Experiment - 9

Student Name: Vaibhav Kumar **UID:** 23BCS13386
Branch: BE-CSE **Section/Group:** KRG_2B
Semester: 5th
Date of Performance: 27/10/25
Subject Name: Advanced Database and Management System
Subject Code: 23CSP-333

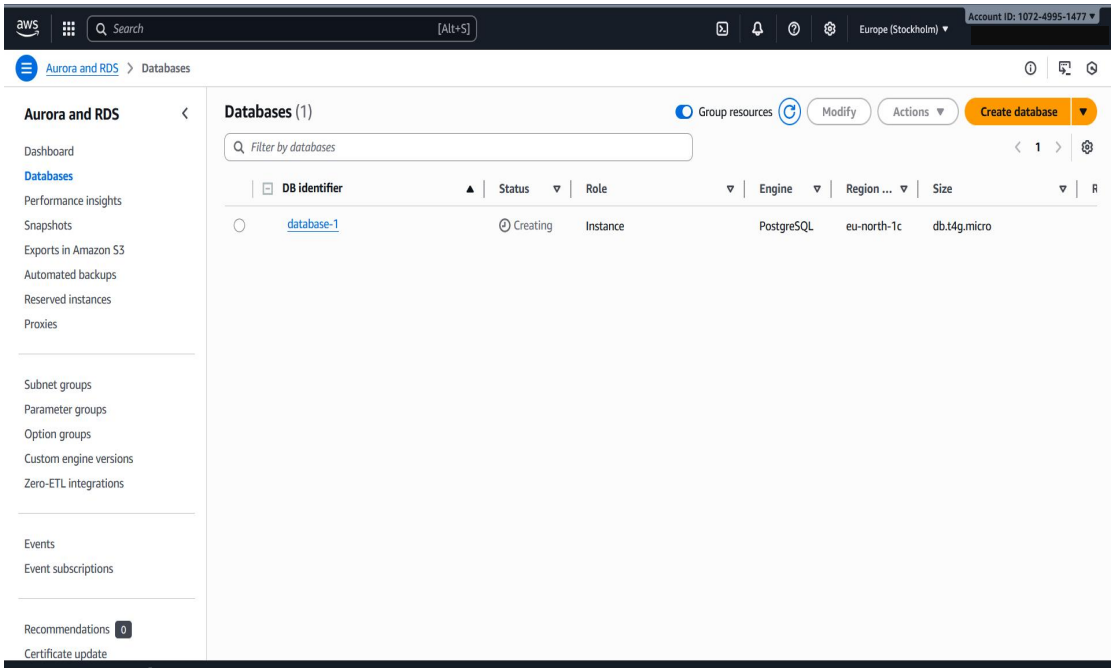
1. Aim

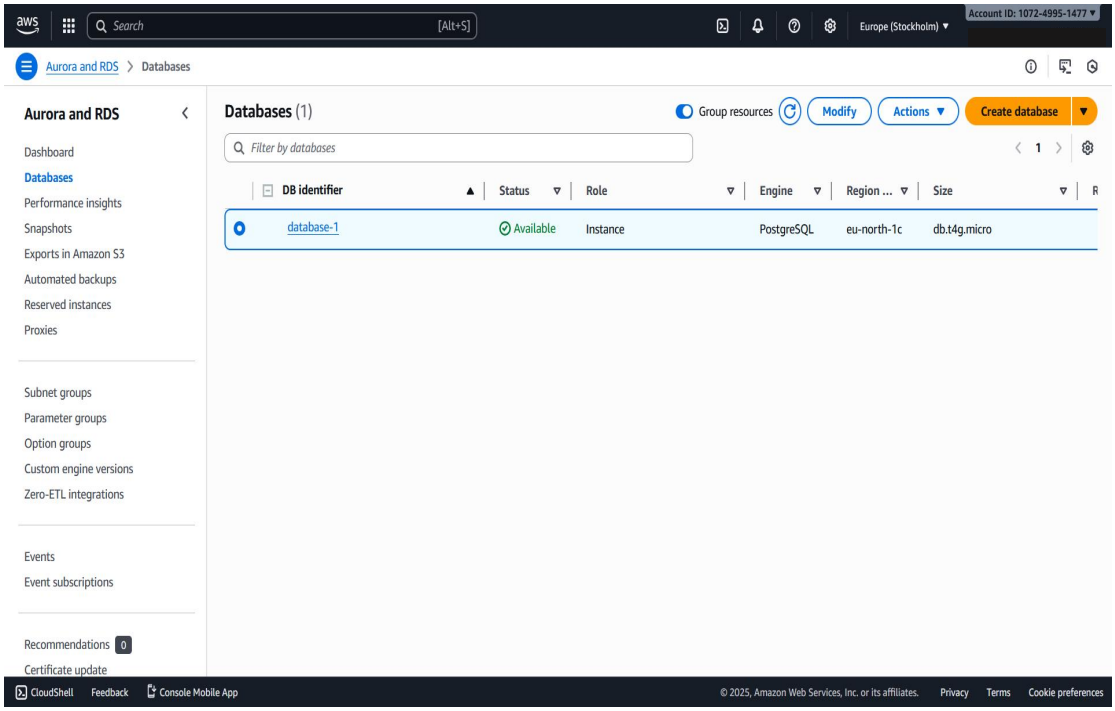
To create, configure, and connect an Amazon RDS PostgreSQL database instance on AWS, and verify successful database operations using a client tool.

