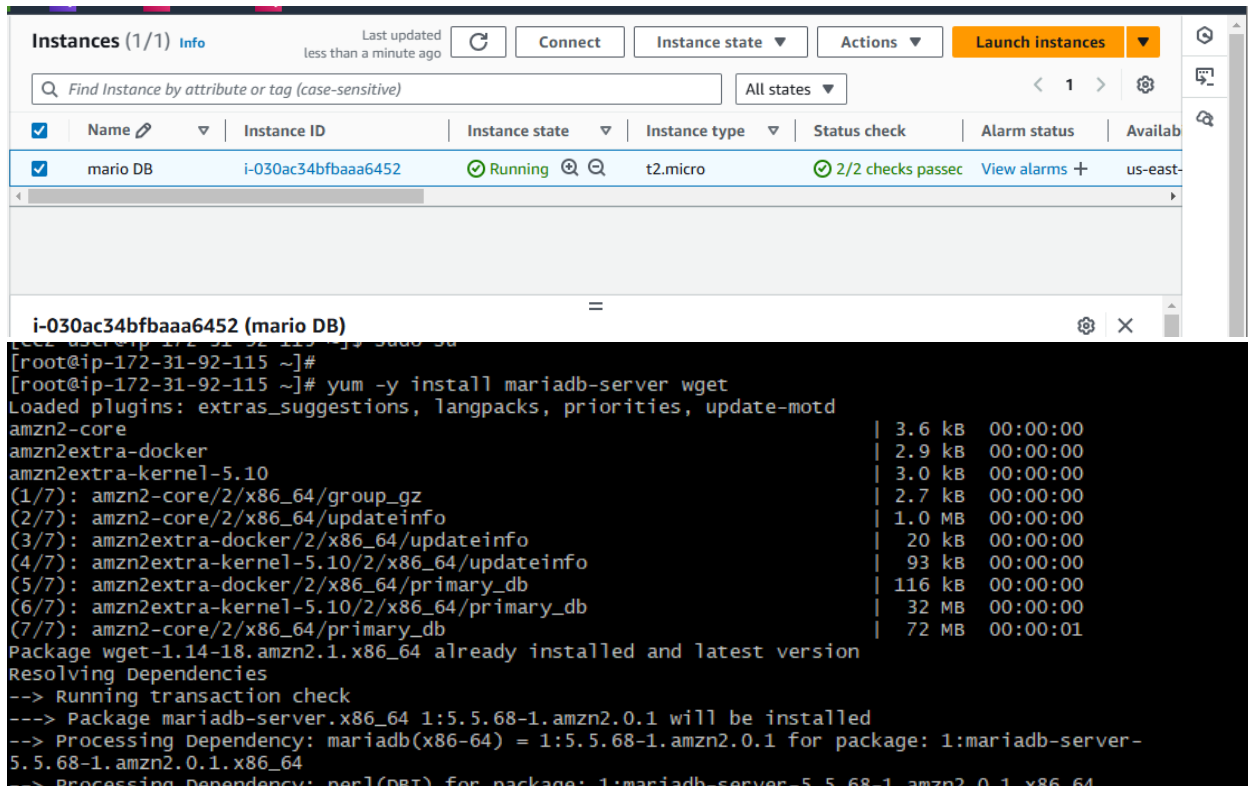


# RDS

1) Create mariadb db on ec2.



