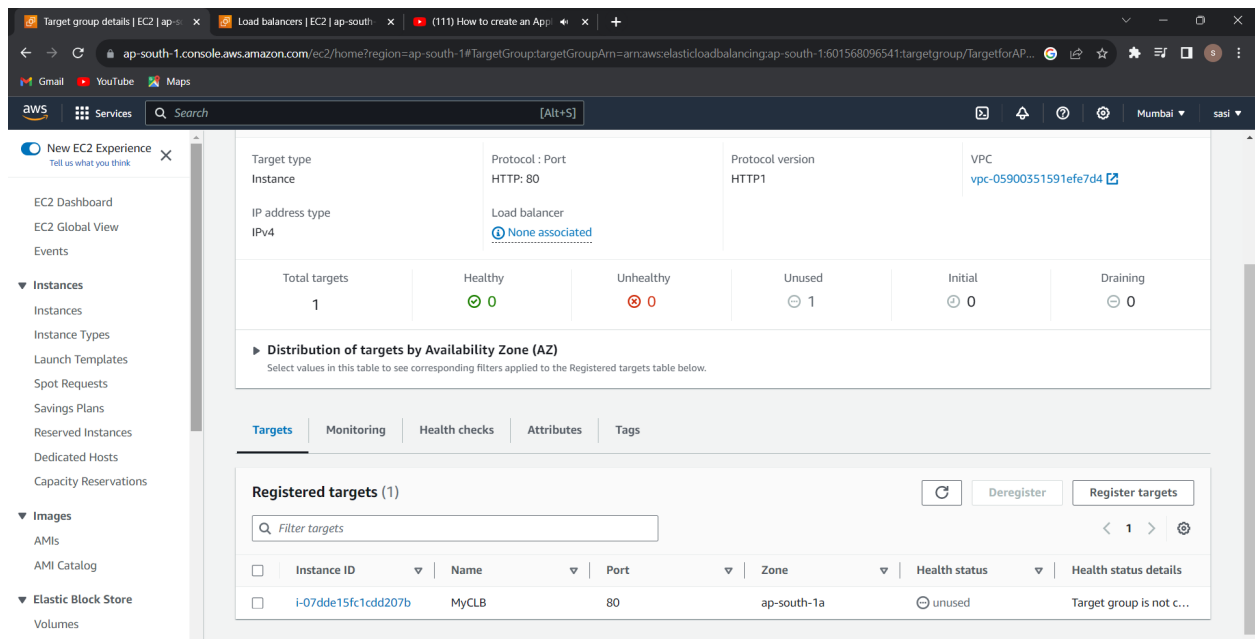
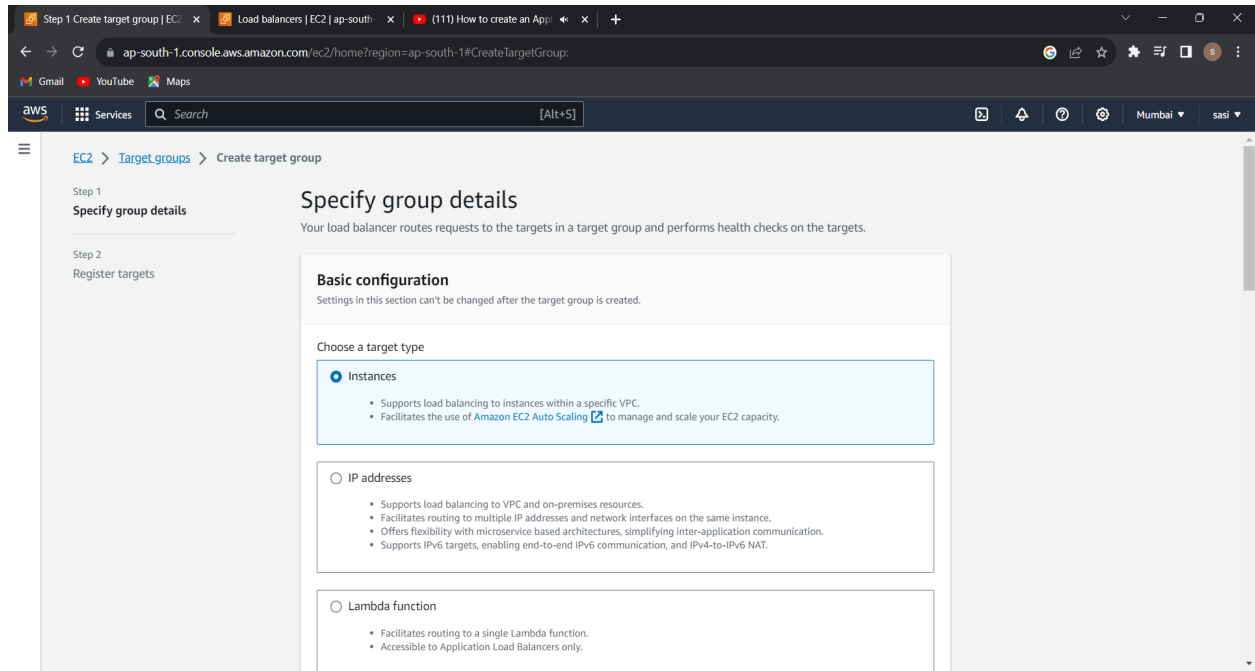
Suggested next step

