**Lesson 06 Lesson-End Project**

**Deploying MySQL RDS Using AWS**

**Project agenda:** To create and configure an RDS instance

**Description:** You must create an RDS database and deploy a Linux instance by creating it in EC2 and connecting an SSH client through EC2.

**Tools required:** AWS Management Console

**Prerequisites:** AWS account with CloudShell installed

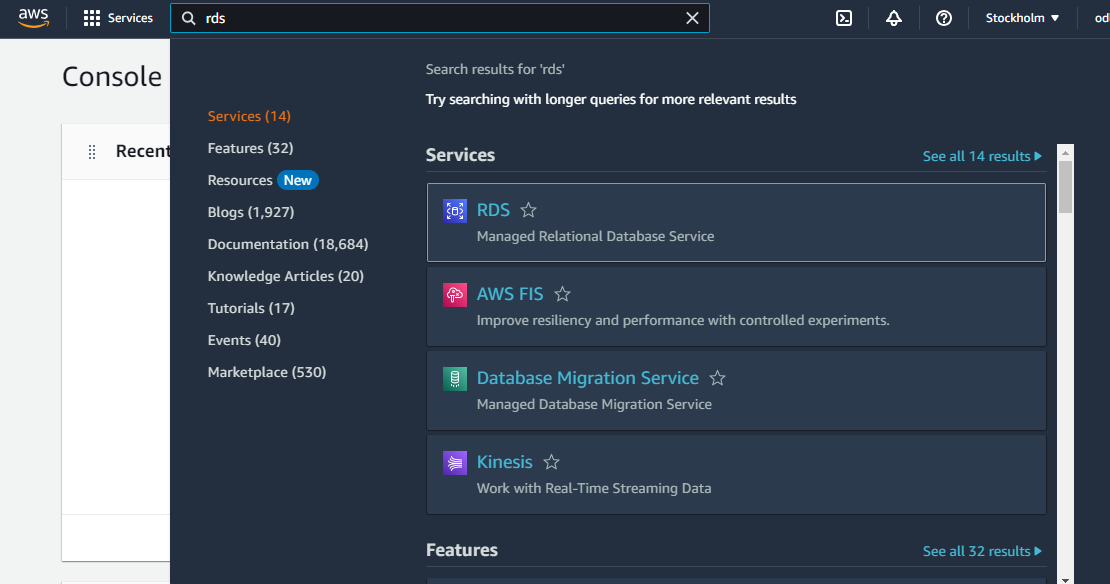
**Expected deliverables:** RDS database with SSH client

Steps to be followed:

1. Create an RDS database
2. Launch an EC2 instance
3. Create security groups
4. Connect the terminal to SSH

**Step 1: Create an RDS instance**

1. In the AWS Management Console, search for and select **RDS**

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1. Click on **Create database**

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1. Choose **Standard create** and select **MySQL**

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1. Select the **MySQL 8.0.31** option and choose the **Free tier** box

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1. Select **us-east-1a** as the **Availability Zone**

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1. Click on **Create database**

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You must wait a few minutes to complete the database.

1. Once the database is successfully created, access the database details by clicking on it

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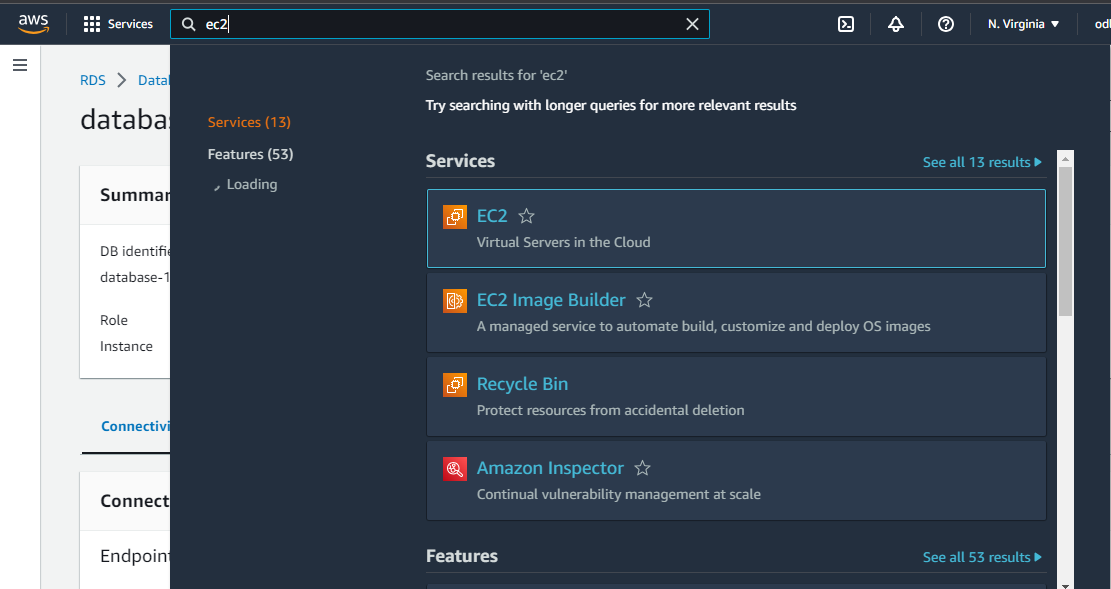
1. After the creation of the database, take note of the **Endpoint**

