

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**.



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.

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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**

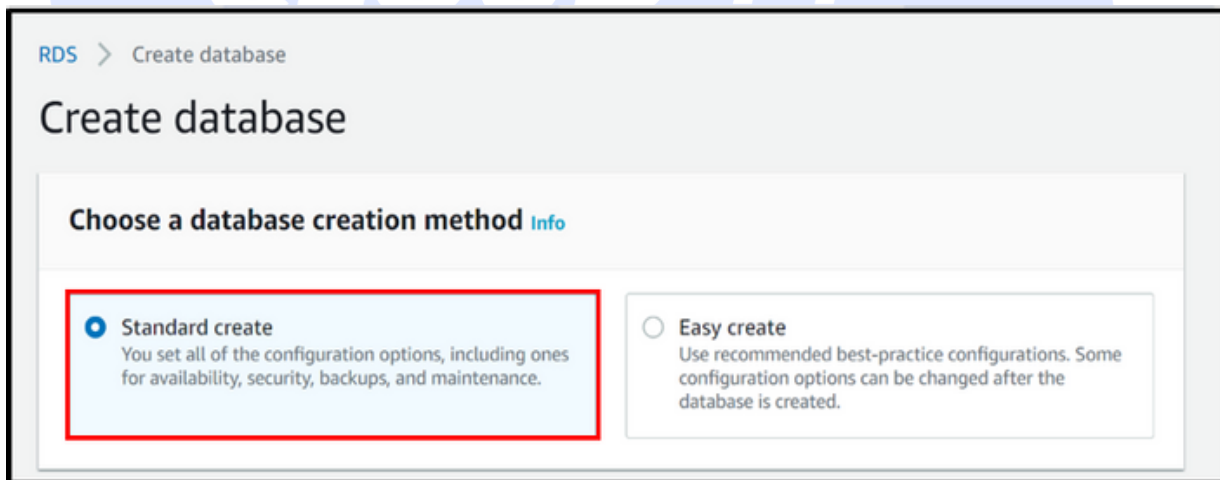
Source: **LinuxSG** (security group that would be used to create the EC2 instance)

