

ECV-DB-201

Launch Your MySQL Database

2018.01.20

Version 2.1

Agenda

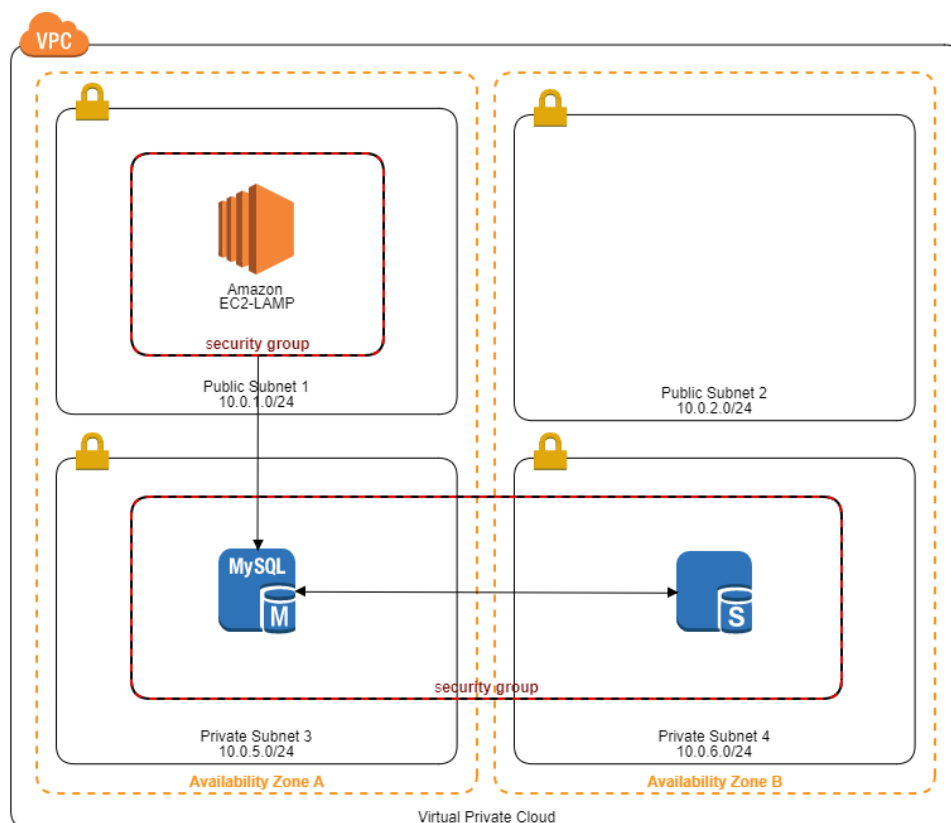
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About this lab

Scenario

This lab builds on the previous lab. It walks you through launching an Amazon Relation Database Service (RDS) DB instance. You will configure the LAMP server that you previously created to use Amazon RDS for its relational database management system needs. This lab is designed to connect DB instance through a web service phpMyAdmin.

You will build the following infrastructure:



AWS RDS introduction

What is Amazon RDS?

Amazon Relation Database Service (Amazon RDS) makes it easy to setup, operate, and scale a relation database in the cloud. It provides cost-efficient and resizable capacity while automating time-consuming administration tasks such as

hardware provisioning, database setup, patching and backups. It frees you to focus on your applications so you can give them the fast performance, high availability, security and compatibility they need.

Amazon RDS is available on several database instance types-optimized for memory, performance or I/O-and provides you with six familiar database engines to choose from, including Amazon Aurora, PostgreSQL, MySQL, MariaDB, Oracle, and Microsoft SQL Server.

The workshop's region will be in 'Oregon'

Prerequisites

Download Putty: If you don't already have the PuTTY client installed on your machine, you can download and then launch it from here:

<http://the.earth.li/~sgtatham/putty/latest/x86/putty.exe>

Lab tutorial

Create a VPC security group for the RDS DB Instance

- 1.1. In the **AWS Management Console**, on the **service** menu, click **VPC**.
- 1.2. In the navigation, click Security Groups.
- 1.3. Click **Create Security Group**.
- 1.4. In the Create Security Group dialog box, enter the following details:
 - I. Name tag: DBSecurityGroup
 - II. Group name: DBSecurityGroup
 - III. Description: DB instance security group
 - IV. VPC: Click My Lab VPC
- 1.5. Click **Yes, Create**.
- 1.6. Select **DBSecurityGroup** you just created.
- 1.7. Click the **Inbound Rules** tab, and then click **Edit**.
- 1.8. Create an inbound rule with the following details:

