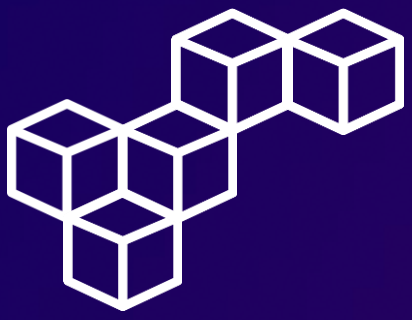
AWS re:Start LAB

Build your DB Server

WEEK 7

aws re/start



Overview

Amazon Relational Database Service (Amazon RDS) makes it easy to set up, operate, and scale a relational database in the cloud. It provides cost-efficient and resizable capacity while managing time-consuming database administration tasks, which allows you to focus on your applications and business. Amazon RDS provides you with six familiar database engines to choose from: Amazon Aurora, Oracle, Microsoft SQL Server, PostgreSQL, MySQL and MariaDB.

Building a robust data infrastructure involves launching an Amazon RDS DB instance with high availability, ensuring uninterrupted access to your database. Configuring the DB instance to allow connections from your web server facilitates seamless communication between your application and the database, enabling real-time data processing and dynamic content delivery within your web application. This integration empowers users to access and utilize data effectively, supporting data-driven decision-making and enhancing overall user experience.

Topics covered

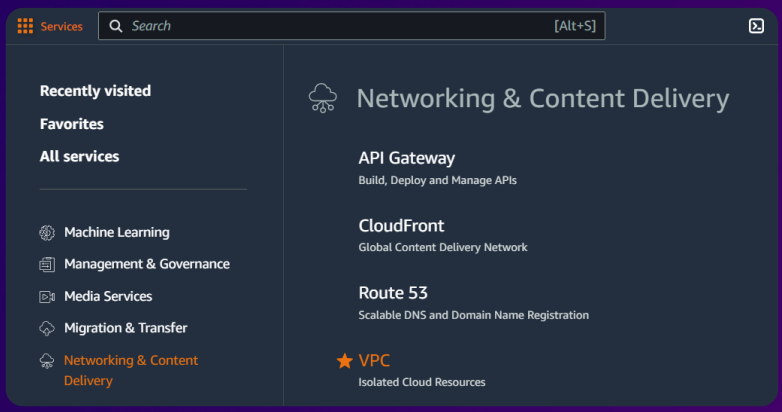
- Launch an Amazon RDS DB instance with high availability.
- Configure the DB instance to permit connections from your web server.
- Open a web application and interact with your database.

Task 1

Create a Security Group for the RDS DB Instance

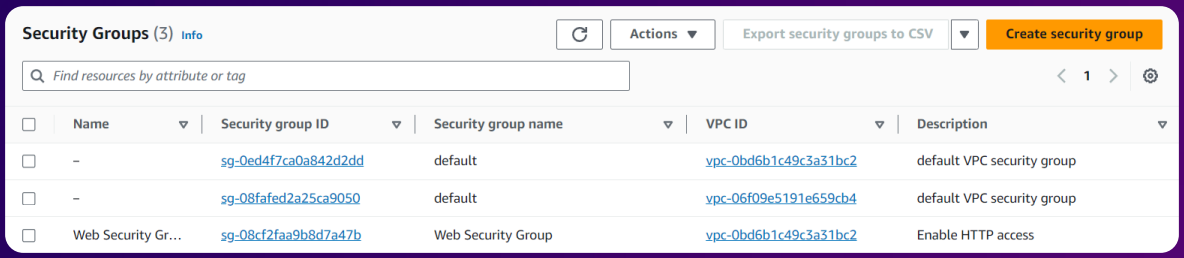
Step 1: Access the VPC management console

Open the AWS Management Console, and select VPC.



Step 2: Create security group

Navigate to the **Security Groups** section, and select Create security group.