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

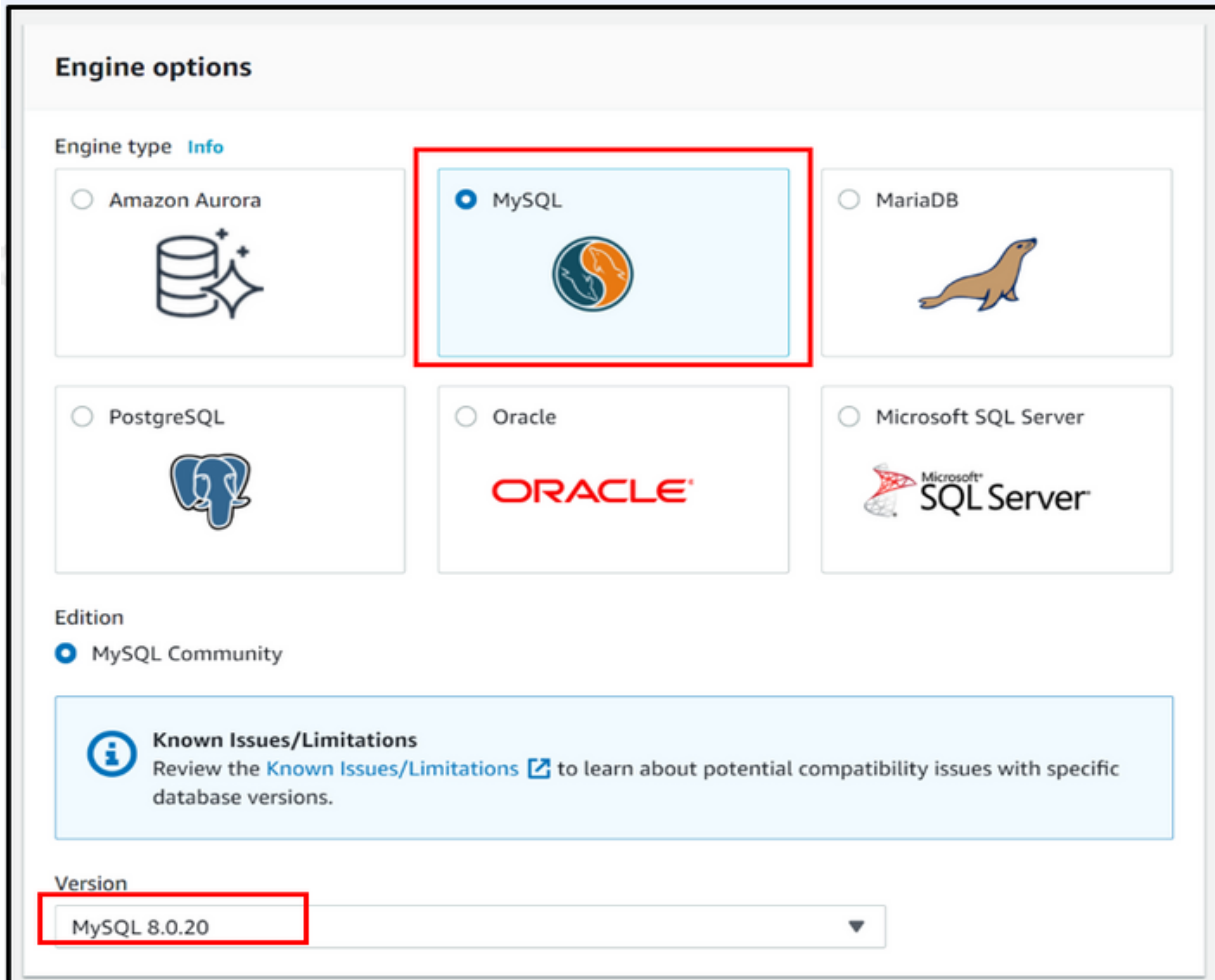
Create database

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.

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



Engine options

Engine type [Info](#)

☐ Amazon Aurora

☒ MySQL

☐ MariaDB

☐ PostgreSQL

☐ Oracle

☐ Microsoft SQL Server

Edition

☒ MySQL Community

Known Issues/Limitations
Review the [Known Issues/Limitations](#) to learn about potential compatibility issues with specific database versions.

Version

MySQL 8.0.20

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

Under **Settings**:

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Give **DB instance identifier** as **mydatabase1**.

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

- **Master Username:** **rdsuser123**
- **Master password:** **rdspass123**

Settings

DB cluster identifier [Info](#)
Type a name for your DB cluster. The name must be unique across all DB clusters owned by your AWS account in the current AWS Region.

mydatabase1

The DB cluster identifier is case-insensitive, but is stored as all lowercase (as in "mydbcluster"). Constraints: 1 to 60 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

▼ **Credentials Settings**

Master username [Info](#)
Type a login ID for the master user of your DB instance.

rdsuser123

1 to 16 alphanumeric characters. First character must be a letter

☐ **Auto generate a password**
Amazon RDS can generate a password for you, or you can specify your own password

Master password [Info](#)

.....

Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), ' (single quote), " (double quote) and @ (at sign).

Confirm password [Info](#)

.....

Let the **DB instance class** be **Standard Classes** and **size** be **db.m5.xlarge**.

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

Uncheck the **Enable storage autoscaling**.

Under **Availability & durability** select **Do not create a standby instance** 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**.

Public access [Info](#)

☒ Yes
Amazon EC2 instances and devices outside the VPC can connect to your database. Choose one or more VPC security groups that specify which EC2 instances and devices inside the VPC can connect to the database.

☐ No
RDS will not assign a public IP address to the database. Only Amazon EC2 instances and devices inside the VPC can connect to your database.

VPC security group
Choose a VPC security group to allow access to your database. Ensure that the security group rules allow the appropriate incoming traffic.

☒ Choose existing
Choose existing VPC security groups

☐ Create new
Create new VPC security group

Existing VPC security groups

Choose VPC security groups ▼

RDS-SG ✕

Availability Zone [Info](#)

ap-south-1a ▼

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 **mysql8.0**.

▼ **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 **Enable automatic backups** will be checked.

Backup retention period will be **0 days**.

Backup window will have **No preference** selected.

Uncheck Copy tags to snapshots.

Uncheck Enable Encryption.

Uncheck Enable Performance Insights.

Uncheck Enable Enhanced monitoring.

Uncheck all options under **Log Exports**.

Uncheck Enable auto minor version upgrade.

Select **No preference** for **Maintenance window**.

Uncheck Enable deletion protection.

