

1. Create MariaDB DB on EC2.

Sudo -i

dnf install mariadb105-server -y

systemctl start mariadb

systemctl enable mariadb

```
[root@ip-172-31-23-167 ~]# systemctl start mariadb
[root@ip-172-31-23-167 ~]# systemctl enable mariadb
Created symlink /etc/systemd/system/mysql.service → /usr/lib/systemd/system/mariadb.service.
Created symlink /etc/systemd/system/mysqld.service → /usr/lib/systemd/system/mariadb.service.
Created symlink /etc/systemd/system/multi-user.target.wants/mariadb.service → /usr/lib/systemd/system/mariadb.service.
```

2. Insert some dummy data.

Add environment variables:

DBName=ec2db

DBPassword=admin123456

DBRootPassword=admin123456

DBUser=ec2dbuser

Database Setup on EC2 Instance:

=====

```
echo "CREATE DATABASE ${DBName};" >> /tmp/db.setup
```

```
echo "CREATE USER '${DBUser}' IDENTIFIED BY '${DBPassword}';" >> /tmp/db.setup
```

```
echo "GRANT ALL PRIVILEGES ON *.* TO '${DBUser}'@'%';" >> /tmp/db.setup
```

```
echo "FLUSH PRIVILEGES;" >> /tmp/db.setup
```

```
mysqladmin -u root password "${DBRootPassword}"
```

```
mysql -u root --password="${DBRootPassword}" < /tmp/db.setup
```

```
rm /tmp/db.setup
```

Adding some dummy data to the Database inside EC2 Instance:

=====

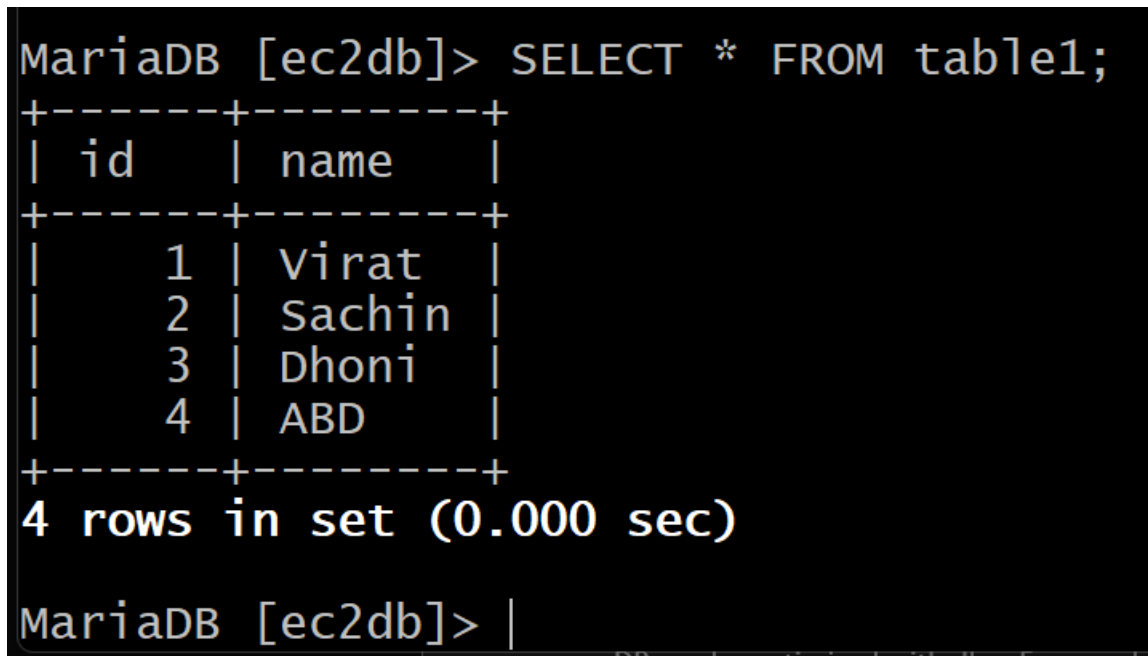
```
mysql -u root --password="${DBRootPassword}"
```

```
USE ec2db;
```

```
CREATE TABLE table1 (id INT, name VARCHAR(45));
```

```
INSERT INTO table1 VALUES(1, 'Virat'), (2, 'Sachin'), (3, 'Dhoni'), (4, 'ABD');
```

```
SELECT * FROM table1;
```



The screenshot shows a terminal window with a black background and yellow text. The prompt is 'MariaDB [ec2db]>'. The command entered is 'SELECT * FROM table1;'. The output is a table with two columns: 'id' and 'name'. The data rows are: (1, 'Virat'), (2, 'Sachin'), (3, 'Dhoni'), and (4, 'ABD'). Below the table, it says '4 rows in set (0.000 sec)'. The prompt 'MariaDB [ec2db]> |' is visible at the bottom.

```
MariaDB [ec2db]> SELECT * FROM table1;
+-----+-----+
| id    | name  |
+-----+-----+
| 1     | Virat |
| 2     | Sachin |
| 3     | Dhoni |
| 4     | ABD   |
+-----+-----+
4 rows in set (0.000 sec)

MariaDB [ec2db]> |
```

