**Deploying a Multi-Tier Website using AWS EC2**

**Project 1:**

**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 and Table in RDS instance (Database name: intel, Table name: data, Database password: intel123
5. Change hostname in website
6. Allow traffic from EC2 to RDS instance
7. Allow all-traffic to EC2 instance

**Solution:**

1. Launch an EC2 instance with Ubuntu OS

A screenshot of a computer

Description automatically generated

1. Update the machine using apt-get update.

A screen shot of a computer screen

Description automatically generated

1. Install Apache2 on this server using “sudo apt-get install apache2”

A screenshot of a computer

Description automatically generated

1. Then install php-mysql using the following command.

sudo add-apt-repository -y ppa:ondrej/php

sudo apt install php5.6 mysql-client php5.6-mysqli

A screenshot of a computer screen

Description automatically generated

A screenshot of a computer program

Description automatically generated

1. Now connect mysql with the RDS database. Choose create database option and select the engine as MySql

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

1. Edit security configuration in the RDS database. Go to EC2 instance security groups and select your group ID.

A screenshot of a computer

Description automatically generated

1. Go to RDS security groups and select the Inbound rules panel and click on Add rule. Then paste the EC2 security ID keeping the type as MYSQL/Aurora

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

1. Connect to mysql using XAMPP app with the endpoint, username and password. Select MySql and open shell prompt.

A screenshot of a computer

Description automatically generated

A screen shot of a computer

Description automatically generated

1. Open FileZilla and connect using public IP of EC2 instance.

A screenshot of a computer

Description automatically generated

1. Go to cd /var/www/html and remove index.html. Copy index.php from the local system and paste it inside /var/www/html

A screenshot of a computer

Description automatically generated

1. Create a table inside the database using XAMPP

A computer screen shot of a black screen

Description automatically generated

1. Now open index.php file and change the database details such as endpoint, username and password.

A screen shot of a computer

Description automatically generated

1. Copy the public IP of EC2 instance and paste it in browser.

A screenshot of a computer

Description automatically generated

1. Enter details and submit the form.

A screenshot of a computer

Description automatically generated

A computer screen with white text

Description automatically generated

A screenshot of a computer

Description automatically generated

1. Verify that the table has been updated with the data entered.

A screenshot of a computer screen

Description automatically generated

1. For AutoScaling, we need to create an AMI image to spin up new instances based on the traffic. Go to EC2 instance -> Actions -> create Image

A screenshot of a computer

Description automatically generated

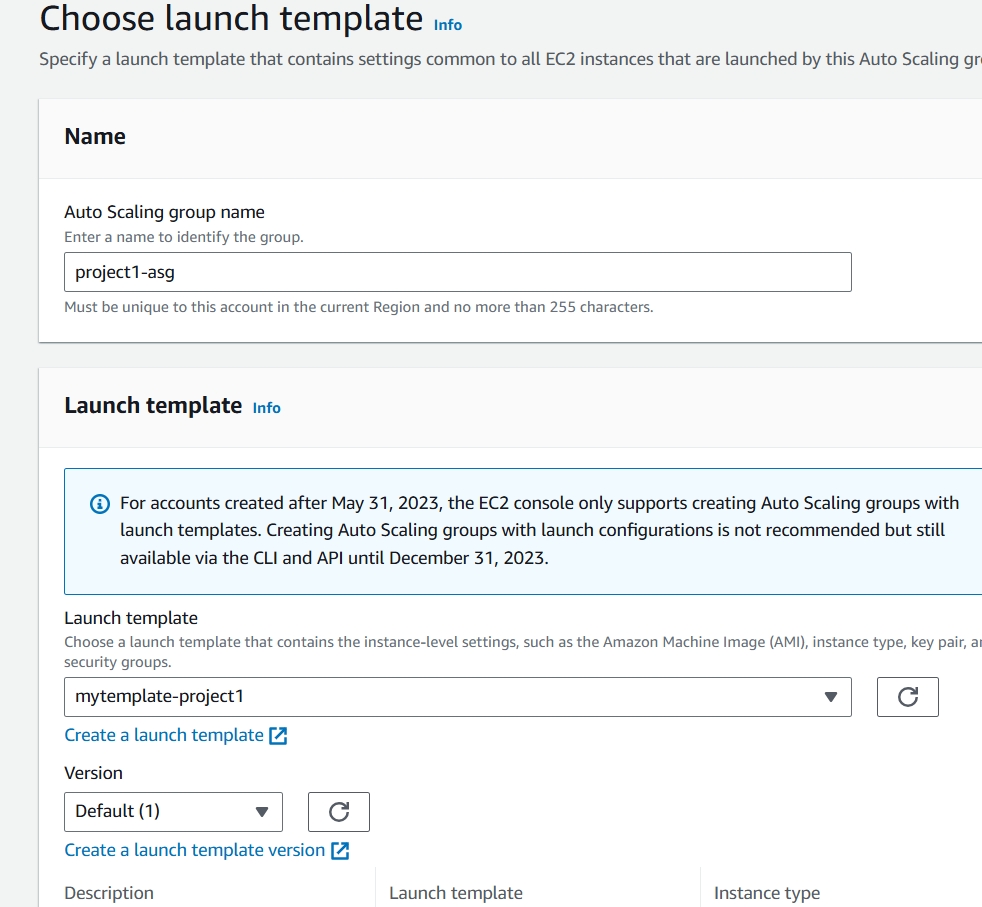
A screenshot of a computer

Description automatically generated

1. Create a new autoscaling group.

A screenshot of a computer

Description automatically generated



A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

1. Auto scaling group has spun up 2 more instances as we specified.

A screenshot of a computer

Description automatically generated