

## Experiment - 9

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**Section/Group:**KRG\_2B

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**Subject Name:** Advanced Database and Management System

**Subject Code:** 23CSP-333

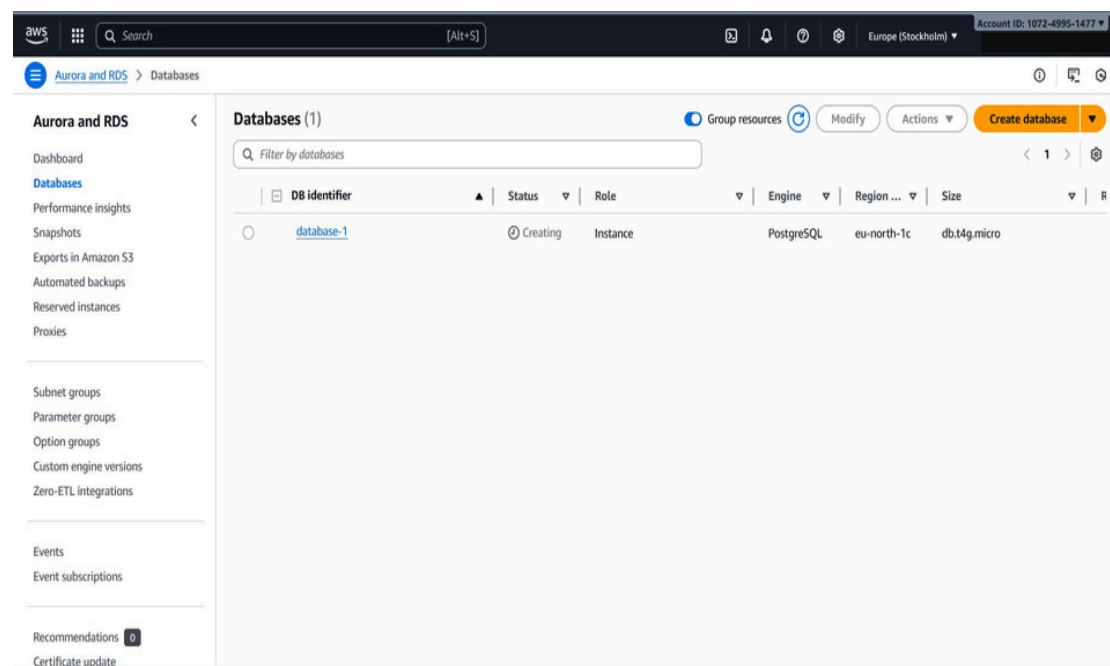
### 1. Aim

To create, configure, and connect an Amazon RDS PostgreSQL database instance on AWS, and verify successful database operations using a client tool.

### 2. Objectives:

1. To understand the concept of managed relational database services in AWS (Amazon RDS).
2. To create a PostgreSQL database instance using AWS RDS.
3. To configure DB parameters such as instance size, storage, authentication, and security groups.
4. To connect the RDS instance from a PostgreSQL client (e.g., pgAdmin/psql).
5. To execute basic SQL queries to validate connectivity and database functionality.

### 3. AWS RDS OPERATIONS AND OUTPUTS -





EC2 > Instances > Launch an instance

Enable

Firewall (security groups)

