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# **Amazon RDS**

## **Create and connect to DB instance**

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### **Topic : Relational Database Service (RDS)**

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Amazon Web Services (AWS)  
Training Content

## **Tutorial**

# 1 Introduction

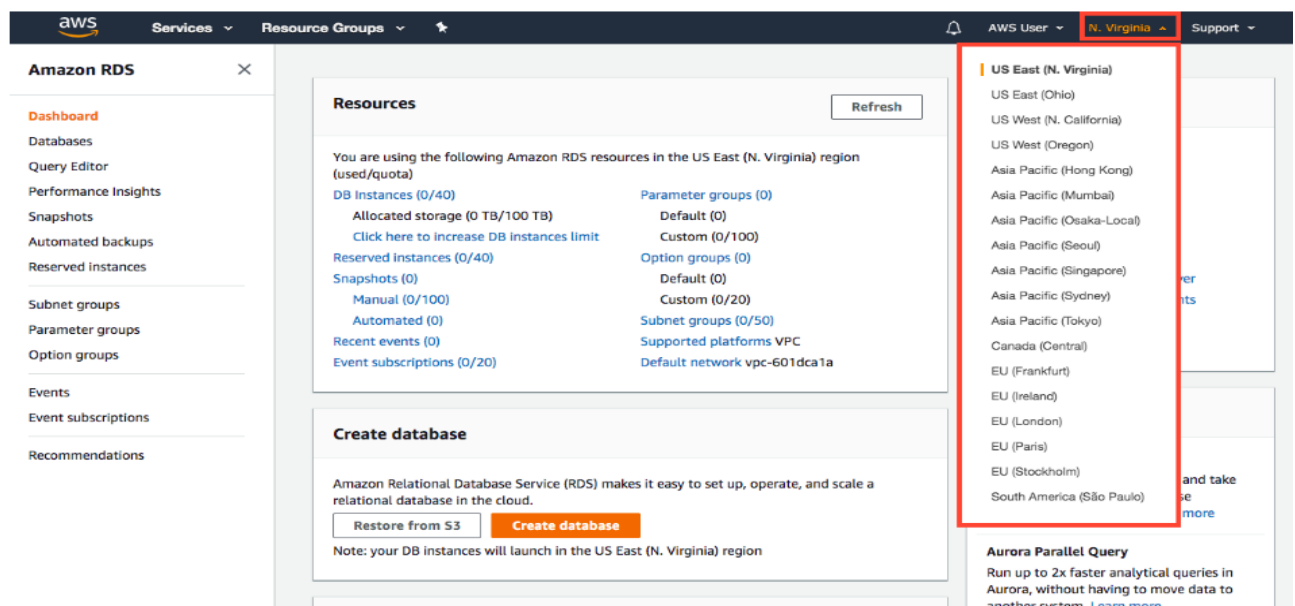
In this tutorial, you will learn how to create an environment to run your MySQL database (we call this environment an instance) and connect to the database. We will do this using Amazon Relational Database Service (Amazon RDS) and everything done in this tutorial is free-tier eligible.

## 1.1 Create a MySQL DB Instance

In this step, use Amazon RDS to create a MySQL DB Instance with db.t2.micro DB instance class, 20 GB of storage, and automated backups enabled with a retention period of one day.

