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

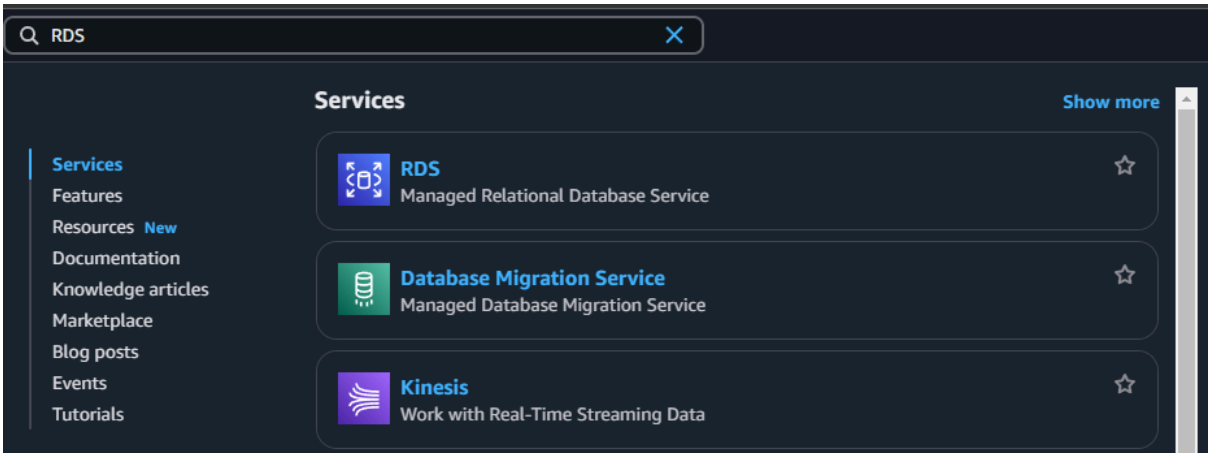
This guide provides step-by-step instructions to create an Amazon RDS PostgreSQL instance and connect to it using DBeaver. Follow the steps below to set up your database and establish a connection.

Prerequisites

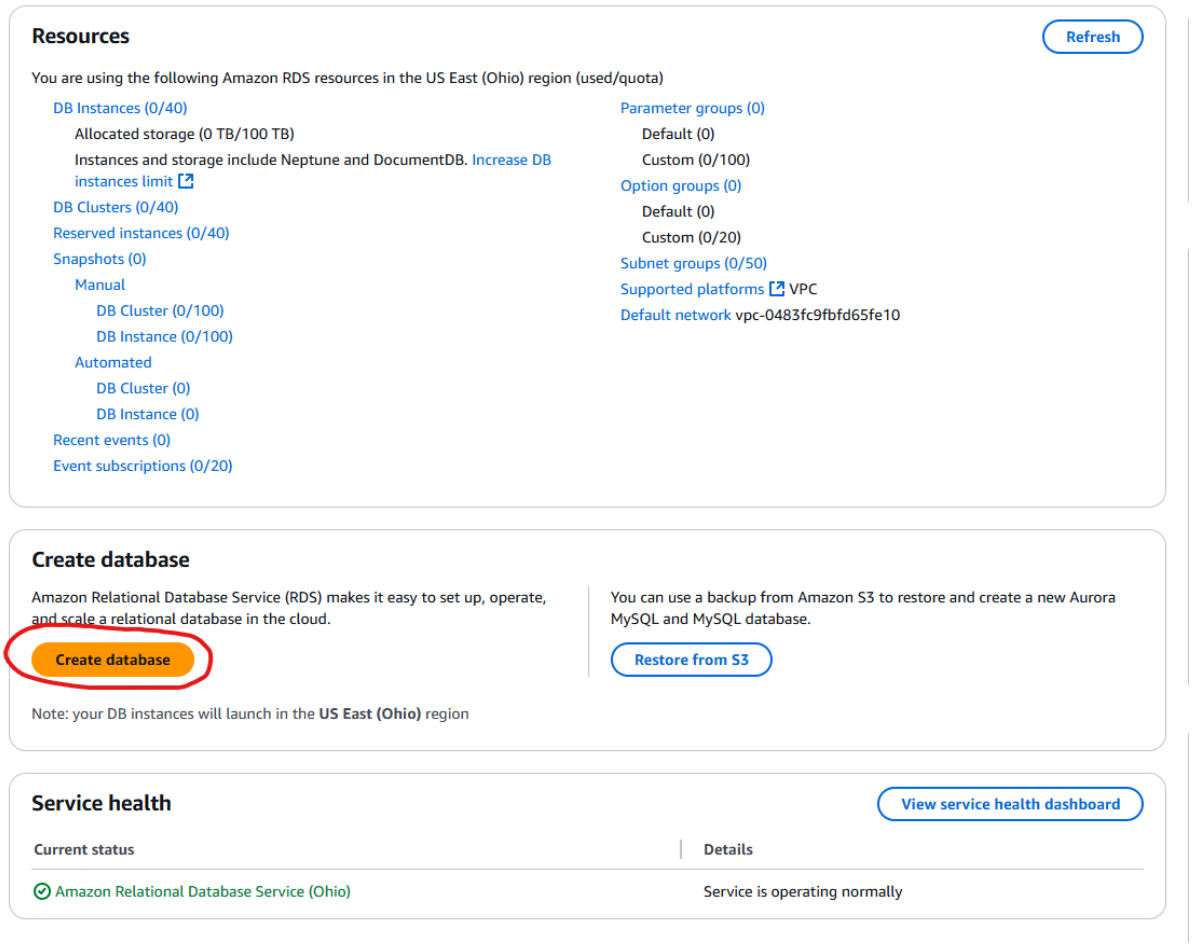
- Access to AWS Management Console.
- Dbeaver Community 24.3.1