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 -




aws
Search
[Alt+S]
Europe (Stockholm)
Account ID: 1072-4995-1477
Aurora and RDS
Databases
Aurora and RDS
Dashboard
Databases
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 0
Certificate update
Databases (1)
Group resources
Modify
Actions
Create database
Filter by databases
DB identifier
Status
Role
Engine
Region ...
Size
database-1
Available
Instance
PostgreSQL
eu-north-1c
db.t4g.micro
CloudShell
Feedback
Console Mobile App
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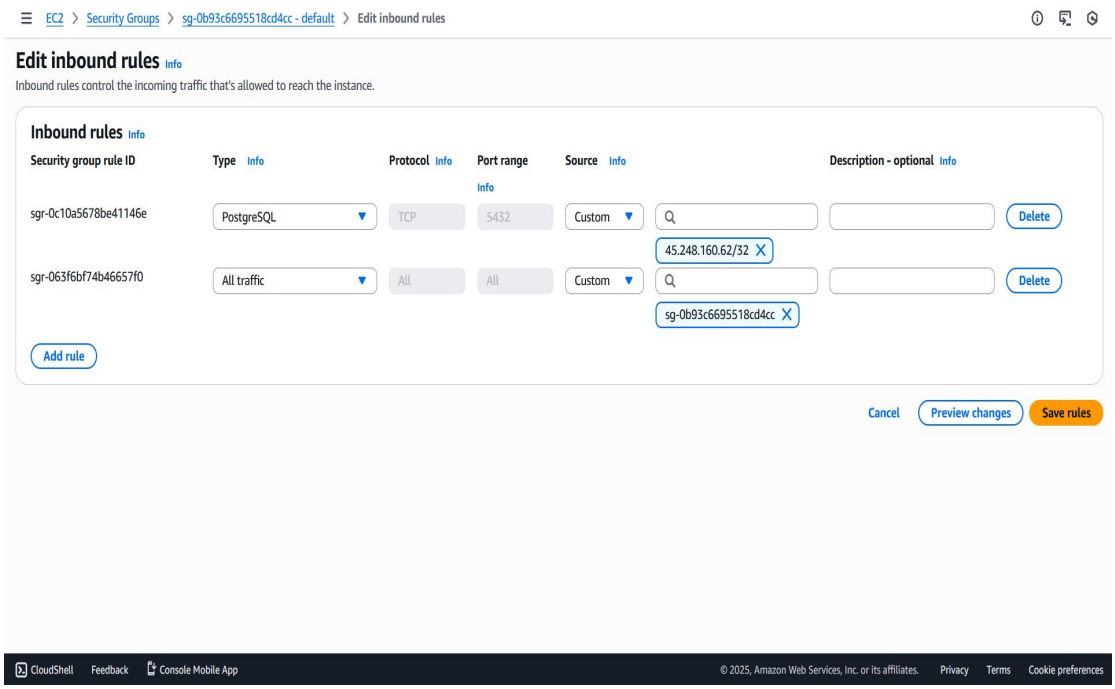
EC2
Security Groups
sg-0b93c6695518cd4cc - default
Edit inbound rules
Edit inbound rules Info
Inbound rules control the incoming traffic that's allowed to reach the instance.