The screenshot displays the AWS Management Console interface for EC2 instances. At the top, there's a header for 'Instances (1/1)' with an 'Info' link and a 'Last updated' timestamp. Below this is a search bar and a table of instances. The table has columns for Name, Instance ID, Instance state, Instance type, Status check, Alarm status, and Availability. One instance, 'mario DB', is listed with ID 'i-030ac34bfbaaa6452', state 'Running', type 't2.micro', and status '2/2 checks passed'. Below the table, a terminal window for the instance 'i-030ac34bfbaaa6452 (mario DB)' shows the execution of the command 'yum -y install mariadb-server wget'. The terminal output shows the installation progress for various packages and their dependencies, including 'amzn2-core', 'amzn2extra-docker', and 'amzn2extra-kernel-5.10'. The output indicates that the packages are already installed and the latest version is being used.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability
mario DB	i-030ac34bfbaaa6452	Running	t2.micro	2/2 checks passed	View alarms +	us-east-

```
[root@ip-172-31-92-115 ~]# yum -y install mariadb-server wget
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core | 3.6 kB 00:00:00
amzn2extra-docker | 2.9 kB 00:00:00
amzn2extra-kernel-5.10 | 3.0 kB 00:00:00
(1/7): amzn2-core/2/x86_64/group_gz | 2.7 kB 00:00:00
(2/7): amzn2-core/2/x86_64/updateinfo | 1.0 MB 00:00:00
(3/7): amzn2extra-docker/2/x86_64/updateinfo | 20 kB 00:00:00
(4/7): amzn2extra-kernel-5.10/2/x86_64/updateinfo | 93 kB 00:00:00
(5/7): amzn2extra-docker/2/x86_64/primary_db | 116 kB 00:00:00
(6/7): amzn2extra-kernel-5.10/2/x86_64/primary_db | 32 MB 00:00:00
(7/7): amzn2-core/2/x86_64/primary_db | 72 MB 00:00:01
Package wget-1.14-18.amzn2.1.x86_64 already installed and latest version
Resolving Dependencies
--> Running transaction check
---> Package mariadb-server.x86_64 1:5.5.68-1.amzn2.0.1 will be installed
--> Processing Dependency: mariadb(x86-64) = 1:5.5.68-1.amzn2.0.1 for package: 1:mariadb-server-5.5.68-1.amzn2.0.1.x86_64
--> Processing Dependency: perl(DBI) for package: 1:mariadb-server-5.5.68-1.amzn2.0.1.x86_64
```

Dependency installed:

```
mariadb.x86_64 1:5.5.68-1.amzn2.0.1
perl-Compress-Raw-Bzip2.x86_64 0:2.061-3.amzn2.0.2
perl-Compress-Raw-Zlib.x86_64 1:2.061-4.amzn2.0.2
perl-DBD-MySQL.x86_64 0:4.023-6.amzn2
perl-DBI.x86_64 0:1.627-4.amzn2.0.2
perl-Data-Dumper.x86_64 0:2.145-3.amzn2.0.2
perl-IO-Compress.noarch 0:2.061-2.amzn2
perl-Net-Daemon.noarch 0:0.48-5.amzn2
perl-PlRPC.noarch 0:0.2020-14.amzn2
```

Complete!

[root@ip-172-31-92-115 ~]# |

```
[root@ip-172-31-92-115 ~]# ls
[root@ip-172-31-92-115 ~]# systemctl status mariadb
Unit mariadb.service could not be found.
[root@ip-172-31-92-115 ~]# systemctl status mariadb
Unit mariadb.service could not be found.
[root@ip-172-31-92-115 ~]# systemctl status mariadb
● mariadb.service - MariaDB database server
   Loaded: loaded (/usr/lib/systemd/system/mariadb.service; enabled; vendor preset: disabled)
   Active: active (running) since Fri 2024-11-22 11:59:22 UTC; 5min ago
     Process: 3540 ExecStartPost=/usr/libexec/mariadb-wait-ready $MAINPID (code=exited, status=0/SUCCESS)
     Process: 3457 ExecStartPre=/usr/libexec/mariadb-prepare-db-dir %n (code=exited, status=0/SUCCESS)
    Main PID: 3539 (mysqld_safe)
      CGroup: /system.slice/mariadb.service
              └─3539 /bin/sh /usr/bin/mysqld_safe --basedir=/usr
                 └─3709 /usr/libexec/mysqld --basedir=/usr --datadir=/var/lib/mysql --plugin-dir=/usr/lib64/mysql/plugin --log-error=/var/log/mariadb/mariadb.log --pid-f
```

Nov 22 11:59:20 ip-172-31-92-115.ec2.internal mariadb-prepare-db-dir[3457]: MySQL manual for more instructions.

Nov 22 11:59:20 ip-172-31-92-115.ec2.internal mariadb-prepare-db-dir[3457]: Please report any problems at <http://mariadb.org/jira>

Nov 22 11:59:20 ip-172-31-92-115.ec2.internal mariadb-prepare-db-dir[3457]: The latest information about MariaDB is available at <http://mariadb.org/>.