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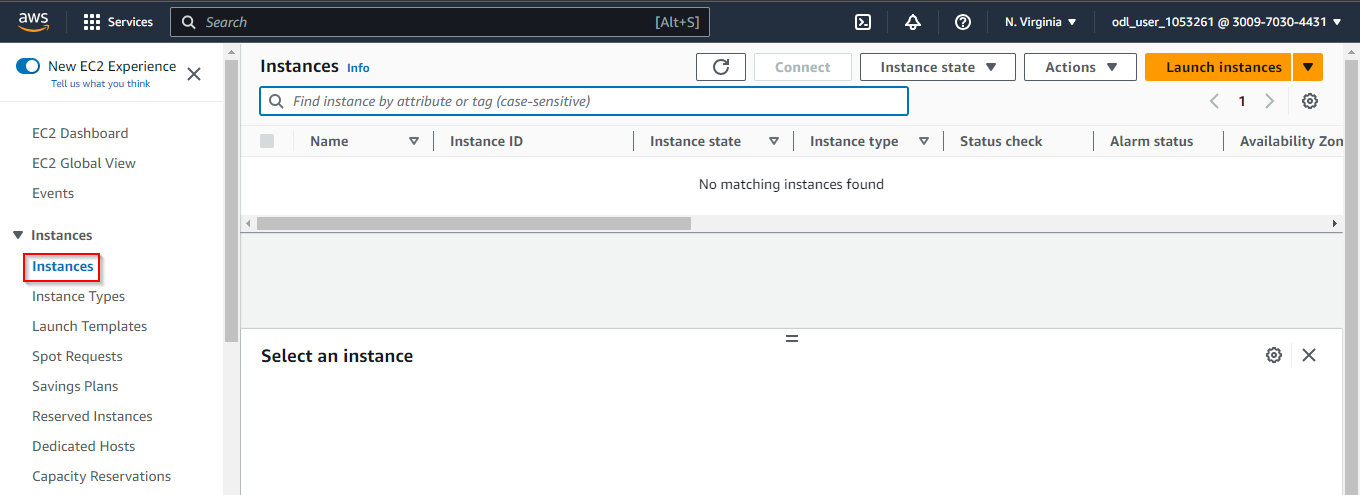
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**Step 2: Launch an EC2 instance**

