**INTELLIPAAT**

**CAPSTONE PROJECT-1**

* Iyappan

Problem Statement:

Company ABC wants to move their product to AWS. They have the following

things set up right now:

1. MySQL DB

2. Website (PHP)

The company wants high availability on this product, therefore wants Auto

Scaling to be enabled on this website.

Steps To Solve:

1. Launch an EC2 Instance

2. Enable Auto Scaling on these instances (minimum 2)

3. Create an RDS Instance

4. Create Database & Table in RDS instance:

a. Database name: intel

b. Table name: data

c. Database password: intel123

5. Change hostname in website

6. Allow traffic from EC2 to RDS instance

7. Allow all-traffic to EC2 instance

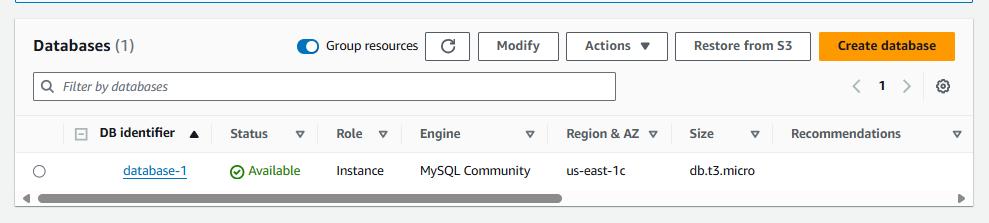
SOLUTION:

PROJECT REQUIREMENT:

1. Running Ec2 instance with apache2 installed in it.
2. Php application with connection to Database
3. RDS instance to store database
4. Auto-scaling group
5. Load balancer with target group to pointed to Auto-scaling group

STEPS:

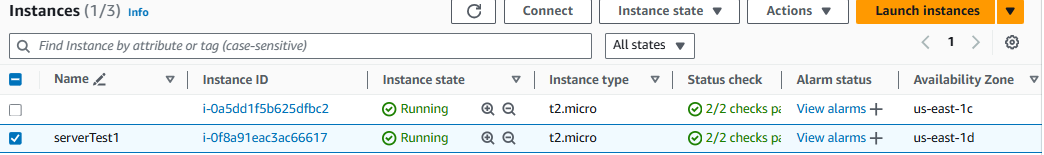
1. Create a security group:
   1. Name: SG-1
   2. Port: http ; Allow: Anywhere
   3. Port:SSL : Allow:Anywhere (Restrict this access to allow only from your machine for better security)
2. Create a Target group (TG1) – we will use it when we create Auto-scalling group.
3. Creating RDS instance
   1. Name : database-1
   2. Security group : port : 3306 ; Allow\_From: SG-1



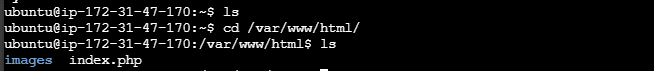
* 1. Create a user and save the pswd

1. Create a Ec2 instance
   1. Instance\_type : (basic is OK) t2.micro(free tier)
   2. Image : ubuntu
   3. Secutrity group: Port: 22 (SSL); Allow: anywhere(restrict this)

