4.Creating an Amazon RDS Database

Task 1: Creating an Amazon RDS database

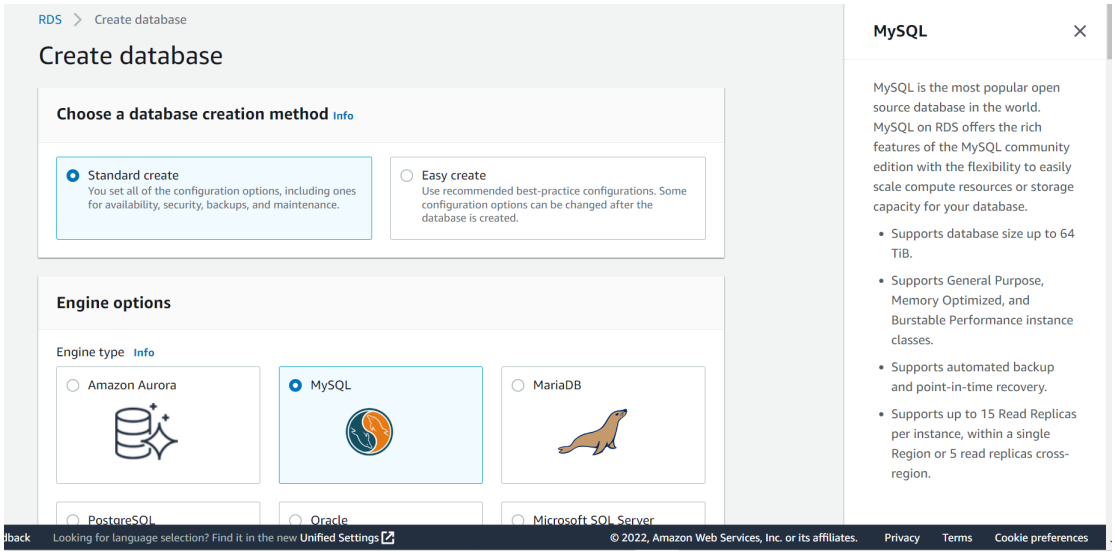
In this task, you will create a MySQL database in your virtual private cloud (VPC). MySQL is a popular open source relational database management system (RDBMS), so there are no software licensing fees.

1.In the search box to the right of **Services**, search for and choose **RDS** to open the RDS console.

2.Choose **Create database**

3.Under Engine options, select MySQL.

The options include several use cases, ranging from enterprise-class databases to Dev/Test systems. In the options, you might notice Amazon Aurora. Aurora is a MySQL-compatible system that was re-architected for the cloud. If your company uses large-scale MySQL or PostgreSQL databases, Aurora can provide enhanced performance.



4.Set the templates and availability and durability options:

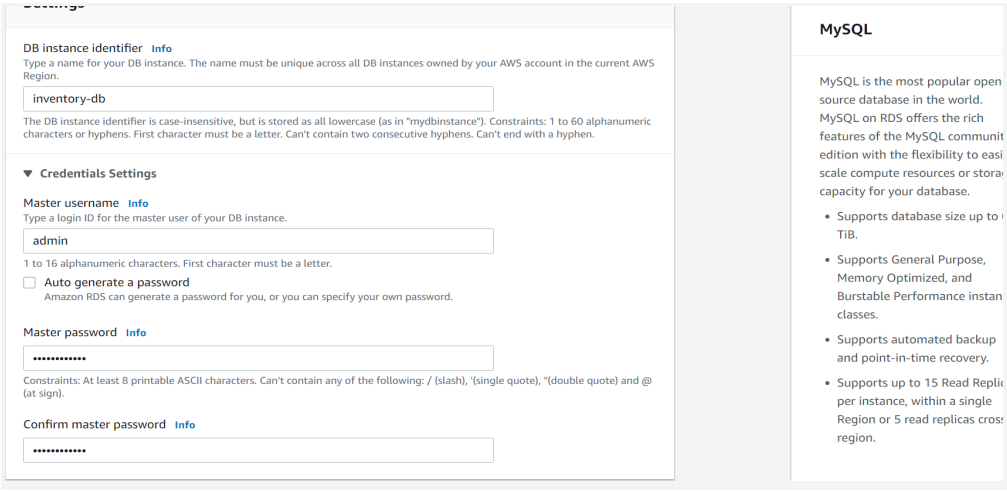
- Under the **Templates** section, select **Dev/Test**.
- Under the **Availability and durability** section, select **Single DB instance**

  Note: the default *Multi-AZ deployment* option automatically creates a replica

of the database in a second Availability Zone for High Availability, however in this lab that is not needed.