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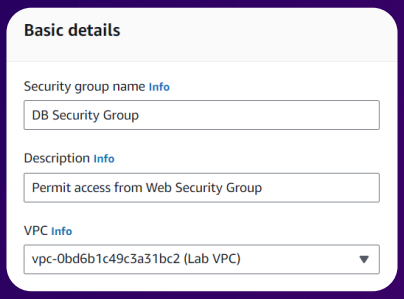
Task 1

Create a Security Group for the RDS DB Instance

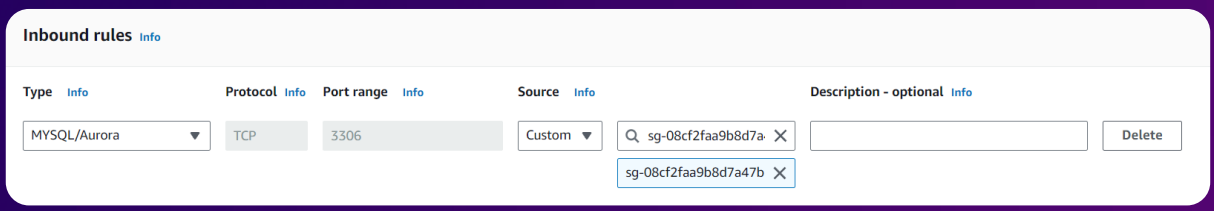
Step 3: Basic details

In the **Basic details** section, configure the DB Security Group using the following settings.



Step 4: Inbound rules

In the **Inbound rules** section, configure the DB Security Group to permit inbound traffic on port 3306 from any EC2 instance that is associated with the Web Security Group.



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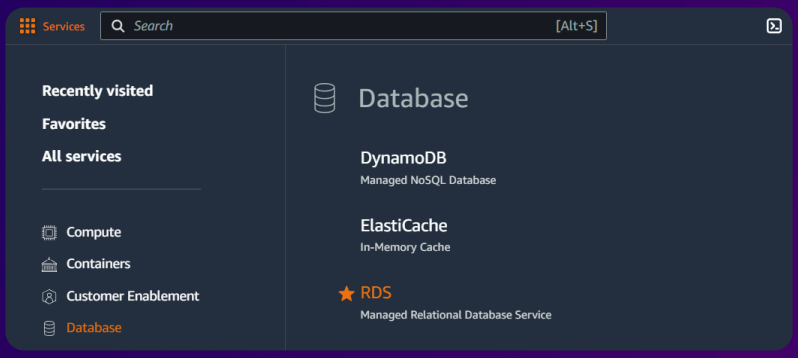
Task 2

Create a DB Subnet Group

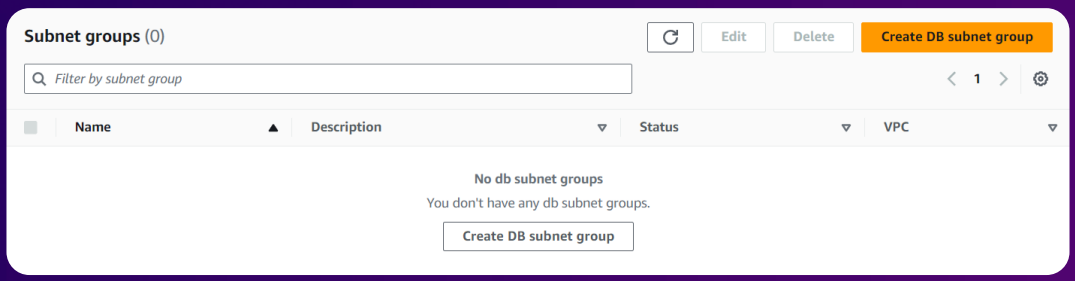
Step 1: Access the RDS database service

In the AWS Management Console, select RDS.



Step 2: Create DB subnet group

Navigate to the **Subnet groups** section, and select Create DB subnet group.