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.

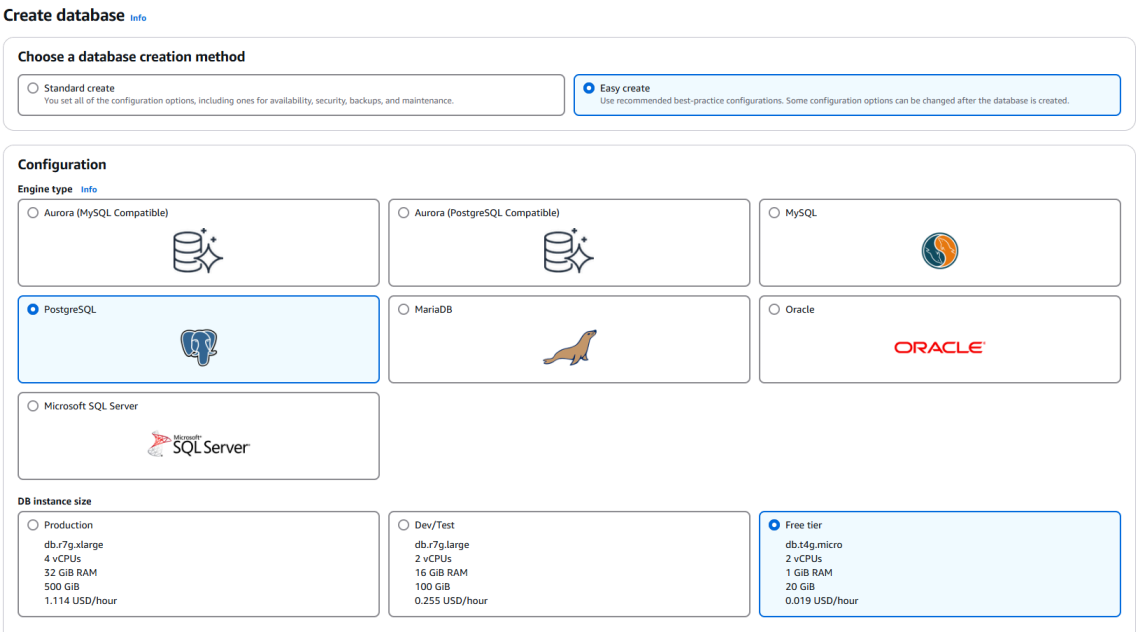


3. On the RDS Service page, click on the **Create Database** button.

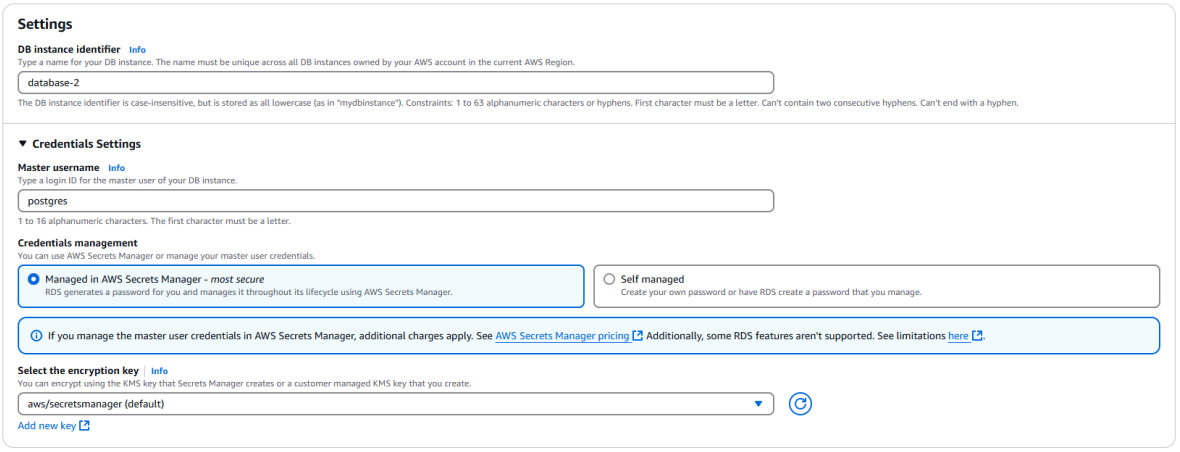


Step 2: Configure the PostgreSQL Database

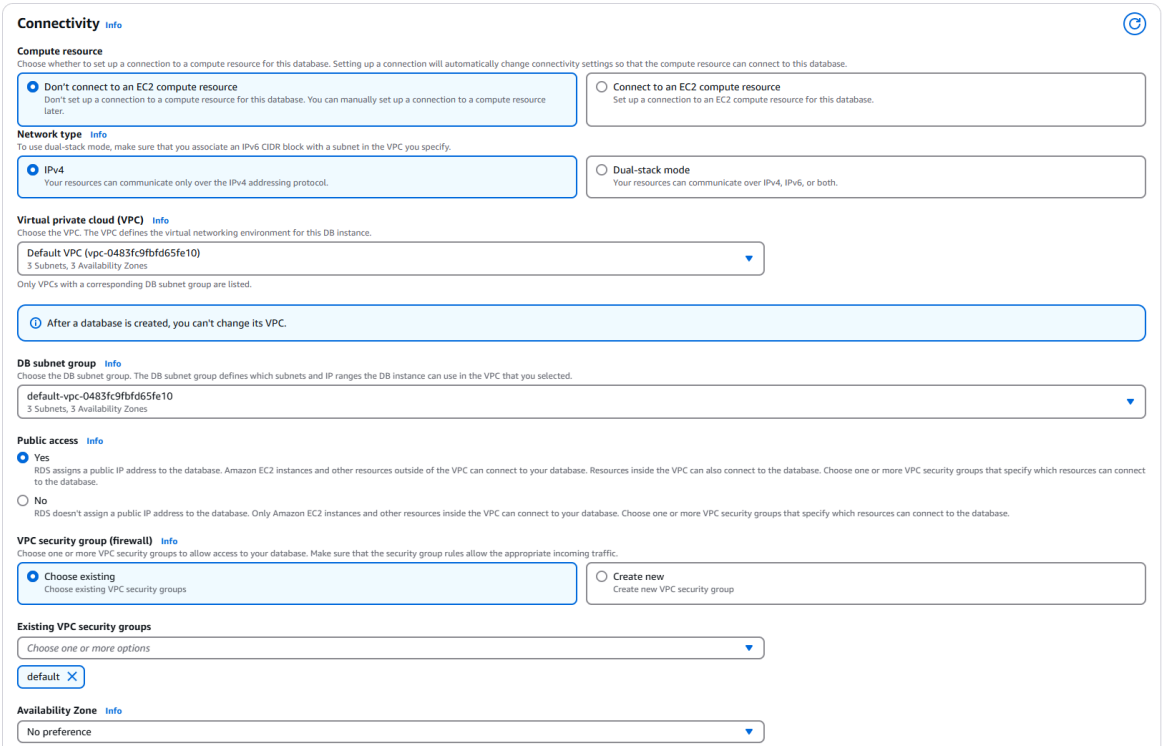
1. **Choose a database creation method:** Select **Standard Create**.
2. **Engine options:** Choose **PostgreSQL**.
3. **Version:** Select the desired PostgreSQL version.
4. **Templates:** Choose a template based on your needs (e.g., Free Tier for testing).