Nov 22 11:59:20 ip-172-31-92-115.ec2.internal mariadb-prepare-db-dir[3457]: You can find additional information about the MySQL part at:

Nov 22 11:59:20 ip-172-31-92-115.ec2.internal mariadb-prepare-db-dir[3457]: <http://dev.mysql.com>

Nov 22 11:59:20 ip-172-31-92-115.ec2.internal mariadb-prepare-db-dir[3457]: Consider joining MariaDB's strong and vibrant community:

Nov 22 11:59:20 ip-172-31-92-115.ec2.internal mariadb-prepare-db-dir[3457]: <https://mariadb.org/get-involved/>

Nov 22 11:59:21 ip-172-31-92-115.ec2.internal mysqld\_safe[3539]: 241122 11:59:21 mysqld\_safe Logging to '/var/log/mariadb/mariadb.log'.

Nov 22 11:59:21 ip-172-31-92-115.ec2.internal mysqld\_safe[3539]: 241122 11:59:21 mysqld\_safe Starting mysqld daemon with databases from /var/lib/mysql

Nov 22 11:59:22 ip-172-31-92-115.ec2.internal systemd[1]: Started MariaDB database server.

[root@ip-172-31-92-115 ~]# |

2) Insert some dummy data

```

MariaDB [(none)]> USE ec2db;
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 [ec2db]> insert into table1 values(1, 'rakesh'), (2, 'naresh'), (3, 'ganesh')
, (4, 'sundar');
Query OK, 4 rows affected (0.01 sec)
Records: 4  Duplicates: 0  Warnings: 0

MariaDB [ec2db]> select * from table1:
->
->
->
->
->
-> select * from table1;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corre
sponds to your MariaDB server version for the right syntax to use near ':

select * from table1' at line 1
MariaDB [ec2db]> select * from table1;
+-----+-----+
| id  | name  |
+-----+-----+
| 1   | rakesh |
| 2   | naresh |
| 3   | ganesh |
| 4   | sundar |
+-----+-----+
4 rows in set (0.00 sec)

MariaDB [ec2db]> |

```

### 3) Take the backup of dummy data on ec2

```

[root@ip-172-31-92-115 backup]# ls
[root@ip-172-31-92-115 backup]# mysqldump -u root -p ec2db > backup_maria.sql
Enter password:
mysqldump: Got error: 1045: "Access denied for user 'root'@'localhost' (using password: YES)" when trying to connect
[root@ip-172-31-92-115 backup]# mysqldump -u root -p ec2db > backup_maria.sql
Enter password:
[root@ip-172-31-92-115 backup]# ls
backup_maria.sql
[root@ip-172-31-92-115 backup]# |

```

### 4) launch Mariadb RDS instance

## 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.

## Configuration

Engine type [Info](#)

☐ Aurora (MySQL Compatible)



☐ Aurora (PostgreSQL Compatible)



☐ MySQL



☐ PostgreSQL



☒ MariaDB



☐ Oracle

ORACLE

### Creating database my-database1

Your database might take a few minutes to launch. You can use settings from my-database1 to simplify configuration of suggested database add-ons while we finish creating your DB for you.

[View credential details](#)

## Databases (1)

☒ Group resources



[Modify](#)

[Actions](#)

[Restore from S3](#)

[Create database](#)

< 1 > [Settings](#)

<input type="checkbox"/>	DB identifier	Status	Role	Engine	Region ...	Size	Recon
<input type="radio"/>	<a href="#">my-database1</a>	Creating	Instance	MariaDB	-	db.t4g.mi...	