3. Take the backup of dummy data on EC2.

Execute the command on ec2 to get the backup of dummy data from the mariadb database and store it into a file:

```

[root@ip-172-31-19-114 ~]# mysqldump -u root -p ec2db > file_name.sql
Enter password:
[root@ip-172-31-19-114 ~]# cat file_name.sql
/*!999999\ - enable the sandbox mode */
-- MariaDB dump 10.19  Distrib 10.5.29-MariaDB, for Linux (x86_64)
--
-- Host: localhost      Database: ec2db
--
-- Server version      10.5.29-MariaDB

/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!40101 SET NAMES utf8mb4 */;
/*!40103 SET @OLD_TIME_ZONE=@@TIME_ZONE */;
/*!40103 SET TIME_ZONE='+00:00' */;
/*!40014 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
/*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0

/*!40101 SET @OLD_SQL_MODE=@@SQL_MODE, SQL_MODE='NO_AUTO_VALUE_ON_ZERO' */;
/*!40111 SET @OLD_SQL_NOTES=@@SQL_NOTES, SQL_NOTES=0 */;

--
-- Table structure for table `table1`
--

DROP TABLE IF EXISTS `table1`;
/*!40101 SET @saved_cs_client      = @@character_set_client */;
/*!40101 SET character_set_client = utf8mb4 */;
CREATE TABLE `table1` (
  `id` int(11) DEFAULT NULL,
  `name` varchar(45) DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `table1`
--

LOCK TABLES `table1` WRITE;
/*!40000 ALTER TABLE `table1` DISABLE KEYS */;
INSERT INTO `table1` VALUES (1,'Virat'),(2,'Sachin'),(3,'Dhoni'),(4,'ABD');

```

4. Launch MariaDB RDS instance.

Goto RDS and click on Create Database:

Aurora and RDS > Dashboard

Aurora and 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
- Events
- Event subscriptions

Resources

You are using the following Amazon RDS resources in the US East (N. Virginia) region (used/quota)

- DB Instances (0/40)
 - Allocated storage (0 TB/100 TB)
 - Instances and storage include Neptune and DocumentDB.
 - [Increase DB instances limit](#)
- DB Clusters (0/40)
 - Reserved Instances (0/40)
 - Snapshots (0)
 - Manual
 - DB Cluster (0/100)
 - DB Instance (0/100)
 - Automated
 - DB Cluster (0)
 - DB Instance (0)
 - Recent events (0)
 - Event subscriptions (0/20)
- Parameter groups (0)
 - Default (0)
 - Custom (0/100)
- Option groups (0)
 - Default (0)
 - Custom (0/20)
- Subnet groups (0/50)
- Supported platforms [VPC](#)
- Default network vpc-038d9ffa8289cfafc

Create a database

Amazon Relational Database Service (RDS) makes it easy to set up, operate, and scale a relational database in the cloud.

You can use a backup from Amazon S3 to restore and create a new Aurora MySQL and MySQL database.

[Create a database](#) [Restore from S3](#)

Explore Aurora & RDS

In this activity, you will learn how to create a database. To begin, choose **Start tutorial**.

Estimated duration
2-5 minutes

[Start tutorial](#)

Recommended services

Customers like you also use these services.

- [AWS App Mesh](#)
Easily monitor and control microservices
- [EFS](#)
Managed File Storage for EC2
- [AWS Firewall Manager](#)
Central management of firewall rules
- [AWS Well-Architected Tool](#)
Use AWS Well-Architected Tool to learn best practices, measure, and improve your workloads

Recommended for you

Select MariaDB:

Aurora and RDS > Databases > Create database

Choose a database creation method

- ☒ **Standard create**
You set all of the configuration options, including ones for availability, security, backups, and maintenance.
- ☐ **Easy create**
Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

Engine options

Engine type [Info](#)

- ☐ Aurora (MySQL Compatible)
- ☐ Aurora (PostgreSQL Compatible)
- ☐ MySQL
- ☐ PostgreSQL
- ☒ **MariaDB**
- ☐ Oracle
- ☐ Microsoft SQL Server
- ☐ IBM Db2

IBM Db2

Select 'Template' as 'Free tier':

Templates

Choose a sample template to meet your use case.

- ☐ **Production**
Use defaults for high availability and fast, consistent performance.
- ☐ **Dev/Test**
This instance is intended for development use outside of a production environment.
- ☒ **Free tier**
Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS. [Info](#)

Give the DB instance identifier means Name to the rds:

Settings

DB instance identifier [Info](#)

Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 63 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

Give the Credentials: Self managed

▼ **Credentials Settings**

Master username [Info](#)
Type a login ID for the master user of your DB instance.

admin

1 to 16 alphanumeric characters. The first character must be a letter.






Credentials management
You can use AWS Secrets Manager or manage your master user credentials.

☐ **Managed in AWS Secrets Manager - *most secure***
RDS generates a password for you and manages it throughout its lifecycle using AWS Secrets Manager.

☒ **Self managed**
Create your own password or have RDS create a password that you manage.

☐ **Auto generate password**
Amazon RDS can generate a password for you, or you can specify your own password.

Master password [Info](#)

Password strength **Very weak**     

Minimum constraints: At least 8 printable ASCII characters. Can't contain any of the following symbols: / ' * @

Confirm master password [Info](#)

Select the DB instance class:

Instance configuration
The DB instance configuration options below are limited to those supported by the engine that you selected above.

DB instance class [Info](#)

▼ **Hide filters**

☒ **Show instance classes that support Amazon RDS Optimized Writes** [Info](#)
Amazon RDS Optimized Writes improves write throughput by up to 2x at no additional cost.

☐ **Include previous generation classes**

☐ Standard classes (includes m classes)

☐ Memory optimized classes (includes r and x classes)

☒ **Burstable classes (includes t classes)**

db.t3.micro
2 vCPUs 1 GiB RAM Network: Up to 2,085 Mbps ▼

Give the storage type, and size and Disable storage autoscaling (for this task):

Storage

Storage type [Info](#)

Provisioned IOPS SSD (io2) storage volumes are now available.

