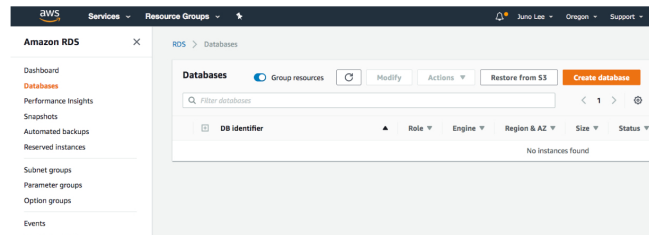


## Create a PostgreSQL DB Instance using RDS

1. Go to the [Amazon RDS console](#) and click on **Databases** on the left navigation pane. Choose what region you'd like to create this database in on the right of the top menu bar.
2. Click on the **Create Database** button.



3. Select **PostgreSQL** on the Select Engine page.

### Select engine

**Engine options**

☐ Amazon Aurora

☐ MySQL

☐ MariaDB

☒ PostgreSQL

☐ Oracle

☐ Microsoft SQL Server

**PostgreSQL**

PostgreSQL is a powerful, open-source object-relational database system with a strong reputation of reliability, stability, and correctness.

- High reliability and stability in a variety of workloads.
- Advanced features to perform in high-volume environments.
- Vibrant open-source community that releases new features multiple times per year.
- Supports multiple extensions that add even more functionality to the database.
- Supports up to 5 Read Replicas per instance, within a single Region or cross-region.
- The most Oracle-compatible open-source database.

[If you want to create PostgreSQL 11 in the Preview environment, click here](#)

**Aurora global database feature is now available.**  
This feature is now available in our new database creation flow.

[Try it now](#)

☐ Only enable options eligible for RDS Free Usage Tier [Info](#)

[Cancel](#) [Next](#)

4. Since this is for demonstration purposes, select **Dev/Test** under Use case.

### Choose use case

**Use case**

Do you plan to use this database for production purposes?

**Use case**

☐ **Production**  
Use Multi-AZ Deployment and Provisioned IOPS Storage as defaults for high availability and fast, consistent performance.

☒ **Dev/Test**  
This instance is intended for use outside of production or under the RDS Free Usage Tier.

Billing is based on [RDS pricing](#).

[Cancel](#) [Previous](#) [Next](#)

5. Next, is a long **Specify DB details** page. You can leave the default values (shown below) for most of these settings. Just make the following choices:

- For **DB instance class**, select `db.t2.small`

### Specify DB details

**Instance specifications**

Estimate your monthly costs for the DB Instance using the [AWS Simple Monthly Calculator](#).

**DB engine**

PostgreSQL

**License model** [Info](#)

postgresql-license

**DB engine version** [Info](#)

PostgreSQL 10.6-R1

**Free tier**

The Amazon RDS Free Tier provides a single db.t2.micro instance as well as up to 20 GiB of storage, allowing new AWS customers to gain hands-on experience with Amazon RDS. Learn more about the RDS Free Tier and the instance restrictions [here](#).

☐ Only enable options eligible for RDS Free Usage Tier [Info](#)

**DB instance class** [Info](#)

db.t2.small — 1 vCPU, 2 GiB RAM

**Multi-AZ deployment** [Info](#)

☐ Create replica in different zone  
Creates a replica in a different Availability Zone (AZ) to provide data redundancy, eliminate I/O freezes, and minimize latency spikes during system backups.

☒ No

**Storage type** [Info](#)

General Purpose (SSD)

**Allocated storage**

20 GiB

(Minimum: 20 GiB, Maximum: 16384 GiB) Higher allocated storage may improve IOPS performance.

- For DB instance identifier, enter `postgresql-test` or another name of your choice
- Enter a master username and password

### Estimated monthly costs

|              |                  |
|--------------|------------------|
| DB Instance  | 26.28 USD        |
| Storage      | 2.90 USD         |
| <b>Total</b> | <b>29.18 USD</b> |

Billing estimate is based on on-demand usage as described in [Amazon RDS Pricing](#). Estimate does not include costs for backup storage, O/S (if applicable), or data transfer.

Estimate your monthly costs for the DB Instance using the [AWS Simple Monthly Calculator](#)

### Settings

**DB instance identifier** [Info](#)  
Specify a name that is unique for all DB instances owned by your AWS account in the current region.  
`postgresql-test`

**DB instance identifier** [Info](#)  
DB instance identifier is case insensitive, but stored as all lower-case, as in "mysql:instance". Must contain from 1 to 63 alphanumeric characters or hyphens (1 to 10 for SQL Server). First character must be a letter. Cannot end with a hyphen or contain two consecutive hyphens.

**Master username** [Info](#)  
Specify an alphanumeric string that defines the login ID for the master user.  
`postgres`

**Master username** [Info](#)  
Master username must start with a letter. Must contain 1 to 63 alphanumeric characters.

**Master password** [Info](#) **Confirm password** [Info](#)  
Master Password must be at least eight characters long, as in "password". Can be any printable ASCII character except " ", "=", or "||".

Cancel Previous Next

- Leave the default values for the next few sections.

## Configure advanced settings

### Network & Security

**Virtual Private Cloud (VPC)** [Info](#)  
VPC defines the virtual networking environment for this DB instance.  
Default VPC (vpc-2cc4274b)

Only VPCs with a corresponding DB subnet group are listed.

