

Guide: Creating an Amazon RDS PostgreSQL Instance and Accessing it with DBeaver

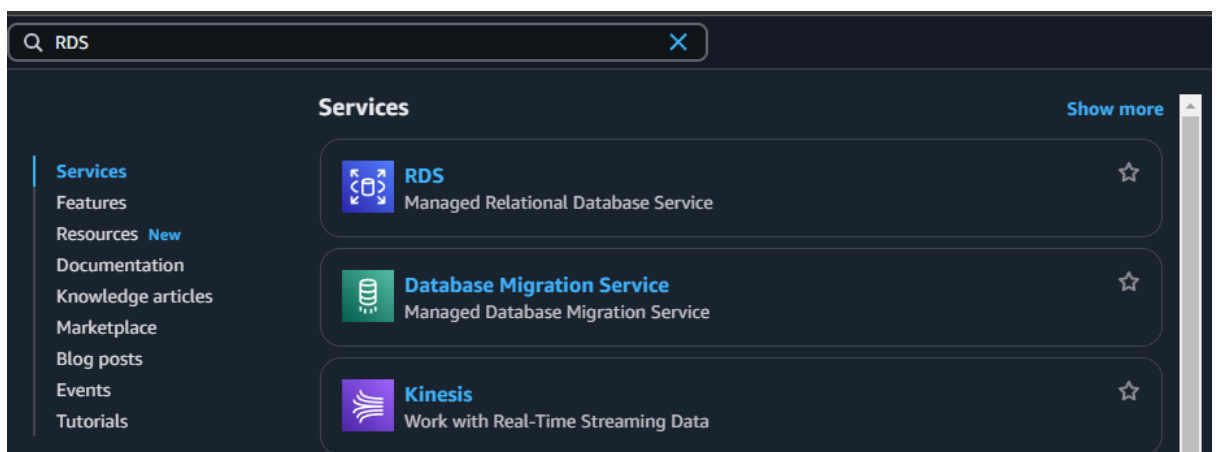
This guide provides step-by-step instructions to create an Amazon RDS PostgreSQL instance and connect to it using DBeaver. Follow the steps below to set up your database and establish a connection.

Prerequisites

- Access to AWS Management Console.
- Dbeaver Community 24.3.1

Step 1: Access AWS Management Console

1. Go to [AWS Management Console](#) and log in.
2. In the AWS Console, search for **RDS** in the search bar and select the RDS service.



3. On the RDS Service page, click on the **Create Database** button.

Resources

Refresh

You are using the following Amazon RDS resources in the US East (Ohio) region (used/quota)

[DB Instances \(0/40\)](#)
Allocated storage (0 TB/100 TB)
Instances and storage include Neptune and DocumentDB. [Increase DB instances limit](#) [↗](#)

[DB Clusters \(0/40\)](#)
[Reserved instances \(0/40\)](#)
[Snapshots \(0\)](#)
Manual
 [DB Cluster \(0/100\)](#)
 [DB Instance \(0/100\)](#)
Automated
 [DB Cluster \(0\)](#)
 [DB Instance \(0\)](#)
[Recent events \(0\)](#)
[Event subscriptions \(0/20\)](#)

[Parameter groups \(0\)](#)
Default (0)
Custom (0/100)
[Option groups \(0\)](#)
Default (0)
Custom (0/20)
[Subnet groups \(0/50\)](#)
[Supported platforms](#) [↗](#) VPC
Default network `vpc-0483fc9fbfd65fe10`

Create database

Amazon Relational Database Service (RDS) makes it easy to set up, operate, and scale a relational database in the cloud.

Create database

You can use a backup from Amazon S3 to restore and create a new Aurora MySQL and MySQL database.

Restore from S3

Note: your DB instances will launch in the **US East (Ohio)** region

Service health

View service health dashboard

Current status	Details
✔ Amazon Relational Database Service (Ohio)	Service is operating normally

Step 2: Configure the PostgreSQL Database

1. **Choose a database creation method:** Select **Standard Create**.
2. **Engine options:** Choose **PostgreSQL**.
3. **Version:** Select the desired PostgreSQL version.
4. **Templates:** Choose a template based on your needs (e.g., Free Tier for testing).

Create database [info](#)

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

☐ Microsoft SQL Server



DB instance size

☐ Production

db.r7g.xlarge
4 vCPUs
32 GiB RAM
500 GiB
1.114 USD/hour

☐ Dev/Test

db.r7g.large
2 vCPUs
16 GiB RAM
100 GiB
0.255 USD/hour

☒ Free tier

db.t4g.micro
2 vCPUs
1 GiB RAM
20 GiB
0.019 USD/hour

5. Settings:

- DB Instance Identifier:** Enter a unique name for your instance.
- Master Username:** Enter a username.
- Master Password:** Enter a secure password and confirm it.
- Instance Specifications:**
- Choose the instance size (e.g., db.t2.micro for Free Tier).
- Configure storage if needed.

