

# Creating a PostgreSQL Database in AWS RDS

---

- Start by logging in to the AWS Management Console, then navigate to the **RDS** section under **Database**.

## ▼ All services



### Compute

EC2

Lightsail 

Elastic Container Service

EKS

Lambda

Batch

Elastic Beanstalk



### Storage

S3

EFS

Glacier

Storage Gateway



### Database

RDS 

DynamoDB

ElastiCache

Neptune

Amazon Redshift



### Management Tools

CloudWatch

AWS Auto Scaling

CloudFormation

CloudTrail

Config

OpsWorks

Service Catalog

Systems Manager

Trusted Advisor

Managed Services



### Media Services

Elastic Transcoder

Kinesis Video Streams

MediaConvert

MediaLive

MediaPackage

MediaStore

MediaTailor

- Click **Create database** from the **Create database** section to the right. This button will take you to the **Engine options** page, which brings up a menu of different relational databases.
- **Note:** AWS may have a different screen than the one pictured below. If this is the first time using the service, the orange **Create database** will still be on the right.

The screenshot shows the Amazon RDS console interface. On the left is a navigation sidebar with the following links: Dashboard (highlighted in orange), Databases, Query Editor, Performance Insights, Snapshots, Automated backups, Reserved instances, Subnet groups, Parameter groups, Option groups, Events, Event subscriptions, and Recommendations. The main content area is titled 'Amazon RDS' with a close button (X). It features a blue information box for 'Amazon Aurora' with a 'Create database' button and a link to 'Restore Aurora DB cluster from S3'. Below this is a 'Resources' section listing various RDS metrics. At the bottom is the 'Create database' section, which includes a 'Restore from S3' button and a prominent orange 'Create database' button. A pink rectangular box highlights the 'Create database' button and the text 'Note: your DB instances will launch in the US East (n.)' below it.

**Amazon RDS** X

**Dashboard**

Databases

Query Editor

Performance Insights

Snapshots

Automated backups

Reserved instances

Subnet groups

Parameter groups

Option groups

Events

Event subscriptions

Recommendations

**Amazon Aurora**  
Amazon Aurora is a MySQL- and PostgreSQL-compatible database engine with up to 15 read replicas. [Learn more.](#)

**Create database**

Or, [Restore Aurora DB cluster from S3](#)

**Resources**

You are using the following Amazon RDS resources in **DB Instances (0/40)**  
Allocated storage (0 bytes/100.00 TB)  
[Click here to increase DB instances limit](#)

**Reserved instances (0/40)**

**Snapshots (161)**  
Manual (0/100)  
Automated (0)

**Recent events (3)**

**Event subscriptions (0/20)**

**Create database**

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

[Restore from S3](#) **Create database**

Note: your DB instances will launch in the US East (n.)

**Note:** There may be an option to create a database with Amazon Aurora, which is a paid database. We will not be using this in today's lesson.

- Make sure the **Standard create** option is checked in the first box.

## Choose a database creation method [Info](#)

### ☒ 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.

- Select **PostgreSQL** and keep the default version option. **Note** that the version may be different from what is pictured.

## Engine options

### Engine type [Info](#)

#### ☐ Amazon Aurora



#### ☐ MySQL



#### ☐ MariaDB



#### ☒ PostgreSQL



#### ☐ Oracle



#### ☐ Microsoft SQL Server



### Version [Info](#)

PostgreSQL 10.6-R1

- **IMPORTANT:** Under **Templates**, select **Free Tier**.

## Templates

Choose a sample template to meet your use case.

#### ☐ Production

Use defaults for high availability and fast, consistent performance.

#### ☐ Dev/Test

This instance is intended for development use outside of a production environment.

#### ☒ Free tier

Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS.

- Fill out the fields under **Settings**. Use **myPostgresDB** as the database instance identifier and **root** as the master username.

**Note:** We recommend sticking to these names today for consistency, but the database instance identifier and master username can take any name in the future.

- Uncheck the **Auto generate password** box. Enter a password and be sure to record it somewhere. The other settings will be accessible in the future, but the password will not.

## Settings

### DB instance identifier [Info](#)

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

**1.**

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constrains: 1 to 60 alphanumeric characters or hyphens (1 to 15 for SQL Server). 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.

**2.**

1 to 16 alphanumeric characters. First character must be a letter

☐ **Auto generate a password** **3.**

Amazon RDS can generate a password for you, or you can specify your own password

#### Master password [Info](#)

Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), "(double quote) and @ (at sign).

#### Confirm password [Info](#)

**4.**

- Leave the settings for **DB instance class** as the default values.
- Under the **Storage** box, uncheck the box next to **Enable storage autoscaling** and leave the rest of the options as the default values.

## Storage

Storage type [Info](#)

General Purpose (SSD) ▼

Allocated storage

20

GiB

(Minimum: 20 GiB, Maximum: 16,384 GiB) Higher allocated storage **may improve** IOPS performance.

Storage autoscaling [Info](#)

Provides dynamic scaling support for your database's storage based on your application's needs.

- ☐ **Enable storage autoscaling**  
Enabling this feature will allow the storage to increase once the specified threshold is exceeded.

- Under **Connectivity**, select **Yes** under the **Public accessibility** option. Explain that this does not mean that everyone can access the database, as a password is still required, but it allows connections from outside sources like pgAdmin. Leave the rest of the options as the default values.

## Connectivity



Virtual private cloud (VPC) [Info](#)

VPC that defines the virtual networking environment for this DB instance.

Default VPC (vpc-36ab4f50) ▼

Only VPCs with a corresponding DB subnet group are listed.

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

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 access [Info](#)

- ☒ **Yes**  
Amazon EC2 instances and devices outside the VPC can connect to your database. Choose one or more VPC security groups that specify which EC2 instances and devices inside the VPC can connect to the database.
- ☐ **No**  
RDS will not assign a public IP address to the database. Only Amazon EC2 instances and devices inside the VPC can connect to your database.

- Under **Additional configuration**, click the down arrow and make the database name **my\_data\_class\_db** (use this name for the sake of consistency. In the future, any name can be used). Then, uncheck the boxes next to **Enable automatic backups**, **Enable Performance Insights**, and **Enable auto minor version upgrade**. Leave the rest of the settings as the default values.

## ▼ Additional configuration

Database options, backup disabled, backtrack disabled, Performance Insights disabled, Enhanced Monitoring disabled, maintenance, CloudWatch Logs, delete protection disabled

### Database options

Initial database name [Info](#)

If you do not specify a database name, Amazon RDS does not create a database.

DB parameter group [Info](#)

Option group [Info](#)

### Backup

Creates a point-in-time snapshot of your database

☐ Enable automatic backups  
Creates a point-in-time snapshot of your database

### Performance Insights [Info](#)

☐ Enable Performance Insights

### Monitoring

☐ Enable Enhanced monitoring  
Enabling Enhanced monitoring metrics are useful when you want to see how different processes or threads use the CPU

### Maintenance

Auto minor version upgrade [Info](#)

☐ Enable auto minor version upgrade  
Enabling auto minor version upgrade will automatically upgrade to new minor versions as they are released. The automatic upgrades occur during the maintenance window for the database.

Maintenance window [Info](#)

Select the period you want pending modifications or maintenance applied to the database 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.

- Click **Create Database** followed by **View DB Instance details** to navigate to the instance console page. The database creation on AWS's end will take anywhere from 10 to 15 minutes.