General Purpose SSD (gp2)

Baseline performance determined by volume size

Allocated storage [Info](#)

20

GiB

Allocated storage value must be 20 GiB to 6,144 GiB

▼ Additional storage configuration

Storage autoscaling [Info](#)

Provides dynamic scaling support for your database's storage based on your application's needs.

☐ Enable storage autoscaling

Enabling this feature will allow the storage to increase after the specified threshold is exceeded.

Availability & durability

Multi-AZ deployment [Info](#)

☒ Create a standby instance (recommended for production usage)

Creates a standby in a different Availability Zone (AZ) to provide data redundancy, eliminate I/O freezes, and minimize latency spikes during system backups.

☐ Do not create a standby instance

Select 'don't connect to ec2 instance', and select vpc, DB subnet group:

Connectivity [Info](#)

Compute resource

Choose whether to set up a connection to a compute resource for this database. Setting up a connection will automatically change connectivity settings so that the compute resource can connect to this database.

☒ Don't connect to an EC2 compute resource

Don't set up a connection to a compute resource for this database. You can manually set up a connection to a compute resource later.

☐ Connect to an EC2 compute resource

Set up a connection to an EC2 compute resource for this database.

Network type [Info](#)

To use dual-stack mode, make sure that you associate an IPv6 CIDR block with a subnet in the VPC you specify.

☒ IPv4

Your resources can communicate only over the IPv4 addressing protocol.

☐ Dual-stack mode

Your resources can communicate over IPv4, IPv6, or both.

Virtual private cloud (VPC) [Info](#)

Choose the VPC. The VPC defines the virtual networking environment for this DB instance.

Default VPC (vpc-038d9ffa8289cfa6c)

6 Subnets, 6 Availability Zones

Only VPCs with a corresponding DB subnet group are listed.

ⓘ After a database is created, you can't change its VPC.

DB subnet group [Info](#)

Choose the DB subnet group. The DB subnet group defines which subnets and IP ranges the DB instance can use in the VPC that you selected.

default

Select 'No public access', vpc security group, availability zone,

Public access [Info](#)

☐ Yes
RDS assigns a public IP address to the database. Amazon EC2 instances and other resources outside of the VPC can connect to your database. Resources inside the VPC can also connect to the database. Choose one or more VPC security groups that specify which resources can connect to the database.

☒ No
RDS doesn't assign a public IP address to the database. Only Amazon EC2 instances and other resources inside the VPC can connect to your database. Choose one or more VPC security groups that specify which resources can connect to the database.

VPC security group (firewall) [Info](#)
Choose one or more VPC security groups to allow access to your database. Make sure that the security group rules allow the appropriate incoming traffic.

☒ Choose existing
Choose existing VPC security groups

☐ Create new
Create new VPC security group

Existing VPC security groups

Choose one or more options

default X

Availability Zone [Info](#)

us-east-1a

RDS Proxy
RDS Proxy is a fully managed, highly available database proxy that improves application scalability, resiliency, and security.

☐ Create an RDS Proxy [Info](#)
RDS automatically creates an IAM role and a Secrets Manager secret for the proxy. RDS Proxy has additional costs. For more information, see [Amazon RDS Proxy pricing](#).

Certificate authority - optional [Info](#)
Using a server certificate provides an extra layer of security by validating that the connection is being made to an Amazon database. It does so by checking the server certificate that is automatically installed on all databases that you provision.

rds-ca-rsa2048-g1 (default)
Expiry: May 26, 2061

Give the password authentication:

▼ Additional configuration

Database port [Info](#)

TCP/IP port that the database will use for application connections.

3306

Tags - optional

A tag consists of a case-sensitive key-value pair.

No tags associated with the resource.

Add new tag

You can add up to 50 more tags.

Database authentication

Database authentication options [Info](#)

- ☒ Password authentication
Authenticates using database passwords.
- ☐ Password and IAM database authentication
Authenticates using the database password and user credentials through AWS IAM users and roles.

Select defaults and don't want backup now:

Monitoring [Info](#)

Choose monitoring tools for this database. Database Insights provides a combined view of Performance Insights and Enhanced Monitoring for your fleet of databases. **Database Insights** pricing is separate from RDS monthly estimates. See [Amazon CloudWatch pricing](#).

☐ Database Insights - Advanced

- Retains 15 months of performance history
- Fleet-level monitoring
- Integration with CloudWatch Application Signals

☒ Database Insights - Standard

▼ Additional monitoring settings

Enhanced Monitoring, CloudWatch Logs and DevOps Guru

Enhanced Monitoring

☐ Enable Enhanced monitoring

Enabling Enhanced Monitoring metrics are useful when you want to see how different processes or threads use the CPU.

Log exports

Select the log types to publish to Amazon CloudWatch Logs

- ☐ Audit log
- ☐ Error log
- ☐ General log
- ☐ iam-db-auth-error log
- ☐ Slow query log

IAM role

The following service-linked role is used for publishing logs to CloudWatch Logs.

[RDS service-linked role](#)

▼ Additional configuration

Database options, encryption turned off, backup turned off, backtrack turned off, maintenance, CloudWatch Logs, delete protection turned off.

Database options

Initial database name [Info](#)

If you do not specify a database name, Amazon RDS does not create a database.

