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Configure Amazon RDS with MySQL engine and establish connection from MySQL Workbench.

Objectives:

1. Learn RDS and deploy MySQL database engine using RDS service.

2. Test RDS/MySQL database connection from MySQL Workbench.

Step 1: In **EC2** service console, go to **Security groups** in side panel. Click on **Create security groups**.

Security Groups	Info		C	Actions ▼	Create security group

Create a Security Group for Linux Server with following configuration:

Security group name: **LinuxSG**

Description: Security Group for Linux Server

Type: **SSH**

Source: **0.0.0.0/0**

Click on **Create security group** button in bottom right corner. Confirm that it is created.

Type	Protocol	Port range	Source
SSH	TCP	22	0.0.0.0/0

Go back to **EC2** service console, go to **Security groups** in side panel. Click on **Create security groups**.

Provide **Security group name** as **RDS-SG**.

Provide **Description** as **Security Group for Database**.

Provide following Inbound rules:

1. **Type**: **SSH**

Source: 0.0.0.0/0

2. **Type**: MySQL/Aurora

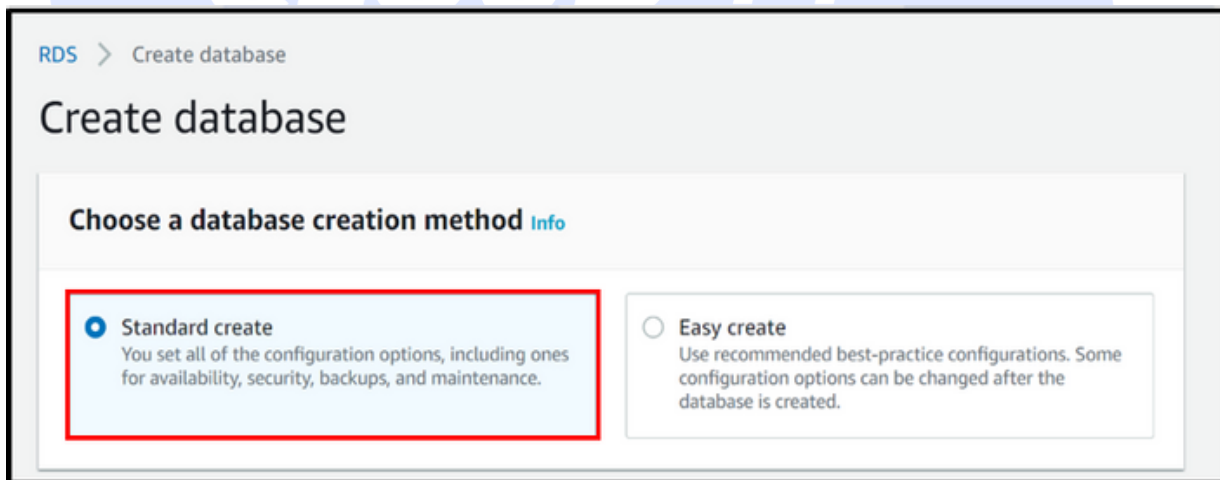**Source**: 0.0.0.0/0

3. **Type**: MySQL/Aurora

Source: LinuxSG (security group that would be used to create the EC2 instance

Type	Protocol	Port range	Source
SSH	TCP	22	0.0.0.0/0
MYSQL/Aurora	TCP	3306	sg-0a543e89ae24da77e (LinuxSG)

Click on **Create security group** button in bottom right corner. Confirm that it is created.

Step 2: Go to **RDS** service console. Click on **Create database**.

Choose a **Standard create** database creation method.

