

# Creating a PostgreSQL Database in AWS RDS

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- Log in to the AWS Management Console and 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.

**Amazon RDS** X

**Dashboard**

- Databases
- Query Editor
- Performance Insights
- Snapshots
- Automated backups
- Reserved instances

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- Subnet groups
- Parameter groups
- Option groups

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- Events
- Event subscriptions

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- Recommendations

**Amazon Aurora**  
Amazon Aurora is a MySQL- and PostgreSQL-compatible 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. Virginia) Region.

**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.

- **IMPORTANT:** Check the box next to **Only enable options eligible for RDS Free Usage Tier** at the bottom of the menu.
- Select **PostgreSQL**.

### Engine options

Engine type [Info](#)

<input type="radio"/> Amazon Aurora 	<input type="radio"/> MySQL 	<input type="radio"/> MariaDB 
<input checked="" type="radio"/> PostgreSQL 	<input type="radio"/> Oracle 	<input type="radio"/> Microsoft SQL Server 

Version [Info](#)

PostgreSQL 10.6-R1

- Under **Templates** select **Free Tier**.

### Templates

Choose a sample template to meet your use case.

<input type="radio"/> <b>Production</b> Use defaults for high availability and fast, consistent performance.	<input type="radio"/> <b>Dev/Test</b> This instance is intended for development use outside of a production environment.	<input checked="" type="radio"/> <b>Free tier</b> Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS.
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- Fill out the fields under Settings. Use **myPostgresDB** as the database instance identifier and **root** as the master username.

**Note:** While the database instance identifier and master username can be anything, we recommend sticking to these settings in this case for consistency.

- Un-check 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 across 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"). Constraints: 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.**

- Under **Connectivity** click the down arrow next to **Additional connectivity configuration**. Select **Yes** under the **Public accessibility** option. Explain that this does not mean anyone can access the database, as a password is still required, but it allows connections from outside sources like pgAdmin.

## 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.

1.

### ▼ Additional connectivity configuration

#### Subnet group [Info](#)

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

default ▼

#### Publicly accessible [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.) Keep the default settings in the other fields.

## Database options

### Database name [Info](#)

my\_data\_class\_db

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

- Un-check the boxes for **Enable automatic backups**, **Enable Performance Insights**, and **Enable auto minor version upgrade**.

### Backup

Creates a point in time snapshot of your database

☐ **Enable automatic backups**  
Enabling backups will automatically create backups of your database during a certain time window.




### 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



### 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

 Ensure that General, Slow Query, and Audit Logs are turned on. Error logs are enabled by default. [Learn more](#)

### 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.



- 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.