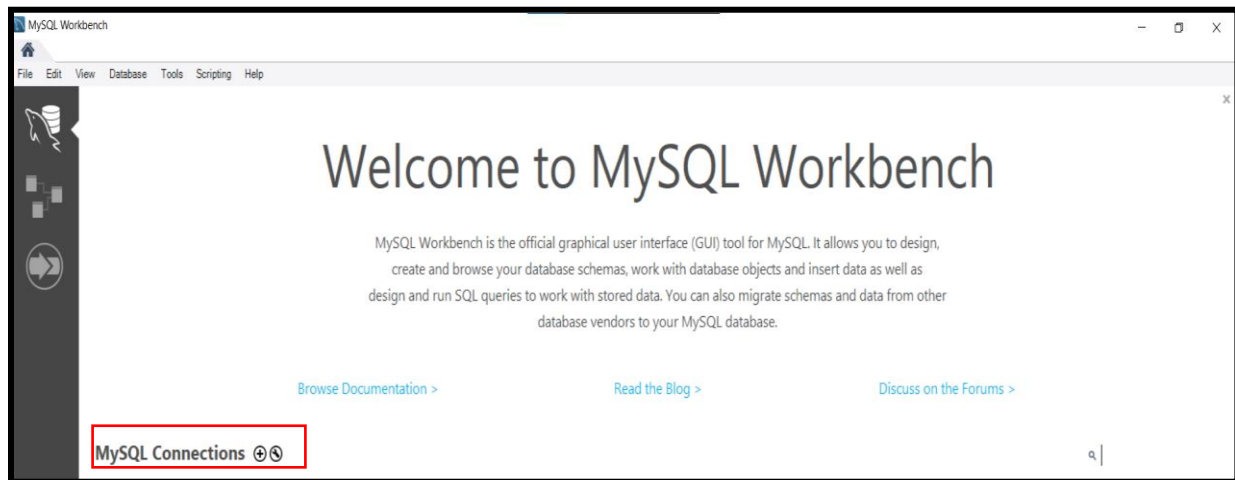
Ensure no additional cost is being incurred in the **Estimated monthly cost** section.

Click on **Create database** button in bottom right corner.

Confirm that the database is created and **Available**.

Step 3: Open the **MySQL Workbench** application on your device.

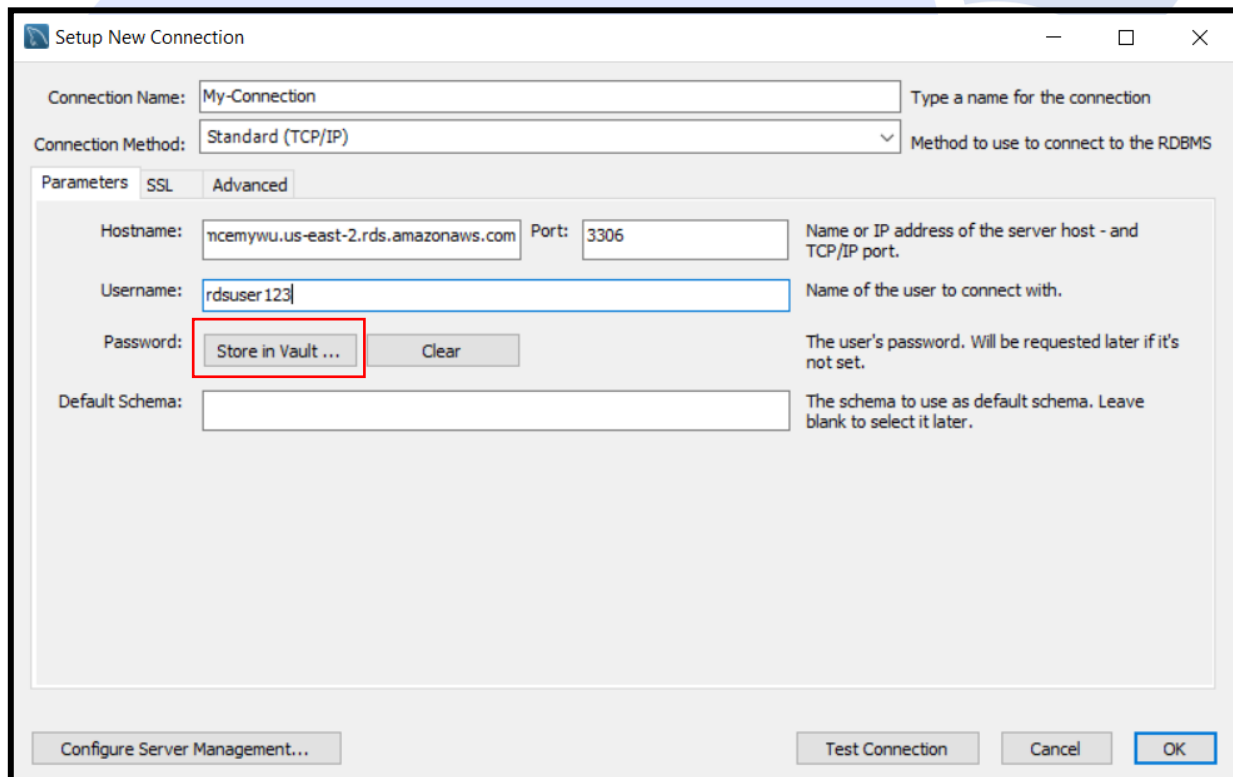
Click on the **plus icon** to connect a new **Database**.