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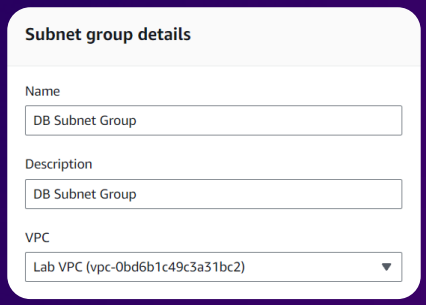
Task 2

Create a DB Subnet Group

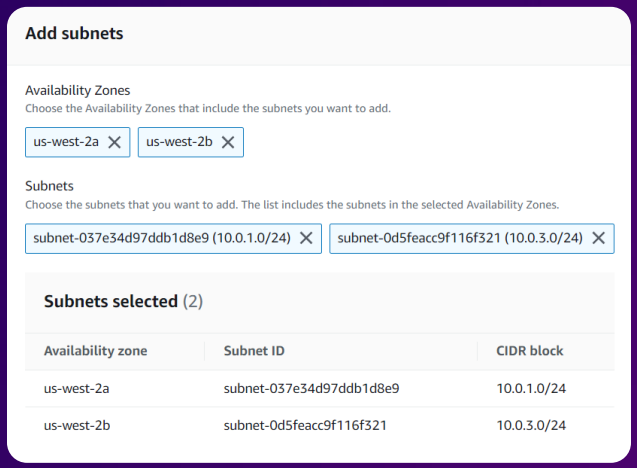
Step 3: Subnet group details

In the **Subnet group details** section, configure the DB Subnet Group using the following settings.



Step 4: Add subnets

In the **Add subnets** section, configure the following settings.



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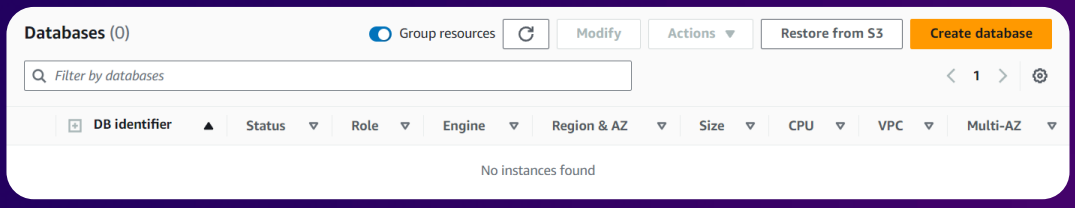
Task 3

Create an Amazon RDS DB Instance

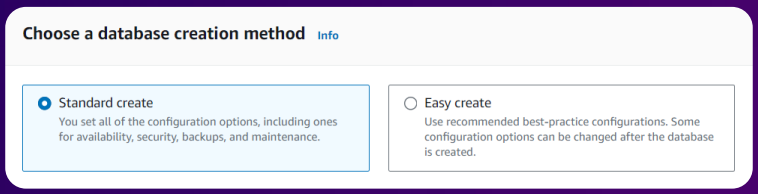
Step 1: Create database

Navigate to the **Databases** section, and select Create database.



Step 2: Choose a database creation method

In the **Choose a database creation method** section, choose Standard create.



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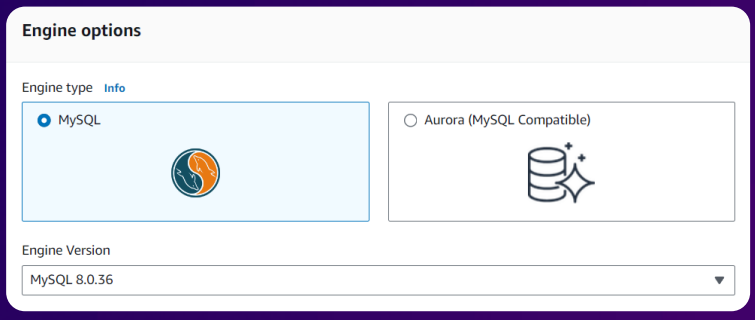
Task 3