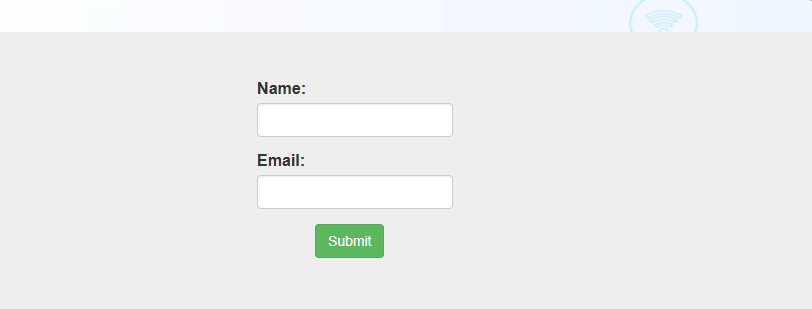
Port: html; Allow : anywhere



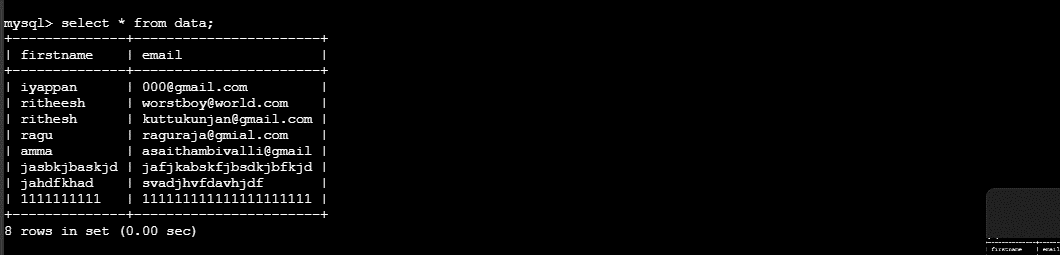
1. Login into Instance
   1. $ sudo apt-get update
   2. $ sudo apt install apache2
   3. $ cd /var/www/html/
   4. Remove index.html
   5. Place ur php file with its dependencies



* 1. Edit the php file to configure it to connect with RDS instance we created.
  2. Install mysql which supports PHP.
  3. Login to RDS server create a database & Table as configured in php file.
  4. Check connection with database server and update and check.
  5. Open ur php app in web browser



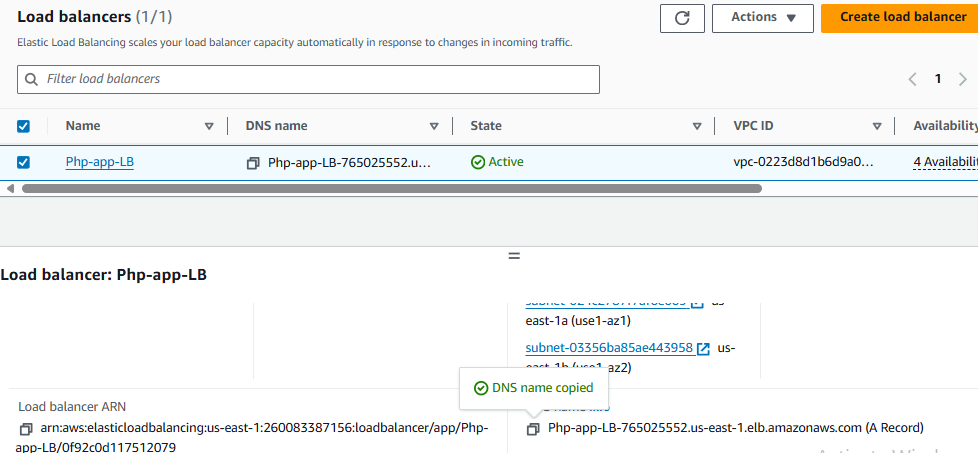
* 1. Add entery into the given field.
  2. Check the entry from mysql table.

