University Institute of Engineering

Department of Computer Science & Engineering

EXPERIMENT: 9

NAME : Johnson Kumar **UID** : 23BCS12654

SECTION : KRG_2A **SEMESTER**: 5TH

SUBJECT CODE: 23CSP-339 **SUBJECT** : ADBMS

Problem Statement:

-To design and interact with cloud-based data storage systems using AWS RDS.
-Connect it with local database from your system.

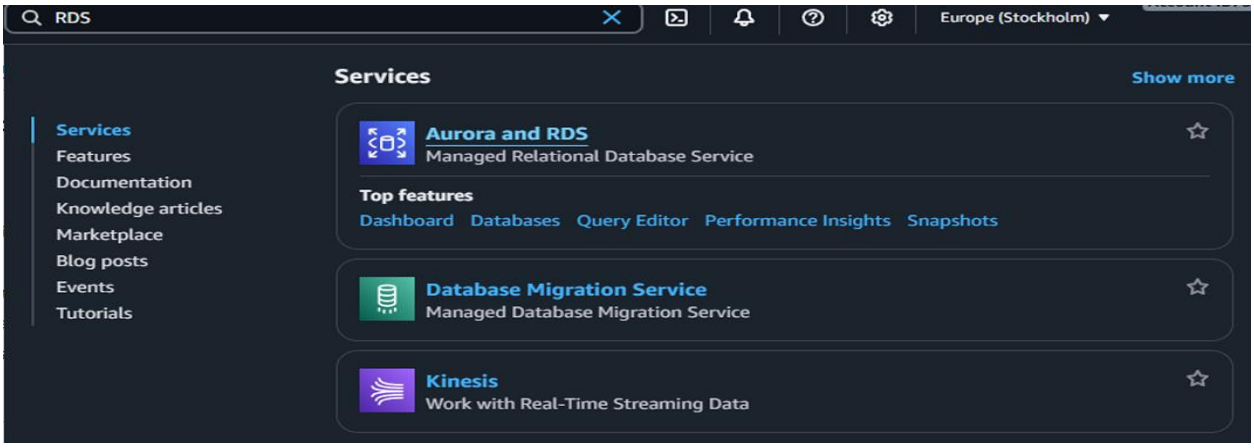
Hardware/Software Requirements

Component	Specification
Hardware	Personal computer
Cloud Services	AWS RDS
Tools	PGAdmin
Languages	PostgreSQL
OS	Windows

Steps:

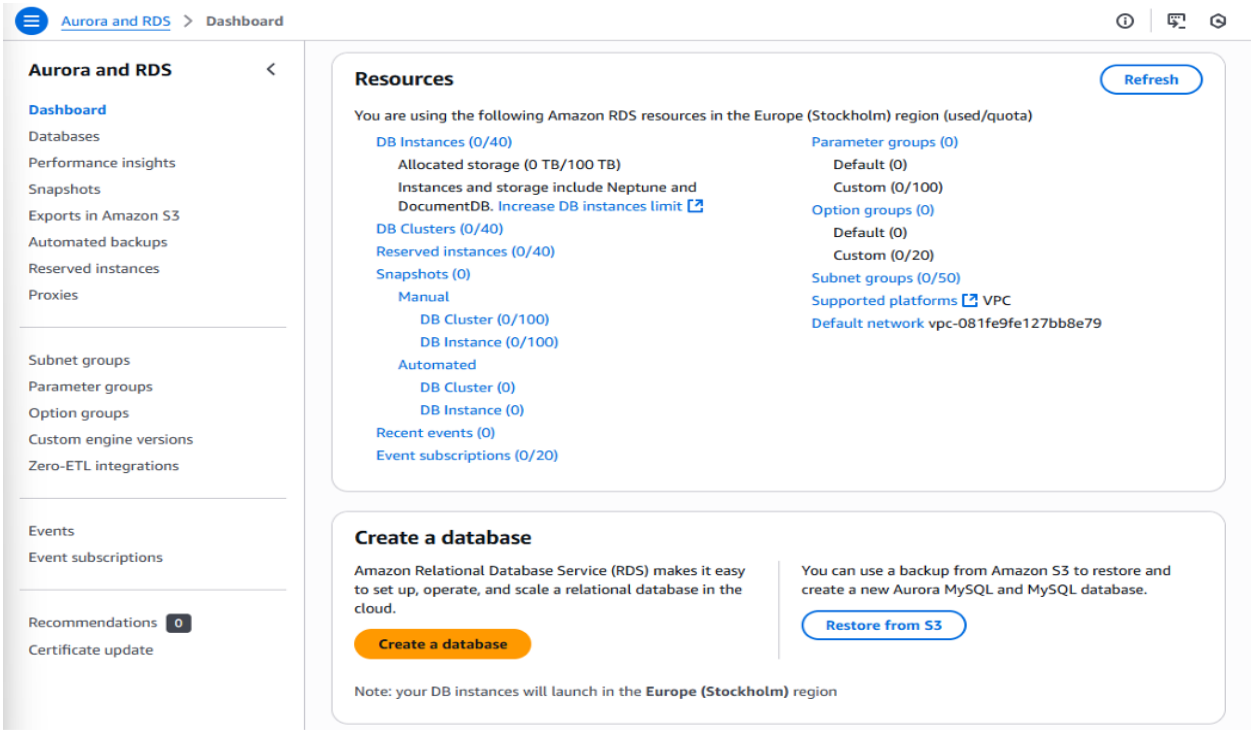
i) Go to aws homepage -> click on sign in-> enter user name with email address.