Inbound rules Info
Security group rule ID
Type Info
Protocol Info
Port range Info
Source Info
Description - optional Info
sgr-0c10a5678be41146e
PostgreSQL
TCP
5432
Custom
45.248.160.62/32
Delete
sgr-063f6bf74b46657f0
All traffic
All
All
Custom
sg-0b93c6695518cd4cc
Delete
Add rule
Cancel
Preview changes
Save rules
CloudShell
Feedback
Console Mobile App
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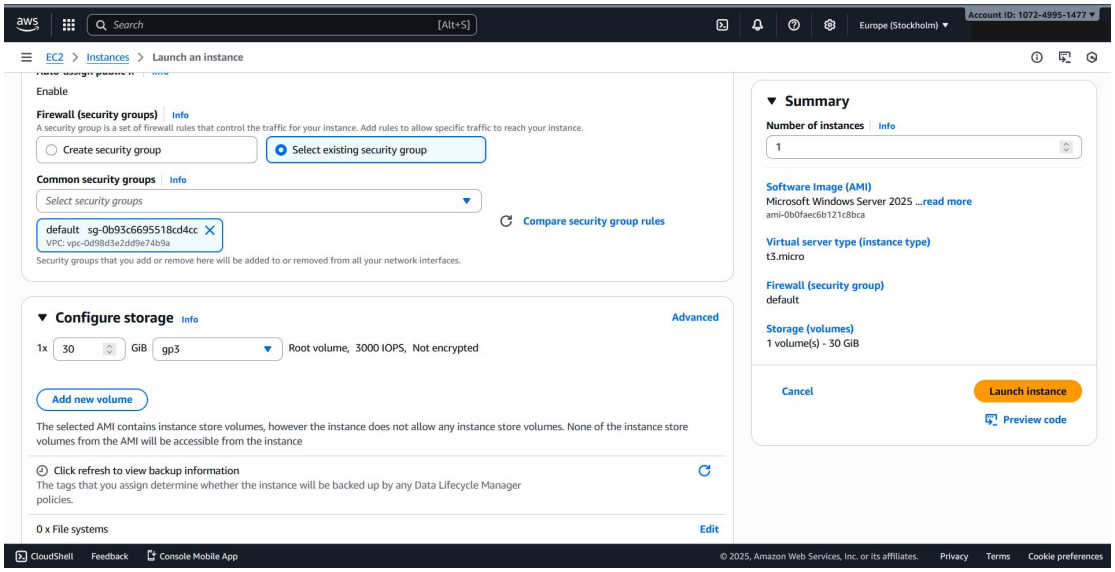
Search [Alt+S]
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EC2 > Instances > Launch an instance
Enable
Firewall (security groups) Info
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.
Create security group
Select existing security group
Common security groups Info
Select security groups
default sg-0b93c6695518cd4cc
VPC: vpc-0d98d3e2dd9e74b9a
Security groups that you add or remove here will be added to or removed from all your network interfaces.
Compare security group rules
Configure storage Info
Advanced
1x 30 GiB gp3 Root volume, 3000 IOPS, Not encrypted
Add new volume
The selected AMI contains instance store volumes, however the instance does not allow any instance store volumes. None of the instance store volumes from the AMI will be accessible from the instance
Click refresh to view backup information
The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.
