



# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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## EXPERIMENT- 09

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**Semester:** 05  
**Subject Name:** ADBMS

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

**2. Objective:**

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

**3. Tools / Software**

- ❑ Amazon Web Services
- ❑ (AWS) PostgreSQL
- ❑ pgAdmin 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: ruchi-db, Username: postgre, choose db.t3.micro, 20 GB gp2 storage,

The screenshot shows the AWS RDS Databases console. On the left, there's a sidebar with 'Aurora and RDS' selected. The main area is titled 'Databases (1)' and shows a table with one row for 'ruchi-db'. The table includes columns for DB identifier, Status, Role, Engine, Region, and Size. The status for 'ruchi-db' is 'Config... Instance'. The engine is PostgreSQL, the region is eu-north-1a, and the size is db.t4g.micro.

and enable Public access.

- Click Create database and wait until the status shows Available in the RDS dashboard.



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

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

The screenshot shows the AWS EC2 Security Groups console for a security group named 'sg-0570f959421927738 - default'. It displays two inbound rules:

Name	Security group rule ID	IP version	Type	Protocol	Port range	Source
-	sgr-0d39d1bf593210da4	IPv4	PostgreSQL	TCP	5432	106.206.235.43
-	sgr-0ee4f18536cb88772	-	All traffic	All	All	sg-0570f95942

### Step 3: Connect Database Using pgAdmin

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

The screenshot shows the pgAdmin 4 interface with the following connection tree:

- Default Workspace
- Servers (2)
  - PostgreSQL 17
  - ruchi-db
    - Databases
    - Login/Group Roles
    - Tablespaces