RDS > Create database
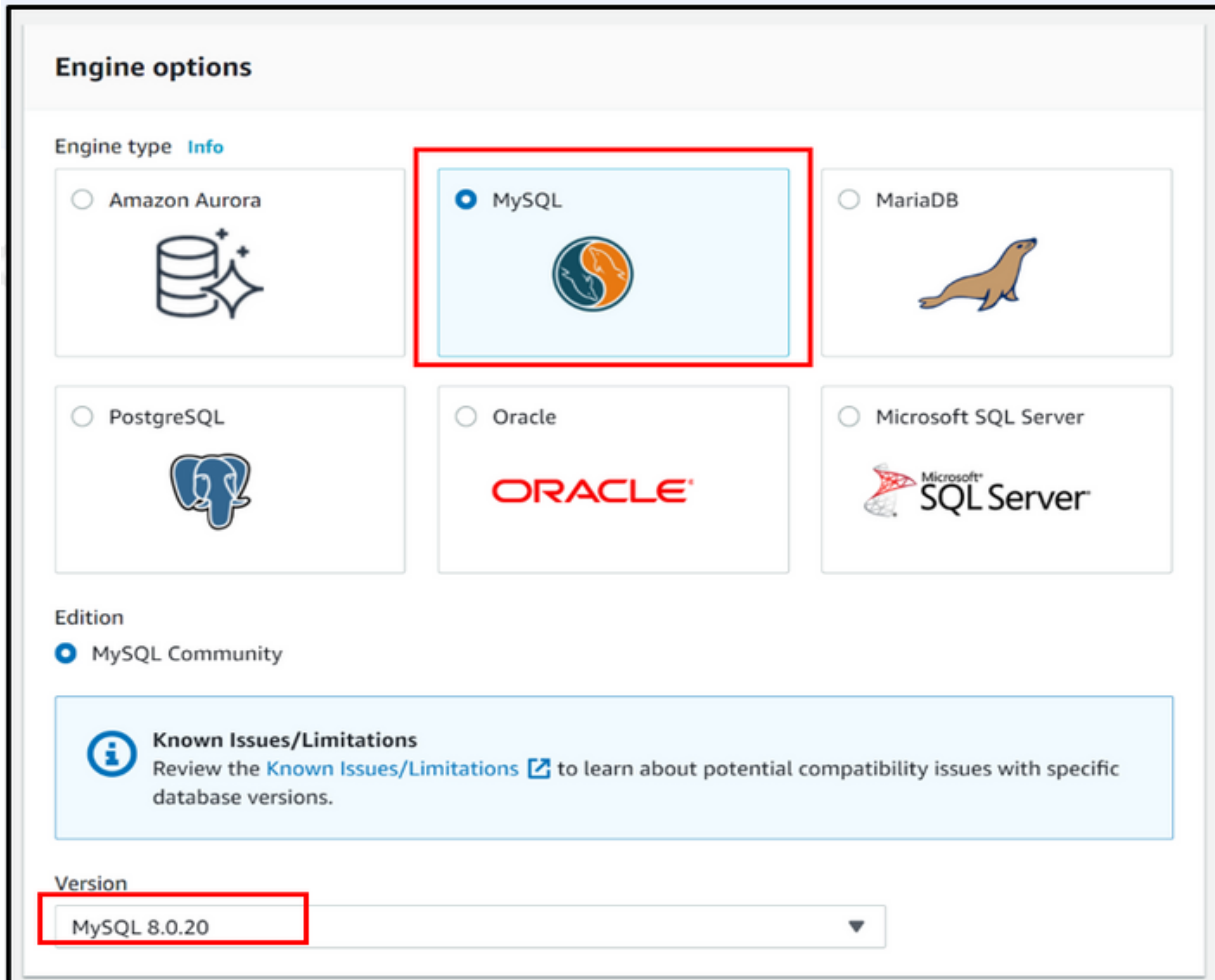
Create database

Choose a database creation method Info

- **Standard create**
  You set all of the configuration options, including ones for availability, security, backups, and maintenance.

- **Easy create**
  Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

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Select the **MySQL** radio button in **Engine options**. Confirm your **MySQL 8.0.20**

Select the **Dev/Test** in **Templates**.

Under **Settings**:

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Give **DB instance identifier** as <mark>mydatabase1</mark>.

Provide **Credentials Settings** as per your choice and store it in a secure place. We refer to following values for this document:

- **Master Username**: <mark>rdsuser123</mark>
- **Master password**: <mark>rdspass123</mark>

Let the **DB instance class** be <mark>Standard Classes</mark> and **size** be <mark>db.m5.xlarge</mark>.

Confirm the default **Storage** settings as **Storage type**: <mark>General type- General Purpose (SSD)</mark> and **Allocated storage** <mark>20 GiB</mark>.

Uncheck the <mark>Enable storage autoscaling</mark>.

Under **Availability & durability** select <mark>Do not create a standby instance</mark> radio button.

Connectivity section will have Default VPC selected.

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Click on **Additional connectivity configuration** for drop down.

- Select **default-vpc** Subnet group.
- Select **Yes** radio button under **Public access**.
- Select **Choose Existing** radio button in **VPC security group**.
- In the **Existing VPC security groups** default will be selected. Remove this security group by clicking on the **cross** sign. Select the **RDS-SG** created in previous step.
- In **Availability Zone** select **1a** which should be **same as the AZ of Linux Instance**.
- The **Database port** will be default **3306**.

Database authentication is set to **Password authentication**.

Click on **Additional configuration** drop down.

Provide **Initial database name** as **cloudPlusPlusLab**.

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DB **parameter group** and **Option group** will be default <mark>mysql8.0</mark>.