0 x File systems
Edit
Summary
Number of instances Info
1
Software Image (AMI)
Microsoft Windows Server 2025 ...read more
ami-0b0faec6b121c8bca
Virtual server type (instance type)
t3.micro
Firewall (security group)
default
Storage (volumes)
1 volume(s) - 30 GiB
Cancel
Launch instance
Preview code
CloudShell Feedback Console Mobile App
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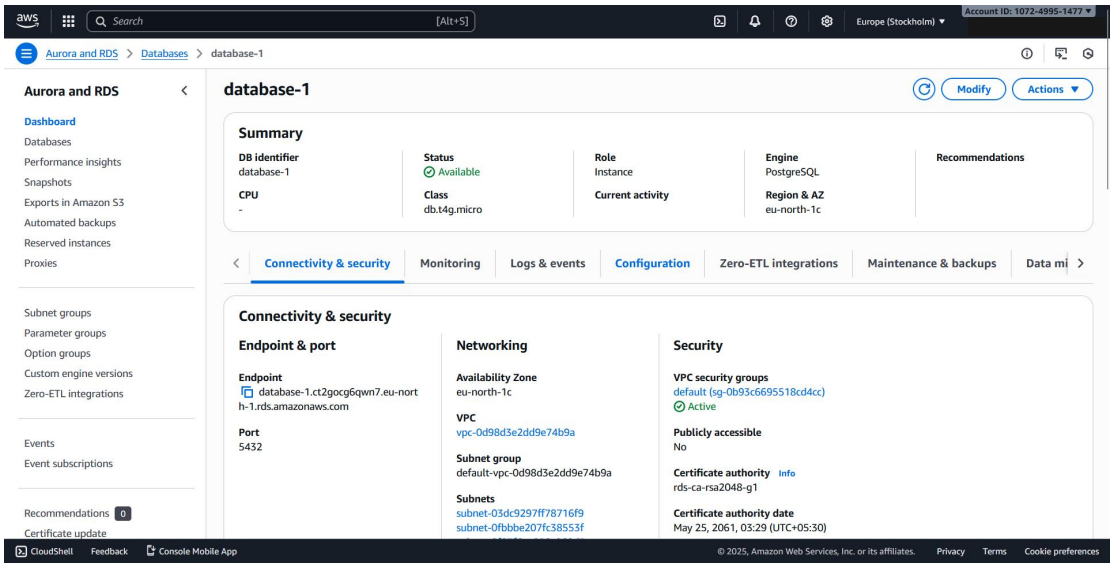
Search [Alt+S]
Europe (Stockholm)
Account ID: 1072-4995-1477
Aurora and RDS > Databases > database-1
Aurora and RDS
Dashboard
Databases
Performance insights
Snapshots
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Automated backups
Reserved instances
Proxies
Subnet groups
Parameter groups
Option groups
Custom engine versions
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Events
Event subscriptions
Recommendations 0
Certificate update
database-1
Modify
Actions
Summary
DB identifier
database-1
Status
Available
Role
Instance
Engine
PostgreSQL
Recommendations
CPU
-
Class
db.t4g.micro
Current activity
Region & AZ