DB parameter group [Info](#)

Option group [Info](#)

Backup

☐ Enable automated backups

Creates a point-in-time snapshot of your database

☐ Enable encryption

Choose to encrypt the given instance. Master key IDs and aliases appear in the list after they have been created using the AWS Key Management Service console. [Info](#)

Maintenance

Auto minor version upgrade [Info](#)

☐ Enable auto minor version upgrade

Enabling auto minor version upgrade will automatically upgrade your database minor version. For limitations and more details, see [Automatically upgrading the minor engine version documentation](#).

And click on Create database:

Maintenance window [Info](#)

Select the period you want pending modifications or maintenance applied to the database by Amazon RDS.

- ☐ Choose a window
- ☒ No preference

☐ Enable deletion protection

Protects the database from being deleted accidentally. While this option is enabled, you can't delete the database.

Estimated monthly costs

The Amazon RDS Free Tier is available to you for 12 months. Each calendar month, the free tier will allow you to use the Amazon RDS resources listed below for free:

- 750 hrs of Amazon RDS in a Single-AZ db.t2.micro, db.t3.micro or db.t4g.micro Instance.
- 20 GB of General Purpose Storage (SSD).
- 20 GB for automated backup storage and any user-initiated DB Snapshots.

[Learn more about AWS Free Tier.](#)

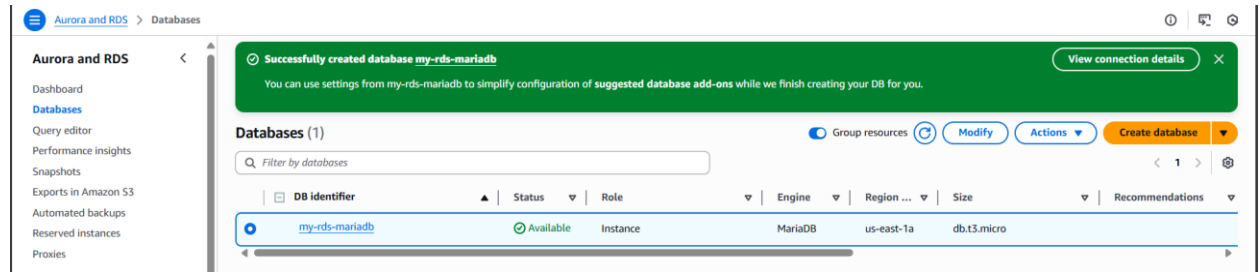
When your free usage expires or if your application use exceeds the free usage tiers, you simply pay standard, pay-as-you-go service rates as described in the [Amazon RDS Pricing page](#).

i You are responsible for ensuring that you have all of the necessary rights for any third-party products or services that you use with AWS services.

Cancel

Create database

The rds 'MariaDB' got installed:



-----done-----

5. Migrate database from EC2 to RDS.

1) Get the dump of your existing DB on EC2

```
mysqldump -u root -p database_name > file_name.sql
```

2) Migrate the DB dump that you have taken in step 1 to RDS

```
mysql -h <replace-rds-end-point-here> -P 3306 -u <user_name> -p database_name < ec2db.sql
```

{-u <user_name> this user name is 'admin' which we have created in rds because from the above command we want to connect to rds, and -p database_name is the name of database which we have in rds but in this example we have not created any database so first login to rds and then create one database using 'create database rdsdb;' and then exit and then again execute this command:

```
mysql -h <replace-rds-end-point-here> -P 3306 -u admin -p rdsdb < ec2db.sql
```

3) Connect to your RDS DB instance

```
mysql -h <replace-rds-end-point-here> -P 3306 -u rdsuser -p
```

4) Switch to the database and verify the details.

USE rdsdb

```
SELECT * FROM table1;
```

```
[root@ip-172-31-19-114 ~]# mysql -h my-rds-mariadb.c45kqc8o02sl.us-east-1.rds.amazonaws.com -P 3306 -u admin -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 45
Server version: 11.4.5-MariaDB 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)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| innodb      |
| mysql       |
| performance_schema |
| sys         |
+-----+
5 rows in set (0.008 sec)
```

```
MariaDB [(none)]> create database rdsdb;
Query OK, 1 row affected (0.003 sec)
```

```
MariaDB [(none)]> show databases;
```

```
+-----+
| Database |
+-----+
| information_schema |
| innodb      |
| mysql       |
| performance_schema |
| rdsdb       |
| sys         |
+-----+
```

```
6 rows in set (0.001 sec)
```

```
MariaDB [(none)]> exit
Bye
```

Then migrate the data from EC2 to rds:

```
[root@ip-172-31-19-114 ~]# mysql -h my-rds-mariadb.c45kqc8o02sl.us-east-1.rds.amazonaws.com -P 3306 -u admin -p rdsdb < file_name.sql
Enter password:
```

Login to your rds:

```
[root@ip-172-31-19-114 ~]# mysql -h my-rds-mariadb.c45kqc8o02sl.us-east-1.rds.amazonaws.com -P 3306 -u admin -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 57
Server version: 11.4.5-MariaDB 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)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| innodb |
| mysql |
| performance_schema |
| rdsdb |
| sys |
+-----+
6 rows in set (0.001 sec)
```

Then switch to the rdsdb database and select the table to see the migrated data:

```
MariaDB [(none)]> use rdsdb;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MariaDB [rdsdb]> select * from table1;
+-----+-----+
| id | name |
+-----+-----+
| 1 | Virat |
| 2 | Sachin |
| 3 | Dhoni |
| 4 | ABD |
+-----+-----+
4 rows in set (0.001 sec)
```

