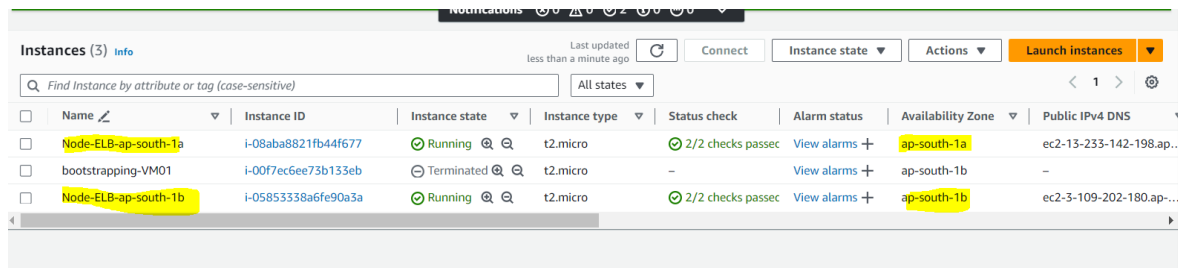


ELB(Elastic Load Balancer) - 02nd September 2024 Savita Nalawade

1) Create two instances in different zone of (ap-south-1)

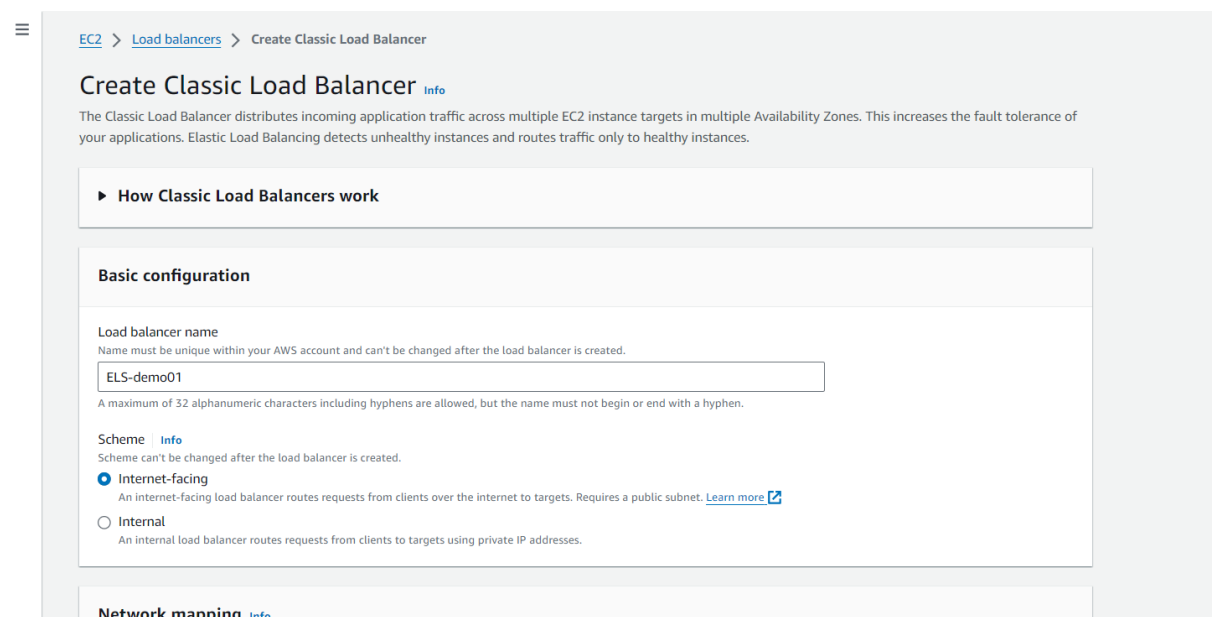


The screenshot shows the AWS Management Console 'Instances' page. It displays a table of EC2 instances. Two instances are highlighted in yellow: 'Node-ELB-ap-south-1a' and 'Node-ELB-ap-south-1b'. Both are in the 'Running' state, using 't2.micro' instances, and are located in the 'ap-south-1a' and 'ap-south-1b' availability zones respectively. The 'bootstrapping-VM01' instance is also visible, in the 'Terminated' state.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
Node-ELB-ap-south-1a	i-08aba8821fb44f677	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	ec2-13-233-142-198.ap...
bootstrapping-VM01	i-00f7ec6ee73b133eb	Terminated	t2.micro	-	View alarms +	ap-south-1b	-
Node-ELB-ap-south-1b	i-05853338a6fe90a3a	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b	ec2-3-109-202-180.ap...