Create an Amazon RDS DB Instance

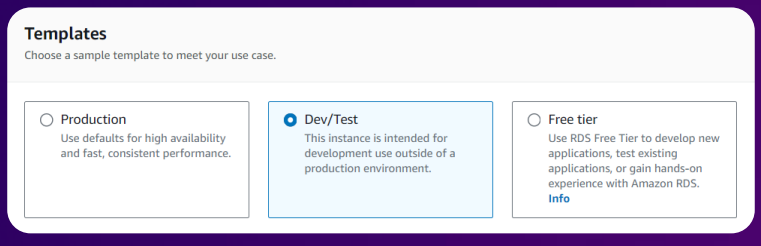
Step 3: Engine options

In the **Engine options** section, for Engine type, choose MySQL, for Engine version, choose the latest version.



Step 4: Templates

In the **Templates** section, choose Dev/Test.



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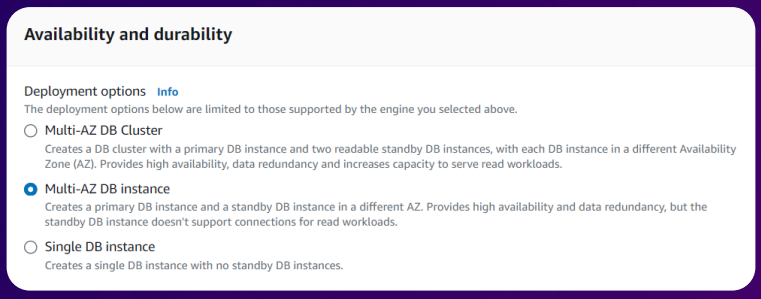
Task 3

Create an Amazon RDS DB Instance

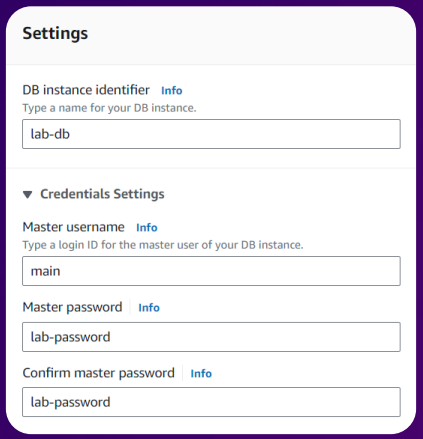
Step 5: Availability and durability

In the **Availability and durability** section, for Deployment option, choose Multi-AZ DB Instance.



Step 6: Settings

In the **Settings** section, configure the following parameters.



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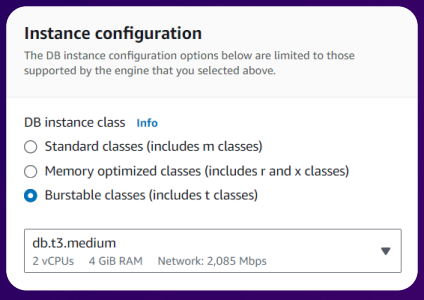
Task 3

Create an Amazon RDS DB Instance

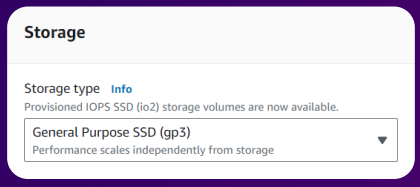
Step 7: Instance configuration

In the **Instance configuration** section, for DB instance class, configure the following settings.



Step 8: Storage

In the **Storage** section, for Storage type, select General Purpose (SSD).