-----done-----

6. Install MySQL DB on EC2.

1. Remove old MySQL GPG public-key entries

```
sudo rpm -e gpg-pubkey-3a79bd29 || true
```

(The `3a79bd29` is the identifier for the old 2022 key – remove any conflicting ones you see via `rpm -qa gpg-pubkey`)

2. Import the new GPG key

```
sudo rpm --import https://repo.mysql.com/RPM-GPG-KEY-mysql-2023
```

3. Manually adjust your MySQL repo file

```
sudo tee /etc/yum.repos.d/mysql-community.repo << 'EOF'
```

```
[mysql80-community]
```

```
name=MySQL 8.0 Community Server
```

```
baseurl=https://repo.mysql.com/yum/mysql-8.0-community/el/9/x86_64/
```

```
enabled=1
```

```
gpgcheck=1
```

```
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-mysql-2023
```

```
EOF
```

4. Clean metadata and caches

```
sudo dnf clean all
```

```
sudo rm -rf /var/cache/dnf
```

```
sudo dnf makecache
```

5. Try installing MySQL server

```
sudo dnf install mysql-server -y
```

```
sudo systemctl start mysqld
```

```
sudo systemctl enable mysqld
```

Find initial root password

During the installation of packages, an initial password is configured for the MySQL root account. You can find this password from the MySQL log file.

```
cat /var/log/mysqld.log | grep "A temporary password"
```

```
[root@tecadmin ~]# cat /var/log/mysqld.log | grep "A temporary password"
2022-09-06T01:14:44.404845Z 6 [Note] [MY-010454] [Server] A temporary password is generated for root
@localhost: %Wlpuzk33iQ9
[root@tecadmin ~]#
```

This password will be required in the next step

MySQL Post Installation Setup

```
sudo mysql_secure_installation
```

- Enter password for user root: **[Enter current root password]**
- New password: **[Enter a new root password]**
- Re-enter new password: **[Re-Enter the new root password]**

- Estimated strength of the password: 100
Change the password for root ? ((Press y|Y for Yes, any other key for No) : **n**
- Remove anonymous users? (Press y|Y for Yes, any other key for No) : **y**
- Disallow root login remotely? (Press y|Y for Yes, any other key for No) : **y**
- Remove test database and access to it? (Press y|Y for Yes, any other key for No) : **y**
- Reload privilege tables now? (Press y|Y for Yes, any other key for No) : **y**
- All done!