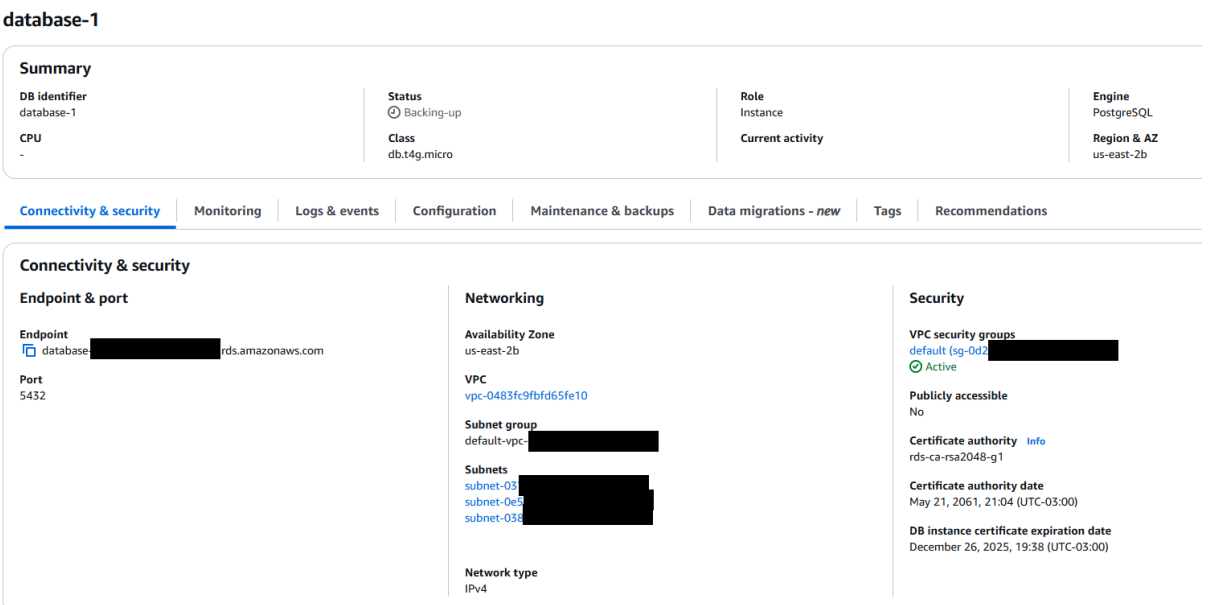
5. **Settings:**
   - **DB Instance Identifier:** Enter a unique name for your instance.
   - **Master Username:** Enter a username.
   - **Master Password:** Enter a secure password and confirm it.
   - **Instance Specifications:**
   - Choose the instance size (e.g., db.t2.micro for Free Tier).
  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



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.