ii) After sign-in -> go to search bar -> search for rds -> hit enter.

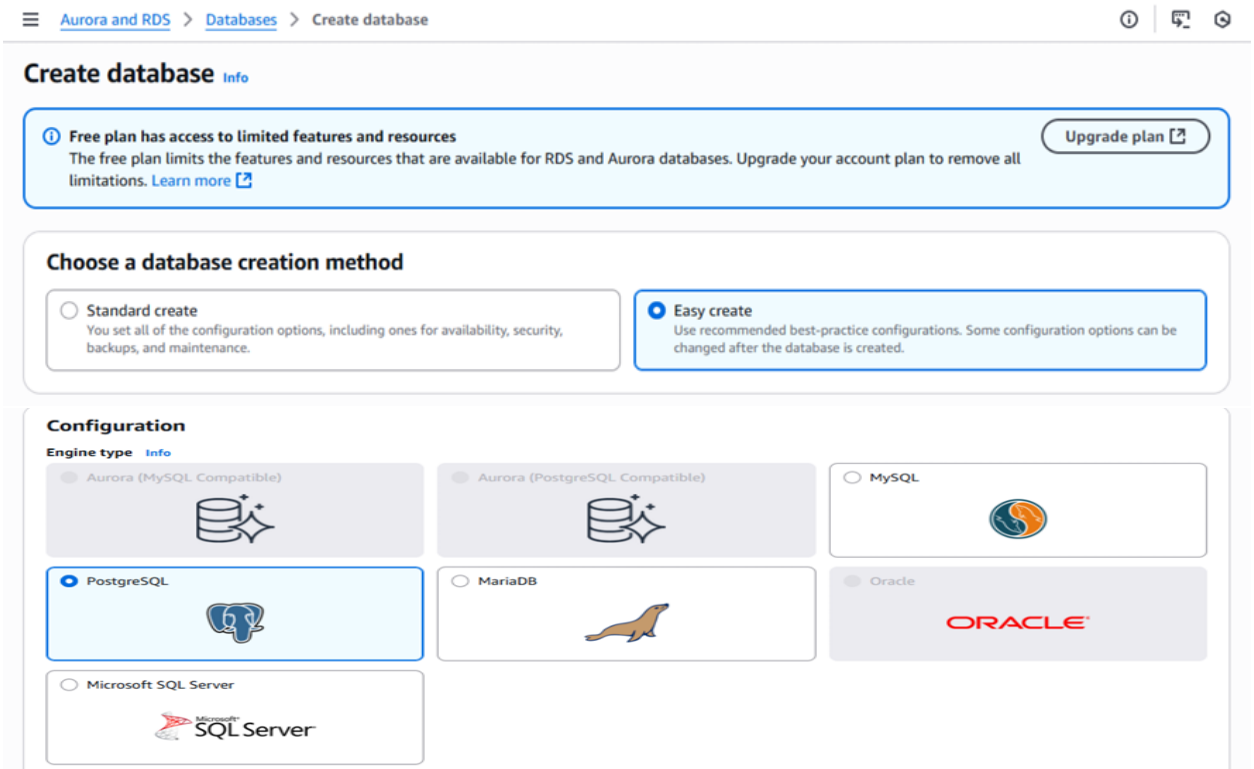


University Institute of Engineering