• Connect to MySQL

mysql -u root -p

```
[ec2-user@ip-172-31-16-209 ~]$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 14
Server version: 8.0.43 MySQL Community Server - GPL

Copyright (c) 2000, 2025, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

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

-----done-----

7. Launch MySQL RDS image.

Goto RDS:

Create database [info](#)

Choose a database creation method

☒ **Standard create**

You set all of the configuration options, including ones for availability, security, backups, and maintenance.

☐ **Easy create**

Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

Engine options

Engine type [info](#)

☐ Aurora (MySQL Compatible)



☐ Aurora (PostgreSQL Compatible)



☒ **MySQL**



☐ PostgreSQL



☐ MariaDB



☐ Oracle

ORACLE

☐ Microsoft SQL Server



☐ IBM Db2

IBM Db2

Edition

[MySQL Compatible](#)

▼ Hide filters

☒ **Show only versions that support the Multi-AZ DB cluster** [info](#)

Create a Multi-AZ DB cluster with one primary DB instance and two readable standby DB instances. Multi-AZ DB clusters provide up to 2x faster transaction commit latency and automatic failover in typically under 35 seconds.

☒ **Show only versions that support the Amazon RDS Optimized Writes** [info](#)

Amazon RDS Optimized Writes improves write throughput by up to 2x at no additional cost.

Engine version

MySQL 8.0.42

☐ **Enable RDS Extended Support** [info](#)

Amazon RDS Extended Support is a [paid offering](#). By selecting this option, you consent to being charged for this offering if you are running your database major version past the RDS end of standard support date for that version. Check the end of standard support date for your major version in the [RDS for MySQL documentation](#).

Templates

Choose a sample template to meet your use case.

☐ **Production**

Use defaults for high availability and fast, consistent performance.

☐ **Dev/Test**

This instance is intended for development use outside of a production environment.

☒ **Sandbox**

To develop new applications, test existing applications, or gain hands-on experience with Amazon RDS.

Availability and durability

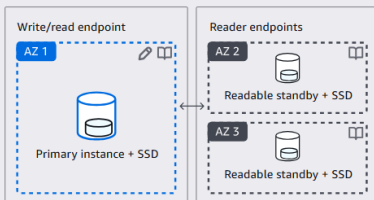
Deployment options [info](#)

Choose the deployment option that provides the availability and durability needed for your use case. AWS is committed to a certain level of uptime depending on the deployment option you choose. Learn more in the [Amazon RDS service level agreement \(SLA\)](#).

☐ **Multi-AZ DB cluster deployment (3 instances)**

Creates a primary DB instance with two readable standbys in separate Availability Zones. This setup provides:

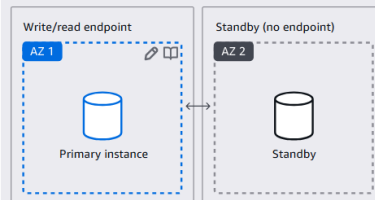
- 99.95% uptime
- Redundancy across Availability Zones
- Increased read capacity
- Reduced write latency



☐ **Multi-AZ DB instance deployment (2 instances)**

Creates a primary DB instance with a non-readable standby instance in a separate Availability Zone. This setup provides:

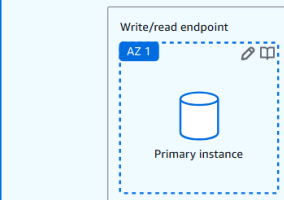
- 99.95% uptime
- Redundancy across Availability Zones



☒ **Single-AZ DB instance deployment (1 instance)**

Creates a single DB instance without standby instances. This setup provides:

- 99.5% uptime
- No data redundancy



Settings

DB instance identifier [Info](#)

Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

mysql-db

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 63 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

▼ Credentials Settings

Master username [Info](#)

Type a login ID for the master user of your DB instance.

admin

1 to 16 alphanumeric characters. The first character must be a letter.

Credentials management

You can use AWS Secrets Manager or manage your master user credentials.



Managed in AWS Secrets Manager - **most secure**

RDS generates a password for you and manages it throughout its lifecycle using AWS Secrets Manager.



Self managed

Create your own password or have RDS create a password that you manage.

☐ Auto generate password

Amazon RDS can generate a password for you, or you can specify your own password.

Master password [Info](#)

Password strength

Very weak

Minimum constraints: At least 8 printable ASCII characters. Can't contain any of the following symbols: / ' * @

Confirm master password [Info](#)

Instance configuration

The DB instance configuration options below are limited to those supported by the engine that you selected above.

DB instance class [Info](#)

▼ Hide filters



Show instance classes that support Amazon RDS Optimized Writes [Info](#)

Amazon RDS Optimized Writes improves write throughput by up to 2x at no additional cost.