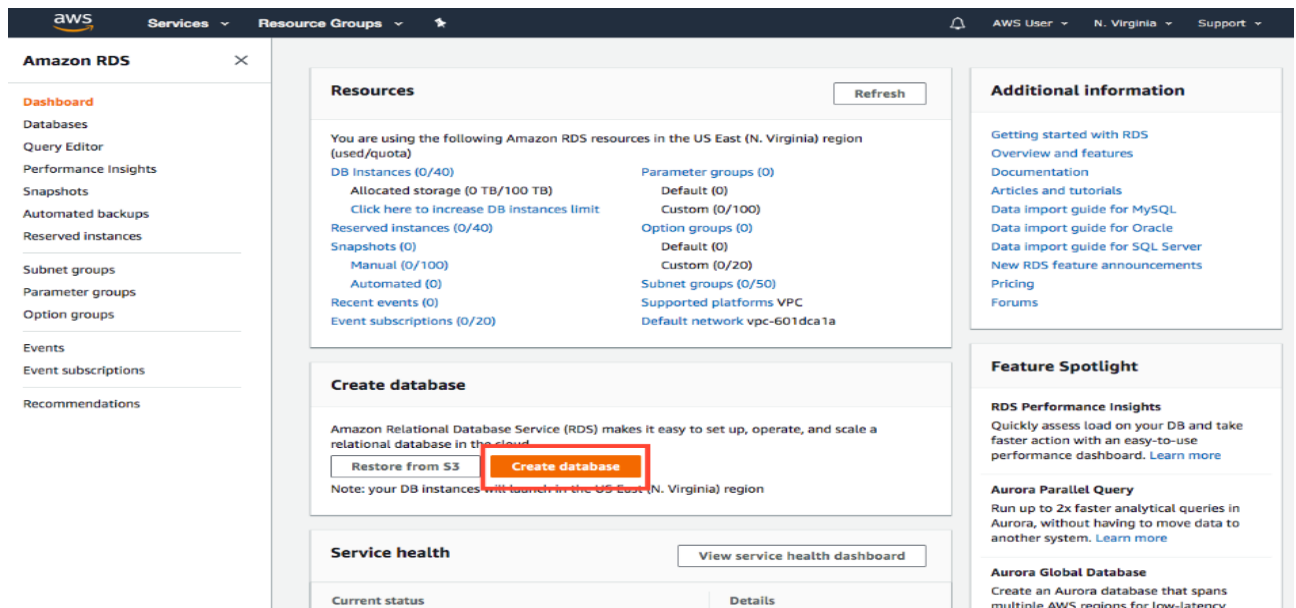
In the top right corner of the Amazon RDS console, select the Region in which you want to create the DB instance.

Note: AWS Cloud resources are housed in highly available data center facilities in different areas of the world. Each Region contains multiple distinct locations called Availability Zones. You have the ability to choose which Region to host your Amazon RDS activity in.



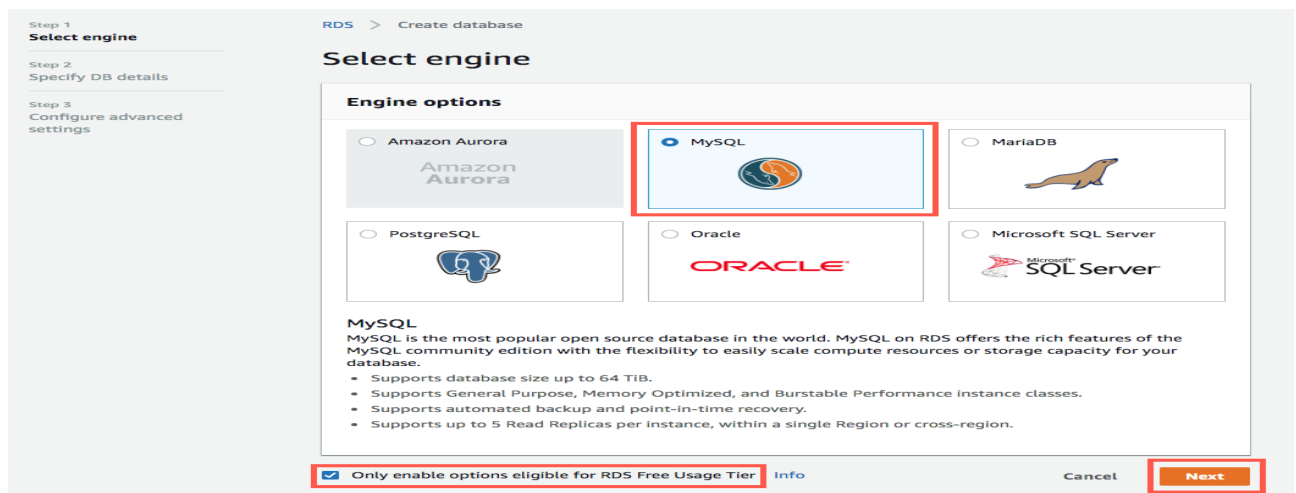
**Figure 1:** Amazon RDS Dashboard

In the Create database section, choose Create database.