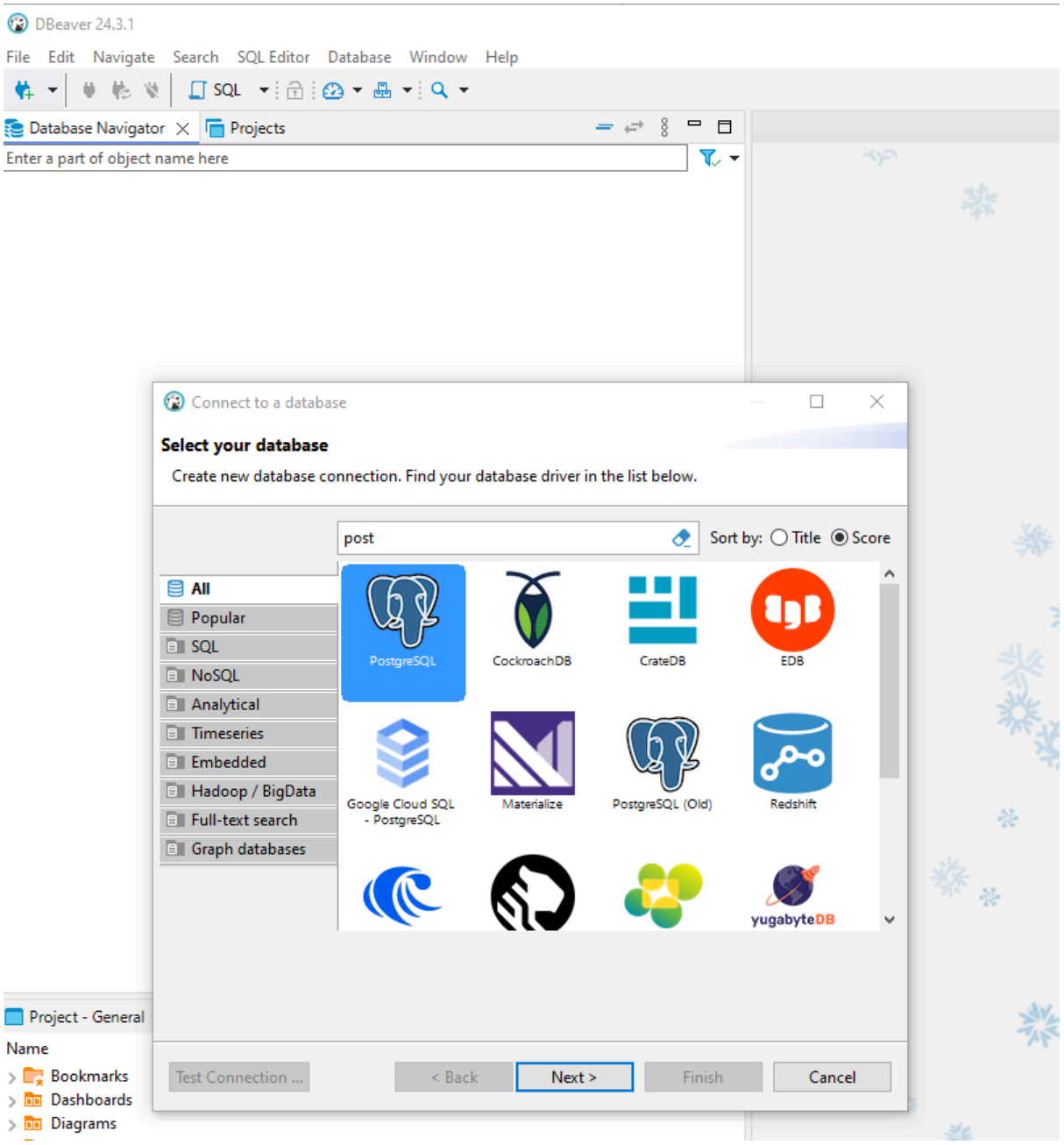


8. **Additional Settings:**
   - Optionally, configure backups, monitoring, and other options.
9. Click **Create Database**.
10. In the RDS dashboard, monitor the **Status** of your database until it changes to **Available**.
11. Click on your database name to show its details. Save the **Endpoint**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