Review, customize, or configure attributes for your load balancer and listeners using the **Description** and **Listeners** tabs within MyELB.

View load balancer

2. Create an Application Load Balancer.

Before you have to create a Target group.

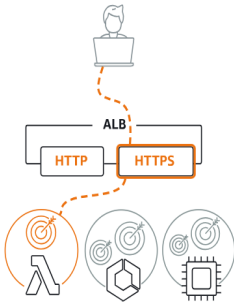


Compare and select load balancer | Load balancers | EC2 | ap-south-1 | (111) How to create an App |

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#SelectCreateELBWizard:

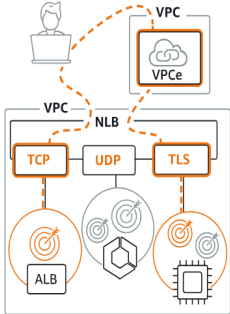
Load balancer types

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

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

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](#)

Click on Application load balancer.

Create application load balancer | Load balancers | EC2 | ap-south-1 | (111) How to create an App |

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#CreateALBWizard:

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 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.

APL

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](#)

Create application load balancer x Load balancers [EC2] ap-south- x (111) How to create an App x +

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#CreateALBWizard:

Gmail YouTube Maps

aws Services Search [Alt+S]

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Listener HTTP:80

Remove

▼ Listener HTTP:81

Remove

Protocol HTTP Port 81

Default action Forward to TargetforAPL

Info 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.

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.

Create application load balancer x Load balancers [EC2] ap-south- x (111) How to create an App x +

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#CreateALBWizard:

Gmail YouTube Maps

aws Services Search [Alt+S]