Type: MySQL/Aurora(3306)

Protocol: TCP(6)

Source: Click **LAMPSecurityGroup**

**Search sg-xxxxxxx to find LAMPSecurityGroup

1.9. Click **Save**.

Create Private Subnets for Your Amazon RDS Instances

1.1. In the navigation pane, click **Subnets**.

1.2. Select **Public Subnet 1**, scroll down to the Summary tab in the lower pane.

Take note of the **Availability Zone** for this subnet.

1.3. Select **Public Subnet 2**, scroll down to the Summary tab in the lower pane.

Take note of the **Availability Zone** for this subnet.

1.4. Click Create Subnet dialog box, enter the following details:

- I. Name tag: Private Subnet 3
- II. VPC: 'My Lab VPC'
- III. Availability Zone: 'us-west-2a'
- IV. CIDR block: 10.0.5.0/24

1.5. Click **Yes, Create**.

1.6. Click **Create Subnet**.

1.7. In Create Subnet dialog box, enter the following details:

- I. Name tag: Private Subnet 4
- II. VPC: 'My Lab VPC'
- III. Availability Zone: 'us-west-2b'
- IV. CIDR block: 10.0.6.0/24

1.8. Click **Yes, Create**.

Create a DB Subnet Group

1.9. In the **AWS Management Console**, on the **service** menu, click **RDS**.

1.10. In the navigation pane, click **Subnet Groups**.

1.11. Click **Create DB Subnet Group**.

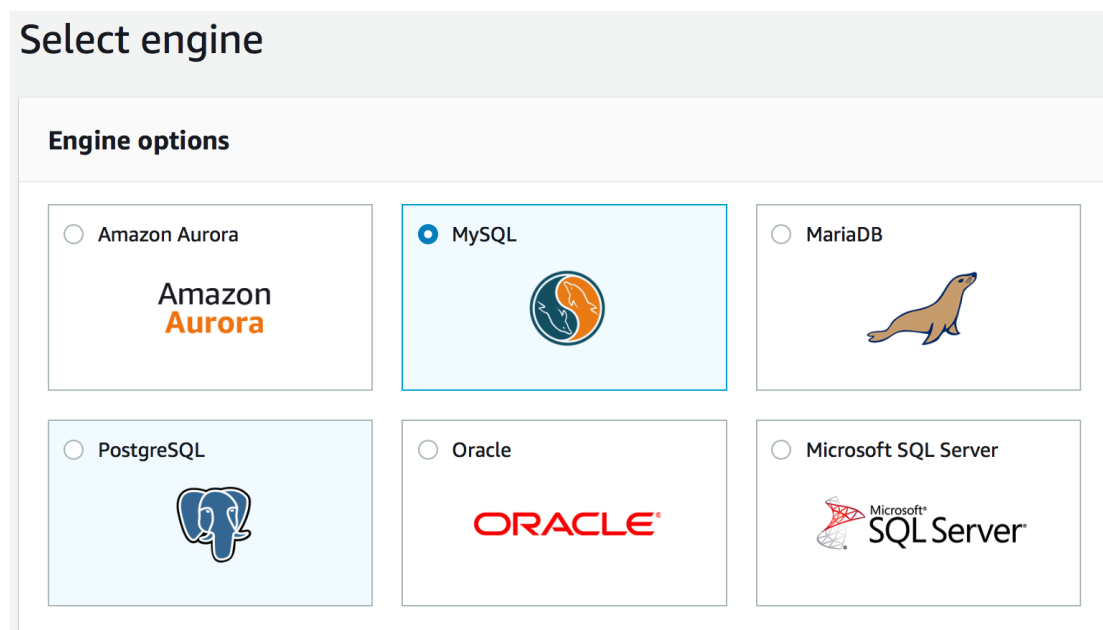
1.12. On the Create DB Subnet Group page, enter the following details:

- I. Name: dbsubnetgroup
- II. Description: Lab DB Subnet Group
- III. VPC ID: Click My Lab VPC

- 1.13. For **Availability Zone**, choose **us-west-2a**, choose **10.0.5.0/24**, then click **Add**.
- 1.14. Choose another **Availability Zone us-west-2b**, choose **10.0.6.0/24**, then click **Add**.
- 1.15. Click **Create**.
- 1.16. If you do not see your new subnet group, click the refresh icon in the upper-right corner of the console.