Settings

DB instance identifier [info](#)

Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

database-2

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 63 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

▼ Credentials Settings

Master username [info](#)

Type a login ID for the master user of your DB instance.

postgres

1 to 16 alphanumeric characters. The first character must be a letter.

Credentials management

You can use AWS Secrets Manager or manage your master user credentials.

☒ Managed in AWS Secrets Manager - most secure

RDS generates a password for you and manages it throughout its lifecycle using AWS Secrets Manager.

☐ Self managed

Create your own password or have RDS create a password that you manage.

[i](#) If you manage the master user credentials in AWS Secrets Manager, additional charges apply. See [AWS Secrets Manager pricing](#). Additionally, some RDS features aren't supported. See [limitations here](#).

Select the encryption key [info](#)

You can encrypt using the KMS key that Secrets Manager creates or a customer managed KMS key that you create.

aws/secretsmanager (default)

[Add new key](#)

7. Connectivity:

- Select a VPC.
- Make sure to enable **Public Access** to connect from external tools like DBeaver.
- Configure security group rules to allow inbound traffic on port 5432.

Connectivity info

Compute resource
Choose whether to set up a connection to a compute resource for this database. Setting up a connection will automatically change connectivity settings so that the compute resource can connect to this database.

☒ **Don't connect to an EC2 compute resource**
Don't set up a connection to a compute resource for this database. You can manually set up a connection to a compute resource later.

☐ **Connect to an EC2 compute resource**
Set up a connection to an EC2 compute resource for this database.

Network type info
To use dual-stack mode, make sure that you associate an IPv6 CIDR block with a subnet in the VPC you specify.

☒ **IPv4**
Your resources can communicate only over the IPv4 addressing protocol.

☐ **Dual-stack mode**
Your resources can communicate over IPv4, IPv6, or both.

Virtual private cloud (VPC) info
Choose the VPC. The VPC defines the virtual networking environment for this DB instance.

Default VPC (vpc-0483fc9fbfd65fe10)
3 Subnets, 3 Availability Zones

Only VPCs with a corresponding DB subnet group are listed.

After a database is created, you can't change its VPC.

DB subnet group info
Choose the DB subnet group. The DB subnet group defines which subnets and IP ranges the DB instance can use in the VPC that you selected.

default-vpc-0483fc9fbfd65fe10
3 Subnets, 3 Availability Zones

Public access info

☒ **Yes**
RDS assigns a public IP address to the database. Amazon EC2 instances and other resources outside of the VPC can connect to your database. Resources inside the VPC can also connect to the database. Choose one or more VPC security groups that specify which resources can connect to the database.

☐ **No**
RDS doesn't assign a public IP address to the database. Only Amazon EC2 instances and other resources inside the VPC can connect to your database. Choose one or more VPC security groups that specify which resources can connect to the database.

VPC security group (firewall) info
Choose one or more VPC security groups to allow access to your database. Make sure that the security group rules allow the appropriate incoming traffic.

☒ **Choose existing**
Choose existing VPC security groups

☐ **Create new**
Create new VPC security group

Existing VPC security groups

Choose one or more options

default X

Availability Zone info

No preference

8. **Additional Settings:**
 - Optionally, configure backups, monitoring, and other options.
9. Click **Create Database**.
10. In the RDS dashboard, monitor the **Status** of your database until it changes to **Available**.
11. Click on your database name to show its details. Save the **Endpoint** and **Port** of your database instance.

database-1

Summary

DB identifier database-1	Status ⌚ Backing-up	Role Instance	Engine PostgreSQL
CPU -	Class db.t4g.micro	Current activity	Region & AZ us-east-2b

Connectivity & security

Monitoring

Logs & events

Configuration

Maintenance & backups

Data migrations - new

Tags

Recommendations

Connectivity & security

Endpoint & port

Endpoint

database-1.database-1.rds.amazonaws.com

Port

5432

Networking

Availability Zone

us-east-2b

VPC

vpc-0483fc9fbfd65fe10

Subnet group

default-vpc-

Subnets

subnet-03-
subnet-0e3-
subnet-038-

Network type

IPv4

Security

VPC security groups

default (sg-0d2-)