Mumbai sasi

Summary

Review and confirm your configurations. Estimate cost

Basic configuration Edit

APL

Internet-facing

IPv4

Security groups Edit

default

sg-070a69fa0fbba0178

Network mapping Edit

VPC vpc-05900351591efe7d4

ap-south-1a

subnet-0218af047ce3c1038

Listeners and routing Edit

HTTP:80 defaults to Target group not defined

HTTP:81 defaults to TargetforAPL

Add-on services Edit

None

Tags Edit

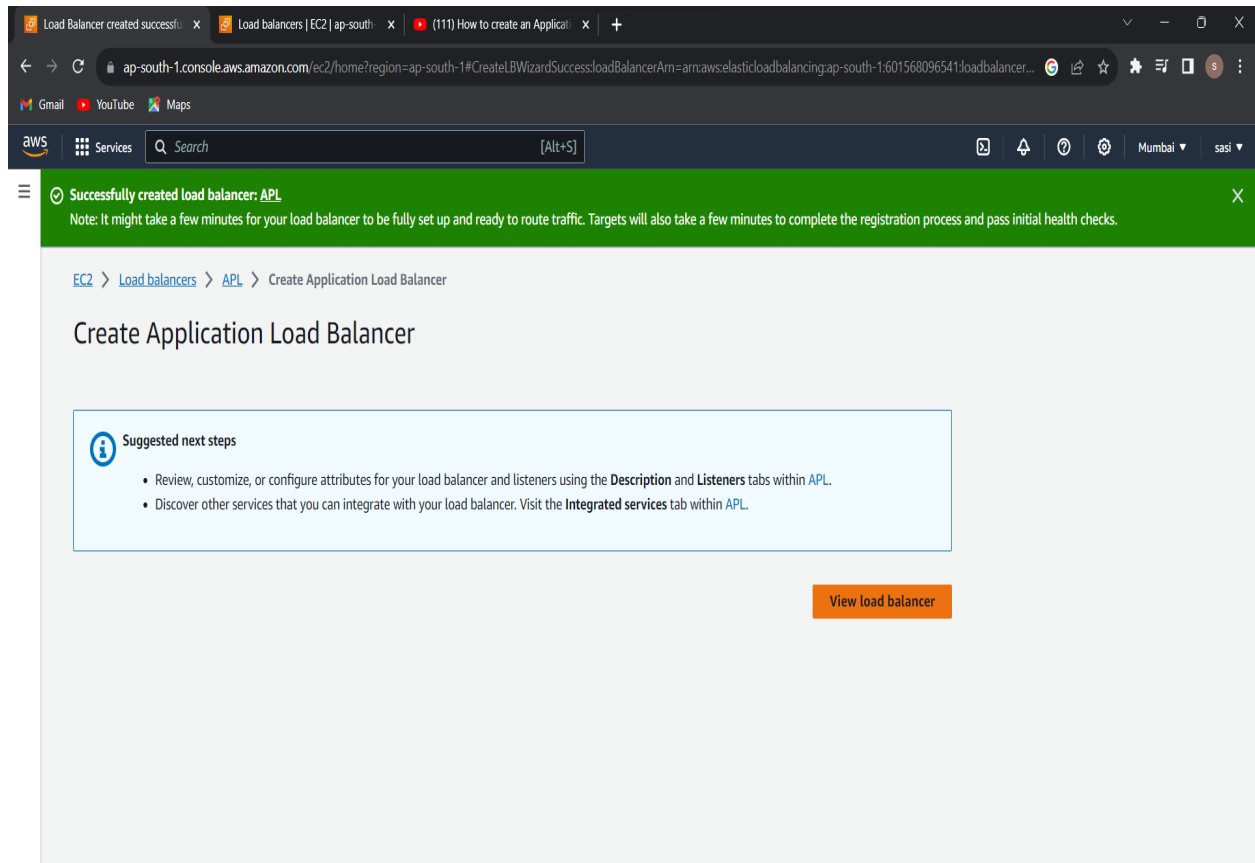
None

Attributes