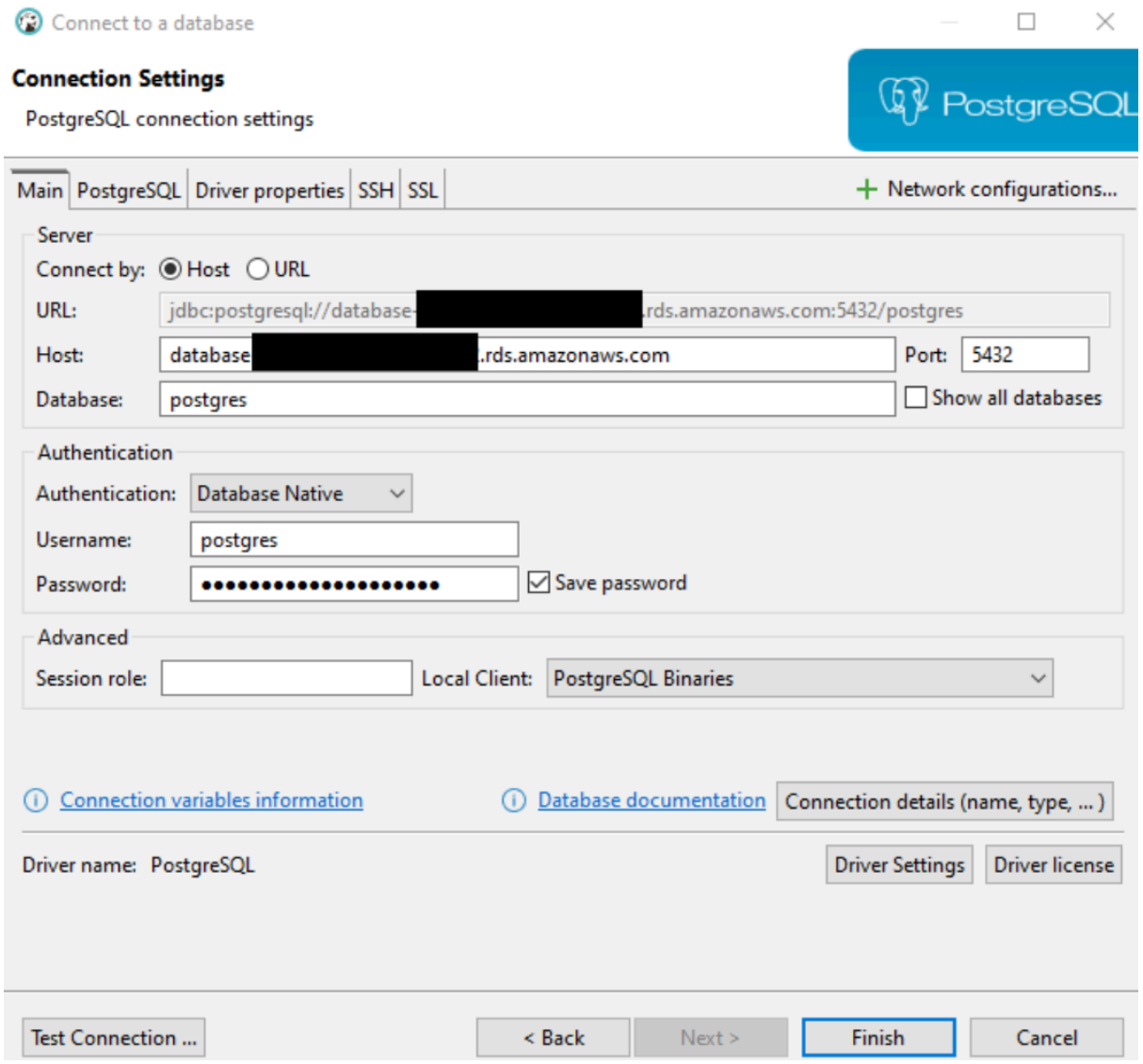


Step 3: Connect with DBeaver

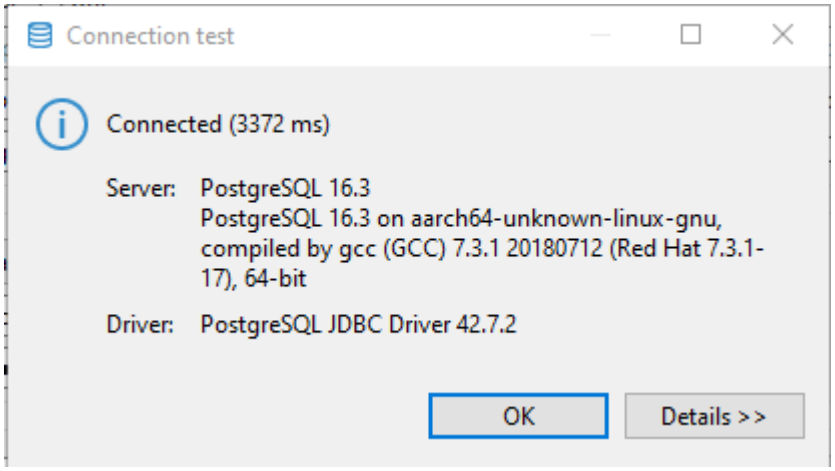
1. Open DBeaver and click on **Database > New Database Connection**.
2. **Select Database Type:** Choose **PostgreSQL**.