5.Under the **Settings** section, configure these options:

- **DB instance identifier:** inventory-db
- **Username:** admin
- **Password:** lab-password
- **Confirm password:** lab-password



6.Under the **DB instance class** section, configure these options:

  - Select **Burstable classes (includes t classes)**.
  - Select **db.t3.micro**

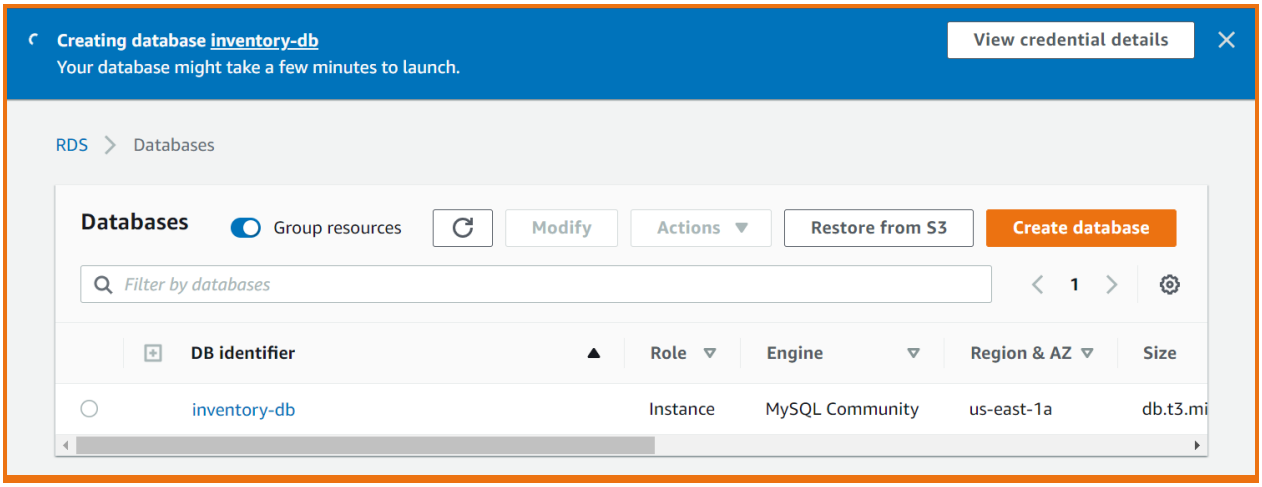
- Under the **Connectivity** section, configure these options:
  - **Virtual Private Cloud (VPC):** *Lab VPC*
  - **Existing VPC security groups:**

    Choose *DB-SG*. It will be highlighted.
    Remove the *default* security group.

7.Expand the **Additional configuration** panel, then configure these settings:

- **Initial database name:** inventory
  Note: This is the logical name of the database that will be used by the application.
- Clear (turn off) the **Enable Enhanced monitoring** option

8.Choose **Create database**



Task 2: Configuring web application communication with a database instance

9.In the search box to the right of **Services**, search for and choose **EC2** to open the EC2 console.
10.In the left navigation pane, choose **Instances**.In the center pane, there should be a running instance that is named **App Server**.

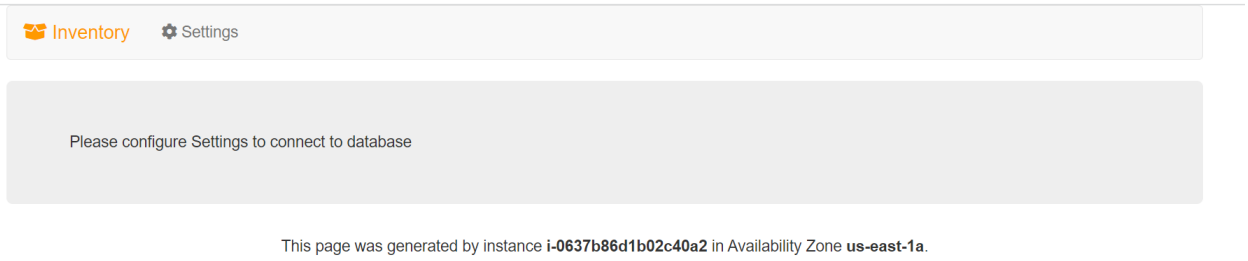
11.Select the **App Server** instance.