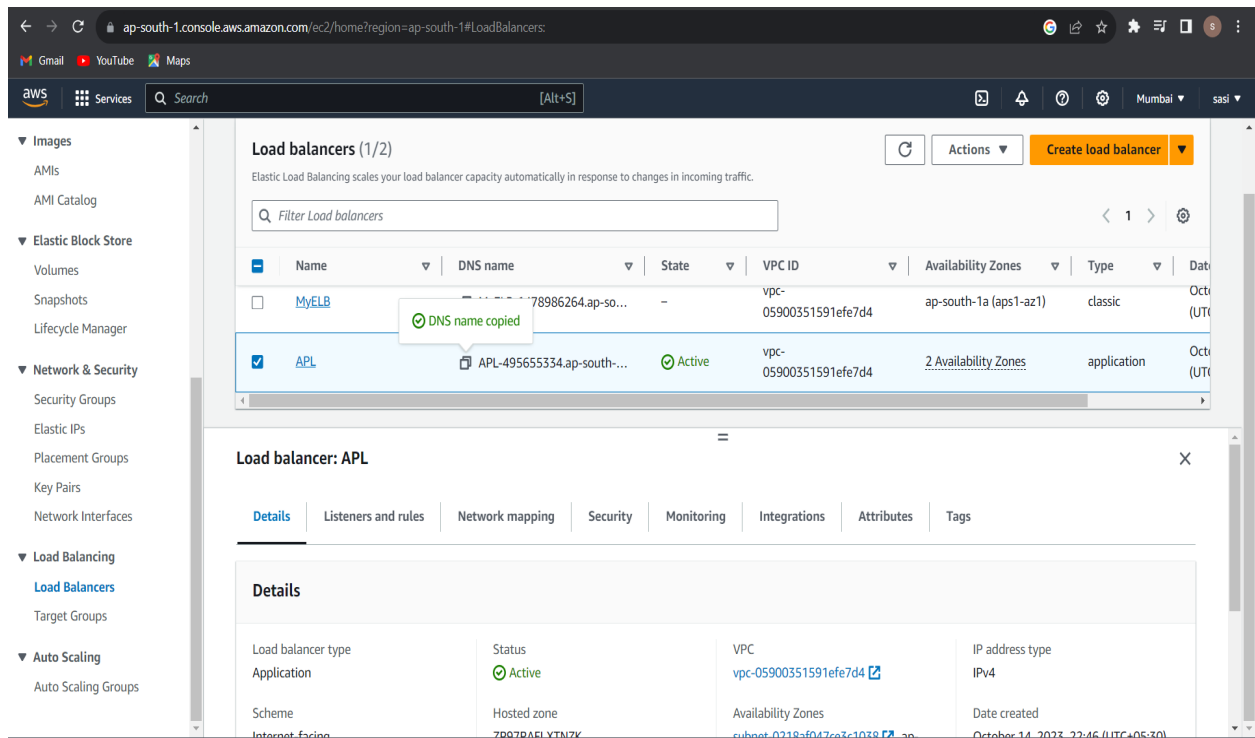
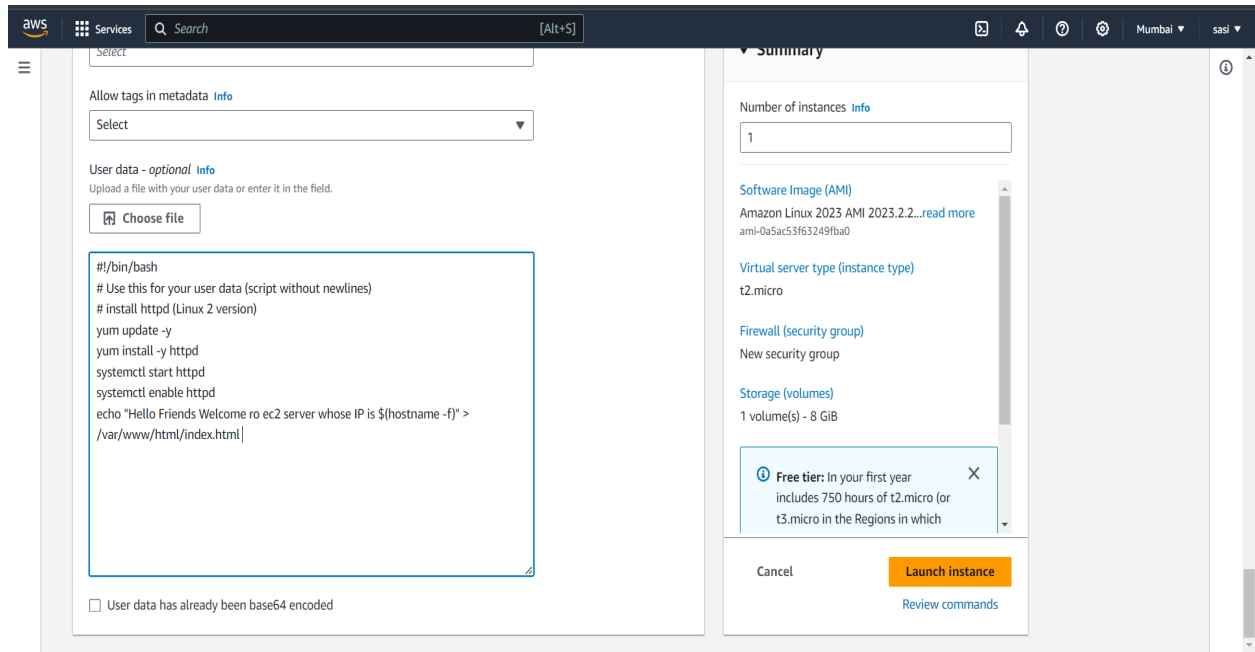
Certain default attributes will be applied to your load balancer. You can view and edit them after creating the load balancer.

Cancel

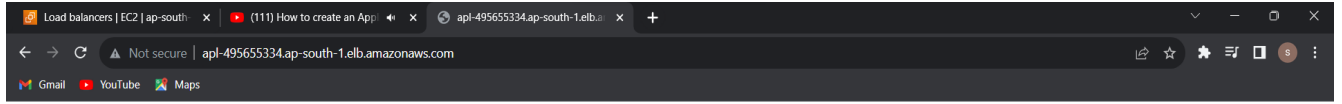
Create load balancer



I have attached an instance to the APL load balancer.
And i have given some command given some description on instance user option



Next copy DNS and access it it will show like below.



