

Student Name: Patil Ratnakar Netaji
Student Roll no.: 322050
Class: TY- B
Batch: B2

ASSIGNMENT 3

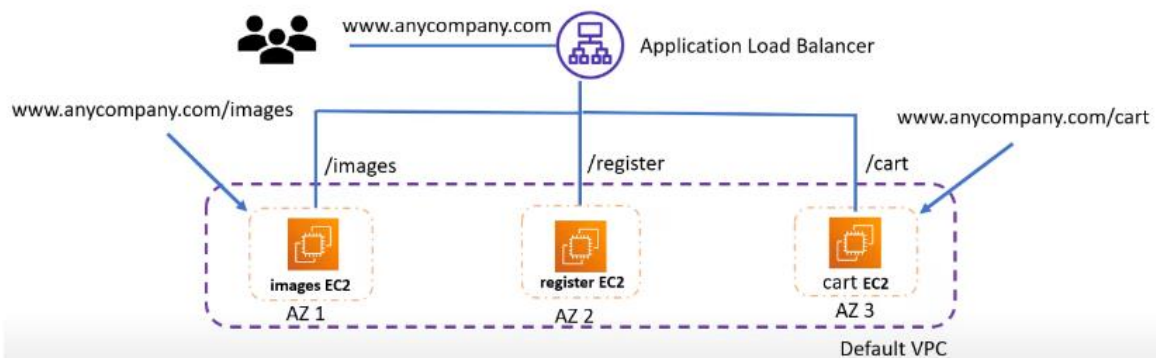
Assignment NO. 3 (CloudComputing and DevOps)

Name: Ratnakar patil.
PRN No: 22110373
Roll No: 322050.

Creating AWS EC2 instance with Load Balancer and deploying an application on it.

Step 1- We are going to make a schema like this

ALB Demo Architecture: Path Routing



Step 2- Use this Script

User data - optional [Info](#)

Enter user data in the field.

```
#!/bin/bash
yum install httpd -y
service httpd start
chkconfig httpd on
mkdir /var/www/html/register
echo "<html><h1> This is the registration server</h1>
</html>">/var/www/html/register/index.html
```

Step 3- Login to AWS Management Console and Launch 3 EC2 Instance.

1. register instance
2. image instance
3. cart instance

The screenshot shows the AWS Management Console interface. The left sidebar displays the navigation menu with options like EC2 Dashboard, EC2 Global View, Events, Console-to-Code, and various instance types. The main content area shows the 'Instances (3)' page. A table lists three EC2 instances: 'cart', 'image', and 'register'. Each instance is in a 'Running' state, using the 't2.micro' instance type, and has a 'Status check' of '2/2 checks passed'. The table also shows the 'Availability Zone', 'Public IPv4 DNS', 'Public IPv4', and 'Elastic IP' for each instance.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4	Elastic IP
cart	i-09f9f6b4a9a6d7da	Running	t2.micro	2/2 checks passed	View alarms	us-east-1c	ec2-54-207-214-23.co...	54.207.214.23	-
image	i-08f173e6000213af	Running	t2.micro	2/2 checks passed	View alarms	us-east-1a	ec2-18-234-225-106.co...	18.234.225.106	-
register	i-069542f4e96c88751	Running	t2.micro	2/2 checks passed	View alarms	us-east-1b	ec2-54-94-103-106.com...	54.94.103.106	-

Step 4- Attach Application Load Balancer

Services

Search

[All+5]

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.

alb-01

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 the load balancer is created. To confirm the VPC for your targets, view your target group.

vpc-08245a60c09e2d8ff

IPv4 VPC CIDR: 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 those Availability Zones only. Availability Zones that are not supported by the load

us-east-1c (use1-az6)

Subnet

subnet-0da70cda1f0dd76eda

IPv4 address

Select up to 5 security groups

alb-sg-21324

sg-02722604f1322fa52 VPC: vpc-08245a60c09e2d8ff

Listeners and routing

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	Forward to	Default-TG
	1-65535		Target type: Instance, IPv4
			HTTP
			Create target group

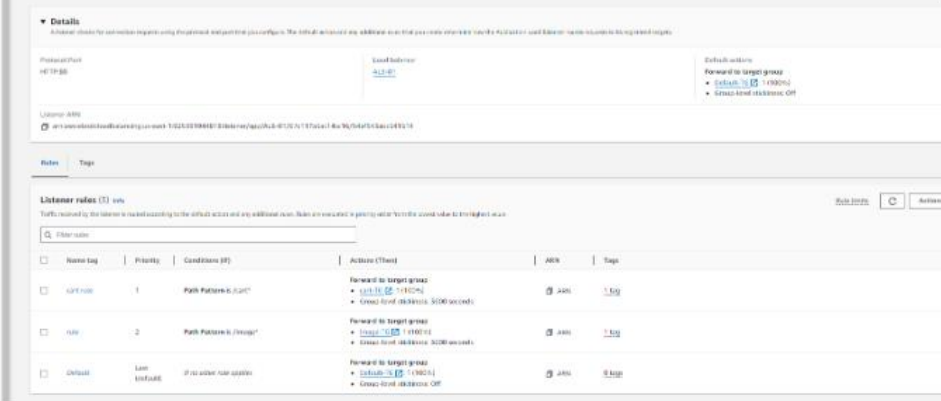
Listener tags - optional

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.

Step 4- Set Listener Rules to Load Balancer




Step 5- Check whether the ALB is distributing the load to the desired target group


- For Registration



This is the registration server

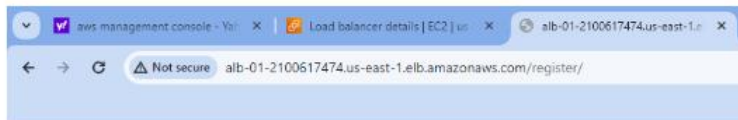
- For Image


This is the image server

- For Cart


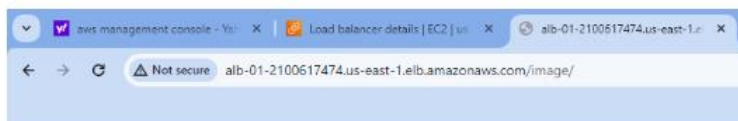
Step 5- Check whether the ALB distributing the load to desired target group

1. For Registration



This is the registration server

2. For Image



This is the image server

3. For Cart