Additional configuration

Database options, encryption disabled, backup enabled, backtrack disabled, Performance Insights disabled, Enhanced Monitoring disabled, maintenance, CloudWatch Logs, delete protection disabled

Database options

Initial database name   Info

cloudPlusPlusLab

If you do not specify a database name, Amazon RDS does not create a database.

DB parameter group   Info

default.mysql8.0 ▼

Option group   Info

default:mysql-8-0 ▼

In **Backup** the <mark>Enable automatic backups</mark> will be checked.

Backup retention period will be <mark>0 days</mark>.

Backup window will have <mark>No preference</mark> selected.

Uncheck <mark>Copy tags to snapshots</mark>.

Uncheck <mark>Enable Encryption</mark>.

Uncheck <mark>Enable Performance Insights</mark>.

Uncheck <mark>Enable Enhanced monitoring</mark>.

Uncheck all options under <mark>Log Exports</mark>.

Uncheck <mark>Enable auto minor version upgrade</mark>.

Select <mark>No preference</mark> for <mark>Maintenance window</mark>.

Uncheck <mark>Enable deletion protection</mark>.
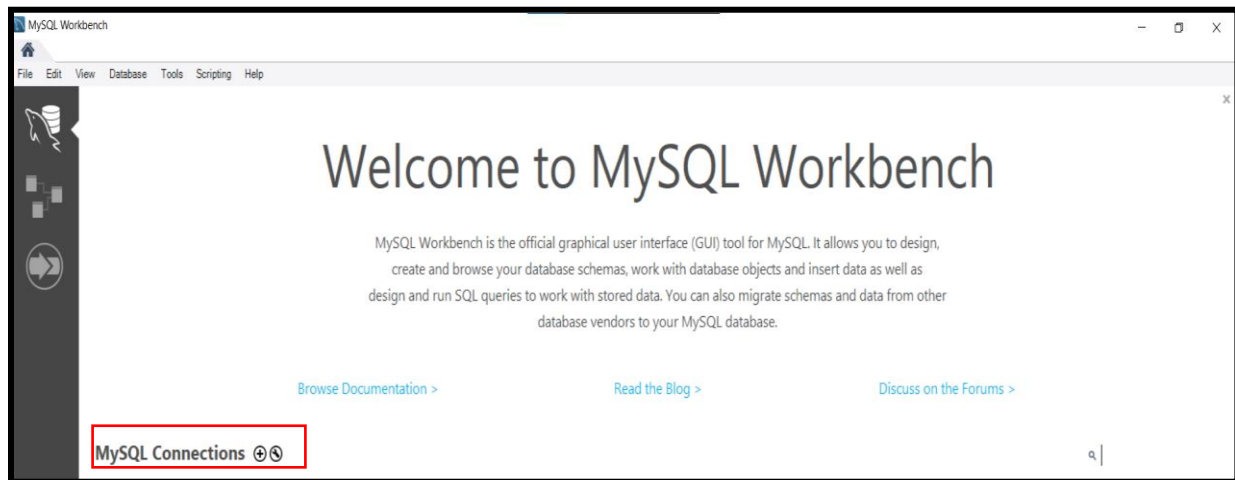
Ensure no additional cost is being incurred in the **Estimated monthly cost** section.

Click on <mark>Create database</mark> button in bottom right corner.

Confirm that the database is created and <mark>Available</mark>.