Hello Friends Welcome ro ec2 server whose IP is ip-172-31-37-102.ap-south-1.compute.internal

3. Create a Classic Load Balancer and register 3 EC2 instances with different web pages running in them.

I already created a Classic load balancer.
Now create 3 instances

Launch an instance

Name and tags

Name

e.g. My Web Server

Add additional tags

Application and OS Images (Amazon Machine Image)

Search our full catalog including 1000s of application and OS images

Quick Start

Summary

Number of instances

1

Software Image (AMI)

Amazon Linux 2023 AMI 2023.2.2...read more

ami-0a5ac53f63249fba0

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which

Cancel

Launch instance

Review commands

Allow tags in metadata

Select

User data - optional

Upload a file with your user data or enter it in the field.

Choose file

```
#!/bin/bash
# Use this for your user data (script without newlines)
# install httpd (Linux 2 version)
yum update -y
yum install -y httpd
systemctl start httpd
systemctl enable httpd
echo "Hello Friends Welcome to ec2 server whose IP is $(hostname -f)" > /var/www/html/index.html
```

☐ User data has already been base64 encoded

Summary

Number of instances

1

Software Image (AMI)

Amazon Linux 2023 AMI 2023.2.2...read more

ami-0a5ac53f63249fba0

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which

Cancel

Launch instance

Review commands

We had given user data. when we access public ip after launching instance it will display web page what you have given in user data.

Instances (1/5)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
Redhat	i-0f4c43e3d08c0241b	Terminated	t2.micro	-	No alarms	ap-south-1a	-
Task 2	i-03bf32902a94f5827	Terminated	t2.micro	-	No alarms	ap-south-1b	-
MyCLB2	i-02a4d651541cfce7a	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1a	ec2-13-233-143-
MyCLB	i-07dde15fc1cdd207b	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1a	ec2-13-233-214-
MyCLB3	i-0b77e2aaca5a771b8	Running	t2.micro	-	No alarms	ap-south-1a	ec2-43-205-130-

Instance: i-02a4d651541cfce7a (MyCLB2)

Instance summary

Instance ID i-02a4d651541cfce7a (MyCLB2)	Public IPv4 address 13.233.143.224 open address	Private IPv4 addresses 172.31.38.114
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-13-233-143-224.ap-south-

And connect those 3 instances to my Classic Load Balancer.
And access each ip address on web page it will display like this.

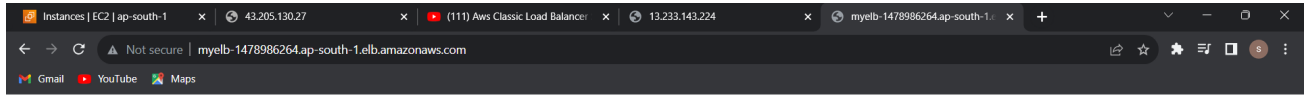
My first Instance web

Instance summary for i-07dde15fc1cdd207b (MyCLB)