**Figure 2:** Create RDS Database instance

You now have options to select your engine. For this tutorial, click the MySQL icon, choose Only enable options eligible for RDS Free Usage Tier, and then click Next.



**Figure 3:** Select DB engine (MySQL, MariaDB, etc)

You will now configure your DB instance. The list below shows the example settings you can use for this tutorial:

Instance specifications:

License model: Select the default general-public-license to use the general license agreement for MySQL. MySQL has only one license model.

DB engine version: Select the default version of MySQL. Note that Amazon RDS supports multiple versions of MySQL in some Regions.

DB instance class: Select db.t2.micro — 1vCPU, 1 GiB RAM. This equates to 1 GB memory and 1 vCPU. To see a list of supported instance classes, see Amazon RDS Product Details.

Multi-AZ deployment: Note that you will have to pay for Multi-AZ deployment. Using a Multi-AZ deployment will automatically provision and maintain a synchronous standby replica in a different Availability Zone. For more information, see High Availability Deployment.

Storage type: Select General Purpose (SSD). For more information about storage, see Storage for Amazon RDS.

Allocated storage: Select the default of 20 to allocate 20 GB of storage for your database. You can scale up to a maximum of 16 TB with Amazon RDS for MySQL.

Enable storage autoscaling: If your workload is cyclical or unpredictable, you would enable storage autoscaling to enable RDS to automatically scale up your storage when needed. This option does not apply to this tutorial.

Settings:

DB instance identifier: Type a name for the DB instance that is unique for your account in the Region that you selected. For this tutorial, we will name it rds-mysql-10minTutorial.

Master username: Type a username that you will use to log in to your DB instance. We will use masterUsername in this example.

Master password: Type a password that contains from 8 to 41 printable ASCII characters (excluding /, ", and @) for your master user password. Confirm password: Retype your password

Allocated Storage: Type 5 to allocate 5 GB of storage for your database. For more information about storage allocation, see Amazon Relational Database Service Features. (switch ordering, its after storage type)  
Click Next.

**Step 1**  
Select engine

**Step 2**  
Specify DB details

**Step 3**  
Configure advanced settings

RDS > Create database

### Specify DB details

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

**DB engine**  
MySQL Community Edition

**License model** [Info](#)  
general-public-license

**DB engine version** [Info](#)  
MySQL 5.7.22

**Known Issues/Limitations**  
Review the [Known Issues/Limitations](#) to learn about potential compatibility issues with specific database versions.

**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.micro — 1 vCPU, 1 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: 20 GiB) Higher allocated storage [may improve](#) IOPS performance.

**Storage autoscaling**  
Provides dynamic scaling support for your database's storage based on your application's needs. [Info](#)  
☐ Enable storage autoscaling  
Enabling this feature will allow the storage to increase once the specified threshold is exceeded.

**Settings**

**DB instance identifier** [Info](#)  
Specify a name that is unique for all DB instances owned by your AWS account in the current region.  
rds-mysql-10minTutorial