Active

Publicly accessible

No

Certificate authority

rds-ca-rsa2048-g1

Certificate authority date

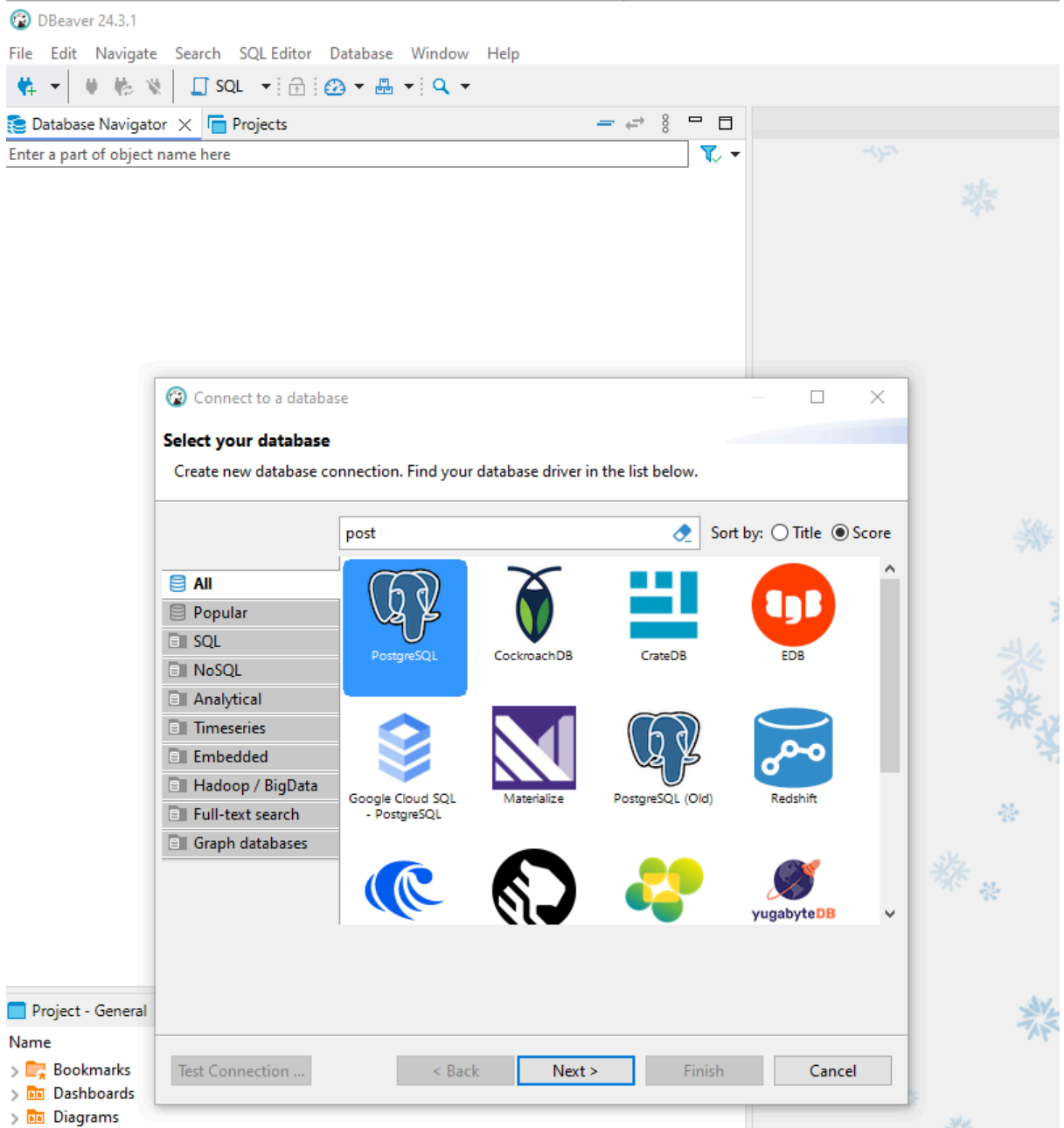
May 21, 2061, 21:04 (UTC-03:00)

DB instance certificate expiration date

December 26, 2025, 19:38 (UTC-03:00)

Step 3: Connect with DBeaver

1. Open DBeaver and click on **Database > New Database Connection**.
2. **Select Database Type:** Choose **PostgreSQL**.



3. **Connection Settings:**
 - a. Enter the RDS **Endpoint** as the host.
 - b. Use port **5432**.
 - c. Enter the **Database Name** (default “postgres”), **Username** (default “postgres”), and **Password** from the RDS setup.

Connect to a database

Connection Settings

PostgreSQL connection settings

Main PostgreSQL Driver properties SSH SSL + Network configurations...

Server

Connect by: ☒ Host ☐ URL

URL: jdbc:postgresql://database-██████████.rds.amazonaws.com:5432/postgres

Host: database-██████████.rds.amazonaws.com Port: 5432

Database: postgres ☐ Show all databases

Authentication

Authentication: Database Native

Username: postgres

Password: ●●●●●●●●●● ☒ Save password

Advanced

Session role: Local Client: PostgreSQL Binaries

[Connection variables information](#) [Database documentation](#) Connection details (name, type, ...)