Include previous generation classes



Standard classes (includes m classes)



Memory optimized classes (includes r and x classes)



Burstable classes (includes t classes)

db.t3.micro

2 vCPUs 1 GiB RAM Network: Up to 2,085 Mbps



Storage

Storage type [Info](#)

Provisioned IOPS SSD (io2) storage volumes are now available.

General Purpose SSD (gp2)

Baseline performance determined by volume size



Allocated storage [Info](#)

20

GiB

Allocated storage value must be 20 GiB to 6,144 GiB

► Additional storage configuration

Connectivity [Info](#)



Compute resource

Choose whether to set up a connection to a compute resource for this database. Setting up a connection will automatically change connectivity settings so that the compute resource can connect to this database.

☒ Don't connect to an EC2 compute resource

Don't set up a connection to a compute resource for this database. You can manually set up a connection to a compute resource later.

☐ Connect to an EC2 compute resource

Set up a connection to an EC2 compute resource for this database.

Virtual private cloud (VPC) [Info](#)

Choose the VPC. The VPC defines the virtual networking environment for this DB instance.

Default VPC (vpc-05f40aba9acea42ad)
6 Subnets, 6 Availability Zones

Only VPCs with a corresponding DB subnet group are listed.

ⓘ After a database is created, you can't change its VPC.

DB subnet group [Info](#)

Choose the DB subnet group. The DB subnet group defines which subnets and IP ranges the DB instance can use in the VPC that you selected.

default

Public access [Info](#)

☐ Yes

RDS assigns a public IP address to the database. Amazon EC2 instances and other resources outside of the VPC can connect to your database. Resources inside the VPC can also connect to the database. Choose one or more VPC security groups that specify which resources can connect to the database.

☒ No

RDS doesn't assign a public IP address to the database. Only Amazon EC2 instances and other resources inside the VPC can connect to your database. Choose one or more VPC security groups that specify which resources can connect to the database.

VPC security group (firewall) [Info](#)

Choose one or more VPC security groups to allow access to your database. Make sure that the security group rules allow the appropriate incoming traffic.

☒ Choose existing

Choose existing VPC security groups

☐ Create new

Create new VPC security group

Existing VPC security groups

Choose one or more options

default

Availability Zone [Info](#)

No preference

RDS Proxy

RDS Proxy is a fully managed, highly available database proxy that improves application scalability, resiliency, and security.

☐ Create an RDS Proxy [Info](#)

RDS automatically creates an IAM role and a Secrets Manager secret for the proxy. RDS Proxy has additional costs. For more information, see [Amazon RDS Proxy pricing](#).

Certificate authority - optional [Info](#)

Using a server certificate provides an extra layer of security by validating that the connection is being made to an Amazon database. It does so by checking the server certificate that is automatically installed on all databases that you provision.

rds-ca-rsa2048-g1 (default)
Expiry: May 26, 2061

If you don't select a certificate authority, RDS chooses one for you.

▼ Additional configuration

Database port [Info](#)

TCP/IP port that the database will use for application connections.

3306

Tags - optional

A tag consists of a case-sensitive key-value pair.

No tags associated with the resource.

[Add new tag](#)

Database authentication

Database authentication options [Info](#)

- ☒ **Password authentication**
Authenticates using database passwords.
- ☐ **Password and IAM database authentication**
Authenticates using the database password and user credentials through AWS IAM users and roles.
- ☐ **Password and Kerberos authentication**
Choose a directory in which you want to allow authorized users to authenticate with this DB instance using Kerberos Authentication.

Monitoring [Info](#)

Choose monitoring tools for this database. Database Insights provides a combined view of Performance Insights and Enhanced Monitoring for your fleet of databases. **Database Insights** pricing is separate from RDS monthly estimates. See [Amazon CloudWatch pricing](#).

- ☐ Database Insights - Advanced
- Retains 15 months of performance history
 - Fleet-level monitoring
 - Integration with CloudWatch Application Signals

- ☒ Database Insights - Standard

▼ Additional monitoring settings

Enhanced Monitoring, CloudWatch Logs and DevOps Guru

Enhanced Monitoring

- ☐ **Enable Enhanced monitoring**