1. Navigate to the AWS Management Console, click on **EC2**



1. Click on **Instances** and select **Launch instances**

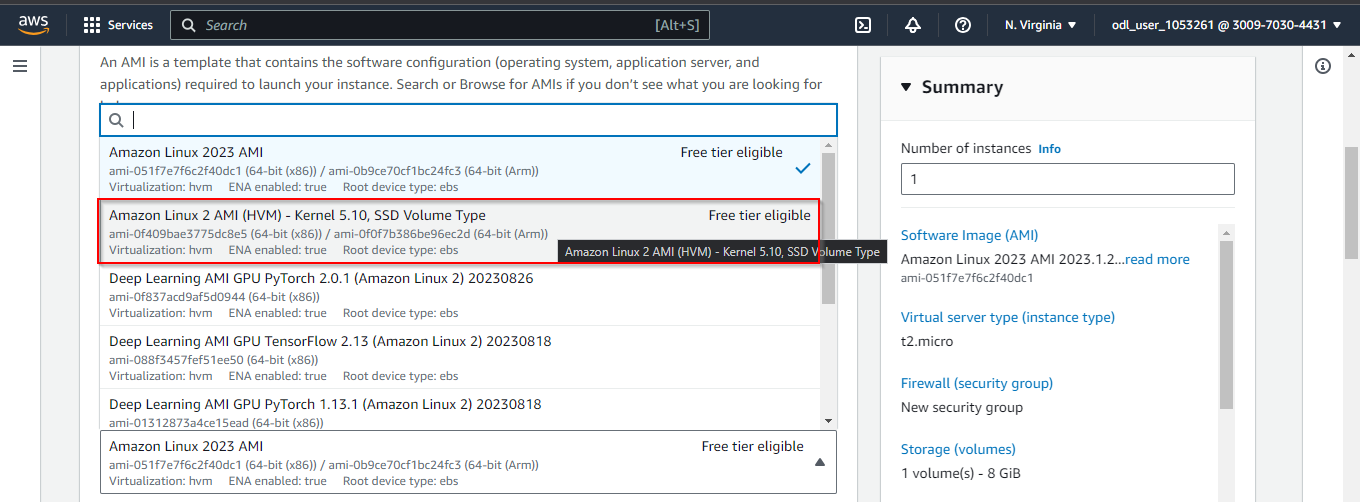


1. Provide an instance name and choose the **Amazon Linux** option

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1. Select the **Amazon Machine Image (AMI)** with kernel version 5.10



1. Choose the **t2.micro** instance type

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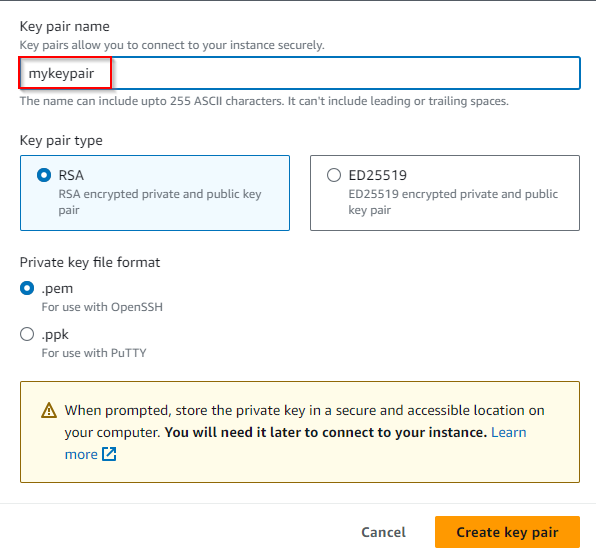
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1. Click on **Create new key pair**

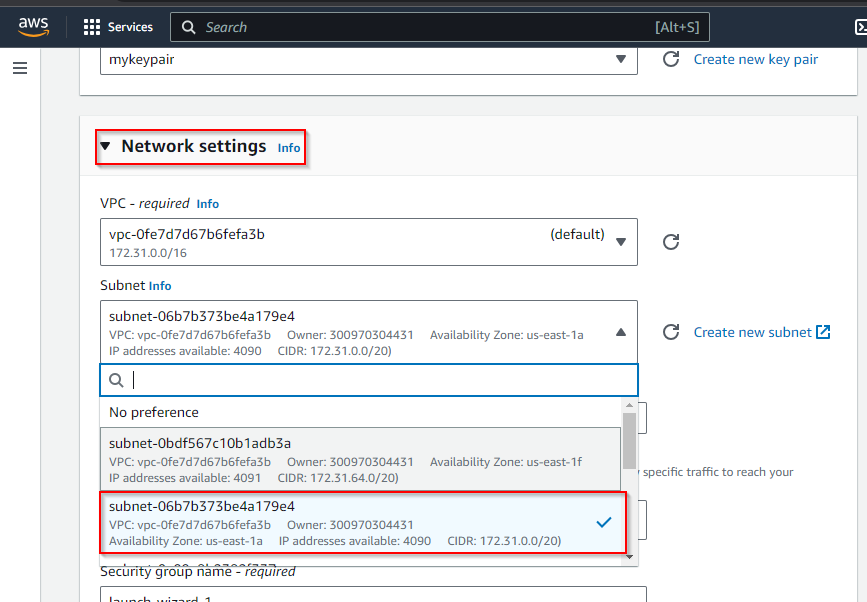
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1. Enter the **Key pair name** as **mykeypair** andclick on **Create key pair**