Driver name: PostgreSQL [Driver Settings](#) [Driver license](#)

[Test Connection ...](#) < Back Next > **Finish** Cancel

4. Test the connection by clicking **Test Connection**. If you don't have PostgreSQL drivers installed, DBeaver will download and install it for you.

Connection test

i Connected (3372 ms)

Server: PostgreSQL 16.3
PostgreSQL 16.3 on aarch64-unknown-linux-gnu,
compiled by gcc (GCC) 7.3.1 20180712 (Red Hat 7.3.1-17), 64-bit

Driver: PostgreSQL JDBC Driver 42.7.2

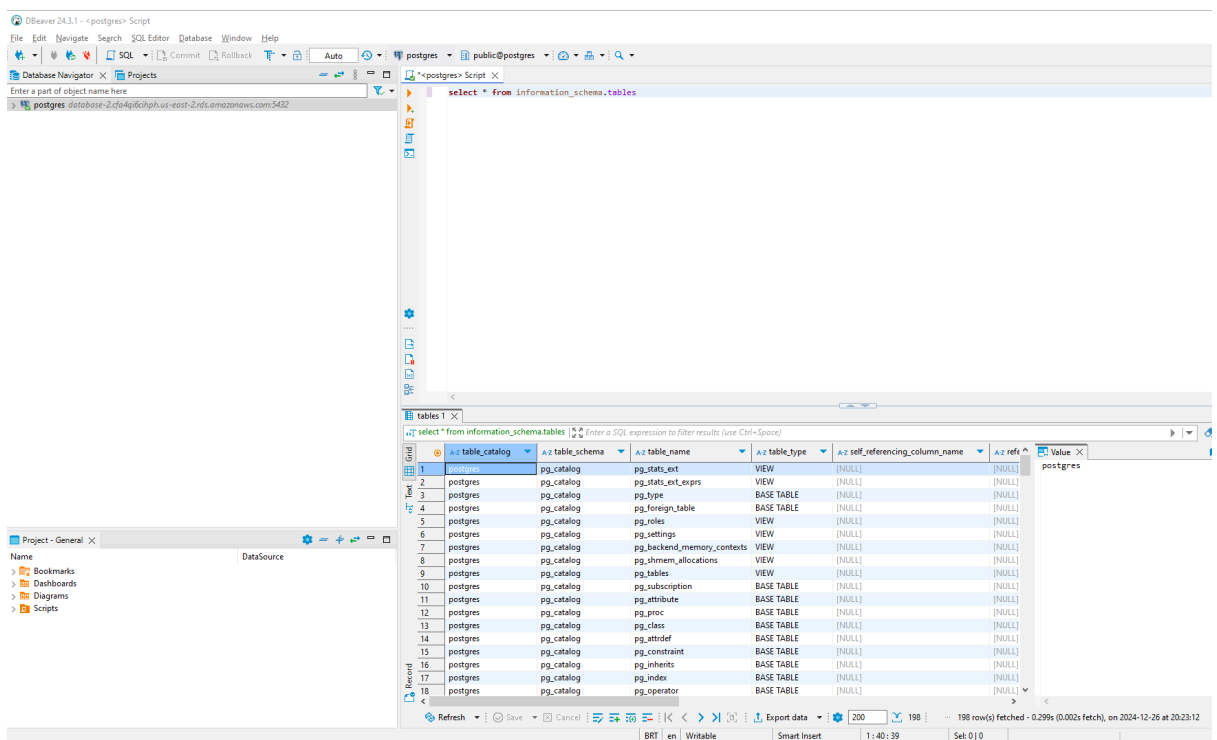
OK [Details >>](#)

5. If successful, click **Finish**.

Step 4: Start Using Your Database

1. Your RDS instance will now appear in the Database Navigator in DBeaver.
2. Expand the connection and start executing queries or managing your database.
3. To test your database, select **SQL Editor > Open SQL script**. To see PostgreSQL default tables, run:

```
select * from information_schema.tables
```



Troubleshoot

Connection Timed Out

If you encounter a connection timeout error, ensure your security group is correctly configured. Navigate to the **Security Group Rules** section in the database details, and click on the **Inbound Rules**. Then, click **Edit Inbound Rules**.

To determine your public IP address, run the following command:

```
curl http://checkip.amazonaws.com
```

Add an inbound rule to allow connections from this IP address.

FATAL: Database Does Not Exist

This error occurs if the database name in your DBeaver connection settings does not match the name of the database instance. Check the **DB Name** field in the RDS details page. If you did not specify a name during setup, PostgreSQL defaults this field to **postgres**. Ensure your connection settings in DBeaver and use the correct database name.

Additional Tips

- Use IAM roles and proper credentials management for secure access.
- Set up ElastiCache for better performance.

For further details, refer to the [AWS RDS documentation](#) or [DBeaver documentation](#).