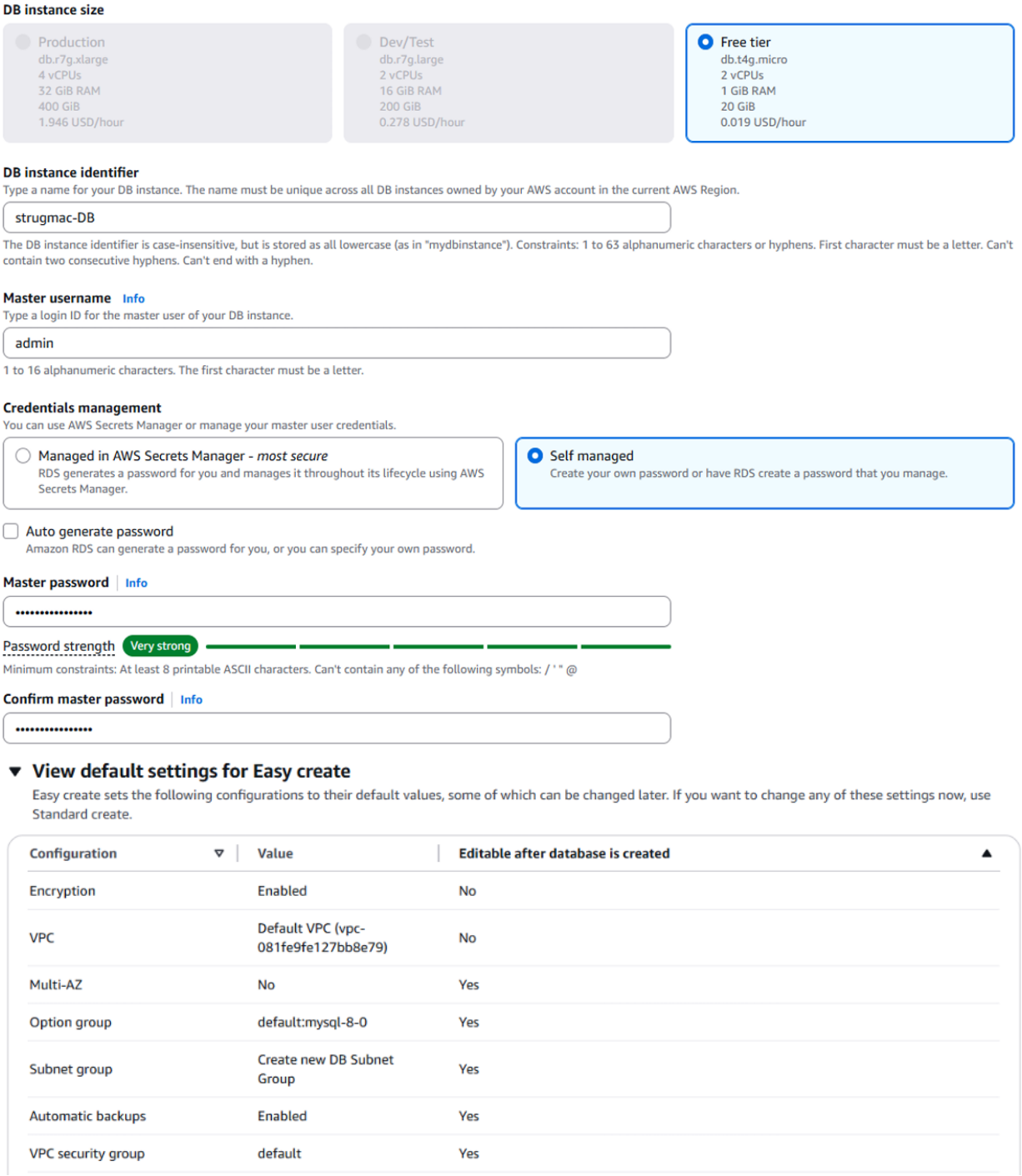
Department of Computer Science & Engineering



iii) Click on create database.