1. In the **Network settings**, select **us-east-1a** as the Subnet



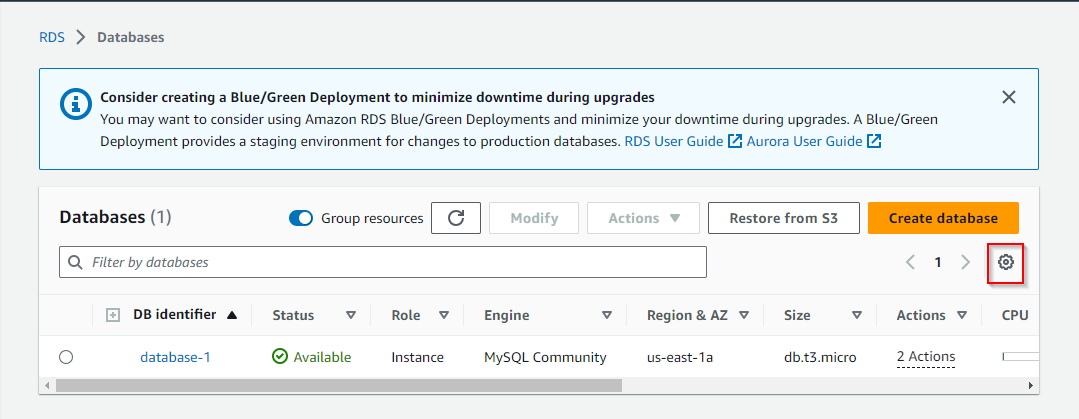
1. Click on **Launch instance**

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**Step 3: Create security groups**

1. Navigate to **RDS Databases** and access the settings **icon**



1. Change the resources per page to **20**

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1. Enable **Security groups** and click on **Continue**

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1. Click on the default security group and navigate to **Inbound rules**

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1. Click on **Edit inbound** **rules**

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1. **Delete** the default inbound rules and save the changes

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1. Now, click on **Add rule**

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1. Search and select **MYSQL/Aurora** and click on **Save rules**

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1. Select Source as **Anywhere IPv4** andclick on **Save rules**