. 6) Install mysql db on ec2

```

[root@ip-172-31-95-27 ~]# wget https://dev.mysql.com/get/mysql84-community-release-el9-1.noarch.rpm
--2024-11-23 11:33:57-- https://dev.mysql.com/get/mysql84-community-release-el9-1.noarch.rpm
Resolving dev.mysql.com (dev.mysql.com)... 23.218.131.64, 2600:1408:ec00:986::2e31, 2600:1408:ec00:986::2e31
Connecting to dev.mysql.com (dev.mysql.com)|23.218.131.64|:443... connected.
HTTP request sent, awaiting response... 302 Moved Temporarily
Location: https://repo.mysql.com/mysql84-community-release-el9-1.noarch.rpm [following]
--2024-11-23 11:33:57-- https://repo.mysql.com/mysql84-community-release-el9-1.noarch.rpm
Resolving repo.mysql.com (repo.mysql.com)... 23.33.203.94, 2600:1408:ec00:888::1d68, 2600:1408:ec00:881::1d68
Connecting to repo.mysql.com (repo.mysql.com)|23.33.203.94|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 13139 (13K) [application/x-redhat-package-manager]
Saving to: 'mysql84-community-release-el9-1.noarch.rpm'

mysql84-community-release-el9-1.noarc 100%[=====>] 12.83K --.-KB/s in 0s

2024-11-23 11:33:57 (404 MB/s) - 'mysql84-community-release-el9-1.noarch.rpm' saved [13139/13139]

[root@ip-172-31-95-27 ~]# yum install AC
[root@ip-172-31-95-27 ~]# yum install 'mysql84-community-release-el9-1.noarch.rpm'
Last metadata expiration check: 1:30:28 ago on Sat Nov 23 10:04:04 2024.
No match for argument: 'mysql84-community-release-el9-1.noarch.rpm'
Error: Unable to find a match: 'mysql84-community-release-el9-1.noarch.rpm'
[root@ip-172-31-95-27 ~]# yum install 'mysql84-community-release-el9-1.noarch.rpm' saved [13139/13139]
Last metadata expiration check: 1:30:55 ago on Sat Nov 23 10:04:04 2024.
No match for argument: 'mysql84-community-release-el9-1.noarch.rpm'
No match for argument: saved
No match for argument: [13139/13139]
Error: Unable to find a match: 'mysql84-community-release-el9-1.noarch.rpm' saved [13139/13139]
[root@ip-172-31-95-27 ~]# AC
[root@ip-172-31-95-27 ~]# yum install mysql84-community-release-el9-1.noarch.rpm
Last metadata expiration check: 1:31:21 ago on Sat Nov 23 10:04:04 2024.
Dependencies resolved.

=====
Package                               Architecture Version           Repository
=====
Installing:
mysql84-community-release             noarch            el9-1             @commandline
=====

Verifying      : mysql-community-client-plugins-8.4.3-1.el9.x86_64
Verifying      : mysql-community-common-8.4.3-1.el9.x86_64
Verifying      : mysql-community-icu-data-files-8.4.3-1.el9.x86_64
Verifying      : mysql-community-libs-8.4.3-1.el9.x86_64
Verifying      : mysql-community-server-8.4.3-1.el9.x86_64

Installed:
mysql-community-client-8.4.3-1.el9.x86_64      mysql-community-client-plugins-8.4.3-1.el9.x86_64      mysql-community-common-8.4.3-1.el9.x86_64
mysql-community-icu-data-files-8.4.3-1.el9.x86_64      mysql-community-libs-8.4.3-1.el9.x86_64      mysql-community-server-8.4.3-1.el9.x86_64

Complete!
[root@ip-172-31-95-27 ~]# sudo rpm --import https://repo.mysql.com/RPM-GPG-KEY-mysql-2022
[root@ip-172-31-95-27 ~]# sudo yum install mysql-community-server
Last metadata expiration check: 0:01:15 ago on Sat Nov 23 11:36:52 2024.
Package mysql-community-server-8.4.3-1.el9.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@ip-172-31-95-27 ~]# sudo systemctl start mysqld
sudo systemctl status mysqld

● mysqld.service - MySQL Server
   Loaded: loaded (/usr/lib/systemd/system/mysqld.service; enabled; preset: disabled)
   Active: active (running) since Sat 2024-11-23 11:38:33 UTC; 114ms ago
     Docs: man:mysqld(8)
           http://dev.mysql.com/doc/refman/en/using-systemd.html
   Process: 29542 ExecStartPre=/usr/bin/mysqld_pre_systemd (code=exited, status=0/SUCCESS)
  Main PID: 29610 (mysqld)
    Status: "Server is operational"
     Tasks: 35 (limit: 1111)
   Memory: 452.2M
      CPU: 4.248s
   CGroup: /system.slice/mysqld.service
           └─29610 /usr/sbin/mysqld

```

## 7) Launch mysql RDS image

Creating database database-2

Your database might take a few minutes to launch. You can use settings from database-2 to simplify configuration of suggested database add-ons while we finish creating your DB for you.