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

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

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

Cancel Previous **Next**

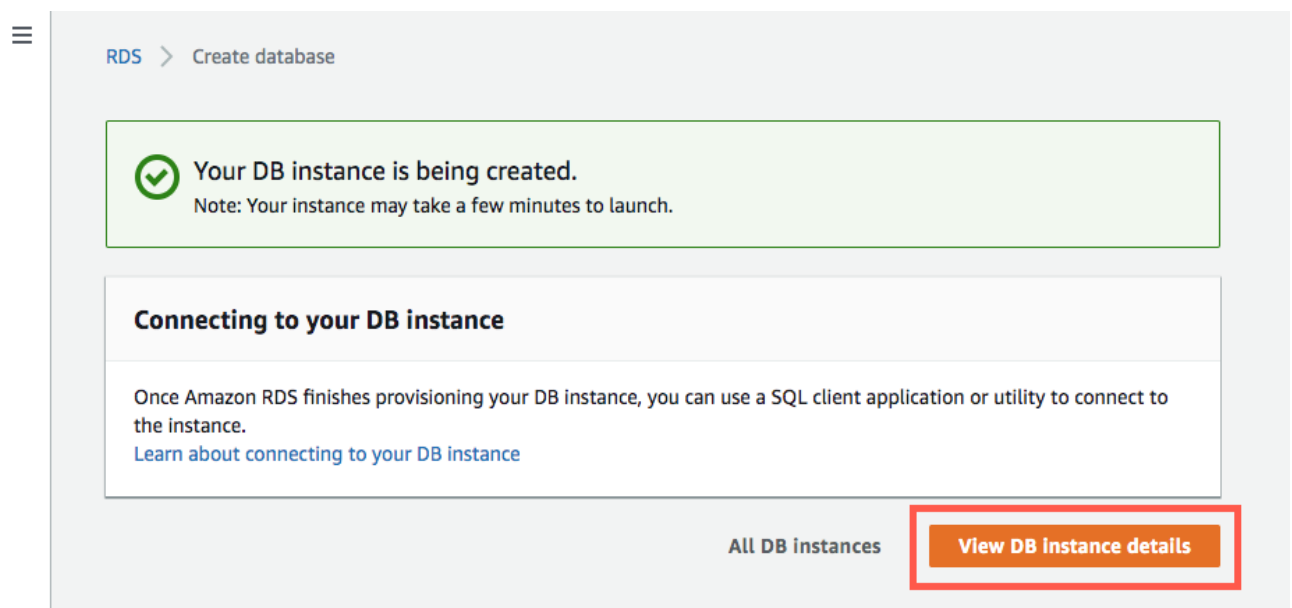
**Figure 4:** Instance specifications

Your DB Instance is now being created. Click View Your DB Instances.

Note: Depending on the DB instance class and storage allocated, it could take several minutes for the new DB instance to become available.

The new DB instance appears in the list of DB instances on the RDS console. The DB instance will have a status of creating until the DB instance is created and ready for use. When the state changes to available, you can connect to a database on the DB instance.

Feel free to move on to the next step as you wait for the DB instance to become available.

