



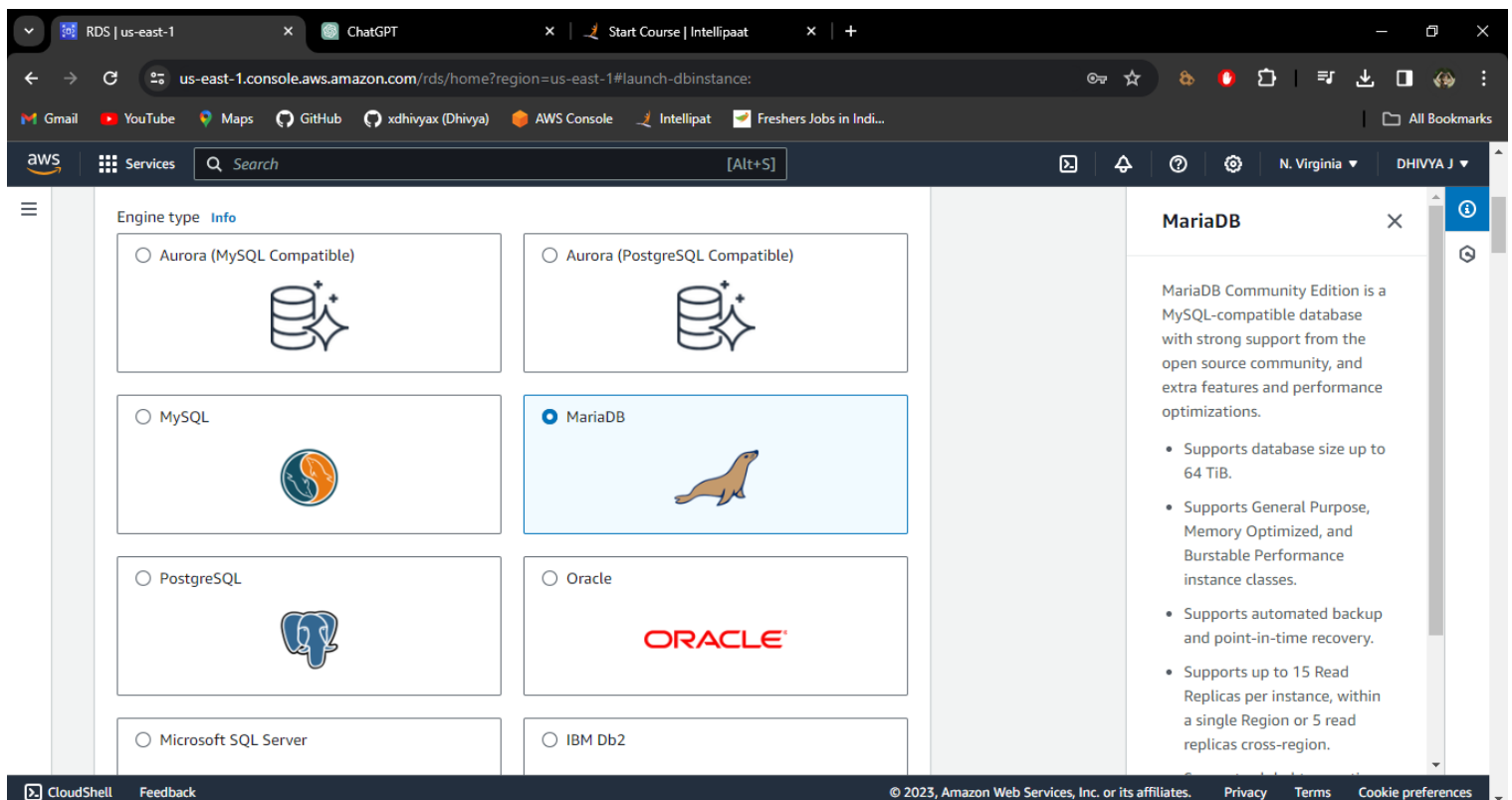
## **Module 7: Maria DB Assignment**

## Problem Statement:

You work for XYZ Corporation. Their application requires a SQL service that can store data which can be retrieved if required. Implement a suitable RDS engine for the same.