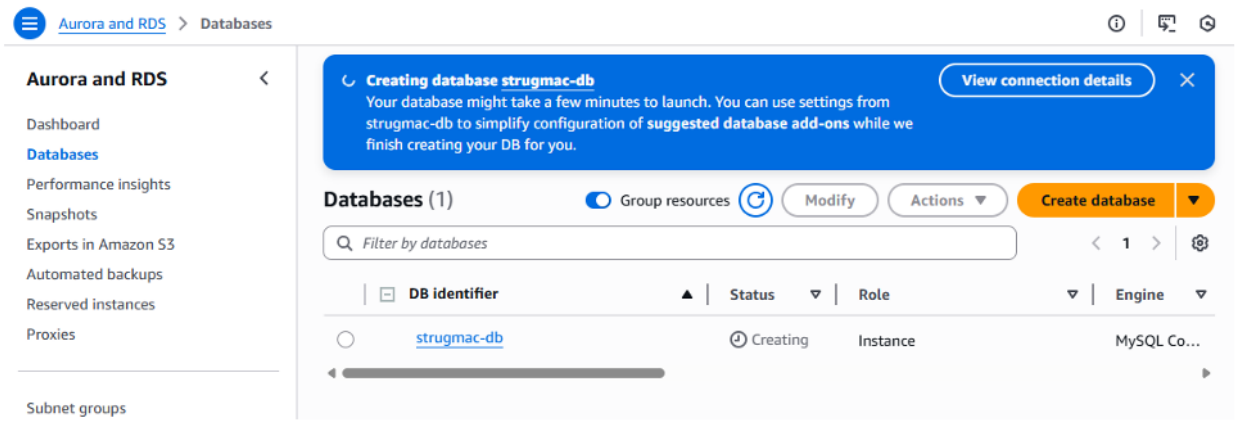


iv) In the standalone create, we can set everything for our database, the incoming traffic, ip addresses to be used, backup.

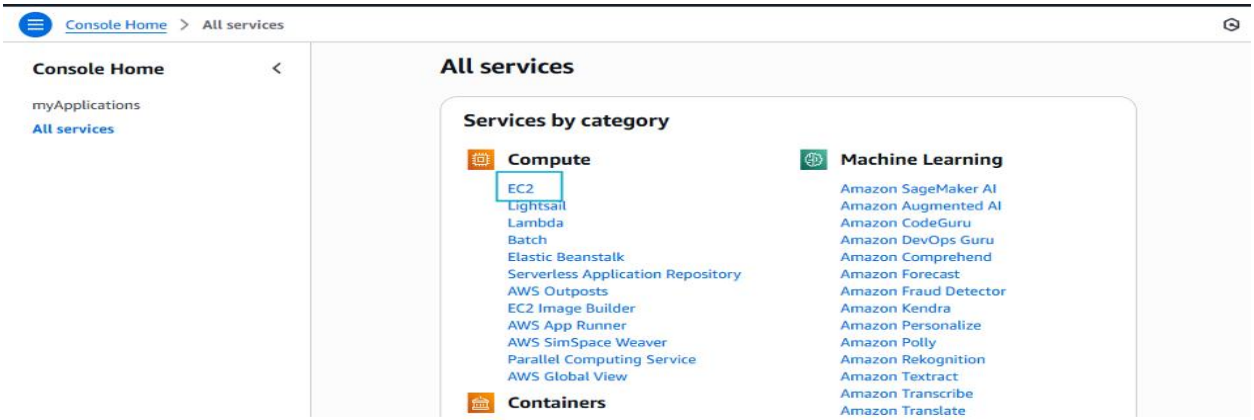


Publicly accessible	No	Yes
Database port	3306	Yes
DB instance identifier	strugmac-DB	Yes
DB engine version	8.0.42	Yes
DB parameter group	default.mysql8.0	Yes
Monitoring type	Database Insights - Standard	Yes
Performance insights	Not enabled	Yes
Monitoring	Enabled	Yes
Maintenance	Auto minor version upgrade enabled	Yes

v) Confirm all your selection .