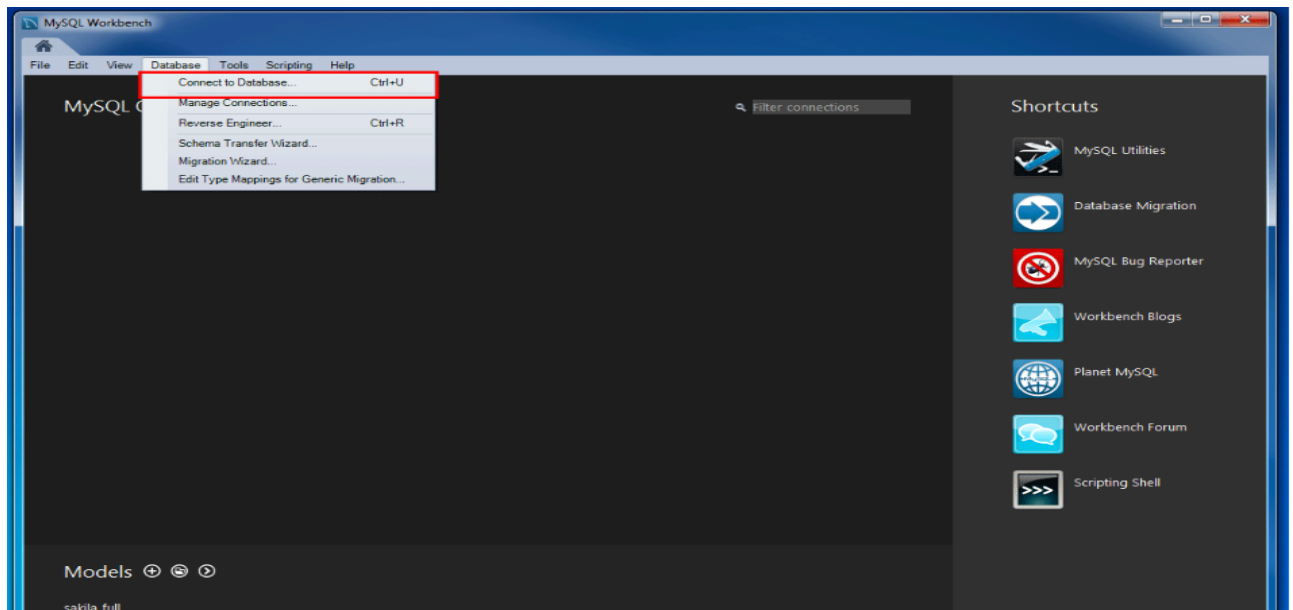


**Figure 5:** Instance now created

## 2 Connect to the MySQL Database

In this step, we will connect to the database you created using MySQL Workbench.

Launch the MySQL Workbench application and go to Database > Connect to Database (Ctrl+U) from the menu bar.



**Figure 6:** SQL client: MySQL workbench

A dialog box appears. Enter the following:

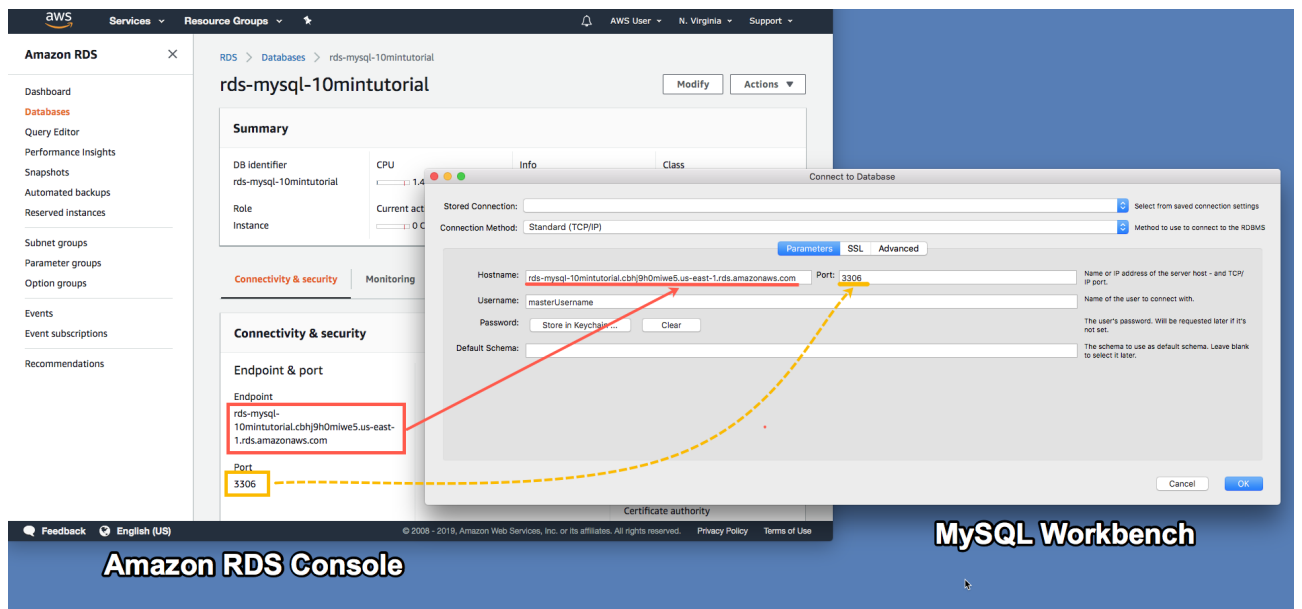
**Hostname:** You can find your hostname on the Amazon RDS console as shown in the screenshot to the right.

**Port:** The default value should be 3306.

**Username:** Type in the username you created for the Amazon RDS database. In this tutorial, it is 'masterUsername.'

**Password:** Click Store in Vault (or Store in Keychain on macOS) and enter the password that you used when creating the Amazon RDS database.

Click OK



**Figure 7:** Connect RDS to SQL Client