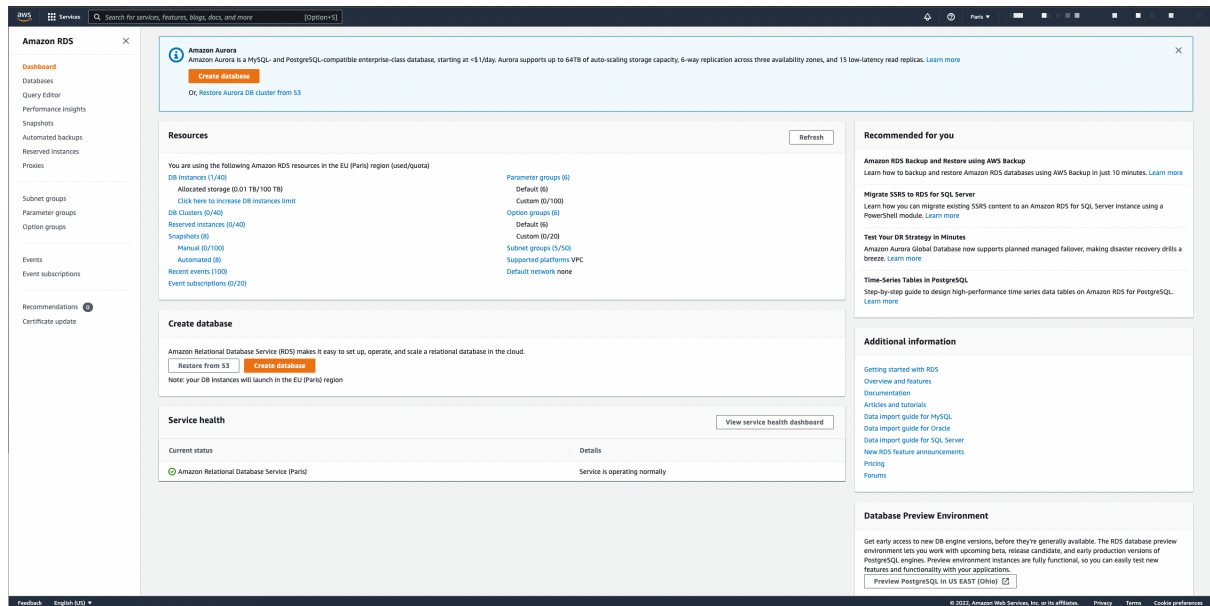


Create RDS Database

To connect your Query cluster(s) to the created RDS database

1. Create RDS database

Go to the AWS RDS console and click `Create database`



2. Select your database type

- We will need to create a dedicated VPC, so select `Standard create`.
- Then chose your database type (we'll use PostgreSQL for our example) and the version.
- Since we're creating a production database, we'll select the `Production` template. You can pick `Dev/Test` template for non-production environments.

RDS > Create database

Create database


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.


Engine options


Engine type [Info](#)


☐ Amazon Aurora


☐ MySQL


☐ MariaDB


☒ PostgreSQL


☐ Oracle


☐ Microsoft SQL Server


Version

PostgreSQL 13.4-R1 ▼

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.

3. Settings

Select a name for your RDS instance, here `my-production-database`, master username and password.

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.

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 60 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.

1 to 16 alphanumeric characters. First character must be a letter.
☐ **Auto generate a password**
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), ' (single quote), " (double quote) and @ (at sign).

Confirm password [Info](#)

4. Instance class

Pick an instance class that works for your needs. You can refer to this document for more information about the different options: <https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Concepts.DBInstanceClass.html>

DB instance class

DB instance class [Info](#)
☒ Standard classes (includes m classes)
☐ Memory optimized classes (includes r and x classes)
☐ Burstable classes (includes t classes)

2 vCPUs 8 GiB RAM Network: 4,750 Mbps

☐ Include previous generation classes

5. Storage

General Purpose SSD should be the right option for most cases. Chose the allocated storage that fits the needs of your application. We also advise you to Enable storage autoscaling in case you need more storage over time.

