

Assignment 5

Ques: Complete the below task:

1. Explain the below AWS Architecture
2. Implement the same in the AWS (only do a proper connection between service)



Explanation:

Here we need to do load balancing , so to implement load balancing we need to have at least two instances, and then only we will be able to verify whether load is distributed or not (accessing it through the ALB DNS name).

Following the completion of the preceding steps, we must connect one of our load-balanced instances to the RDS service.

Implementation:

First of all, we have to launch two Linux instances.

Instances (2) Info

Find instance by attribute or tag (case-sensitive)

Instance state = running X Clear filters

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
<input type="checkbox"/>	A	i-047992868a632d029	Running	t2.micro	2/2 checks passed	No alarms +	ap-south-1a
<input type="checkbox"/>	B	i-05714d8ef46eb76d0	Running	t2.micro	2/2 checks passed	No alarms +	ap-south-1a

Now we need to load balance, so we will use ALB for that. Now we know in ALB we need to have a target group, so basically we will be using these two instances (A and B) in the target group. Our target group is referred to here as "first TG."

Create Load Balancer Actions

search : demo-alb Add filter

<input checked="" type="checkbox"/>	Name	DNS name	State	VPC ID	Availability Zones	Type	Created
<input checked="" type="checkbox"/>	demo-alb	demo-alb-927270872 ap-sou...	Active	vpc-0837fc9702994cc34	ap-south-1c, ap-south-...	application	Decembe

Load balancer: demo-alb

Description

Listeners

Monitoring

Integrated services

Tags

Listeners listen for connection requests using their protocol and port. You can add, remove, or update listeners and listener rules.

To view and edit listener attributes, select the listener and choose Edit.

Add listener

Edit

Delete

<input type="checkbox"/>	Listener ID	Security policy	SSL Certificate	Rules
<input type="checkbox"/>	HTTP : 80 arn...c242e19ac9d5a30e	N/A	N/A	Default: forwarding to first-tg View/edit rules

Search [Alt+S]

Mumbai Anand1 @ anand1-aws

Details

arn:aws:elasticloadbalancing:ap-south-1:685418332193:targetgroup/first-tg/d418c6b007c58712

Target type

Instance

Protocol : Port

HTTP: 80

Protocol version

HTTP1

VPC

vpc-0837fc9702994cc34

IP address type

IPv4

Load balancer

demo-alb

Total targets

2

Healthy

2

Unhealthy

0

Unused

0

Initial

0

Draining

0

Targets

Monitoring

Health checks

Attributes

Tags

Registered targets (2)

Filter resources by property or value

Instance ID

Name

Port

Zone

Health status

Health status details

i-05714d8ef46eb76d0

B

80

ap-south-1a

healthy

i-047992868a632d029

A

80

ap-south-1a

healthy

After doing all the above steps, we need to access our ALB using its DNS name to check if it is load balancing or not.

Create Load Balancer

Actions

search : demo-alb

Add filter

Name

DNS name

State

VPC ID

Available

demo-alb

demo-alb-927270872.ap-sou...

Active

vpc-0837fc9702994cc34

ap-sout

Load balancer: demo-alb

Description

Listeners

Monitoring

Integrated services

Tags

Basic Configuration

Name

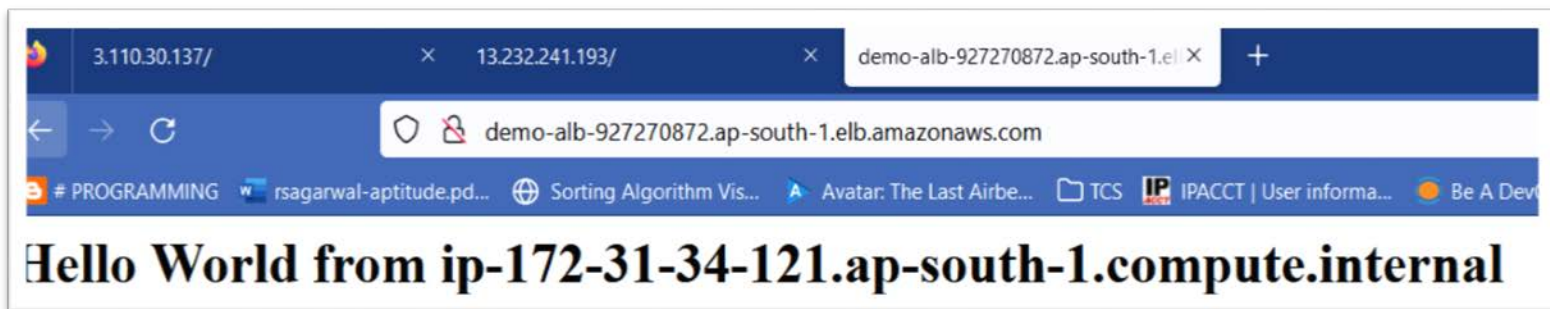
demo-alb

ARN

arn:aws:elasticloadbalancing:ap-south-1:685418332193:loadbalancer/app/demo-alb/4060dd9b6bb7fc32

DNS name

demo-alb-927270872.ap-south-1.elb.amazonaws.com (A Record)



After associating one of the instances with RDS (MySQL) in free tier settings, AWS maintains these two security groups (ec2-rds-1 and rds-ec2-1) so that we can access our database without having to configure anything.

	Name	Security group ID	Security group name	VPC ID	Description	Owner
<input checked="" type="checkbox"/>	-	sg-00d3ae804e0f5f37a	ec2-rds-1	vpc-0837fc9702994cc34	Security group attache...	685418332193
<input type="checkbox"/>	-	sg-049ca473e47b4db71	default	vpc-0837fc9702994cc34	default VPC security gr...	685418332193
<input type="checkbox"/>	-	sg-04a670ed4b33be4f5	launch-wizard-1	vpc-0837fc9702994cc34	launch-wizard-1 create...	685418332193
<input type="checkbox"/>	-	sg-024cbf5ca1f80852d	demo-sg-alb	vpc-0837fc9702994cc34	sg	685418332193
<input checked="" type="checkbox"/>	-	sg-07868c980b6271dfd	rds-ec2-1	vpc-0837fc9702994cc34	Security group attache...	685418332193

To check if connection is done properly or not we need access our DB from the attached instance (here instance A) . To do so first need install mysql on our instance:

command to install mysql is : **sudo yum install mysql**

To check version : **mysql --version**

To check connectivity: **mysql -h <database endpoint> -u < mater username> -p**

hit enter and then type your password

After following all above steps if we see below screen then our connection is done properly.

aws Services Search [Alt+S]

```
root@ip-172-31-34-121 ~]# mysql --version
mysql Ver 15.1 Distrib 5.5.68-MariaDB, for Linux (x86_64) using readline 5.1
root@ip-172-31-34-121 ~]# mysql -h databasess.cvwong7pcdli.ap-south-1.rds.amazonaws.com -u databasess -p
Enter password:
ERROR 1045 (28000): Access denied for user 'databasess'@'172.31.34.121' (using password: YES)
root@ip-172-31-34-121 ~]# mysql -h databasess.cvwong7pcdli.ap-south-1.rds.amazonaws.com -u admin -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MySQL connection id is 21
Server version: 8.0.30 Source distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MySQL [(none)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mydb |
| mysql |
| performance_schema |
| sys |
+-----+
5 rows in set (0.00 sec)

MySQL [(none)]>
```

i-047992868a632d029 (A)

PublicIPs: 13.232.241.193 PrivateIPs: 172.31.34.121