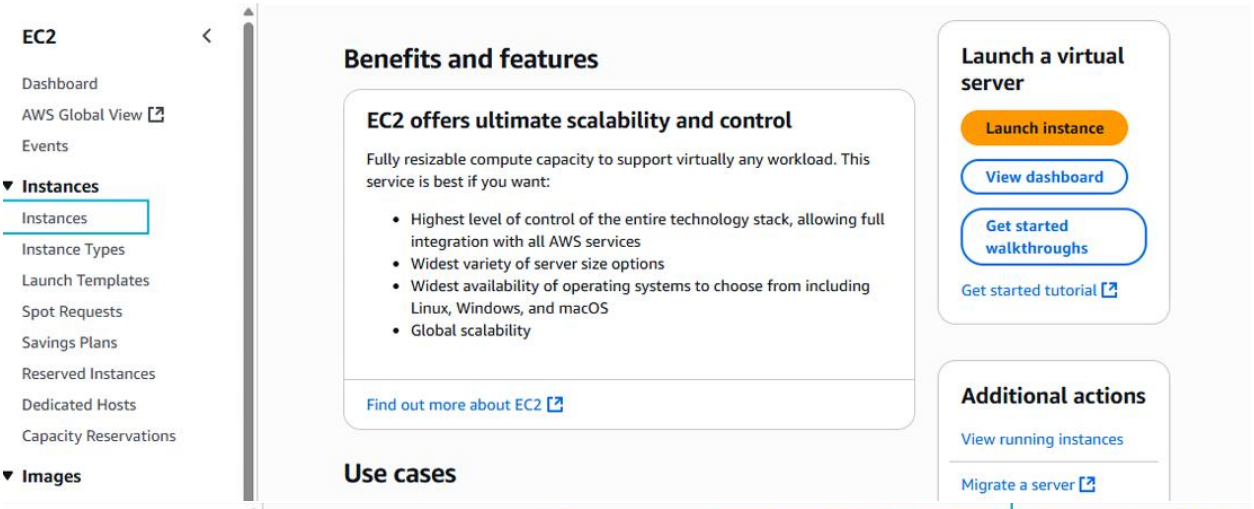


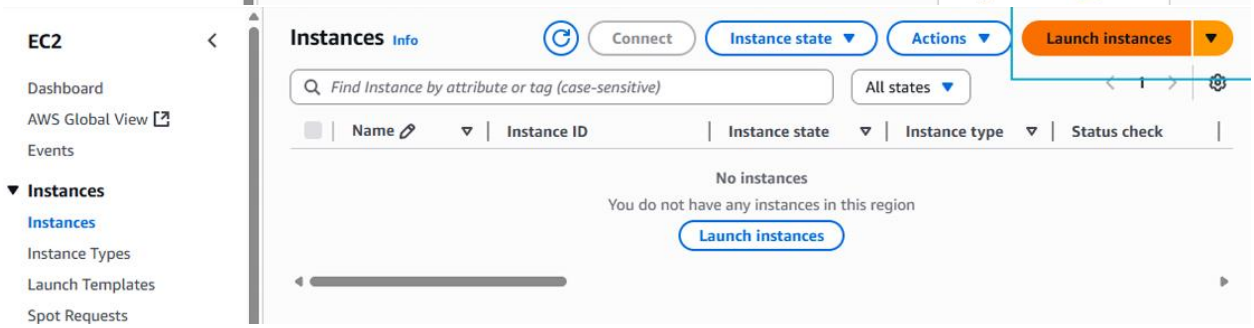
Now this will create a MySQL database to me, and we want to connect to RDS for which we have to launch a server which basically will have MySQL Client installed inside it. For that we have to launch an EC2 instance, Launching an EC2 instance.

