

# Relational Database Service in AWS

RDS:-

Amazon Relational Database Service (Amazon RDS) is a collection of managed services that makes it simple to set up and scale database in the cloud.

## Prerequisites:-

### Step 01

1. Login to your Amazon Account with username and Password.
2. Go to the Amazon EC2 console.
3. Click on "Launch Instance" on the right side of page.
4. Choose a "Linux AMI", give a name to your Ec2 instance.
5. Choose an instance type according to your need, I have selected the t2.micro.
6. Configure the Security group rules to allow inbound traffic on the Appropriate port for the type of database you are using (e.g port 3306 used for the MySQL).
7. Choose an instance type according to your need, I have selected the t2.micro
8. In Our Security Group, I will allow the port 3306 used for the MySQL
9. Launch the instance.
10. Launch the instance mention a tag on your instance

### Step 2 Create a Free tier RDS instance of MYSQL.

1. Go to the Amazon RDS console
2. Click on "Create Database option"
3. Click on "Create Database option"
4. In the Database creation method chooses the Standard Create.
5. In Engine option:
  - I will select the MySQL, you can select according to your need like:- Maria DB, Oracle & PostgreSQL etc.
6. Choose the Standard Create select the MySQL
7. Choose the "Free tier" template for "DB instance class" no charges for the "free tier"
8. Choose the "Free tier" template for "DB instance"
9. Next Step:- Enter a unique name for the "DB instance identifier".
10. Set the "Master Username" & "Master Password" for the database, It will use while login the database from the terminal, I will explain in it in Today Task.
11. Enter a unique e name for the "DB instance Set the "Master username" & "Master Password"
12. Set the "Virtual Private Cloud" and "Subnet group" to create the instance in.
13. Leave the other settings at their default values.
14. "Virtual Private Cloud" and "Subnet group"
15. Select the Storage
16. Select EC2 instance.

17. Select EC2 instance
18. Choose VPC Security Group:-
19. Choose VPC Security Group
20. Click on the "Create database" to start the instance creation.
21. Database is created.

**After completing the Step 1 & Step 2, Move forward Step 3:-**

**Step 3. Create an IAM role for with RDS access.**

1. Go to the IAM console in AWS. Click on "Roles". click on "Create Role"
2. Create an IAM role for with RDS access
3. Need to be attached the "AmazonRDSFullAccess" policy.
4. Choose the "AWS Service"
5. Choose "Allows Ec2 instance to call AWS Services on your behalf"

**Step 4 is very Important:- Assign the role to EC2 so that your EC2 instance can connect with RDS.**

1. Go to the Ec2 console.
2. Select the instance you just created.
3. Click on "Actions" option then "Instance Settings", then "Attach/Replace IAM Role".
4. Choose the IAM role you just created.
5. Click on the "Updated IAM role"
6. Choose the IAM role you just created Click on the "Updated IAM role" Diagram.
7. Step 5 Once the RDS instance is up and running, get the Credentials and connect your EC2 instance using a MySQL client.
8. Go to RDS console in AWS.
9. Select the Instance you just created.
10. Click "Configuration" and note the endpoint address.
11. Click "Security" and note the username and Password.
12. SSH into your EC2 instance using a Terminal or remote access tool.
13. SSH into your EC2 instance
14. Successfully login in account with SSH
15. Need to be installing the MySQL Client, such as "MySQL". I will share the commands it will helpful for you for the installation.

**Syntax:-**

16. `sudo apt install mysql-client-core-8.0`
17. `mysql --version`
18. install the MySQL Client, such as "mysql" & Version check
19. Connect to the RDS instance using the MySql client and the endpoint address username, and Password.
20. **`mysql -h <endpoint address> -P <port.no> -u <username> -p`**
21. Enter the password when prompter and press enter:-

22. You should now be connected to the MySQL database on the RDS instance.

**Syntax:-**

23. `sudo mysql -h database-1.c4mwnlabtvwh.ap-south-1.rds.amaz.. -P 3306 -u admin -p`

24. Enter the Password:- <>

25. you are enter in the mysql:-

26. `mysql>`

27. `show databases;`

***(Note) if you're RDS is not access please checking the Endpoint address in RDS. It will take one or 2 min for access.***