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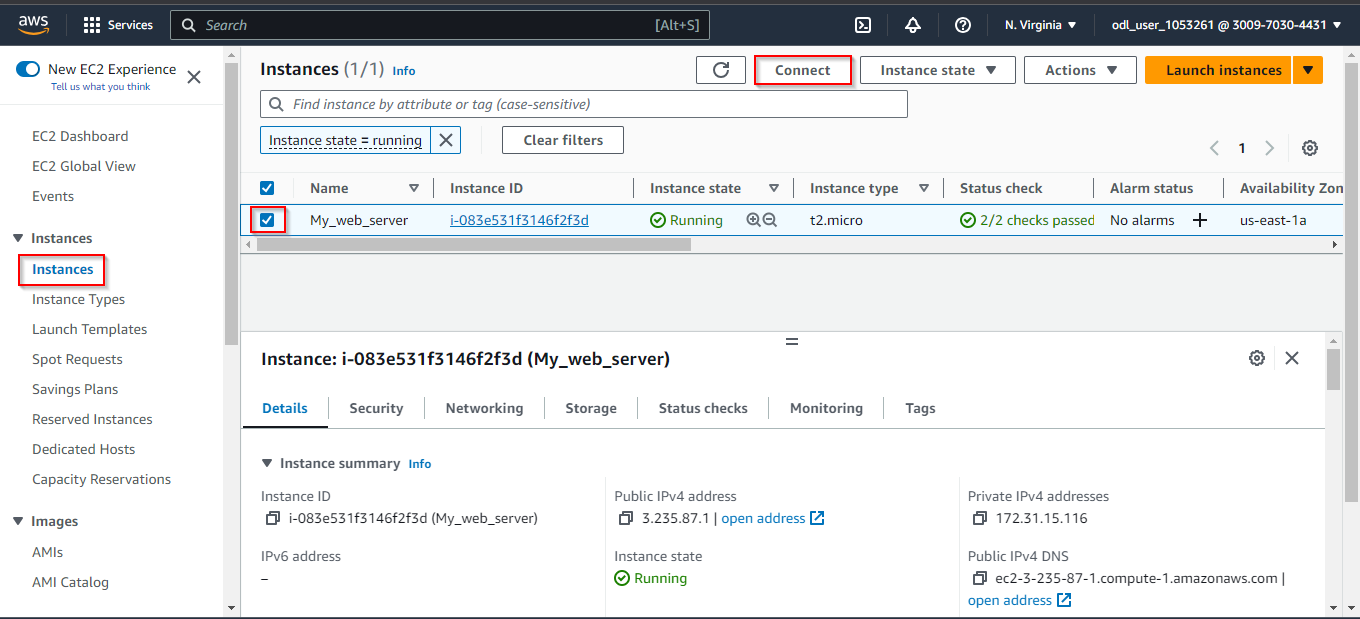
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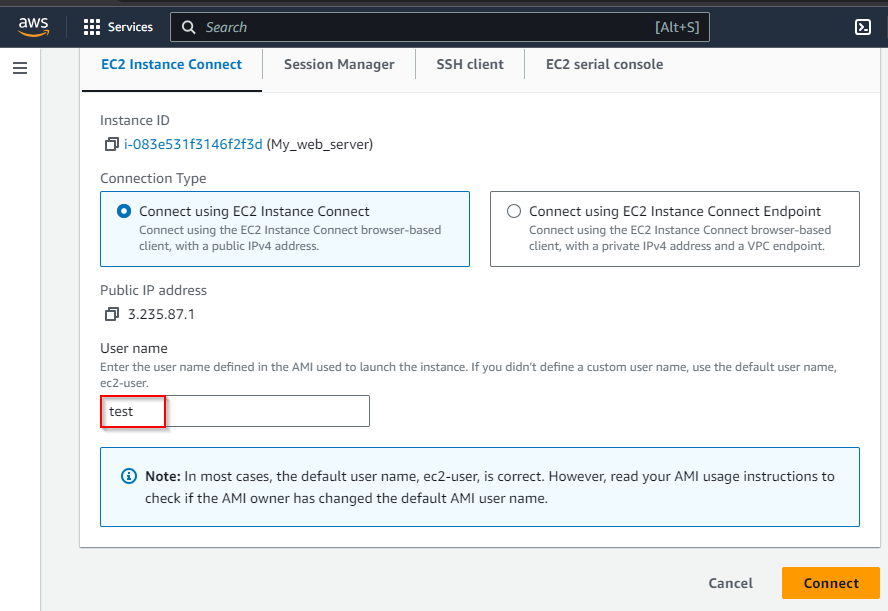
Inbound Security groups are created successfully.

**Step 4: Connect the terminal to SSH**

1. Navigate to **EC2** in the console, select **Instance,** and click **Connect**



1. Enter the username as **test** and click **Connect**



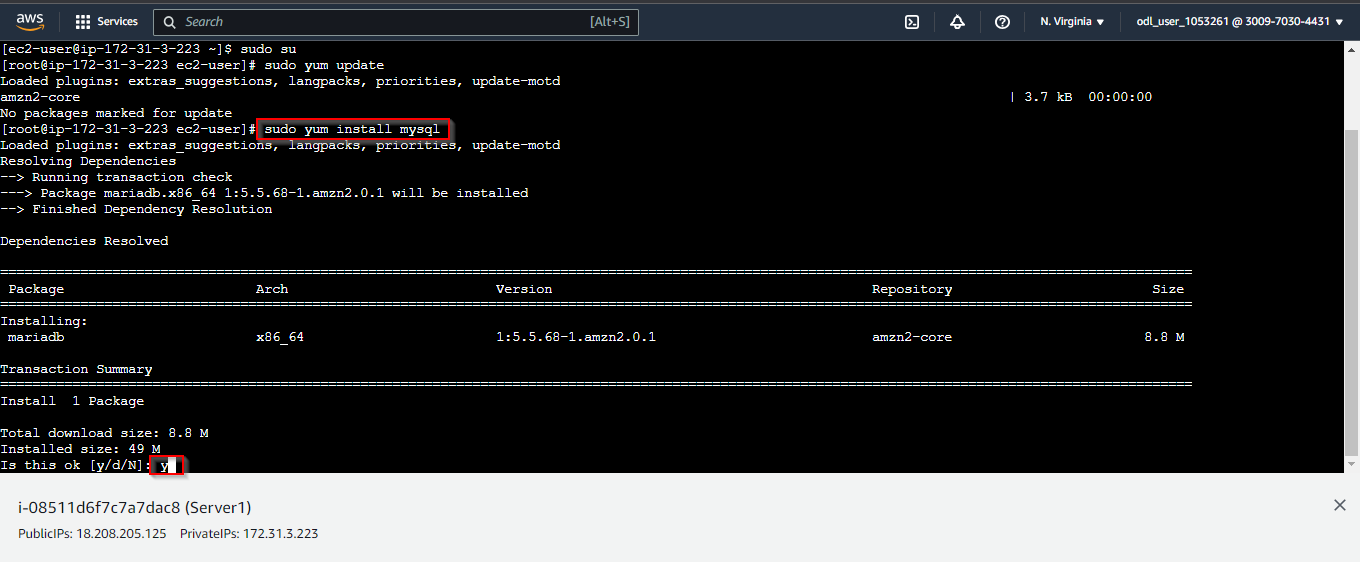
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1. Enter the command below to install MySQLand type **y** to install:

**sudo su**

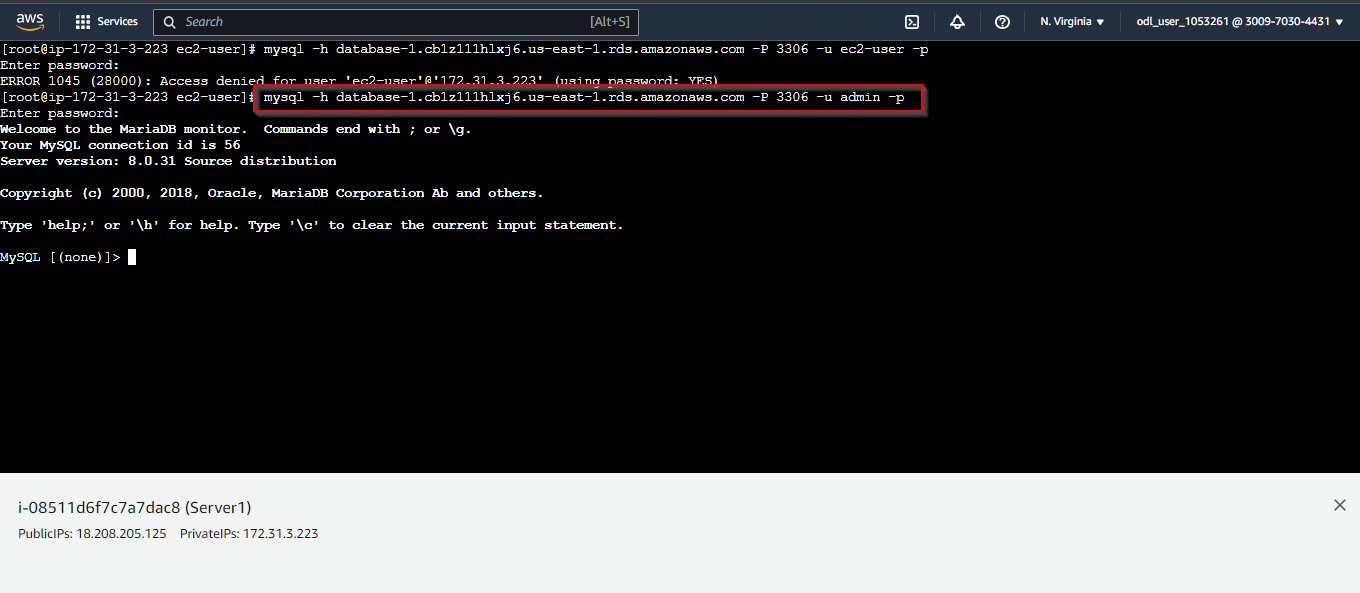
**sudo yum install mysql**



1. Use the command below to connect to the MySQL server (replace placeholders with actual values):

**mysql -h <YOUR RDS instance endpoint> -P 3306 -u <USERNAME of your RDS Instance> -p**

**ex: mysql -h database-1.cb1z111hlxj6.us-east-1.rds.amazonaws.com -P 3306 -u admin -p**



The MySQL database has been accessed successfully.

By following these steps, you have successfully set up a database, launched an EC2 instance, configured security groups, and established an SSH terminal connection.