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.



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

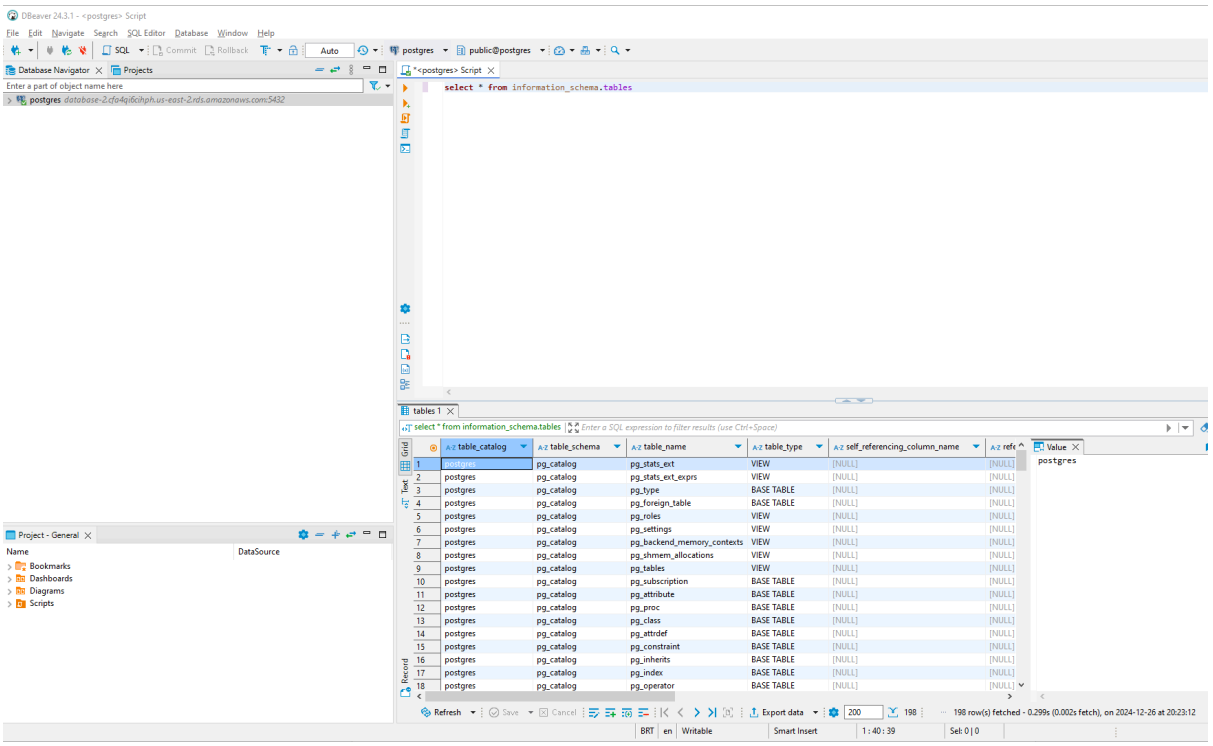


5. If successful, click **Finish**.

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.