## While migrating, you are asked to perform the following tasks:

1. Create a MariaDB Engine based RDS Database.
2. Connect to the DB using the following ways:
  - a. SQL Client for Windows
  - b. Linux based EC2 Instance



us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#databases:

Amazon RDS

Databases (1) Group resources Modify Actions Restore from S3 Create database

Filter by databases

| DB identifier                | Status    | Role     | Engine  | Region & AZ | Size        | Recommendations |
|------------------------------|-----------|----------|---------|-------------|-------------|-----------------|
| <a href="#">mariadb-demo</a> | Available | Instance | MariaDB | us-east-1d  | db.t2.micro |                 |

CloudShell Feedback

© 2023, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Search our full catalog including 1000s of application and OS images

Recents Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat SUSE Linux

Amazon Machine Image (AMI)

Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type  
ami-00b8917ae86a424c9 (64-bit (x86)) / ami-048d7f5ca8e2edd06 (64-bit (Arm))  
Virtualization: hvm ENA enabled: true Root device type: ebs

Description

Amazon Linux 2 Kernel 5.10 AMI 2.0.20231218.0 x86\_64 HVM gp2

Architecture AMI ID

Summary

Number of instances 1

Software Image (AMI)  
Amazon Linux 2 Kernel 5.10 AMI...read more  
ami-00b8917ae86a424c9

Virtual server type (instance type)  
t2.micro

Firewall (security group)  
New security group

Storage (volumes)  
1 volume(s) - 8 GiB

Cancel Launch instance

Review commands

CloudShell Feedback

© 2023, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceId=i-07825fd76c0290b88

Instances (1) Info

Find Instance by attribute or tag (case-sensitive)

Instance ID = i-07825fd76c0290b88

| Name         | Instance ID         | Instance state | Instance type | Status check | Alarm status | Availability |
|--------------|---------------------|----------------|---------------|--------------|--------------|--------------|
| Demo-mariadb | i-07825fd76c0290b88 | Running        | t2.micro      | Initializing | No alarms    | us-east-1b   |

Select an instance

CloudShell Feedback

© 2023, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

```
ec2-user@ip-172-31-84-144:~$ login as: ec2-user
Authenticating with public key "windowskeypair"
#
##### Amazon Linux 2
#####
##### AL2 End of Life is 2025-06-30.
#####
##### A newer version of Amazon Linux is available!
#####
##### Amazon Linux 2023, GA and supported until 2028-03-15.
##### https://aws.amazon.com/linux/amazon-linux-2023/
[ec2-user@ip-172-31-84-144 ~]$
```

us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#database:id=mariadb-demo;is-cluster=false;tab=connectivity

Amazon RDS

Dashboard

Databases

Query Editor

Performance insights

Snapshots

Exports in Amazon S3

Automated backups

Reserved instances

Proxies

Subnet groups

Parameter groups

Option groups

Custom engine versions

Zero-ETL integrations [New](#)

Connections

Connectivity & security | Monitoring | Logs & events | Configuration | Maintenance & backups | Tags | R

### Connectivity & security

|   |  |  |
|---|--|--|
| <b>Endpoint &amp; port</b><br>Endpoint<br>mariadb-demo.cakvj97ke5vr.us-east-1.rds.amazonaws.com<br>Port<br>3306 | <b>Networking</b><br>Availability Zone<br>us-east-1d<br>VPC<br>vpc-0e1d54cef9823402c<br>Subnet group<br>default-vpc-0e1d54cef9823402c<br>Subnets | <b>Security</b><br>VPC security groups<br>mariadb-sg (sg-07b0dfb45b651c12c)<br>Active<br>Publicly accessible<br>Yes<br>Certificate authority <a href="#">Info</a><br>rds-ca-2019 |
|---|--|--|

