**Exercise18**

**PHP/MySQL Application Deployment**

**NOTE: Only major steps are shown here. You will need to apply the knowledge and skills that you have acquired.**

1. Login to your IAM user
2. Setup
   1. Create a VPC name: *OurVPC* , CIDR: 11.212.0.0/16
   2. Subnets
      1. Create a public subnet *OurVPC-Public1* and a private subnet *OurVPC-Private1* in the us-east-1**a** AZ.
      2. Create a public subnet *OurVPC-Public2* and a private subnet *OurVPC-Private2* in the us-east-1**b** AZ.
      3. Choose appropriate CIDRs for the subnets.
   3. Security Groups
      1. Create a security group webSG to allow SSH and HTTP inbound traffic from anywhere
      2. Create a security group dbSG to allow MySQL/Aurora inbound traffic from webSG (select Custom in source, then you will see webSG in the adjoining list)
   4. Use one route table for the two public subnets and one route table for the private subnets.

Go to the Resource map of your ourVPC Take a snapshot (with your IAM username)[1point]

1. Create a Linux Web Server
   1. Create an AMI of the Linux Web Server you had created earlier. Create an EC2 instance from this image, give the name LinuxWebServerFromMyImage, select the webSG security group, choose OurVPC-Public1 subnet Take a snapshot (with your IAM username to confirm this step) [2points]
   2. Access the instance through putty. [Take a snapshot (with your IAM username) to confirm that you are able to connect to it: 1point]
2. Database subnet group

Search for RDS. Click subnet groups, click Create DB subnet group, name dbSubnet, select both the private subnets

1. Backend RDS instance

Go to dashboard, click Create database, select MySQL Engine type, MySQL 5.7.44 engine version, free tier template, DB instance identifies: ourDB, Master username: itec230, Master password: awsFoundations, disable storage autoscaling, remove the default security group and select dbSG, select us-east-1a AZ, Additional configuration-> Initial database name: employee, disable automated backups. After successful creation Take a snapshot (with your IAM username to confirm the successful creation)[1point], copy the endpoint and save it in a notepad.

1. Deploy PHP/MySQL Application on the Linux Web Server
   1. Go to /var/www/html, remove index.html, create a file index.php and copy paste the code:

<?php

$conn = mysqli\_connect('ourdb.cl8ga4oe67v7.us-east-1.rds.amazonaws.com','itec230', 'awsFoundations','employee');

$q = "select \* from salary limit 4";

$result = mysqli\_query($conn,$q);

while ($row = mysqli\_fetch\_array($result))

{

echo $row['eno']." ";

echo $row['dept']." ";

echo $row['salary']." ";

echo "<br />";

}

?>

* 1. Enter these commands (the commands are in bold):

**dnf -y localinstall https://dev.mysql.com/get/mysql80-community-release-el9-4.noarch.rpm**

**dnf -y install mysql mysql-community-client**

**mysql --user itec230 --password --host ourdb.cl8ga4oe67v7.us-east-1.rds.amazonaws.com**

After giving the password, you will see text including the message, “Welcome to the MySQL monitor” Take a snapshot (with your IAM username)[10points] to confirm this.

**use employee;**

**create table employee.salary (eno char(3) primary key,dept varchar(15),salary int(6));**

**insert into employee.salary values ("101","marketing",30000);**

**insert into employee.salary values ("102","sales",25000);**

**insert into employee.salary values ("103","production",12000);**

**select \* from employee.salary;**

You will see the table with 3 rows added based on the above commands. Take a snapshot (with your IAM username)[5points] to confirm this.

**quit**

1. **Cleanup:**
   1. Terminate the EC2 instance.
   2. Delete the RDS instance (unselect Create final snapshot)
   3. Delete the setup

Sources: https://vipingupta.gumroad.com/