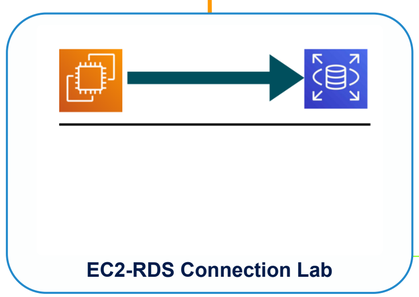

1 Introduction

1. In this lab, you will learn how to set up an Amazon RDS database and connect to it from an EC2 instance.
2. This hands-on exercise will guide you through the process of
   1. Launching both an RDS instance and an EC2 instance
   2. Configuring the necessary security settings
   3. Establishing a connection to the database from your EC2 instance using the MySQL client

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1. Step 1 — Create Security Group for EC2
   1. Name: EC2-SG
   2. Inbound Rules: SSH (Port 22)
   3. Outbound Rules (default): All Traffic (Port 0-65535) allowed
2. Step 2 — Create Security Group for RDS
   1. Name: RDS-SG
   2. Inbound Rules: MySQL/Aurora (Port 3306)
   3. Outbound Rules (default): All Traffic (Port 0-65535)
3. Step-3 — Create RDS Instance
   1. Engine: MySQL
   2. Instance Class: db.t2.micro (free tier eligible if applicable)
   3. Configure Credentials
4. Step-4 — Launch the EC2 Instance
   1. Type: t2.micro
   2. OS: Amazon Linux 2023
   3. Public IP Assign: Yes
5. Step-5 — Connect EC2 to RDS
   1. Access EC2 Instance using SSH
   2. Install Mysql client
      1. `sudo dnf update -y`
      2. `sudo dnf install mariadb105`
   3. Access DB: `mysql -h endpoint -P 3306 -u admin -p`
6. Step-6 — Database Management
   1. Create a Database: `CREATE DATABASE SampleDB;`
   2. Select the Database: `USE SampleDB;`
   3. Create a Sample Table:
      ```
      CREATE TABLE employees (
        id INT NOT NULL AUTO_INCREMENT,
        name VARCHAR(100) NOT NULL,
        position VARCHAR(100),
        PRIMARY KEY (id)
      );
      ```
   4. Insert Sample Data into the Table:
      ```
      INSERT INTO employees (name, position) VALUES ('John Doe', 'Software Engineer');
      INSERT INTO employees (name, position) VALUES ('Jane Smith', 'Project Manager');
      ```
   5. Verify Insertion: `SELECT * FROM employees;`