CloudShell Feedback

© 2023, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

```
root@ip-172-31-84-144:/home/ec2-user
[root@ip-172-31-84-144 ec2-user]# mysql -h mariadb-demo.cakvj97ke5vr.us-east-1.rds.amazonaws.com -P 3306 -u mariadb -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 34
Server version: 10.6.14-MariaDB-log managed by https://aws.amazon.com/rds/

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]>
```

```

root@ip-172-31-84-144:/home/ec2-user
[root@ip-172-31-84-144 ec2-user]# mysql -h mariadb-demo.cakvj97ke5vr.us-east-1.rds.amazonaws.com -P 3306 -u mariadb -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 34
Server version: 10.6.14-MariaDB-log managed by https://aws.amazon.com/rds/

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> CREATE Database Books;
Query OK, 1 row affected (0.00 sec)

MariaDB [(none)]> SHOW DATABASES;
+-----+
| Database |
+-----+
| Books    |
| information_schema |
| innodb   |
| mysql    |
| performance_schema |
| sys      |
+-----+
6 rows in set (0.00 sec)

MariaDB [(none)]> Use Books;
Database changed
MariaDB [Books]>

```

```


root@ip-172-31-84-144:/home/ec2-user
+-----+
| innodb   |
| mysql    |
| performance_schema |
| sys      |
+-----+
6 rows in set (0.00 sec)

MariaDB [(none)]> Use Books;
Database changed
MariaDB [Books]> CREATE TABLE IF NOT EXISTS Books (
->   book_id INT AUTO_INCREMENT,
->   title VARCHAR(50) NOT NULL,
->   author VARCHAR(50),
->   publish_date DATE,
->   description VARCHAR(100),
->   PRIMARY KEY (book_id)
-> );
Query OK, 0 rows affected (0.01 sec)

MariaDB [Books]> clear
MariaDB [Books]> INSERT INTO Books(title,author) VALUES
->   ('Learn from AWS', 'John Smith'),
->   ('MY SQL book', 'John Mary'),
->   ('Dummies for Oracle', 'Robin Smith');
Query OK, 3 rows affected (0.00 sec)
Records: 3  Duplicates: 0  Warnings: 0

MariaDB [Books]>
MariaDB [Books]>
MariaDB [Books]>
MariaDB [Books]>
MariaDB [Books]>
MariaDB [Books]> Select * from Books;
+-----+-----+-----+-----+-----+
| book_id | title          | author    | publish_date | description |
+-----+-----+-----+-----+-----+
| 1       | Learn from AWS | John Smith | NULL         | NULL        |
| 2       | MY SQL book    | John Mary | NULL         | NULL        |
| 3       | Dummies for Oracle | Robin Smith | NULL         | NULL        |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

```

 Setup New Connection — □ ×

Connection Name:  Type a name for the connection

Connection Method:  Method to use to connect to the RDBMS

Parameters ☒ SSL ☐ Advanced

Hostname:  Port:  Name or IP address of the server host - and TCP/IP port.

Username:  Name of the user to connect with.

Password:   The user's password. Will be requested later if it's not set.

Default Schema:  The schema to use as default schema. Leave blank to select it later.

## MySQL Workbench



### Successfully made the MySQL connection

#### Information related to this connection:

Host:

mariadb-demo.cakvj97ke5vr.us-east-1.rds.amazonaws.c...

Port: 3306

User: mariadb

SSL: enabled with TLS\_AES\_256\_GCM\_SHA384

A successful MySQL connection was made with the parameters defined for this connection.

MySQL Workbench

mariadb connection - Warning...

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

Books

Tables

Columns

Indexes

Foreign Keys

Triggers

Views

Stored Procedures

Functions

innodb

sys

Administration Schemas

Information

Table: Books

Columns:

book\_id int(11) AI PK

title varchar(50)

author varchar(50)

publish\_date date

description varchar(10)

Query 1 Administration - Users and Privil... Books

Limit to 1000 rows

1 • SELECT \* FROM Books.Books;

Result Grid

| book_id | title              | author      | publish_date | description |
|---------|--------------------|-------------|--------------|-------------|
| 1       | Learn from AWS     | John Smith  | NULL         | NULL        |
| 2       | MY SQL book        | John Mary   | NULL         | NULL        |
| 3       | Dummies for Oracle | Robin Smith | NULL         | NULL        |

Result Grid

Form Editor

Books 1 x Apply Revert Context Help Snippets

Output

Action Output

| # | Time     | Action                                  | Message           | Duration / Fetch      |
|---|----------|---|-------------------|-----------------------|
| 1 | 15:10:47 | SELECT * FROM Books.Books LIMIT 0, 1000 | 3 row(s) returned | 0.578 sec / 0.000 sec |

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.