Enter the following configurations to **connect** to your **AWS RDS**.

Connection Name: My-Connection

Username: rdsuser123



To enter the password, click on **store in vault** and enter your password


Password: rdspass123

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Store Password For Connection

Please enter password for the following service:

 **Service:** Mysql@my-database-1.crpimcemywu.us-east-2.rds.amazonaws.com:3306
User: rdsuser123
Password:

OK Cancel

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

Paste the endpoint in the hostname filed and Click, on **'OK'**.

Connectivity & security

Endpoint & port	Networking	Security
Endpoint my-database-1.crpimcemywu.us-east-2.rds.amazonaws.com	Availability zone us-east-2a	VPC security groups RDS-SG (sg-0e4067e1925fd3e60) (active)
Port 3306	VPC vpc-7f026714	Public accessibility Yes
	Subnet group default-vpc-7f026714	Certificate authority rds-ca-2019
	Subnets subnet-8d870ae6 subnet-54dc2729 subnet-27bb986b	Certificate authority date August 22, 2024, 10:38 (UTC±10:38)

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Setup New Connection

Connection Name: My-Connection Type a name for the connection

Connection Method: Standard (TCP/IP) Method to use to connect to the RDBMS

Parameters SSL Advanced

Hostname: ncemywu.us-east-2.rds.amazonaws.com Name or IP address of the server host - and TCP/IP port.

Port: 3306

Username: rdsuser123 Name of the user to connect with.

Password: Store in Vault ... Clear The user's password. Will be requested later if it's not set.

Default Schema: The schema to use as default schema. Leave blank to select it later.

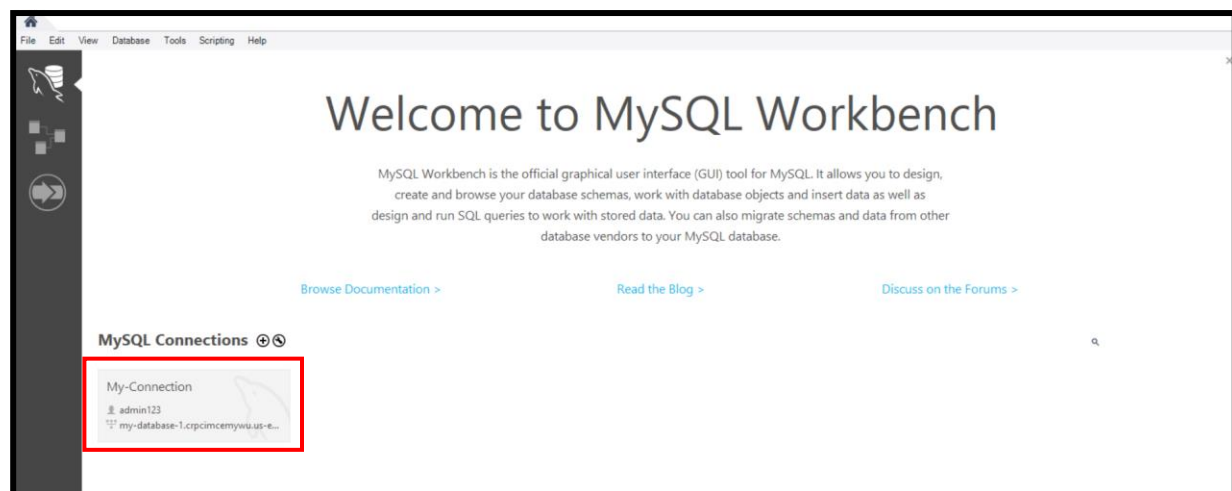
Configure Server Management... Test Connection Cancel OK

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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

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Aayush Gavande	1-September-2021

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