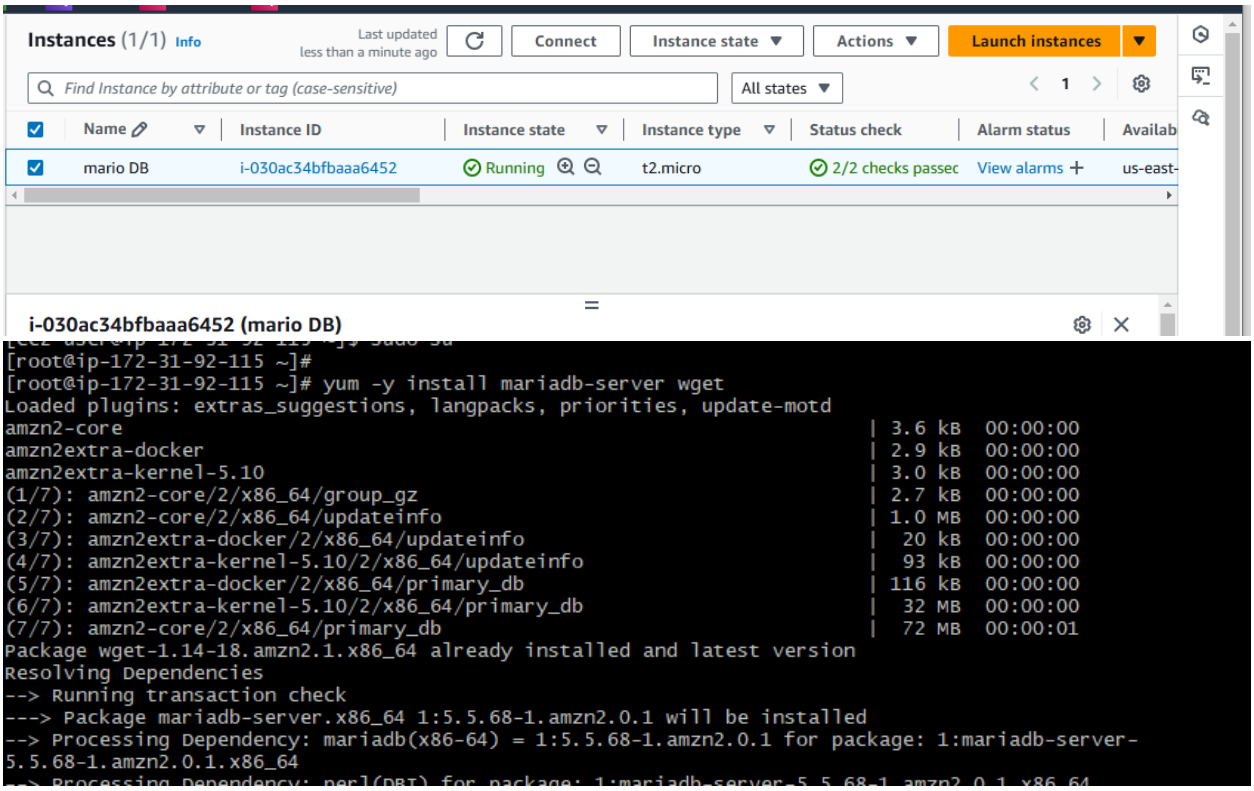
RDS

1) Create mariadb db on ec2.



```
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 marimari
Unit marimari.service could not be found.