Create security group

Select existing security group

Common security groups

Select security groups

default sg-0b93c6695518cd4cc

Compare security group rules

Configure storage

1x 30 GiB gp3 Root volume, 3000 IOPS, Not encrypted

Add new volume

Click refresh to view backup information

0 x File systems

Summary

Number of instances1

Software image (AMI)Microsoft Windows Server 2025 ...read more

Virtual server type (instance type)t3.micro

Firewall (security group)default

Storage (volumes)1 volume(s) - 30 GiB

CancelLaunch instancePreview code

Aurora and RDS > Databases > database-1

database-1

ModifyActions

Aurora and RDS

Dashboard

Performance insights

Snapshots

Exports in Amazon S3

Automated backups

Reserved instances

Proxies

Subnet groups

Parameter groups

Option groups

Custom engine versions

Zero-ETL integrations

Events

Event subscriptions

Recommendations

Certificate update

Summary

DB identifierdatabase-1

StatusAvailable

RoleInstance

EnginePostgreSQL

CPU-

Classdb.t4g.micro

Current activity

Region & AZeu-north-1c

Recommendations

Connectivity & security

Monitoring

Logs & events

Configuration

Zero-ETL integrations

Maintenance & backups

Data migration

Connectivity & security

Endpoint & port

Endpointdatabase-1.ct2gocg6qwn7.eu-nort  
h-1.rds.amazonaws.com

Port5432

Networking

Availability Zoneeu-north-1c

VPCvpc-0d98d3e2dd9e74b9a

Subnet groupdefault-vpc-0d98d3e2dd9e74b9a

Subnetsubnet-03dc9297f7f78716f9  
subnet-0fbbe207fc38553f

Security

VPC security groupsdefault (sg-0b93c6695518cd4cc)  
Active

Publicly accessibleNo

Certificate authorityrds-ca-rsa2048-g1

Certificate authority dateMay 25, 2061, 03:29 (UTC+05:30)

Aurora and RDS > Databases > Create database

Create database

Free plan has access to limited features and resources

The free plan limits the features and resources that are available for RDS and Aurora databases. Upgrade your account plan to remove all limitations. Learn more

Upgrade plan

Choose a database creation method

Standard create

Easy create

Configuration

Engine type

Aurora (MySQL Compatible)

Aurora (PostgreSQL Compatible)

MySQL

PostgreSQL

MariaDB

Oracle

Publicly accessible	No	Yes
Database port	5432	Yes
DB instance identifier	database-1	Yes
DB engine version	17.6	Yes
DB parameter group	default.postgres17	Yes
Database Insights -		

**Aurora and RDS**

**Connectivity & security**

**Endpoint & port**

Endpoint: database-1.ct2gocg6qwn7.eu-north-1.rds.amazonaws.com

Port: 5432

**Networking**

Availability Zone: eu-north-1c

VPC: vpc-0d98d5e2dd9e74b9a

Subnet group: default-vpc-0d98d5e2dd9e74b9a

Subnets: subnet-03dc9297ff78716f9, subnet-0f8ab207fc38553f, subnet-0f27f6ac656a069d5

Network type: IPv4

**Security**

VPC security groups: default (sg-0b93c6695518cd4cc) **Active**

Publicly accessible: No

Certificate authority: rds-ca-rsa2048-g1

Certificate authority date: May 25, 2061, 03:29 (UTC+05:30)

DB instance certificate expiration date: November 09, 2026, 17:38 (UTC+05:30)

Connected compute resources (0) **Info**

**Register - Server**

Port: 5432

Maintenance database: postgres

Username: postgres

Kerberos authentication? ☐

Password:

Save password? ☐

Role:

Unable to connect to server: connection timeout expired

Save password? ☐

Unable to connect to server: connection timeout expired

EC2 > Instances

EC2

Dashboard

AWS Global View

Events

Instances

- Instances
- Instance Types
- Launch Templates
- Spot Requests
- Savings Plans
- Reserved Instances
- Dedicated Hosts
- Capacity Reservations
- Capacity Manager

Images

- AMIs
- AMI Catalog

Elastic Block Store

- Volumes
- Snapshots
- Lifecycle Manager

Instances (1) Info

Last updated less than a minute ago

Connect

Instance state

Actions

Launch instances

Find Instance by attribute or tag (case-sensitive)

All states

< 1 >

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DI
<input type="checkbox"/>	myserver	i-00db5d63e9cd748c6	Running	t3.micro	Initializing	View alarms	eu-north-1b	ec2-51-20-18:

Select an instance