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# RDS

### **RDS Class Room Discussion**

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### **Screenshots for creating an Amazon RDS Instance**

#### **Create MySQL Database on AWS (RDS)**

At the top of the AWS console, you’ll see a **Search bar**. Type **"RDS"** into the search field.

Click on **RDS** from the dropdown list that appears

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On the **left-side pane**, under the **RDS Dashboard**, you’ll see several options.

Click on **Databases,** thenClick on "Create Database".

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Choose **Standard Create** for detailed configurations

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**Engine type:** Select **MySQL**.

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**Version:** Choose the MySQL version you prefer

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Choose **a Free tier template** for learning or experimenting with RDS at no cost

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**DB instance identifier:** Enter a unique name for your database (e.g., my-sqlserver-db).

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**Master username:** Set the admin username (e.g., admin).

**Master password:** Create and confirm a strong password.

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**DB instance class:** Choose the instance type based on workload needs:

* For testing: **db.t3.micro** (free tier eligible).

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**Allocated storage:** Set the storage size (minimum 20 GiB).

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Choose Don’t connect to an EC2 compute resource option under **Compute resource**

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**Virtual Private Cloud (VPC):** Select an existing VPC or create a new one.

**DB Subnet group:** Choose a subnet group within the selected VPC.

Select **Yes for Public access**

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**VPC security group:**

* Ensure inbound traffic on **port 3306** (default MySQL port) is allowed
* choose Availability Zone if required.

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Click **Create database**

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It may take a few minutes for the database status to change to **Available**

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#### **Install MySQL Workbench**

Go to the [MySQL Workbench Downloads](https://dev.mysql.com/downloads/workbench/).

Click on Download

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Click on No tanks, just start my download

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Locate the downloaded .msi file. Double-click the installer to run it

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Follow the prompts, accepting the default settings.

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Open Workbench from the Start Menu or desktop shortcut.

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#### **Connect MySQL Workbench to Your AWS Database**

Select Database tab and click on Manage Connections

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**Copy the Endpoint to use in the connection creation**

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**Connection Name:** Give it a name (e.g., **AWS MySQL**).

**Hostname:** Enter your RDS endpoint.

**Port:** Default is **3306**.

**Username:** The master username you created (e.g., **admin**).

**Password:** Click **Store in Vault** and enter the master password

Click **Test Connection**.

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If successful, you'll see a message: **Connection parameters are correct**.

Click **OK** to save the connection. A screenshot of a computer

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Double-click your saved connection in MySQL Workbench to connect to the MySQL RDS instance.

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#### **Create a New Database in MySQL Workbench**

Type the following SQL command to create a new database:

CREATE DATABASE mytestdb;

Click the **Execute** button (lightning bolt icon).

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Check if the database was created, type

SHOW DATABASES;

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#### **Manage Your Database**

Now that you have created your database, you can perform various operations such as:

CREATE TABLE mytestdb.users (

id INT AUTO\_INCREMENT PRIMARY KEY,

name VARCHAR(100));

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Insert data

INSERT INTO mytestdb.users (name) VALUES ('Prabhakar');

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Check the data

select \* From mytestdb.users;

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### **Screenshot for Read Replica**

#### **Create a Read Replica**

In the RDS dashboard, find and click on your **source database instance** (the one you want to replicate).

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Click on the **Actions** dropdown menu for the selected instance.

Choose **Create read replica**.

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**DB instance identifier:** Choose a unique name for your read replica (e.g., mydb-replica).

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Leave other default value and click on **create read replica**

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It will take a few minutes for the read replica to be created. You can monitor the process in the **RDS Dashboard**.

The status of the read replica will show as **Creating** initially. Once it’s available, the status will change to **Available**.

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#### **Access the Read Replica**

Open **MySQL Workbench** and create a new connection

For the **Hostname**, use the **endpoint** of the read replica.

Use the **username** and **password** that you set for your MySQL instance.

**Port:** Default is **3306**.

Click **Test Connection** and then **OK** to save the connection.

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If successful, you'll see a message: **Connection parameters are correct**.

Click **OK** to save the connection.

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Check the data

select \* From mytestdb.users;

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#### **Test Replica action**

To observe replication in action, add some data to the **source database** and monitor the read replica

Connect to the **source database**

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Select source database connection and click OK

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Use the **SQL Query** tab and run a simple **INSERT** query

INSERT INTO mytestdb.users (name) VALUES ('Veera');

A computer screen with a message

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after inserting data, you can check that it was successfully added to the source database:

run a select query

select \* From mytestdb.users;

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Check the Data in the Read Replica

After the data has been inserted into the source database, run the same query to check if the data is reflected in the replica:

**Expected Result:** You should see the same data

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