EXPERIMENT- 09

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Branch: BE-CSE **Section/Group: KRG-1-B**
Semester: 05 **Date of Performance: 28/10/25**
Subject Name:ADBMS **Subject Code: 23CSP-333**

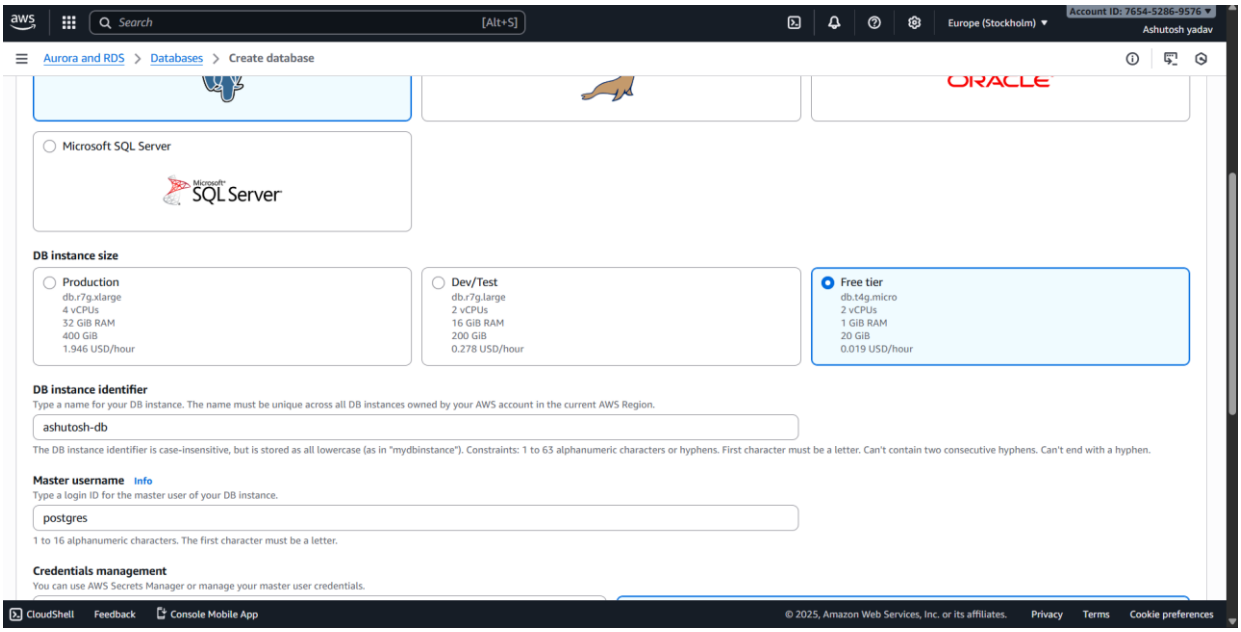
1. Aim:
To create and connect a PostgreSQL database instance on **Amazon RDS (Relational Database Service)**

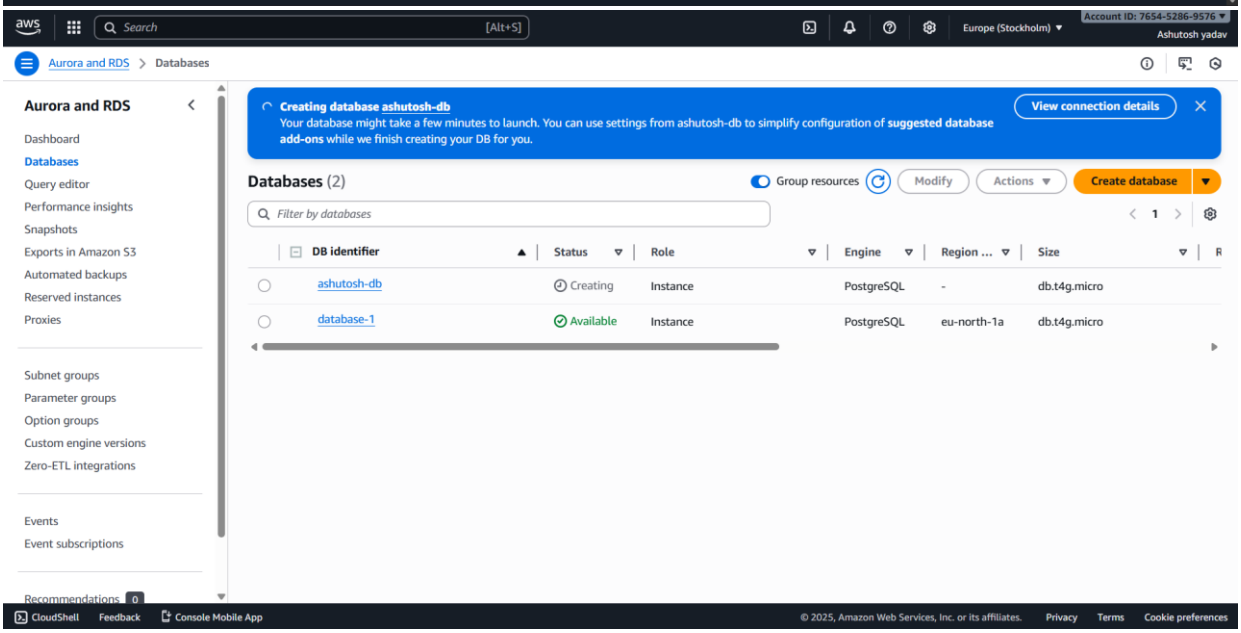
2. Objective:
- To understand the steps involved in launching a database instance using Amazon RDS.
- To configure a database for public access and connect it with a local client (pgAdmin).
- To perform basic SQL operations (CREATE, INSERT, SELECT).