eu-north-1c
Connectivity & security
Monitoring
Logs & events
Configuration
Zero-ETL integrations
Maintenance & backups
Data mi
Connectivity & security
Endpoint & port
Endpoint
database-1.ct2gocg6qwn7.eu-north-1.rds.amazonaws.com
Port
5432
Networking
Availability Zone
eu-north-1c
VPC
vpc-0d98d3e2dd9e74b9a
Subnet group
default-vpc-0d98d3e2dd9e74b9a
Subnets
subnet-03dc9297ff78716f9
subnet-0fbbbe207fc38553f
Security
VPC security groups
default (sg-0b93c6695518cd4cc)
Active
Publicly accessible
No
Certificate authority Info
rds-ca-rsa2048-g1
Certificate authority date
May 25, 2061, 03:29 (UTC+05:30)
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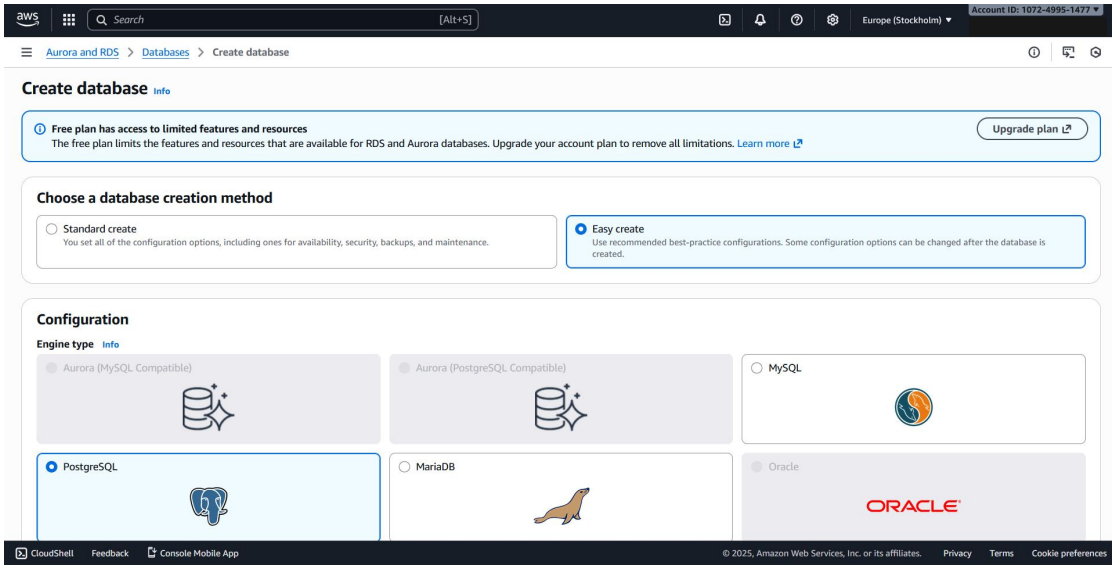
Search [Alt+S]
Europe (Stockholm)
Account ID: 1072-4995-1477
Aurora and RDS > Databases > Create database
Create database Info
Free plan has access to limited features and resources
The free plan limits the features and resources that are available for RDS and Aurora databases. Upgrade your account plan to remove all limitations. Learn more
Upgrade plan
Choose a database creation method