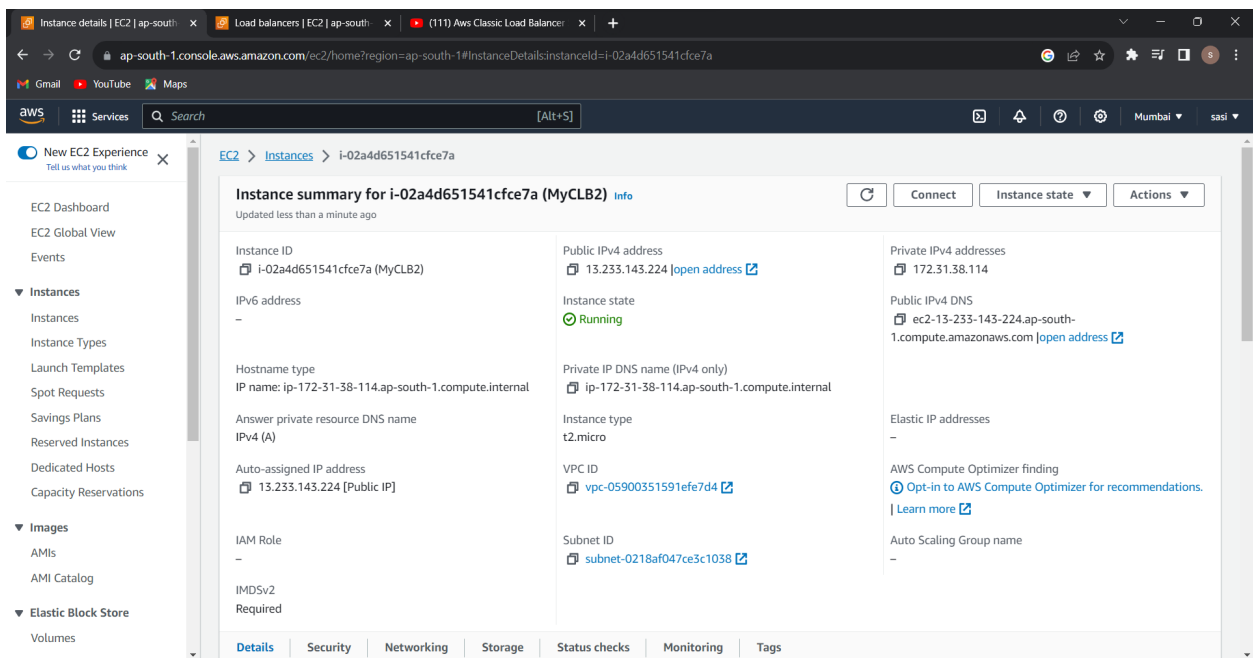
Updated less than a minute ago

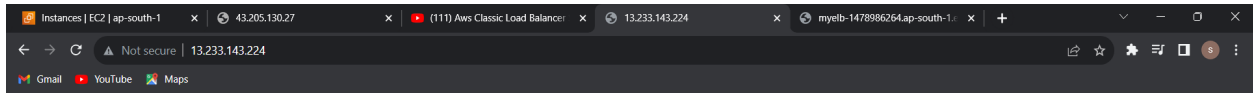
Instance ID i-07dde15fc1cdd207b (MyCLB)	Public IPv4 address 13.233.214.7 open address	Private IPv4 addresses 172.31.37.102
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-13-233-214-7.ap-south-1.compute.amazonaws.com open address
Hostname type IP name: ip-172-31-37-102.ap-south-1.compute.internal	Private IP DNS name (IPv4 only) ip-172-31-37-102.ap-south-1.compute.internal	Elastic IP addresses -
Answer private resource DNS name IPv4 (A)	Instance type t2.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more
Auto-assigned IP address 13.233.214.7 [Public IP]	VPC ID vpc-05900351591efe7d4	Auto Scaling Group name -
IAM Role -	Subnet ID subnet-0218af047ce3c1038	
IMDSv2 Required		

Access the private ip4 address it will display what i have given in user data in instance.