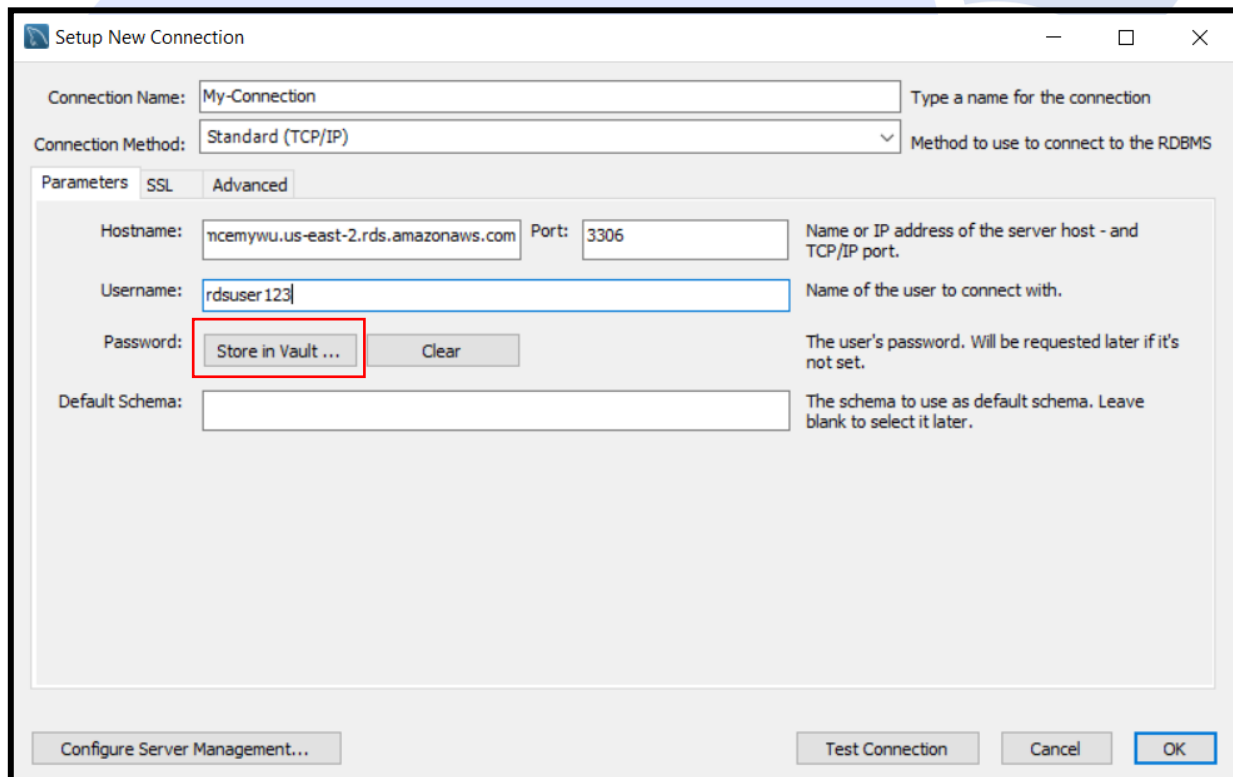Step 3: Open the <mark>MySQL Workbench</mark> application on your device.

Click on the <mark>plus icon</mark> to connect a new **Database**.

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Enter the following configurations to **connect** to your <mark>AWS RDS</mark>.

Connection Name: My-Connection

Username: <mark>rdsuser123</mark>

To enter the password, click on <mark>store in vault</mark> and enter your password

Password: <mark>rdspass123</mark>

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To get the <mark>hostname</mark>, go back to your AWS console, Click, on your RDS Instance and copy then <mark>endpoint</mark>.

Paste the endpoint in the hostname filed and Click, on <mark>'OK'.</mark>

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Thus we have successfully established connection with RDS using MySQL Workbench.

Note: Delete RDS instance and Security groups if you no longer need them.
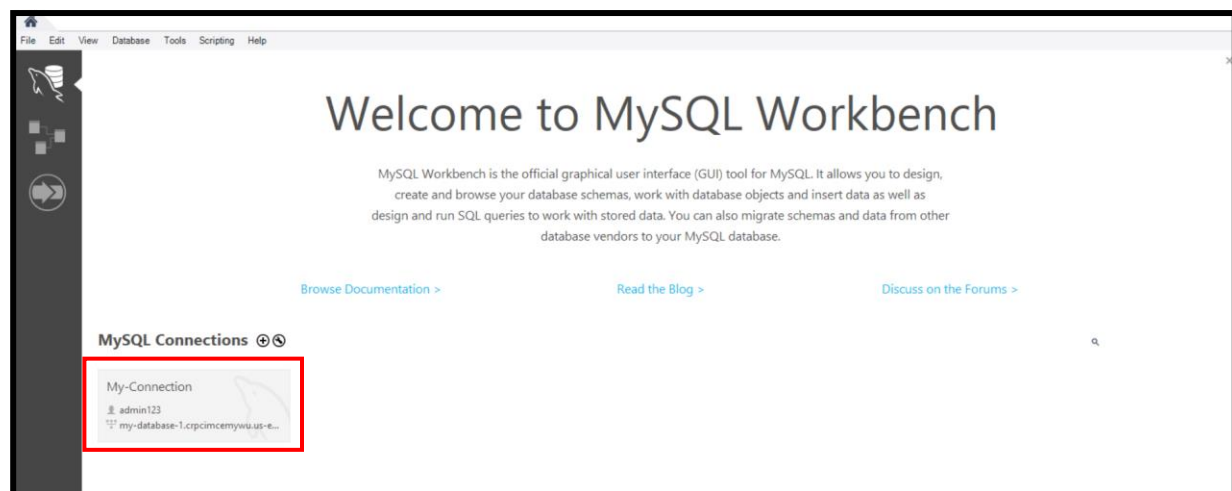
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Was this document helpful? YES / NO

Document Created by	Version
Aayush Gavande	1-September-2021