View credential details

Notifications 0 0 1 0 1

Databases (2)

Group resources

Modify

Actions

Restore from S3

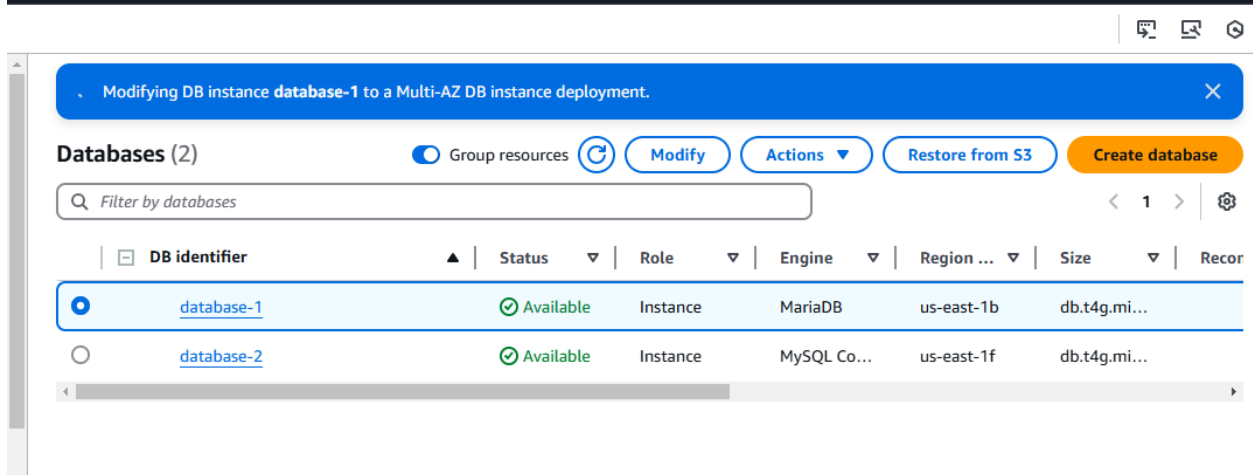
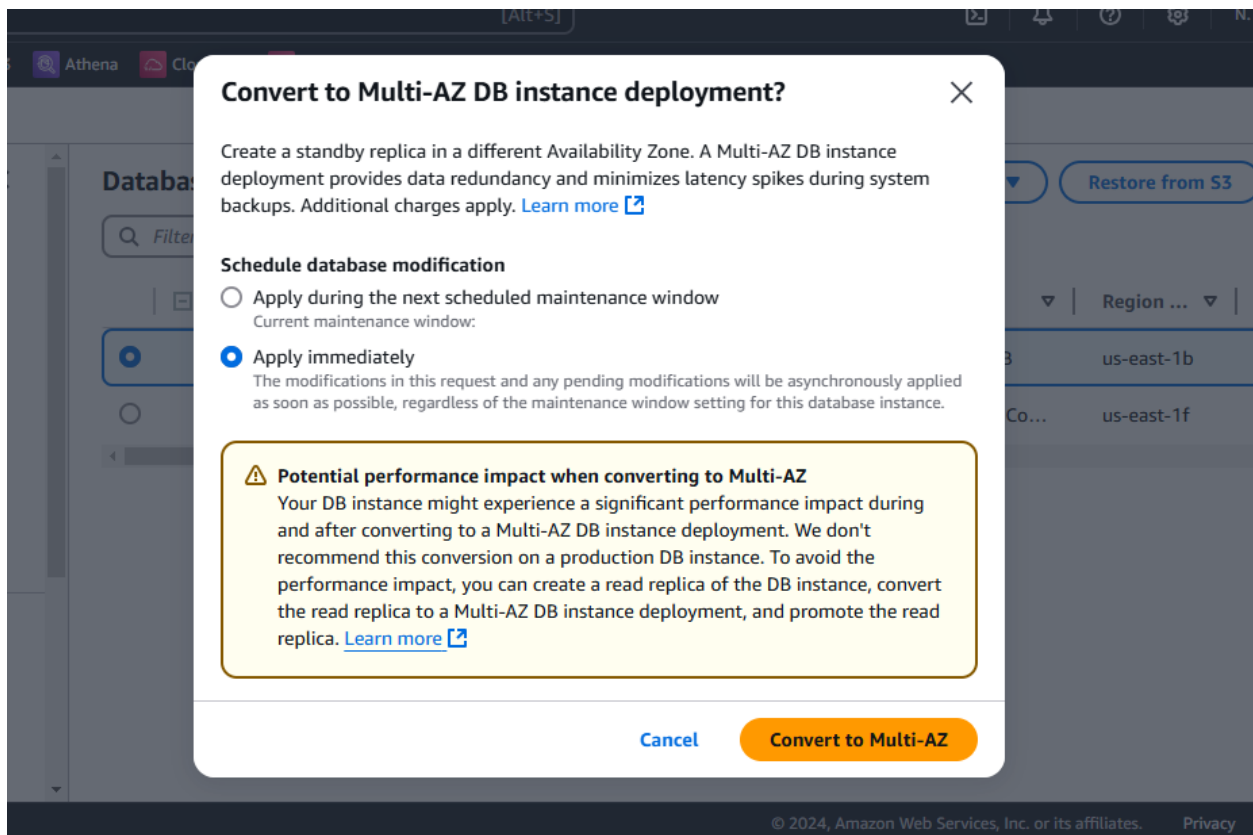
Create database

