EXPERIMENT- 09

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Semester: 05 **Date of Performance: 31/10/25**

Subject Name: ADBMS **Subject Code: 23CSP-333**

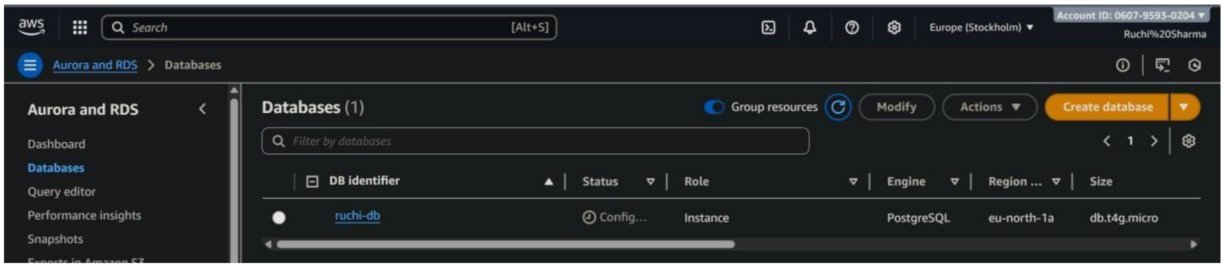
1. Aim:
To create and connect a PostgreSQL database instance on **Amazon RDS (Relational Database Service)**

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: ruchi-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.

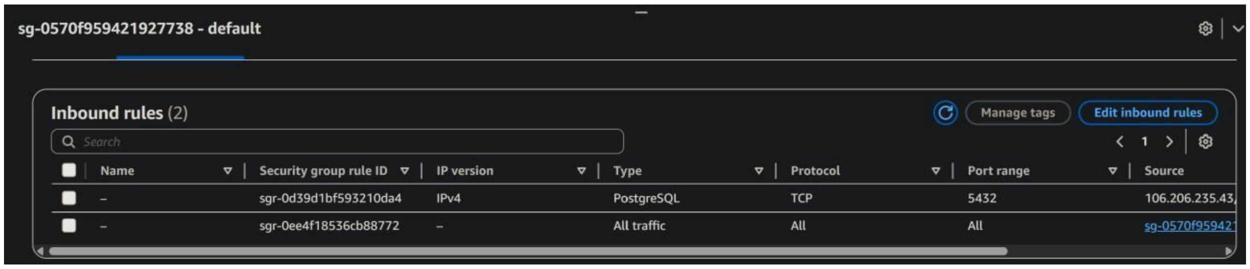


Databases (1)

DB identifier	Status	Role	Engine	Region ...	Size
ruchi-db	Config...	Instance	PostgreSQL	eu-north-1a	db.t4g.micro

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.



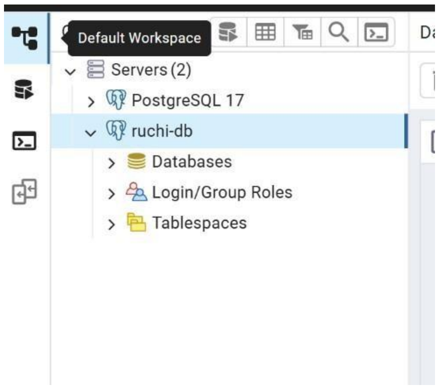
sg-0570f959421927738 - default

Inbound rules (2)

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-0570f959421

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: ruchi-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.