12.In the **Details** tab, copy the **Public IPv4 address** to your clipboard.

Tip: If you hover over the IP address, a copy icon appears. To copy the displayed value, choose the icon.

13.Open a new web browser tab, paste the IP address into the address bar, and then press ENTER.

The web application should appear. It does not display much information because the application is not yet connected to the database.



14.Choose **Settings**.

You can now configure the application to use the RDS DB instance you created earlier. You will first retrieve the **Database Endpoint** so that the application knows how to connect to a database.

15.Return to the **AWS Management Console**, but do not close the application tab. (You will return to it soon.

16.In the **Services** search box, search for and choose **RDS** to open the RDS console.

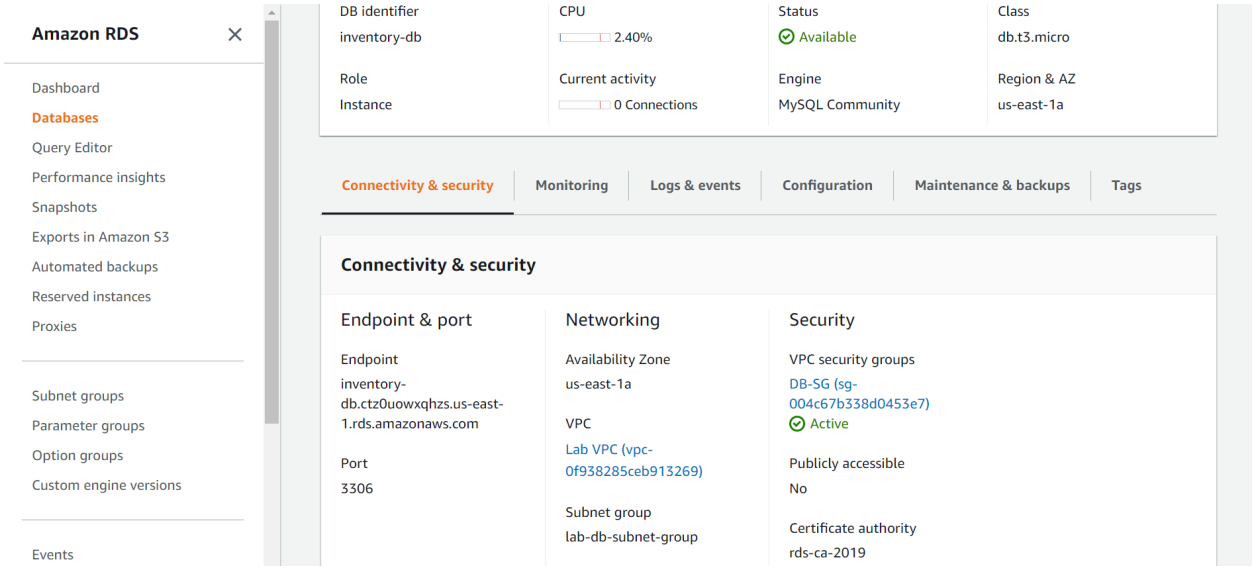
17.In the left navigation pane, choose **Databases**.

18.Choose inventory-db.

19.Scroll to the **Connectivity & Security** section and copy the **Endpoint** to your clipboard.

It should look similar to this example:

inventory-db.crwxbgqad61a.rds.amazonaws.com



20.Return to the browser tab with the Inventory application, and enter these values:

- **Endpoint:** Paste the endpoint you copied earlier
- **Database:** inventory
- **Username:** admin
- **Password:** lab-password
  Choose **Save**

Add inventory, edit, and delete inventory information by using the web application.

The inventory information is stored in the Amazon RDS MySQL database that you created earlier in the lab. This means that any failure in the application server will *not* lose any data. It also means that multiple application servers can access the same data.You have now successfully launched the application and connected it to the database!**Optional:** You can access the saved parameters in the **Systems Manager** console, under **Parameter Store**.