Storage

Storage type [Info](#)


General Purpose SSD (gp2)
Baseline performance determined by volume size


Allocated storage

20

GiB

(Minimum: 20 GiB. Maximum: 65,536 GiB) Higher allocated storage **may improve** IOPS performance.



Provisioning less than 100 GiB of General Purpose (SSD) storage for high throughput workloads could result in higher latencies upon exhaustion of the initial General Purpose (SSD) IO credit balance. [Learn more](#) 

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.

Maximum storage threshold [Info](#)

Charges will apply when your database autoscales to the specified threshold

1000

GiB

Minimum: 21 GiB. Maximum: 65,536 GiB

6. Availability & durability

For a production setup you should Create a standby instance. For non-production usecase you can avoid it to reduce costs.

Availability & durability


Multi-AZ deployment [Info](#)

- ☒ **Create a standby instance (recommended for production usage)**
Creates a standby in a different Availability Zone (AZ) to provide data redundancy, eliminate I/O freezes, and minimize latency spikes during system backups.
- ☐ Do not create a standby instance

7. Connectivity

- Since we want the database to live in it's own VPC, make sure to select the `Create new VPC` option.
- Also select `Create new DB Subnet Group`.
- We advise you to disable `Public access` for security reason. We'll setup VPC peering in the next guide to allow access from your Qovery clusters through private networking.
- Finally chose `Create new security group` and give it a name.


Connectivity



Virtual private cloud (VPC) [Info](#)
VPC that defines the virtual networking environment for this DB instance.

Create new VPC ▼

Only VPCs with a corresponding DB subnet group are listed.

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

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

Create new DB Subnet Group ▼

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.

VPC security group
Choose a VPC security group to allow access to your database. Ensure that the security group rules allow the appropriate incoming traffic.

☐ Choose existing
Choose existing VPC security groups

☒ Create new
Create new VPC security group

New VPC security group name

my-database-sg

► **Additional configuration**

8. Database authentication and estimated costs

Chose Password authentication.

Database authentication

Database authentication options [Info](#)

☒ **Password authentication**
Authenticates using database passwords.

☐ **Password and IAM database authentication**
Authenticates using the database password and user credentials through AWS IAM users and roles.

☐ **Password and Kerberos authentication**
Choose a directory in which you want to allow authorized users to authenticate with this DB instance using Kerberos Authentication.

► **Additional configuration**


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

Estimated monthly costs

DB instance	150.38 USD
Multi-AZ standby instance	150.38 USD
Storage	5.32 USD
Total	306.08 USD

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

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

 You are responsible for ensuring that you have all of the necessary rights for any third-party products or services that you use with AWS services.

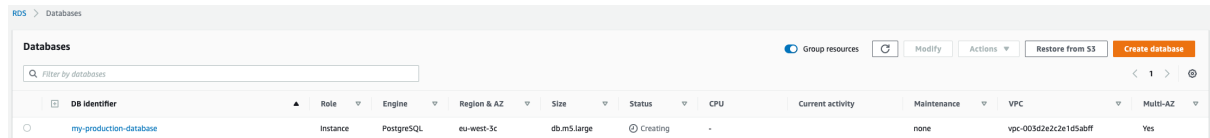
Cancel **Create database**

You can then click on `Create database`

9. Database creation

You should see your new RDS instance in the list of databases, with the `Creating` status.