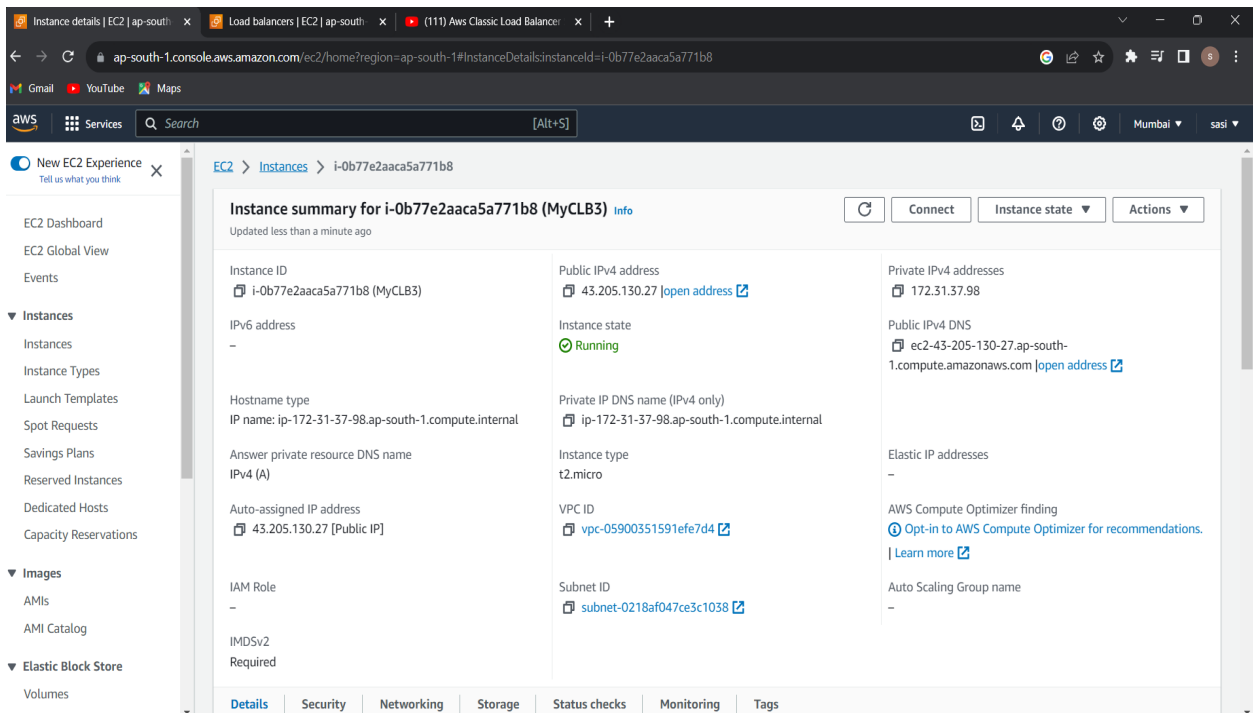
Second instance web

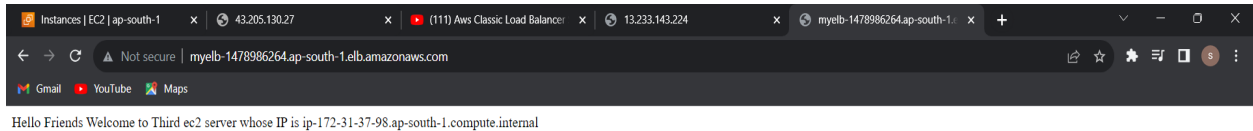




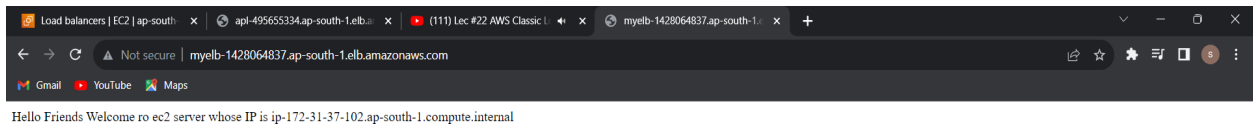
Hello Friends Welcome to second ec2 server whose IP is ip-172-31-38-114.ap-south-1.compute.internal

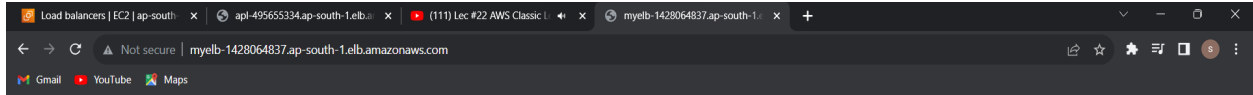
Third web instance.



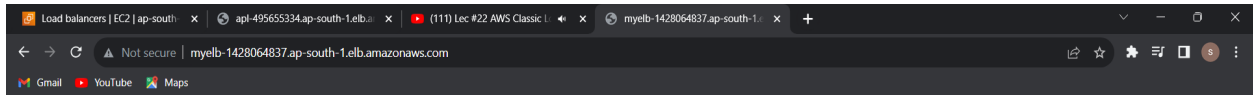


When you attach instances to classic load balancer and you access the classic load blancer DNS all 3 web pages will display like this.





Hello Friends Welcome to second ec2 server whose IP is ip-172-31-38-114.ap-south-1.compute.internal



Hello Friends Welcome to Third ec2 server whose IP is ip-172-31-37-98.ap-south-1.compute.internal

4. Migrate the Classic Load Balancer into an Application Load Balancer.

When we open classic load balancer summary in details we will find launch ALB migration wizard click on that.

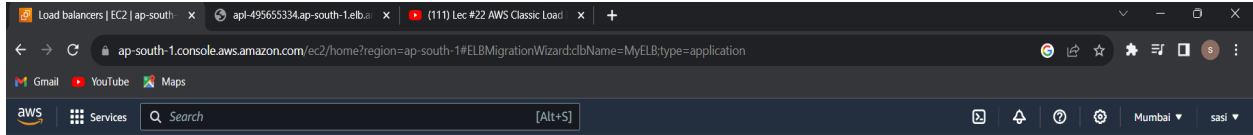
The screenshot shows the AWS Management Console interface. On the left is the navigation menu with categories like Images, Elastic Block Store, Network & Security, Load Balancing, and Auto Scaling. The main content area displays 'Load balancers (1/2)'. A table lists two load balancers: 'MyELB' (classic) and 'APL' (application). The 'MyELB' row is selected. Below the table, the 'Load balancer: MyELB' details are shown. The 'Details' tab is active, and a 'Launch ALB migration wizard' button is located in the top right of the details section.