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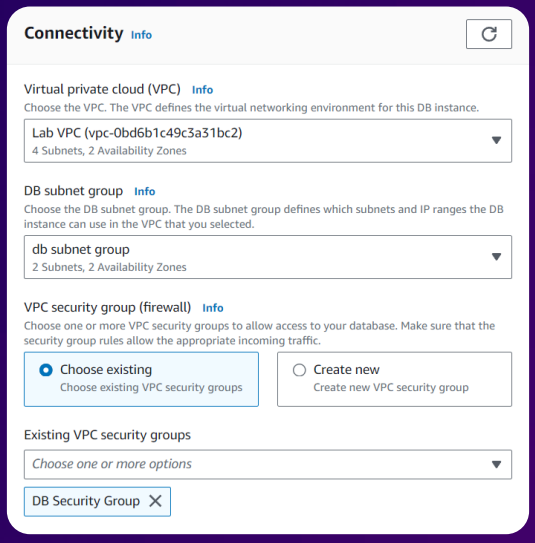
Task 3

Create an Amazon RDS DB Instance

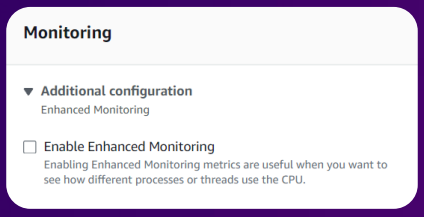
Step 9: Connectivity

In the **Connectivity** section, configure the following settings.



Step 10: Monitoring

In the **Monitoring** section, for Additional configuration, uncheck Enable Enhanced Monitoring.



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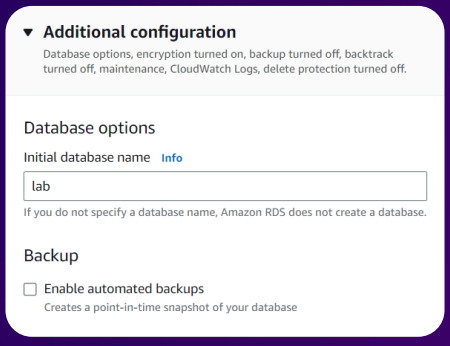
Task 3

Create an Amazon RDS DB Instance

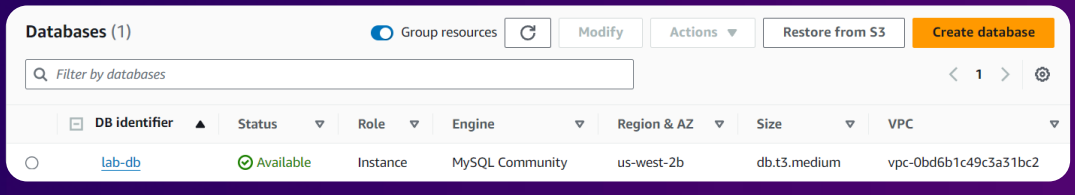
Step 11: Additional configuration

In the **Additional configuration** section, configure the following settings.



Step 12: Review database creation

Verify the availability of the lab-db database and take note of its endpoint in the **Connectivity & Security** section.



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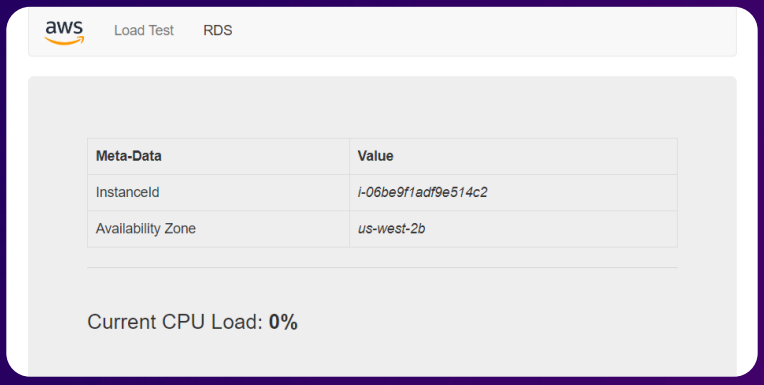
Task 4