Create RDS Database

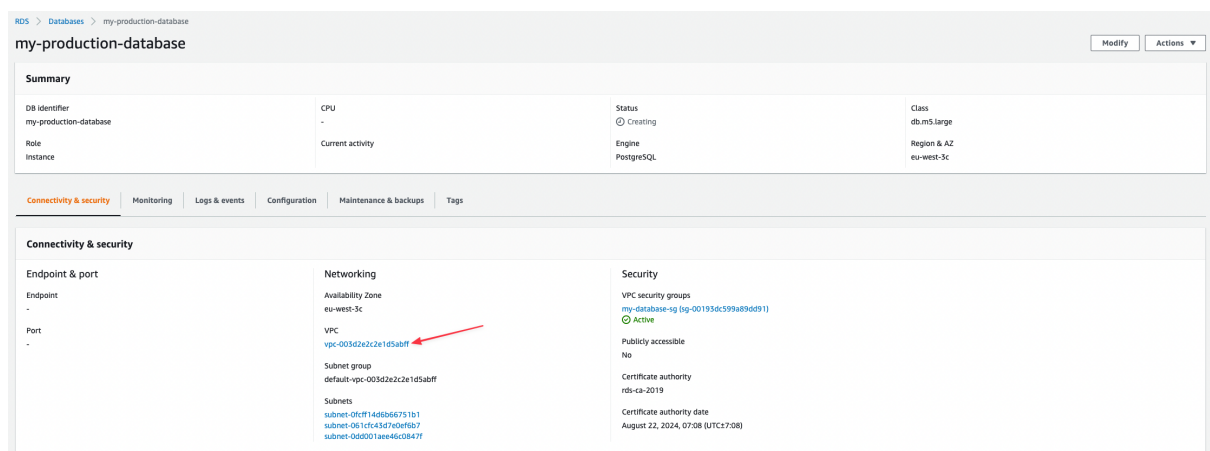


DB Identifier	Role	Engine	Region & AZ	Size	Status	CPU	Current activity	Maintenance	VPC	Multi-AZ
my-production-database	Instance	PostgreSQL	eu-west-3c	db.m5.large	Creating	-		none	vpc-003d2e2c2e1d5abff	Yes

10. Name your RDS VPC

The VPC created for the new RDS database will be named -. For convenience you should rename it.

Click on your database in the list, then on the VPC id.



my-production-database

Summary

DB identifier my-production-database	CPU -	Status Creating	Class db.m5.large
Role Instance	Current activity	Engine PostgreSQL	Region & AZ eu-west-3c

Connectivity & security

Endpoint & port

Endpoint
-

Port
-

Networking

Availability Zone
eu-west-3c

VPC
vpc-003d2e2c2e1d5abff

Subnet group
default-vpc-003d2e2c2e1d5abff

Subnets
subnet-061c45d7d0effb7
subnet-061c45d7d0effb7
subnet-060001aee46c0847f

Security

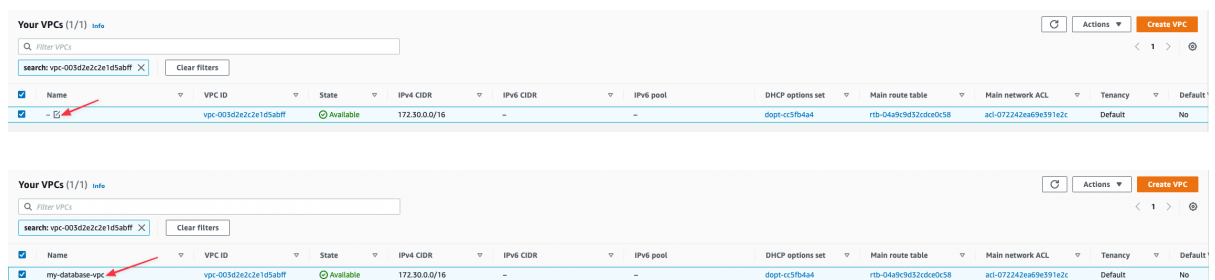
VPC security groups
my-database-sg (sg-00193d6599a89d91)

Publicly accessible
No

Certificate authority
rds-ca-2019

Certificate authority date
August 22, 2024, 07:08 (UTC+7:08)

You will be redirected to the VPCs list, filtered on the VPC id. Click on the edit icon in the Name column, and give it a meaningful name.



Your VPCs (1/1)

search: vpc-003d2e2c2e1d5abff

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR	IPv6 pool	DHCP options set	Main route table	Main network ACL	Tenancy	Default
-	vpc-003d2e2c2e1d5abff	Available	172.30.0.0/16	-	-	default-cc5fb44	rtb-04a9c9d3c0e0c58	acl-072242ea69e591e2c	Default	No

my-database-vpc