Filter by databases

< 1 >

DB identifier	Status	Role	Engine	Region ...	Size	Reco...
<a href="#">database-1</a>	Stopped terr	Instance	MariaDB	us-east-1b	db.t4g.mi...	
<a href="#">database-2</a>	Creating	Instance	MySQL Co...	-	db.t4g.mi...	

## 8) CONfigure multi AZ



9) Take Backup of db and restore the DB

## Take DB Snapshot

### Preferences

To take a DB Snapshot, choose a database and name your DB Snapshot.

#### Snapshot type

- ☒ DB instance  
☐ DB cluster

#### DB instance

DB Instance identifier. This is the unique key that identifies a DB Instance.

database-1 ▾

#### Snapshot name

Identifier for the DB Snapshot.

db1

Snapshot identifier is case insensitive, but stored as all lower-case, as in "mysnapshot". Cannot be null, empty, or blank. Must contain from 1 to 255 alphanumeric characters or hyphens. First character must be a letter. Cannot end with a hyphen or contain two consecutive hyphens.

Cancel

Take snapshot

✓ Successfully created snapshot db1. [View details](#) 📄

✕

## Snapshots

Manual

System

Shared with me

Public

Backup service

Exports in Amazon S3

### Manual snapshots (2)



Actions ▾

Take snapshot

🔍 Filter by manual snapshots

< 1 > ⚙️

<input type="checkbox"/>	Snapshot name ▲	Engine version ▼	DB instance or cluster ▼	Snapshot creation time
<input type="checkbox"/>	<a href="#">db1</a>	10.11.9	database-1	November 23, 2024, 17:31 (UTC-07:00)
<input type="checkbox"/>	<a href="#">my-database1-snapshot</a>	10.11.9	my-database1	November 23, 2024, 15:20 (UTC-07:00)



Deleting DB instance database-1

Notifications
0
0
1
0
1

Databases (2)
Group resources
Modify
Actions
Restore from S3
Create database

Filter by databases

DB identifier	Status	Role	Engine	Region ...	Size	Record
database-1	Deleting	Instance	MariaDB	us-east-1b	db.t4g.mi...	1 hr
database-2	Available	Instance	MySQL Co...	us-east-1f	db.t4g.mi...	

KMS key ID  
c66f6da0-37f5-4e01-b036-18de4d7e50a9

**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.

**Additional configuration**  
Database options, backup turned on, backtrack turned off, CloudWatch Logs, maintenance, delete protection turned off

Cancel
Restore DB instance

## 10) Create ReadReplca

## Create read replica

You are creating a replica DB instance from a source DB instance. This new DB instance will have the source DB instance's DB security groups and DB parameter groups.

### Settings

#### Replica source

Source DB instance identifier

database-2  
Role: Instance

#### DB instance identifier

This is the unique key that identifies a DB instance. This parameter is stored as a lowercase string (for example, mydbinstance).

### 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

Creating replica **db2read** in US East (N. Virginia)  
Your database might take a few minutes to launch.

### Databases (3)

☒ Group resources



Modify





Actions ▼

Restore from S3

Create database

Filter by databases

< 1 > 

 DB identifier	Status	Role	Engine	Region ...	Size	Recor
 <a href="#">database-2</a>	Modifying	Primary	MySQL Co...	us-east-1f	db.t4g.mi...	
 <a href="#">db2read</a>	Creating	Replica	MySQL Co...	-	db.t4g.mi...	
 <a href="#">db1</a>	Creating	Instance	MariaDB	us-east-1c	db.m7g.la...	