Experiment No 8

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

Aim:

To create and connect a PostgreSQL database instance on Amazon RDS (Relational Database Service)

Objective:

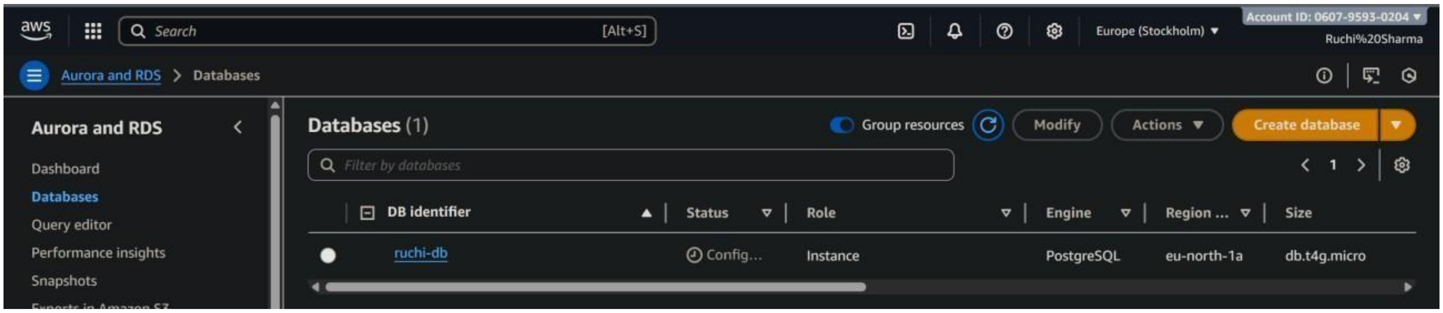
- To understand the steps involved in launching a database instance using Amazon RDS.
- To configure a database for public access and connect it with a local client (pgAdmin).
- To perform basic SQL operations (CREATE, INSERT, SELECT).

Tools / Software

- Amazon Web Services (AWS)
- PostgreSQL
- pgAdmin 4
- RDS (Relational Database Service)

Program:

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

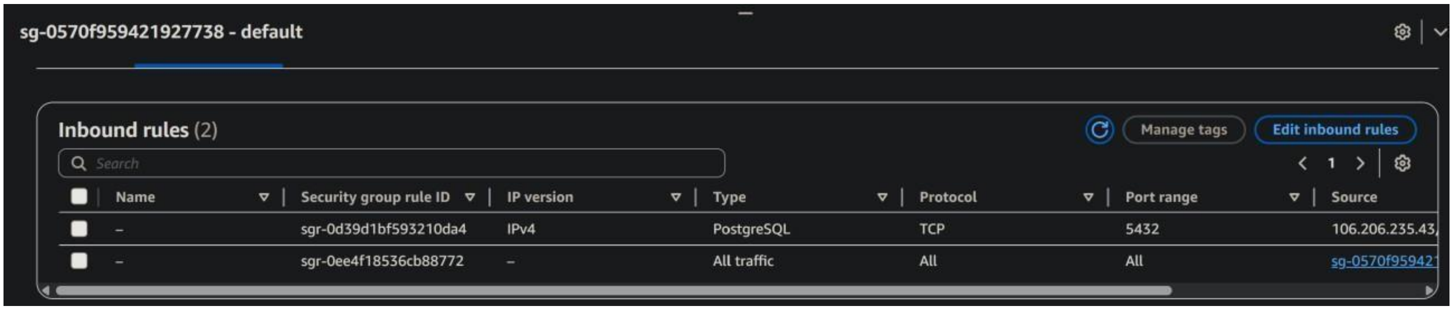


Databases (1)

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

2. 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.

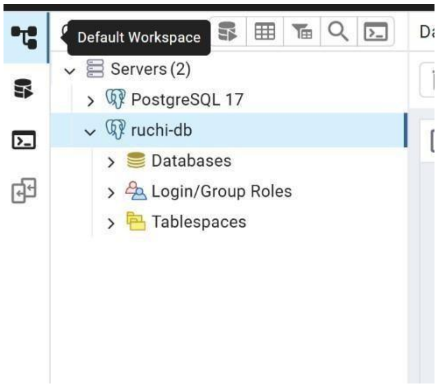


sg-0570f959421927738 - default

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-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: ruchi- db.xxxxxxx.rds.amazonaws.com
- Port: 5432
- Username: postgre
- Check Save password.
- Click Save to connect your RDS PostgreSQL database**.**

5. Learning Outcomes:

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