3. Tools / Software
- AmazonWeb 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, and enable Public access.
3. 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)

1. In AWS Console → go to RDS → Databases → click your 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

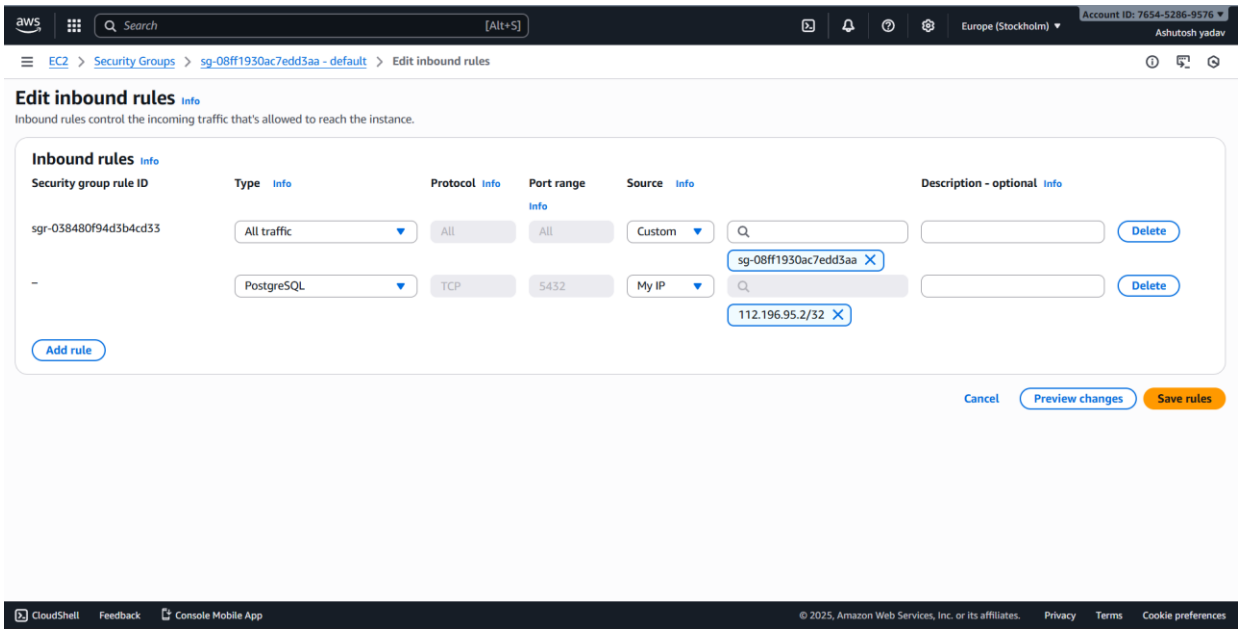
Type:

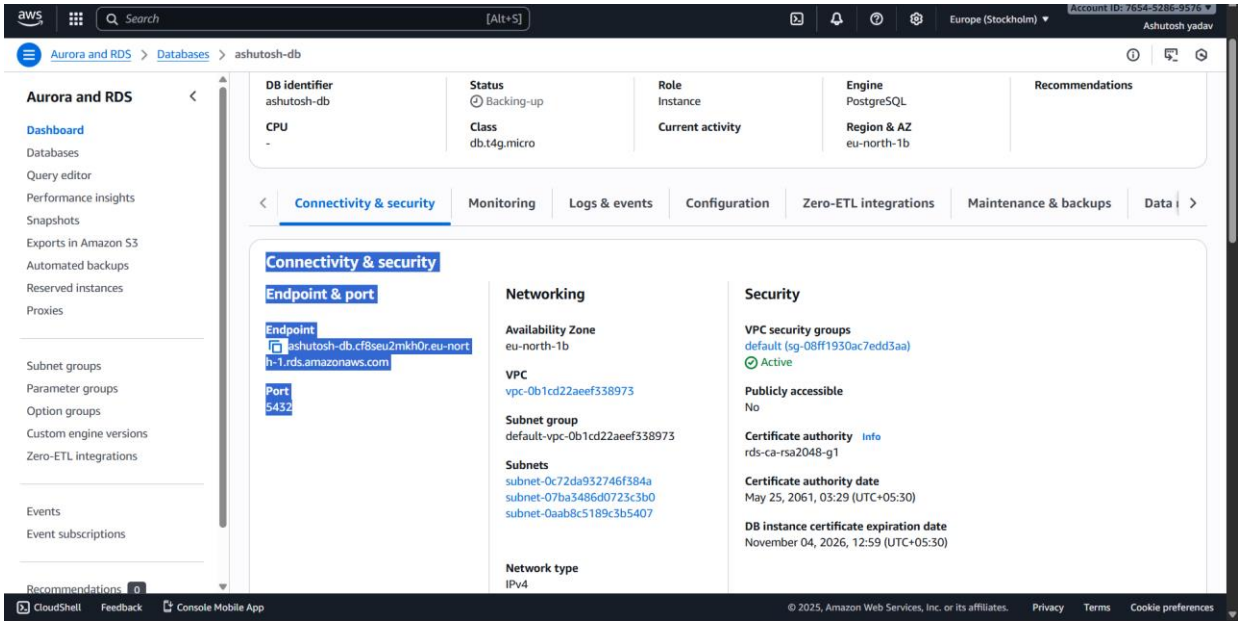
- PostgreSQL
- Protocol: TCP

Port: 5432

- Source: My IP

5. .ClickSaverules.

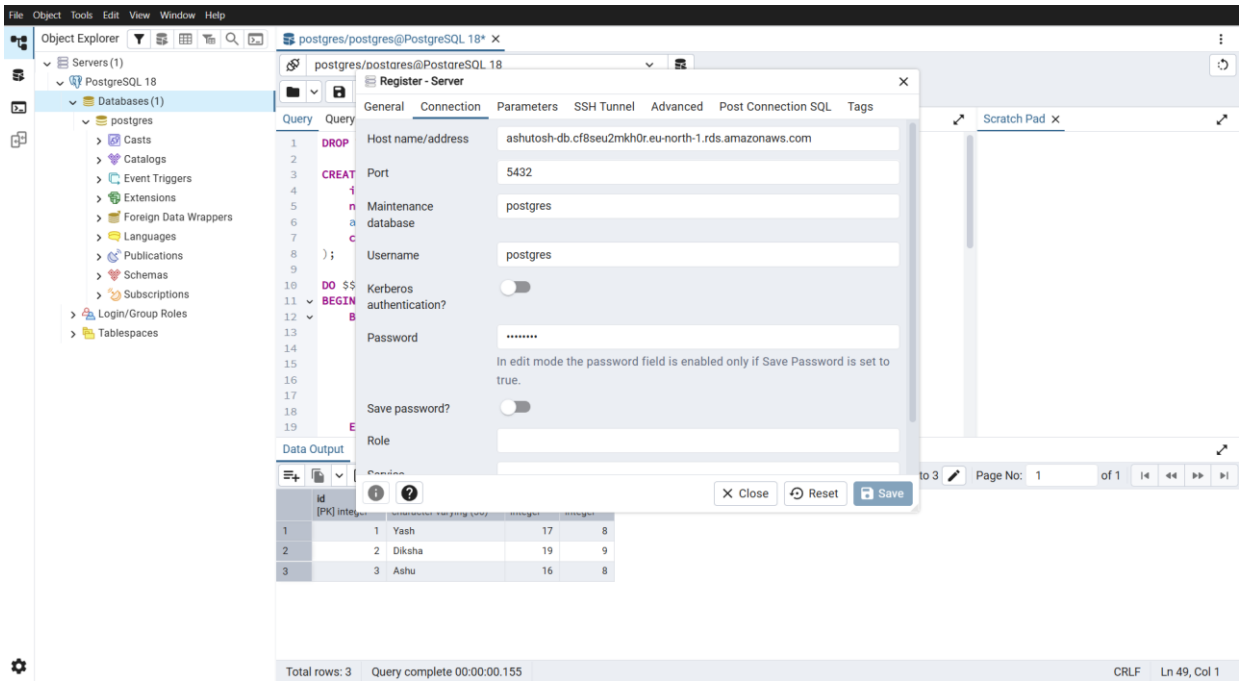




Step3:ConnectDatabaseUsingpgAdmin

1. Open pgAdmin 4 on your local system.
2. Right-click Servers → Create → Server.
3. Under the General tab, enter the name: postgres.
4. Under the Connection tab, fill in the following details:
   - Host name/address from instance connectivity & security
   - Port: 5432 Username and password as while creating the instance.

5. Click Save to connect your RDS PostgreSQL database.



Learning Outcomes:

1. **Understand and configure RDS instances:**
   Learners will be able to create and configure a PostgreSQL database instance on Amazon RDS by selecting appropriate instance types, storage options, and security groups.
2. **Establish secure database connections:**
   Learners will be able to connect to the PostgreSQL RDS instance using database clients or application code through proper authentication, networking, and endpoint management.
3. **Manage and monitor RDS resources:**
   Learners will be able to manage database parameters, perform basic maintenance tasks, and use AWS monitoring tools (like CloudWatch) to ensure database performance and availability.