



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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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 -

The screenshot shows the AWS RDS Databases page. On the left, there's a sidebar with 'Aurora and RDS' selected. The main area displays a table titled 'Databases (1)'. The table has columns for DB identifier, Status, Role, Engine, Region..., and Size. One row is shown with the following details: DB identifier: database-1, Status: Creating, Instance: PostgreSQL, Region...: eu-north-1c, Size: db.t4g.micro. There are buttons for 'Group resources', 'Modify', 'Actions', and 'Create database' at the top right of the table. The top navigation bar includes the AWS logo, search bar, and account information.

AWS | Search [Alt+S] Account ID: 1072-4995-1477 | Europe (Stockholm) ▾

Aurora and RDS > Databases

Databases (1)

Filter by databases

DB identifier	Status	Role	Engine	Region ...	Size
database-1	Available	Instance	PostgreSQL	eu-north-1c	db.t4g.micro

Group resources Actions

Dashboard
Performance insights
Schemas
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 0
Certificate update

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EC2 > Security Groups > sg-0b93c6695518cd4cc - default > Edit inbound rules

Edit inbound rules

Inbound rules control the incoming traffic that's allowed to reach the instance.

Inbound rules	Type	Protocol	Port range	Source	Description - optional
sgr-0c10a5678be41146e	PostgreSQL	TCP	5432	Custom	<input type="text" value="Q"/> 45.248.160.62/32
sgr-063f6bf74b46657f0	All traffic	All	All	Custom	<input type="text" value="Q"/> sg-0b93c6695518cd4cc

Add rule Cancel Preview changes Save rules

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EC2 > Instances > Launch an instance

Enable Firewall (security groups)

Common security groups

Configure storage

Advanced

Summary

Number of instances

Software Image (AMI)

Virtual server type (instance type)

Firewall (security group)

Storage (volumes)

Launch instance

Preview code

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Aurora and RDS > Databases > database-1

database-1

Summary

Connectivity & security

Configuration

Maintenance & backups

Actions

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Aurora and RDS > Databases > Create database

Create database

Choose a database creation method

Configuration

Engine type

PostgreSQL

MariaDB

MySQL

Oracle

Upgrade plan

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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 -

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Aurora and RDS > Databases > database-1

Connectivity & security Monitoring Logs & events Configuration Zero-ETL integrations Maintenance & backups Data mi >

Connectivity & security		
Endpoint & port	Networking	Security
Endpoint database-1.ct2gocg6qwn7.eu-nort-h-1.rds.amazonaws.com	Availability Zone eu-north-1c	VPC security groups default (sg-0b93c6695518cd4cc) Active
Port 5432	VPC vpc-0d98d5e2dd9e74b9a	Publicly accessible No
	Subnet group default-vpc-0d98d5e2dd9e74b9a	Certificate authority info rds-ca-rsa2048-g1
	Subnets subnet-03dc9297ff78716f9 subnet-0fbbe207fc38553f subnet-0f27f6ac656a0695d5	Certificate authority date May 25, 2061, 03:29 (UTC+05:30)
	Network type IPv4	DB instance certificate expiration date November 09, 2026, 17:38 (UTC+05:30)

Connected compute resources (0) [Info](#) Actions ▾

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Statistics Dependencies Dependents Processes Preferences

Register - Server General Connection Parameters SSH Tunnel Advanced Post Connection SQL Tags

Port: 5432 Maintenance database: postgres Username: postgres

Kerberos authentication? Password: Save password? Role: Unable to connect to server: connection timeout expired

Display: true Save password? objects? Show template databases?

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EC2 > Instances

Last updated less than a minute ago

Instances (1) Info

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 D
myserver	i-00db5d65e9cd748c6	Running	t3.micro	Initializing	View alarms +	eu-north-1b	ec2-51-20-18:

Select an instance

EC2

- Dashboard
- AWS Global View
- Events
- Instances**
 - Instances
 - Instance Types
 - Launch Templates
 - Spot Requests
 - Savings Plans
 - Reserved Instances
 - Dedicated Hosts
 - Capacity Reservations
 - Capacity Manager [New](#)
- Images**
 - AMIs
 - AMI Catalog
- Elastic Block Store**
 - Volumes
 - Snapshots
 - Lifecycle Manager