**Subnet group** [Info](#)  
DB subnet group that defines which subnets and IP ranges the DB instance can use in the VPC you selected.  
default

**Public accessibility** [Info](#)  
☒ Yes  
EC2 instances and devices outside of the VPC hosting the DB instance will connect to the DB instances. You must also select one or more VPC security groups that specify which EC2 instances and devices can connect to the DB instance.  
☐ No  
DB instance will not have a public IP address assigned. No EC2 instance or devices outside of the VPC will be able to connect.

**Availability zone** [Info](#)  
No preference

**VPC security groups**  
Security groups have rules authorizing connections from all the EC2 instances and devices that need to access the DB instance.  
☒ Create new VPC security group  
☐ Choose existing VPC security groups

### Database options

**Database name** [Info](#)  
`dbname`  
If you do not specify a database name, Amazon RDS does not create a database.

**Port** [Info](#)  
TCP/IP port the DB instance will use for application connections.  
5432

**DB parameter group** [Info](#)  
default:postgres10

**Option group** [Info](#)  
default:postgres-10

**IAM DB authentication** [Info](#)  
☐ Enable IAM DB authentication  
Manage your database user credentials through AWS IAM users and roles.  
☒ Disable

### Encryption

**Encryption**  
☐ Enable encryption [Learn more](#)  
Select to encrypt the given instance. Master key IDs and aliases appear in the list after they have been created using the Key Management Service (KMS) console.  
☒ Disable encryption

- In the **Backup** section and select `1 day` since this is for demonstration purposes.

### Backup

**Backup retention period** [Info](#)  
Select the number of days that Amazon RDS should retain automatic backups of this DB instance.  
1 day

**Backup window** [Info](#)  
☐ Select window  
☒ No preference  
☒ Copy tags to snapshots

### Monitoring

**Enhanced monitoring**  
☒ Enable enhanced monitoring  
Enhanced monitoring metrics are useful when you want to see how different processes or threads use the CPU.  
☐ Disable enhanced monitoring

**Monitoring Role** **Granularity**  
Default 60 seconds

☒ I authorize RDS to create the IAM role rds-monitoring-role.

### Performance Insights

☒ Enable Performance Insights  
☐ Disable Performance Insights

**Retention period** [Info](#)  
Default (7 days)

**Master key** [Info](#)

- Leave the default values for the rest and click on **Create database** on the bottom right.

**Log exports**  
Select the log types to publish to Amazon CloudWatch Logs.  
☐ Postgresql log  
☐ Upgrade log  
  
IAM role  
The following service-linked role is used for publishing logs to CloudWatch Logs.  
RDS Service Linked Role

**Maintenance**  
Auto minor version upgrade [Info](#)  
☒ **Enable auto minor version upgrade**  
Enables automatic upgrades to new minor versions as they are released. The automatic upgrades occur during the maintenance window for the DB instance.  
☐ Disable auto minor version upgrade  
  
Maintenance window [Info](#)  
Select the period in which you want pending modifications or patches applied to the DB instance by Amazon RDS.  
☐ Select window  
☒ No preference

**Deletion protection**  
☐ Enable deletion protection  
Protects the database from being deleted accidentally. While this option is enabled, you can't delete the database.  
  

Amazon RDS requires permissions to manage AWS resources on your behalf. By clicking Launch DB Instance, you grant permission for Amazon RDS to create a service-linked role in AWS IAM that contains the required permissions. [Learn more.](#)

Cancel Previous **Create database**

You should land on a confirmation page.

**Amazon RDS** X  
Dashboard  
Databases  
Performance insights  
Snapshots  
Automated backups  
Reserved instances  
  
Subnet groups  
Parameter groups  
Option groups  
  
Events  
Event subscriptions  
Recommendations

RDS > Create database  

✓ Your DB instance is being created.  
Note: Your instance may take a few minutes to launch.

**Connecting to your DB instance**  
Once Amazon RDS finishes provisioning your DB instance, you can use a SQL client application or utility to connect to the instance.  
[Learn about connecting to your DB instance](#)

**Usage charges**  
The following selections disqualify the instance from being eligible for the free tier:  
• DB instance class  
You will be charged normal RDS Prices. [Learn More](#)  
Estimate your monthly costs for the DB instance using the [AWS Simple Monthly Calculator](#)

All DB instances **View DB instance details**

6. Click **Databases** on the left navigation pane to return to your list of databases. You should see your newly created database with the status **Creating**.

**Amazon RDS** X  
Dashboard  
Databases  
Performance insights  
Snapshots  
Automated backups  
Reserved instances  
  
Subnet groups  
Parameter groups  
Option groups  
Performance insights

RDS > Databases  
Group resources Modify Actions Restore from S3 **Create database**  
Filter databases  

| DB identifier   | Role     | Engine     | Region & AZ | Size        | Status   | CPU | Current activity |
|-----------------|----------|------------|-------------|-------------|----------|-----|------------------|
| postgresql-test | Instance | PostgreSQL | us-west-2a  | db.t2.small | Creating |     | 0 Sessions       |

7. Wait a few minutes for this to change to the status **Available**.

RDS > Databases  
Group resources Modify Actions Restore from S3 **Create database**  
Filter databases  

| DB identifier   | Role     | Engine     | Region & AZ | Size        | Status    | CPU   | Current activity |
|-----------------|----------|------------|-------------|-------------|-----------|-------|------------------|
| postgresql-test | Instance | PostgreSQL | us-west-2a  | db.t2.small | Available | 5.00% | 0 Sessions       |

NEXT