2) Creating Load balancer for running two instances

i. create classic load balancer



The screenshot shows the 'Create Classic Load Balancer' page in the AWS Management Console. The page is titled 'Create Classic Load Balancer' and includes a brief description of the Classic Load Balancer. Below the description, there are sections for 'Basic configuration' and 'Network mapping'. In the 'Basic configuration' section, the 'Load balancer name' is set to 'ELS-demo01'. The 'Scheme' is set to 'Internet-facing'.

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.

Network mapping [Info](#)

ii. Map the network for instances

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-01ff4ab41ecc0386a

IPv4 VPC CIDR: 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.

Availability Zones

☒ ap-south-1a (aps1-az1)

Subnet

subnet-0117669ed04a81901

IPv4 subnet CIDR: 172.31.32.0/20

IPv4 address

Assigned by AWS

☒ ap-south-1b (aps1-az3)

Subnet

subnet-0697f7f6159fd5ff

IPv4 subnet CIDR: 172.31.0.0/20

IPv4 address

Assigned by AWS

☐ ap-south-1c (aps1-az2)

iii. attached instance to load balancer

Manage instances

Update which instances are registered to your load balancer. To receive traffic from the load balancer, EC2 instances must be registered and considered healthy according to the configured health check settings. Select the instances to register, and deselect any that need to be deregistered. All instances to be registered are populated in the review selected instances section, along with a summary of all changes at the bottom. Once you are satisfied with your selections, choose Save changes.

Load balancer details: ELS-demo01

Available instances (2/2)

Choose from the instances currently available to the load balancer. Selecting an unregistered instance queues it for registration, while deselecting a registered instance queues it for deregistration. Once an instance is queued for deregistration, its details are only displayed here. [Learn more](#)

Filter available instances

< 1 > ⚙

<input checked="" type="checkbox"/>	Registration status	Instance ID	Name	State	Security groups	Zones
<input checked="" type="checkbox"/>	<input type="radio"/> Not registered	i-08aba8821fb44f677	Node-ELB-ap-south-1a	Running	Bootstrapping-group01	ap-south-1a
<input checked="" type="checkbox"/>	<input type="radio"/> Not registered	i-05853338a6fe90a3a	Node-ELB-ap-south-1b	Running	Bootstrapping-group01	ap-south-1b

Iv. Successfully created load balancer

EC2 > Load balancers

Load balancers (1/1)

Actions

Create load balancer

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

Filter load balancers

< 1 > ⚙

<input checked="" type="checkbox"/>	Name	DNS name	State	VPC ID	Availability Zones	Type	Date created
<input checked="" type="checkbox"/>	ELS-demo01	ELS-demo01-175830250....	-	vpc-01ff4ab41ecc0386a	2 Availability Zones	classic	September 2, 2024, 11...

v. both instances in-service status

Successfully created load balancer: ELS-demo01
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

Load balancers (1/1)
Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.

Filter load balancers

<input checked="" type="checkbox"/>	Name	DNS name	State	VPC ID	Availability Zones	Type	Date created
<input checked="" type="checkbox"/>	ELS-demo01	ELS-demo01-429629876....	-	vpc-01ff4ab41ecc0386a	2 Availability Zones	classic	September 3, 2024, 23:14 (U...

Load balancer: ELS-demo01

Target instances (2)
Instances currently registered to your load balancer are displayed. To deregister instances, select them, then choose Deregister. To register and deregister instances simultaneously, choose Manage instances.

Filter target instances

Connection draining: On (300 seconds) [Refresh] [Deregister] [Manage instances]

<input type="checkbox"/>	Instance ID	Name	Health status	Health status description	Security groups
<input type="checkbox"/>	i-0d2f85ba546e584f4	Node-ELB-ap-south-1a	In-service	Not applicable	Bootstrapping-group01
<input type="checkbox"/>	i-03c98349edb4ab4c9	Node-ELB-ap-south-1b	In-service	Not applicable	Bootstrapping-group01

3. copy dns name and paste in chrome

Load balancer: ELS-demo01

(aps1-az3)
subnet-0117669ed04a81901 ap-south-1a
(aps1-az1)

DNS name copied

ELS-demo01-429629876.ap-south-1.elb.amazonaws.com (A Record)

This Classic Load Balancer can be migrated to a next generation load balancer. Migration wizard uses your load balancer's current configurations to create a new load balancer. [Learn more](#) [Launch migration wizard]

Distribution of targets by Availability Zone (AZ)
For each enabled Availability Zone, you can view the number of registered instances and their current health states. Selecting any values here will apply the corresponding filter to the Target instances table.

4. output of index.html file

← → ↻ 🔒 Not secure els-demo01-429629876.ap-south-1.elb.amazonaws.com ☆ 9 ⋮

Create and configure the service front-end-service so its accessible through ClusterIP and routes to the existing pod named front-end

5.output of healthcheck.html file

Hi, I am running fine /h1>

You Have completed ELB