Interact with Your Database

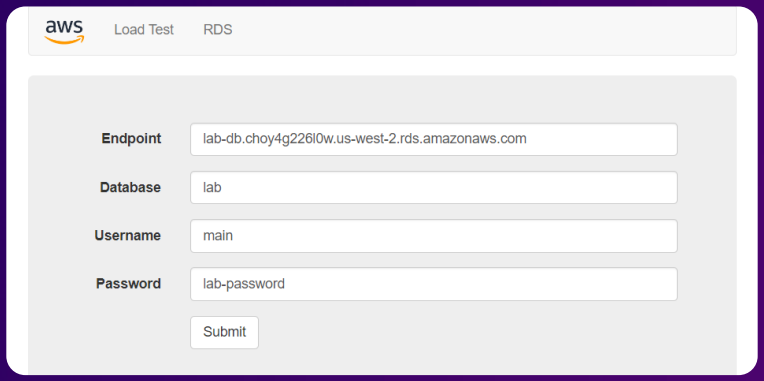
Step 1: Access the web application

Open the web application running on your web server and click the RDS link.



Step 2: Connect to the database

Configure the application to connect to your database.



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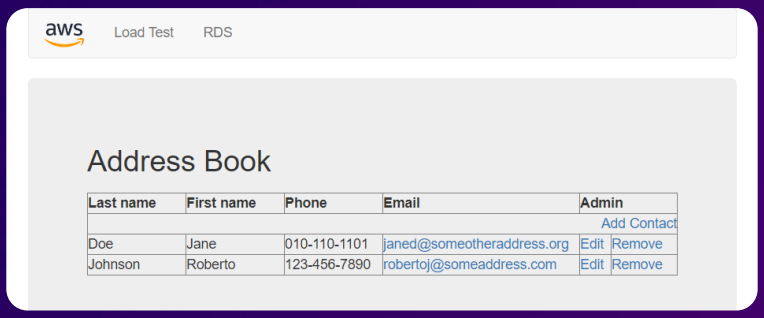
Task 4

Interact with Your Database

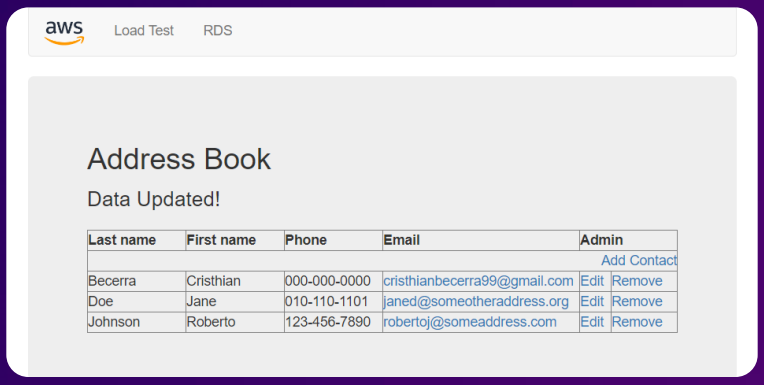
Step 3: Review the Address Book

The application will display an Address Book. The Address Book application is using the RDS database to store information.



Step 4: Test the web application

Test the web application by adding, editing and removing contacts.



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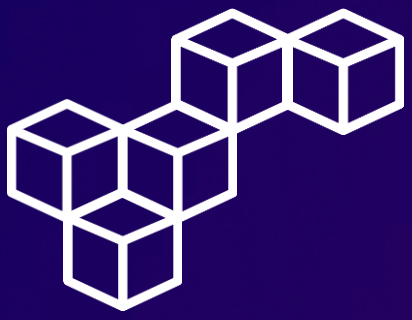

Conclusions

Amazon Relational Databases
Amazon Relational Databases offer scalable and reliable solutions for managing structured data, catering to diverse business needs.

Amazon RDS DB Instances
Amazon RDS DB Instances provide flexible configurations and high availability options, ensuring continuous access to databases.

Permitting connections to a DB instance
Permitting connections to a DB instance allows seamless communication between applications and databases, facilitating real-time data interactions.

DB Subnet Groups
DB Subnet Groups enable secure networking configurations, ensuring data privacy and compliance with regulatory requirements.

Interacting with a Database
Interacting with a database through applications or query tools enables data retrieval, updates, and analysis, empowering informed decision-making and efficient data management.

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