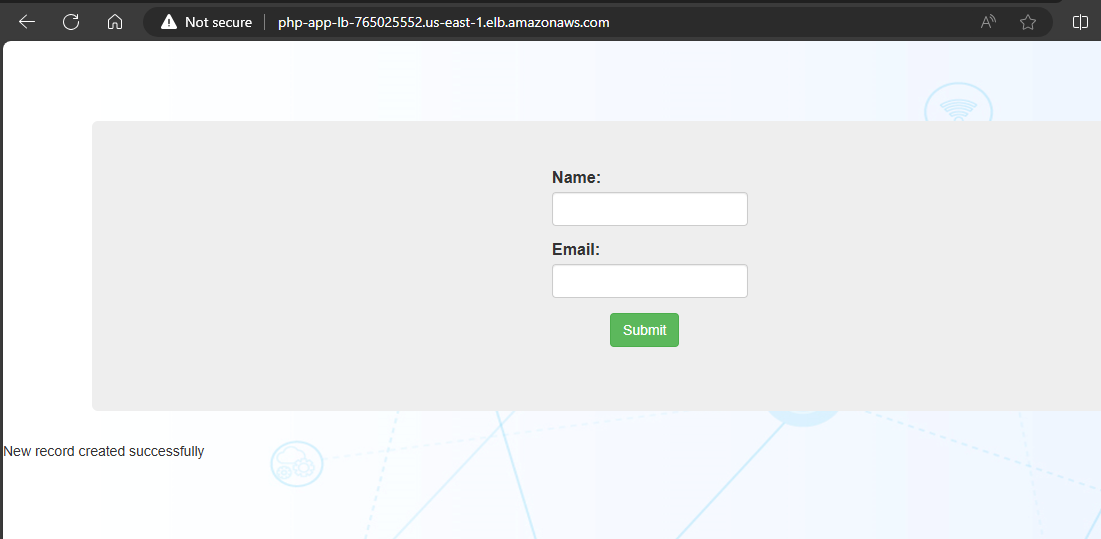


1. Create a Image out of the running instance that we created.
2. Create a template from the image use the same SG-1.
3. Create a Loadbalancer & attach it to TG1 target group.
4. Create a auto-scaling group with the template that we created mention the followings
   1. Desired instance
   2. Maximum instance
   3. Minimum instance
5. Attach the load balancer to auto-scaling group.

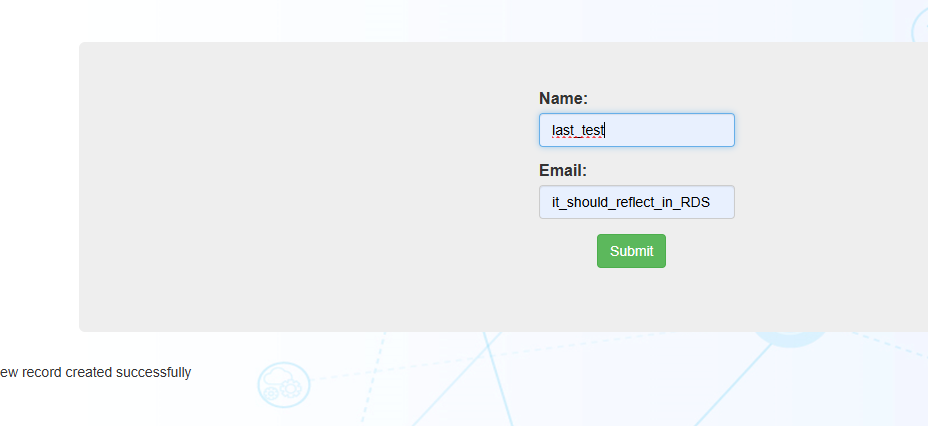
TEST:

1. Ping the laodbalancer endpoint it should reflect the web application.

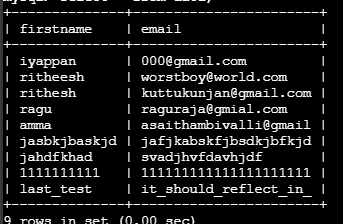




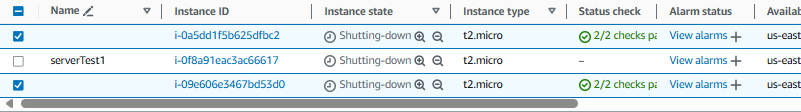
2. Update entry in the field

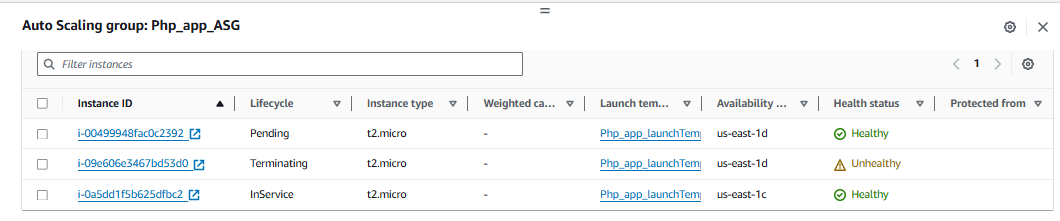


3. check the entry in RDS database.



4. delete a instance to check auto scaling is scaling up to desired state.





Hence , we created and tested the project completed