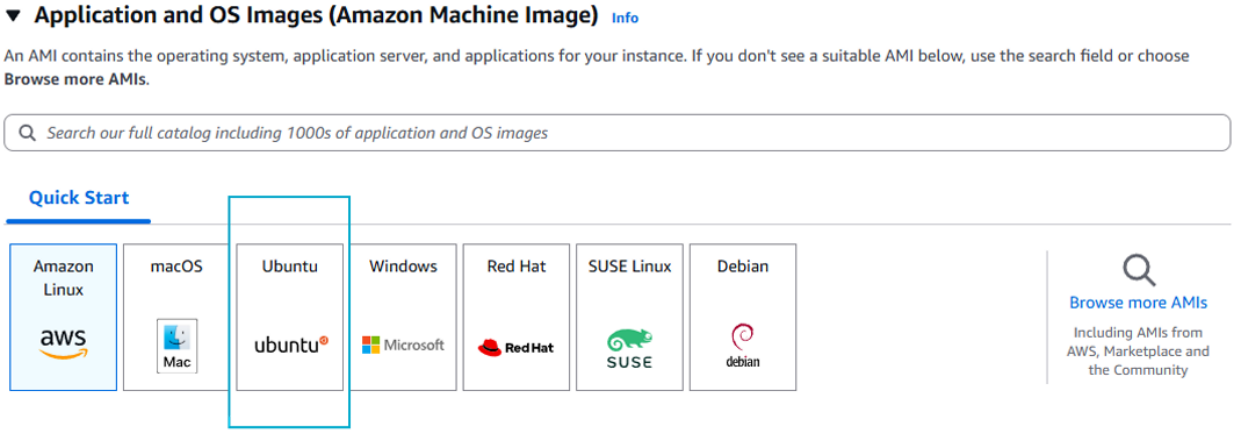


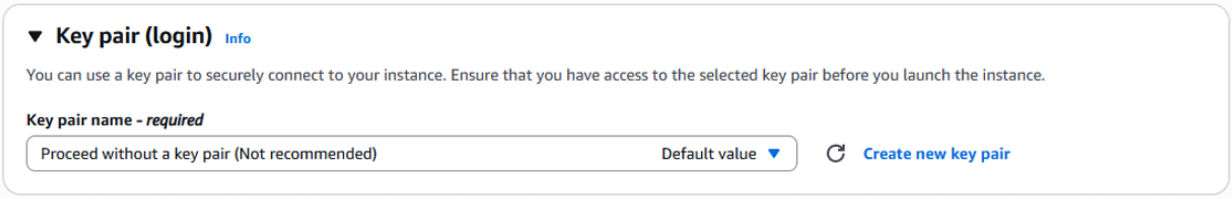
University Institute of Engineering

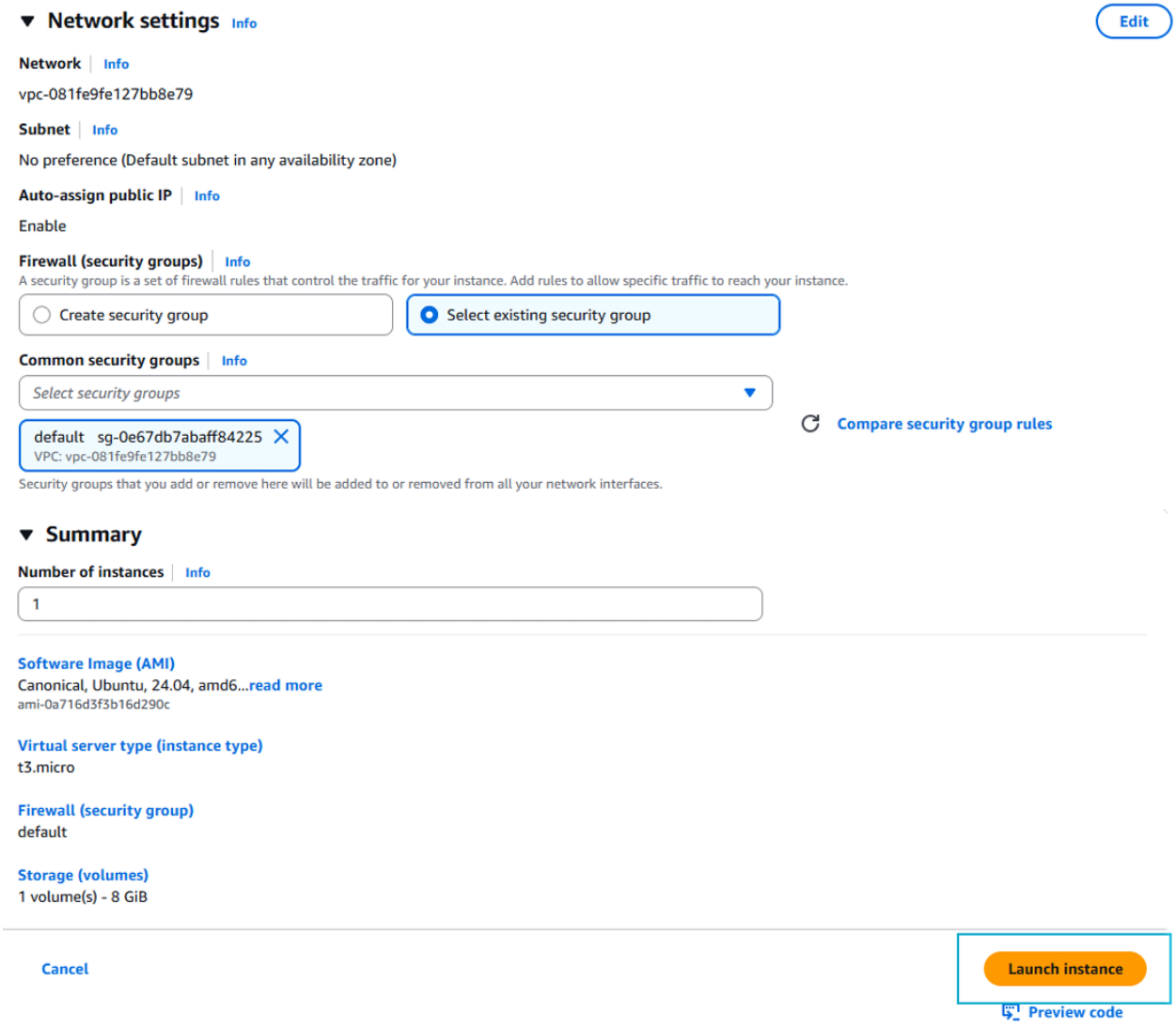
Department of Computer Science & Engineering