Standard create
You set all of the configuration options, including ones for availability, security, backups, and maintenance.
Easy create
Use recommended best-practice configurations. Some configuration options can be changed after the database is created.
Configuration
Engine type Info
Aurora (MySQL Compatible)
Aurora (PostgreSQL Compatible)
MySQL
PostgreSQL
MariaDB
Oracle
ORACLE
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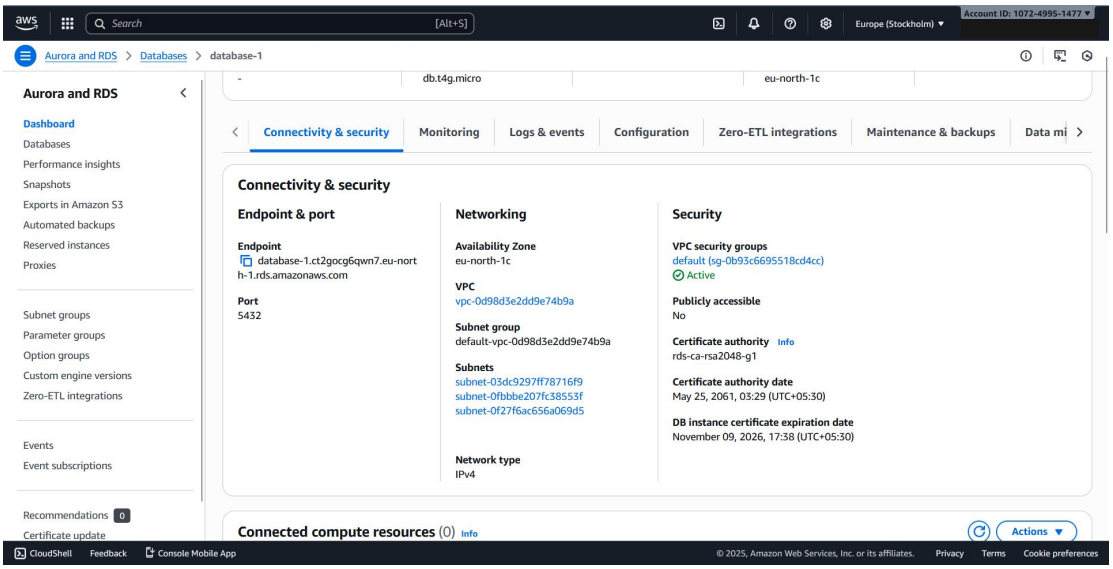
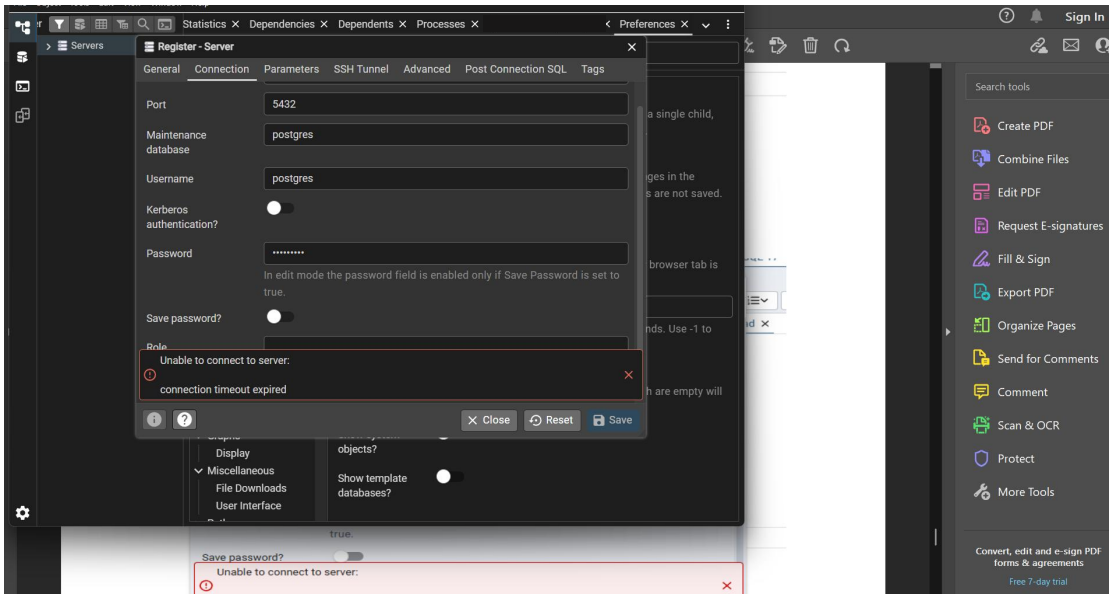
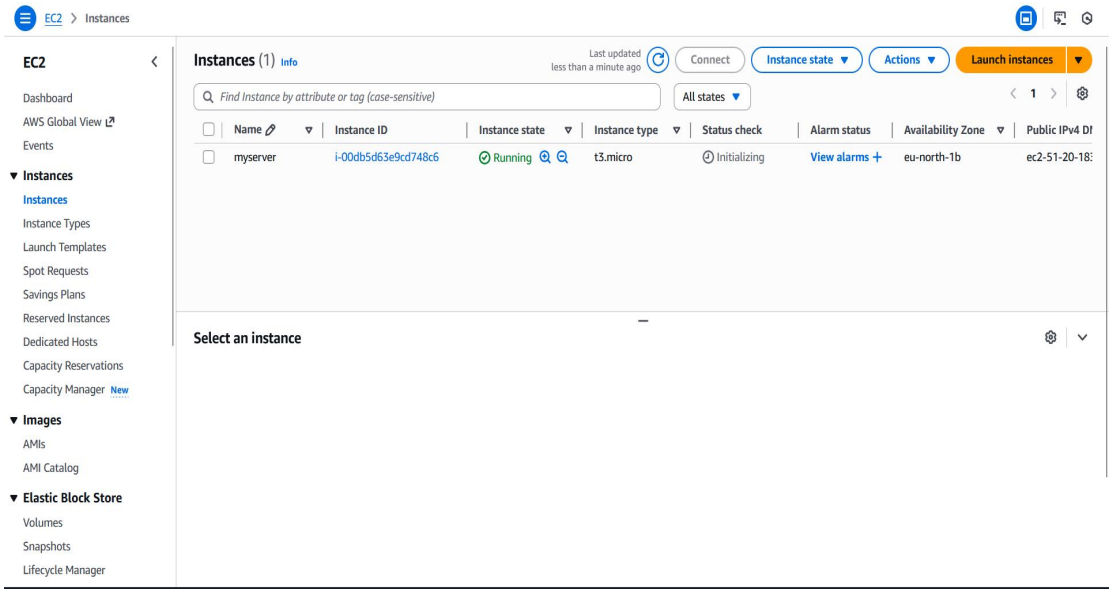
Publicly accessible	No	Yes
Database port	5432	Yes
DB instance identifier	database-1	Yes
DB engine version	17.6	Yes
DB parameter group	default.postgres17	Yes
	Database Insights -	






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 New
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
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zone
Public IPv4 DI
myserver
i-00db5d63e9cd748c6
Running
t3.micro
Initializing
View alarms +
eu-north-1b
ec2-51-20-18
Select an instance