Enabling Enhanced Monitoring metrics are useful when you want to see how different processes or threads use the CPU.

Log exports

Select the log types to publish to Amazon CloudWatch Logs

- ☐ Audit log
- ☐ Error log
- ☐ General log
- ☐ iam-db-auth-error log
- ☐ Slow query log

IAM role

The following service-linked role is used for publishing logs to CloudWatch Logs.

RDS service-linked role

▼ Additional configuration

Database options, encryption turned off, backup turned off, backtrack turned off, maintenance, CloudWatch Logs, delete protection turned off.

Database options

Initial database name [Info](#)

If you do not specify a database name, Amazon RDS does not create a database.

DB parameter group [Info](#)

default:mysql8.0 ▼

Option group [Info](#)

default:mysql-8-0 ▼

Backup

- ☐ **Enable automated backups**
Creates a point-in-time snapshot of your database

Backup

- ☐ **Enable automated backups**
Creates a point-in-time snapshot of your database

Enable encryption

Choose to encrypt the given instance. Master key IDs and aliases appear in the list after they have been created using the AWS Key Management Service console. [Info](#)

Maintenance

Auto minor version upgrade [Info](#)

- ☐ **Enable auto minor version upgrade**
Enabling auto minor version upgrade will automatically upgrade your database minor version. For limitations and more details, see [Automatically upgrading the minor engine version documentation](#).

Maintenance window [Info](#)

Select the period you want pending modifications or maintenance applied to the database by Amazon RDS.

- ☐ Choose a window
- ☒ No preference

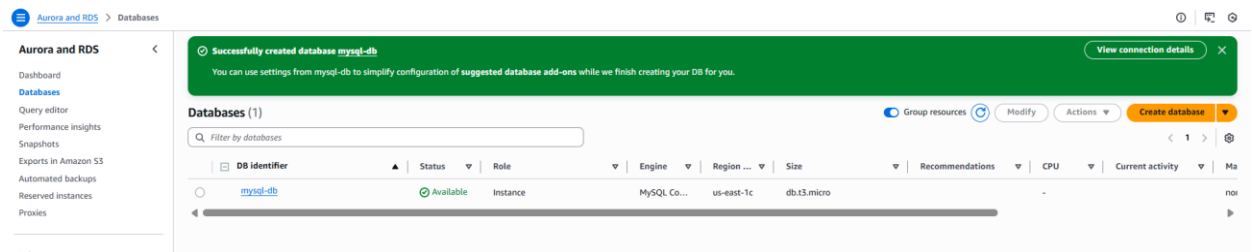
Enable deletion protection

Protects the database from being deleted accidentally. While this option is enabled, you can't delete the database.

[Info](#) You are responsible for ensuring that you have all of the necessary rights for any third-party products or services that you use with AWS services.

Cancel

Create database



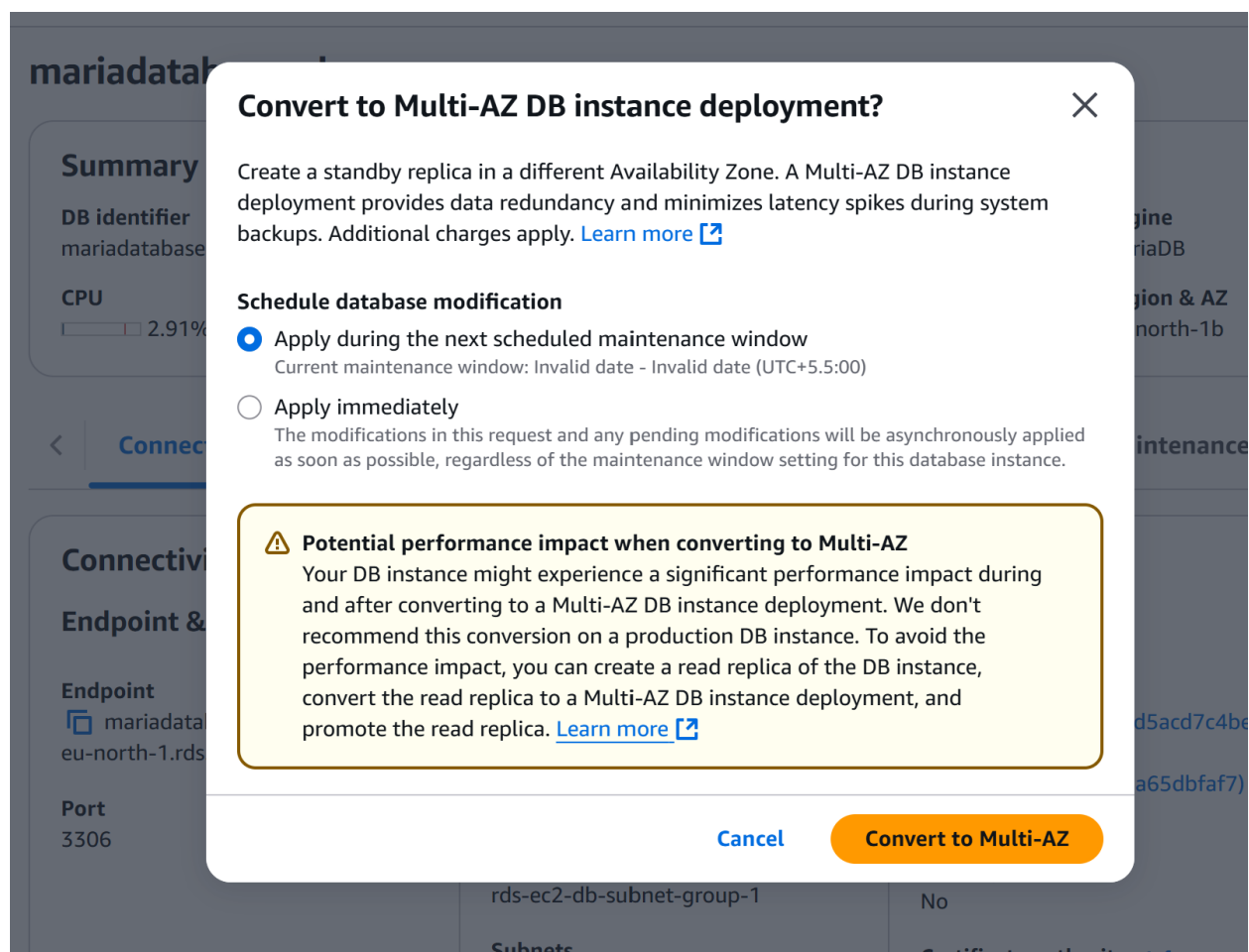
-----done-----

8. Configure Multi-AZ.

In AWS Console → RDS → Select your DB → Modify or (we can go from action → convert to Multi-AZ)

Under Availability & durability, enable Multi-AZ deployment

Apply immediately



9. Take backup of DB and restore the DB.

Go to AWS Console → RDS.

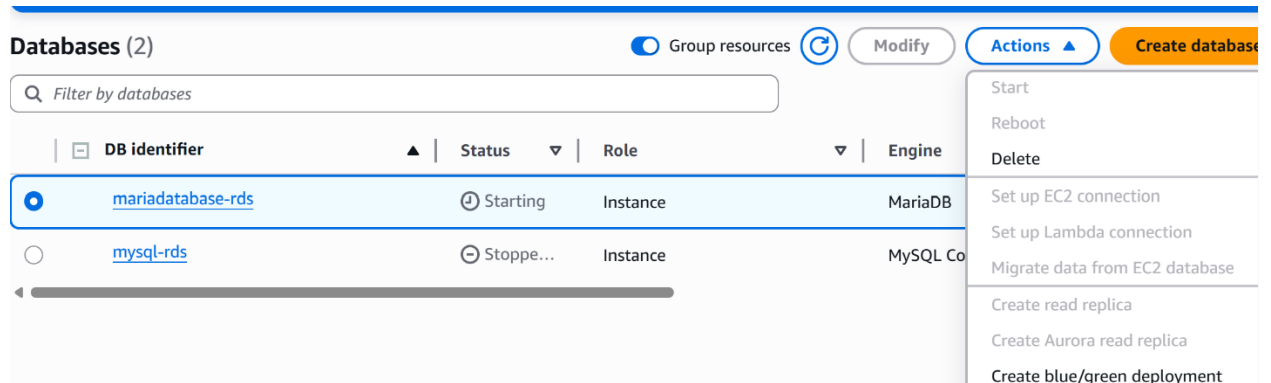
In the left panel, click Databases.

Select your RDS Maria instance.

On the top right, click Actions → Take snapshot.

Enter a Snapshot name.

Click Take snapshot



Step 2: Restore Database from Snapshot

- Go to RDS → Snapshots.
- Select the snapshot you created.
- Click Actions → Restore snapshot

Availability & durability

Multi-AZ deployment [Info](#)

- ☒ Create a standby instance (recommended for production usage)
Creates a standby in a different Availability Zone (AZ) to provide data redundancy, eliminate I/O freezes, and minimize latency spikes during
- ☐ Do not create a standby instance

Storage

Storage type [Info](#)

Provisioned IOPS SSD (io2) storage volumes are now available.

General Purpose SSD (gp3)

Performance scales independently from storage

Allocated storage [Info](#)

200

Minimum: 200 GiB. Maximum: 6,144 GiB.

Filter by databases

DB identifier

Status

Role

Engine

Region ...

Size

[mariad1](#)

Creating

Instance

MariaDB

-

db.t3.micro

[mariadatabase-rds](#)

Available

Instance

MariaDB

eu-north-1b

db.t3.micro

[mysql-rds](#)

Stopped

Instance

MySQL Co

eu-north-1a

db.t3.micro

```
[root@ip-172-31-3-51 ~]# mysql -h mariadb-backup.cyj4cawuudo1.us-east-1.rds.amazonaws.com -u admin -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 18
Server version: 11.4.5-MariaDB-log managed by https://aws.amazon.com/rds/

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owners.

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

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| innodb |
| mysql |
| performance_schema |
| rdsdb |
| sys |
+-----+
6 rows in set (0.01 sec)

mysql> |
```

10. Create read replica.

On the DB instance page,

click on the database

Actions → Create read replica.

Configure the read replica:

DB instance identifier: e.g., mysql-db-read-replica.





DB instance class: Choose based on your workload.

VPC, Subnet, Security Group: Must match or allow access from your app.

Storage type: Same as primary (recommended).

Enable replication features: leave defaults unless specific use case.

Click Create read replica

<input checked="" type="radio"/>	 mysql-rds	 Modify...	Primary	MySQL Co...	eu-north-1a	db.t3.micro
<input type="radio"/>	 mysqlreplica	 Creating	Replica	MySQL Co...	-	db.t3.micro

-----completed.....