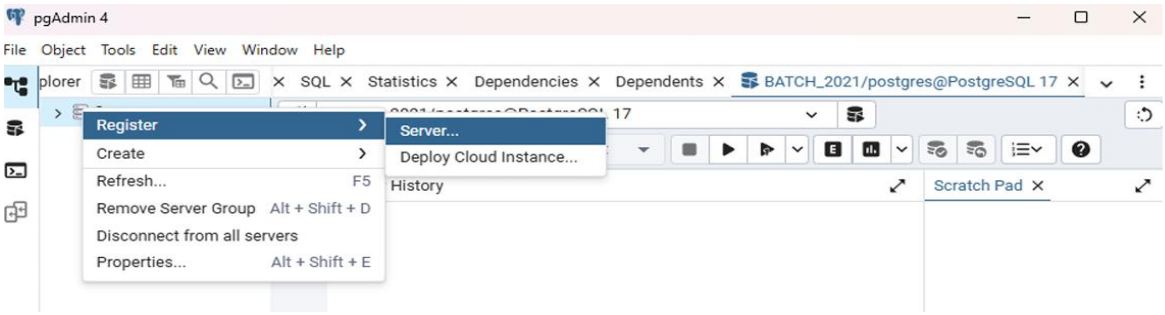




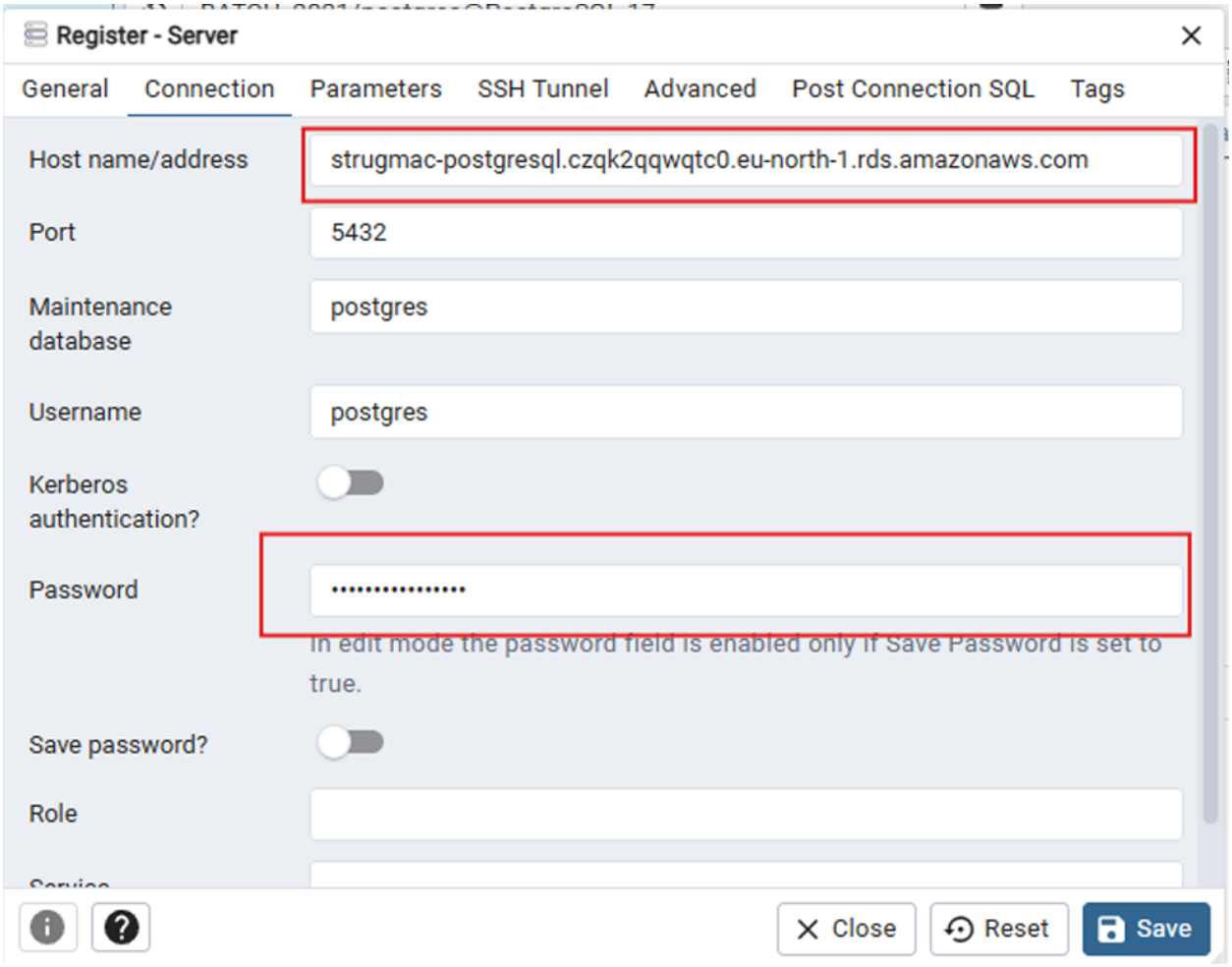


vi) Connect the Postgres AWS RDS to our local machine.

