

EXPERIMENT- 09

Student Name: Shivam Kumar

UID: 23BCS14207

Branch: BE-CSE

Section/Group: KRG 1-B

Semester: 05

Date of Performance: 04/11/25

Subject Name: ADBMS

Subject Code: 23CSP-333

1. Aim: To create and connect a PostgreSQL database instance on **Amazon RDS (Relational Database Service)**

2. Objective:

1. To understand the steps involved in launching a database instance using Amazon RDS.
2. To configure a database for public access and connect it with a local client (pgAdmin).
3. To perform basic SQL operations (CREATE, INSERT, SELECT).

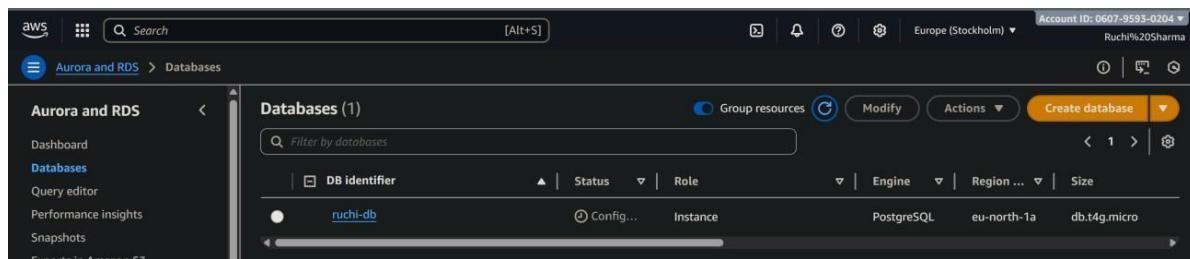
3. Tools / Software

1. Amazon Web Services (AWS)
2. PostgreSQL
3. pgAdmin 4
4. RDS (Relational Database Service)

4. Program:

Step 1: Create and Configure Database Instance

1. Login to AWS Console → RDS → Create database, select Standard create and PostgreSQL under the Free Tier template.
2. Set DB identifier: shivam-db, Username: postgre, choose db.t3.micro, 20 GB gp2 storage, and enable Public access.
3. Click Create database and wait until the status shows Available in the RDS dashboard.





DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

Step 2: Configure Security Group (Allow Local Access Only)

1. In AWS Console → go to RDS → Databases → click your DB (ruchi-db).
2. Open the Connectivity & Security tab.
3. Under VPC security groups, click the linked group name (it opens EC2 security groups).
4. Click Edit inbound rules → Add rule
 - Type: PostgreSQL
 - Protocol: TCP
 - Port: 5432
 - Source: My IP
5. Click Save rules.

Inbound rules (2)						
	Name	Security group rule ID	IP version	Type	Protocol	Port range
<input type="checkbox"/>	-	sgr-0d39d1bf593210da4	IPv4	PostgreSQL	TCP	5432
<input type="checkbox"/>	-	sgr-0ee4f18536cb88772	-	All traffic	All	All

Step 3: Connect Database Using pgAdmin

1. Open pgAdmin 4 on your local system.
2. Right-click Servers → Create → Server.
3. Under the General tab, enter the name: postgre.
4. Under the Connection tab, fill in the following details:
 - Host name/address: shivam-db.xxxxxxx.rds.amazonaws.com
 - Port: 5432
 - Username: postgre
 - Check Save password.
5. Click Save to connect your RDS PostgreSQL database.

5. Learning Outcomes:

1. Understand the procedure to provision and configure a PostgreSQL instance using AWS RDS.
2. Configure security groups and network access controls for secure database connectivity.
3. Establish a remote database connection using pgAdmin and verify successful access.