To launch a MySQL DB instance

- 1.17. In the **AWS Management Console**, on the **service** menu, click **RDS**.
- 1.18. In the navigation pane, choose **Instances**.
- 1.19. Choose **Launch DB Instance** to start the **Launch DB Instance Wizard**.
The wizard opens on the **Select Engine** page.



- 1.20. In the **Select Engine** window, click the **Next** button for the MySQL DB engine.
- 1.21. Click **Use case** step. Click **Production - MySQL**, Click **Next**.
- 1.22. On the **Specify DB Details** page, enter the following details:
 - I. DB Instance Class: Choose db.t2.micro—1 vCPU, 1GiB RAM.
 - II. Multi-AZ Deployment: Click Yes.
 - III. DB Instance Identifier: LabDBInstance
 - IV. Master Username: labuser

- V. Master Password: labpassword
 - VI. Confirm Password: labpassword
- 1.23. Click **Next**.
- 1.24. On the **Configure Advanced Settings** page, enter the following details and leave all other values with their default:
- I. VPC: My Lab VPC
 - II. Subnet Group: dbsubnetgroup
 - III. Publicly Accessible: No
 - IV. VPC Security Group(s): DBSecurityGroup
 - V. Database Name: sampled
 - VI. Encryption: **Disable Encryption**
 - VII. Backup: Backup retention period: **0 days**
 - VIII. Monitoring: **Disable enabled monitoring**
 - IX. Maintenance: choose **Disable auto minor version upgrade**
- 1.25. Click **Launch DB Instance**.
- 1.26. Click **View DB Instances details**.
- 1.27. Select **labdbinstance** and scroll down to **Details** wait until **Endpoint** is available or modifying – this may take up to 10 minutes. Use the refresh icon in the top right corner to check for updates.

Details				Modify
Configurations	Security and network	Instance and IOPS	Maintenance details	
ARN arn:aws:rds:us-west-2:763064383464:db:labdbinstance	Availability zone us-west-2c VPC My Lab VPC (vpc-045bac7d)	Instance Class db.t2.small Storage Type Provisioned IOPS (SSD)	Auto minor version upgrade No Maintenance window sat:11:26-sat:11:56 UTC	

- 1.28. Copy and save the **Endpoint**, making sure to not copy the :3306 – your **Endpoint**. **Endpoint** should look similar to the following as below example: [db.choi5coyenv6.us-west-2.rds.amazonaws.com](#). You will change localhost to this endpoint later.

Username labuser	labdbinstance.ce1tnzyqpzqu.us-west-2.rds.amazonaws.com (active)	Multi AZ Yes	Encryption enabled No
Option Group default:mysql-5-6	Publicly accessible No	Secondary zone us-west-2b	
Parameter group default.mysql5.6 (in-sync)	Endpoint labdbinstance.ce1tnzyqpzqu.us-west-2.rds.amazonaws.com	Automated backups Disabled	
Copy tags to snapshots false	Certificate authority rds-ca-2015 (Mar 5, 2020)	Latest restore time N/A	
Resource ID db-CLMU53POL2D7U76ML4DC2			

Use EC2 to Connect with Database

1.29. Log in to your **LAMP Server** instance using SSH.

1.30. Install MySQL tool.

```
[ec2-user ~]$ sudo yum install mysql
```

1.31. After check state, please key **y** to start install.

```
Is this ok? [y/d/N]: y
```

1.32. After installed MySQL, to log-in RDS server, key '**mysql -h [Endpoint] -u [Username] -p**', and press enter to key **[password]**.

1.33. If you log-in to RDS, you can see the **mysql> select database();** and you can use the database.

1.34. If you want to leave the RDS, please press **Ctrl+C** to exit.

Conclusion

Congratulations! You now have learned how to:

- Logged into Amazon Management Console.
- Setup network security included subnets and security group.
- Create an Amazon Relation Database (RDS).
- Logged into your DB instance.