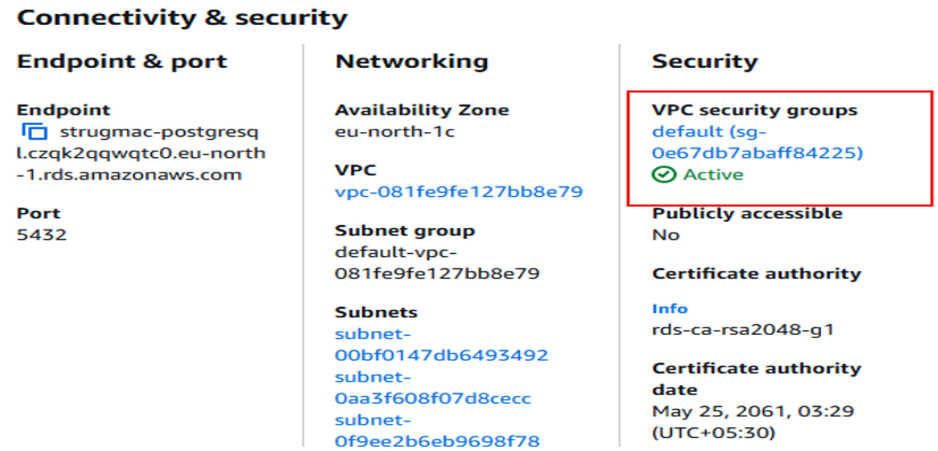
- Create AWS RDS database for PostgresSQL
- Connect from PgAdmin.

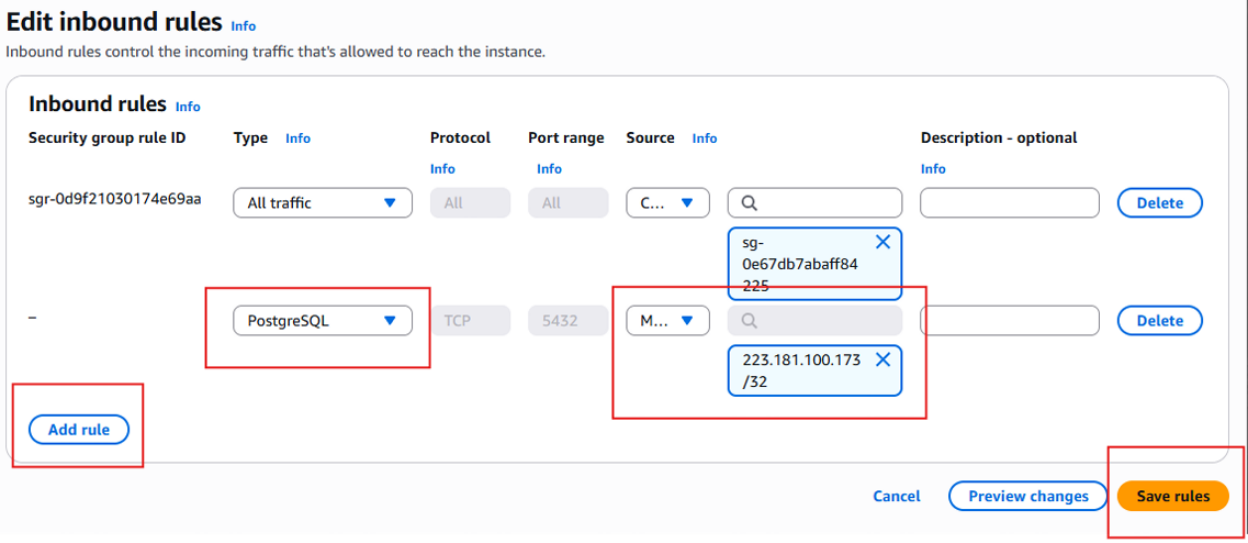


vii) Copy the API Endpoints from the dashboard of AWS RDS Database instance.



viii) Change the INBOUND RULES of DB Instance from the AWS Console.





ix) This allows the local editor to acces the cloud db via the ip of local host over the internet providede in the inbound rules.

Learning outcomes:

- I learned the core benefits of AWS RDS over EC2-hosted databases, including scalability, manageability, and built-in high availability.
- I practiced creating a database instance on AWS RDS and configuring parameters like engine type, storage, and backup settings.
- I understood how security groups control access to RDS instances and how to modify inbound rules for external connectivity.
- I learned how to retrieve the RDS endpoint and use it to connect a PostgreSQL database to my local PgAdmin client.
- I troubleshot common connectivity issues and understood how to resolve them by adjusting AWS Console settings.
- I gained hands-on experience integrating cloud-hosted databases with local development tools for real-world applications.