The screenshot shows the 'Step 6: Review' page of the ALB migration wizard. The page title is 'Step 6: Review' and it says 'Please review the load balancer details before continuing'. A note states: 'The highlighted fields below indicate the new values (green) and the original values (grey)'. The configuration details are as follows:

- Load balancer:**
 - Name: MyELB
 - Scheme: Internet-facing
 - Listeners: Port:80 - Protocol:HTTP
 - IP address type: ipv4
 - VPC: vpc-05900351591efe7d4
 - Subnets: subnet-0218af047ce3c1038, subnet-05e13e0f014be07b, subnet-06bc0276159f1c8ce, subnet-0218af047ce3c1038 (highlighted in green)
 - Tags: (empty)
- Security groups:**
 - Security groups: sg-070a69fa0fbba0178
- Routing:**
 - Target group: New target group
 - Target group name: MyELB

At the bottom right, there are three buttons: 'Cancel', 'Previous', and 'Create'.

Connect minimum 2 or more subnets to that and click on review and create.



Load Balancer Creation Status

✓ **Successfully created load balancer**

Load balancer **MyELB** was successfully created.

Note: It might take a few minutes for your load balancer to be fully set up and ready to route traffic, and for the targets to complete the registration process and pass the initial health checks.

After migration is complete, you can do the following as needed:

- Redirect traffic to your new load balancer (see [Migrate Traffic](#)).
- Change the deregistration delay (see [Deregistration Delay](#)). The default is 300 seconds.
- Change the idle connection timeout if needed (see [Connection Idle Timeout](#)). The default is 60 seconds.
- Enable access logs (see [Access Logs](#)).

Suggested next steps

- Discover other services that you can integrate with your load balancer. Visit the **Integrated services** tab within **MyELB**
- Consider using AWS Global Accelerator to further improve the availability and performance of your applications. [AWS Global Accelerator console](#)

Close

Below image is before migration see the DNS IP You will find difference.

▼ Images

AMIs

AMI Catalog

▼ Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

▼ Network & Security

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Network Interfaces

▼ Load Balancing

Load Balancers

Target Groups

▼ Auto Scaling

Auto Scaling Groups

Load balancers (1/2)

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

Filter Load balancers

	Name	DNS name	State	VPC ID	Availability Zones	Type
<input checked="" type="checkbox"/>	MyELB	MyELB-1478986264.ap-so...	–	vpc-05900351591efe7d4	ap-south-1a (aps1-az1)	classic
<input type="checkbox"/>	APL	APL-495655334.ap-south-...	Active	vpc-05900351591efe7d4	2 Availability Zones	application

Load balancer: MyELB

Details

Listeners

Network mapping

Security

Health checks

Target instances

Monitoring

Attributes

Tags

Details

Launch ALB migration wizard

Load balancer type	Status	VPC	Date created
Classic	3 of 3 instances in service	vpc-05900351591efe7d4	October 14, 2023, 21:41 (UTC+05:30)
Scheme	Hosted zone	Availability Zones	
Internet-facing	7DQ7DAELVTM7K	subnet-0338f047ca3c1038	

After migration below image.

Load balancers | EC2 | ap-south-1

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LoadBalancers

Load balancers (1/3)

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

Filter Load balancers

	Name	DNS name	State	VPC ID	Availability Zones	Type	Date created
<input type="checkbox"/>	APL	APL-495655334.ap-south-1.elb.amazonaws.com	Active	vpc-05900351591efe7d4	2 Availability Zones	application	October 14, 2023, 23:01 (UTC+05:30)
<input checked="" type="checkbox"/>	MyELB	MyELB-1428064837.ap-south-1.elb.amazonaws.com	Provisioning	vpc-05900351591efe7d4	3 Availability Zones	application	October 14, 2023, 23:01 (UTC+05:30)

Load balancer: MyELB

Details | Listeners and rules | Network mapping | Security | Monitoring | Integrations | Attributes | Tags

Details

Load balancer type	Status	VPC	IP address type
Application	Provisioning	vpc-05900351591efe7d4	IPv4
Scheme	Hosted zone	Availability Zones	Date created
Internet-facing	7P97RAEL YTNZY	subnet-0218cf047ca3c1038, subnet-0218cf047ca3c1039, subnet-0218cf047ca3c103a	October 14, 2023, 23:01 (UTC+05:30)

No change while accessing the all 3 web pages.it will display same data what you have given in user data.