[root@ip-172-31-92-115 ~]# systemctl status mari
Unit mari.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
           └─3705 /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 ~]#
```

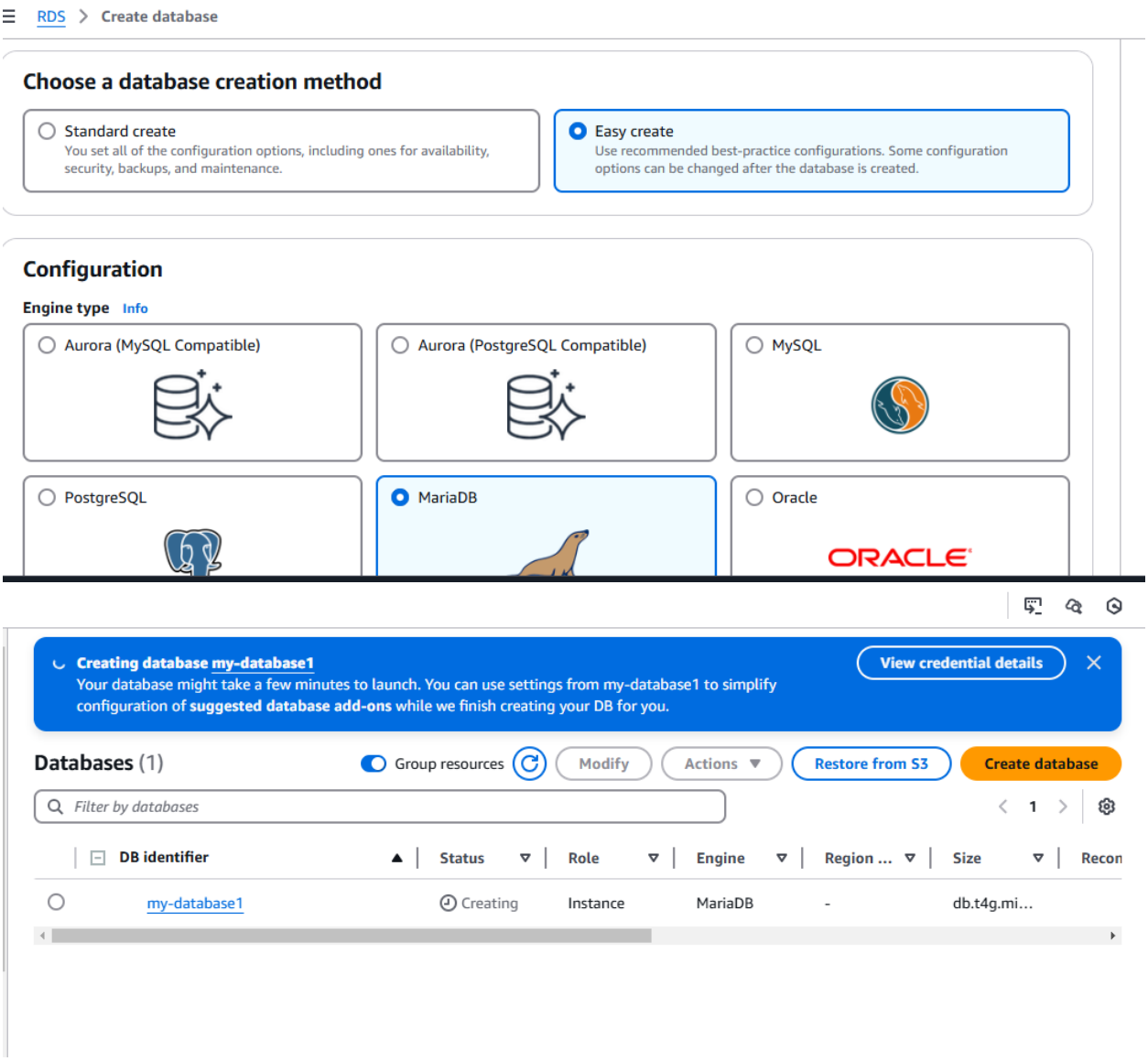
2) Insert some dummy data

```
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]# 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

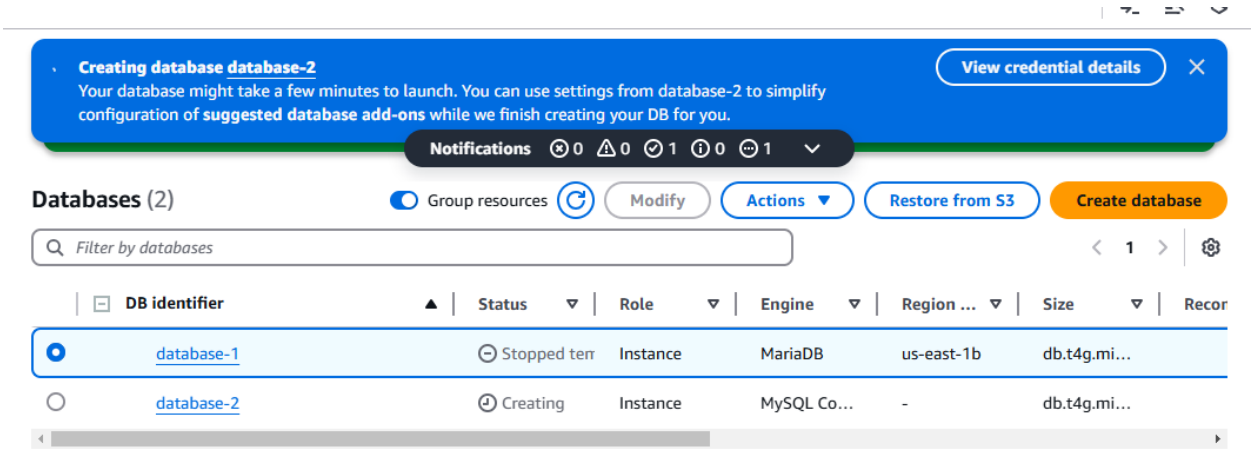


. 6) Install mysql db on ec2

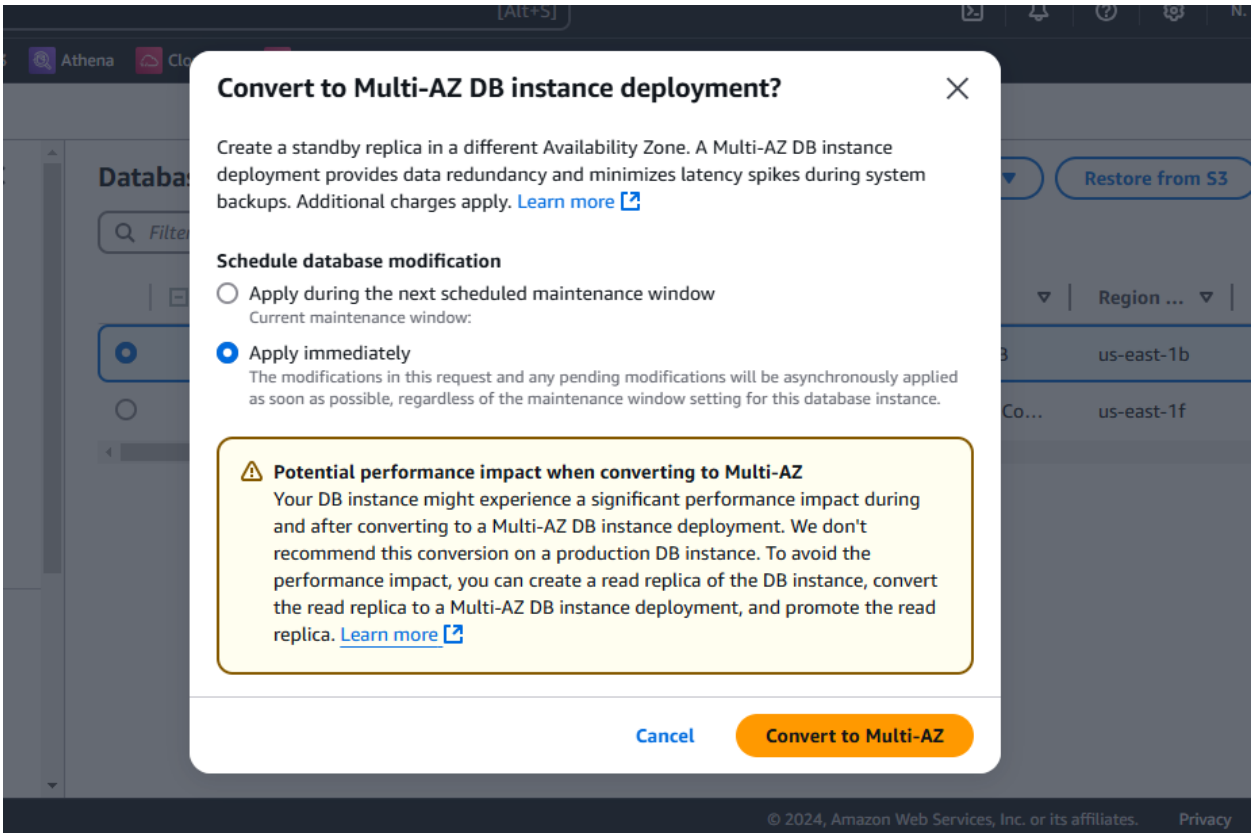
```
[root@ip-172-31-95-27 ~]# wget https://dev.mysql.com/get/mysql84-community-release-el9-1.noarch.rpm
--2024-11-23 11:33:57--  https://dev.mysql.com/get/mysql84-community-release-el9-1.noarch.rpm
Resolving dev.mysql.com (dev.mysql.com)... 23.218.131.64, 2600:1408:ec00:986::2e31, 2600:1408:ec00:98e::2e31
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^C
[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 ~]# ^C
[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
```

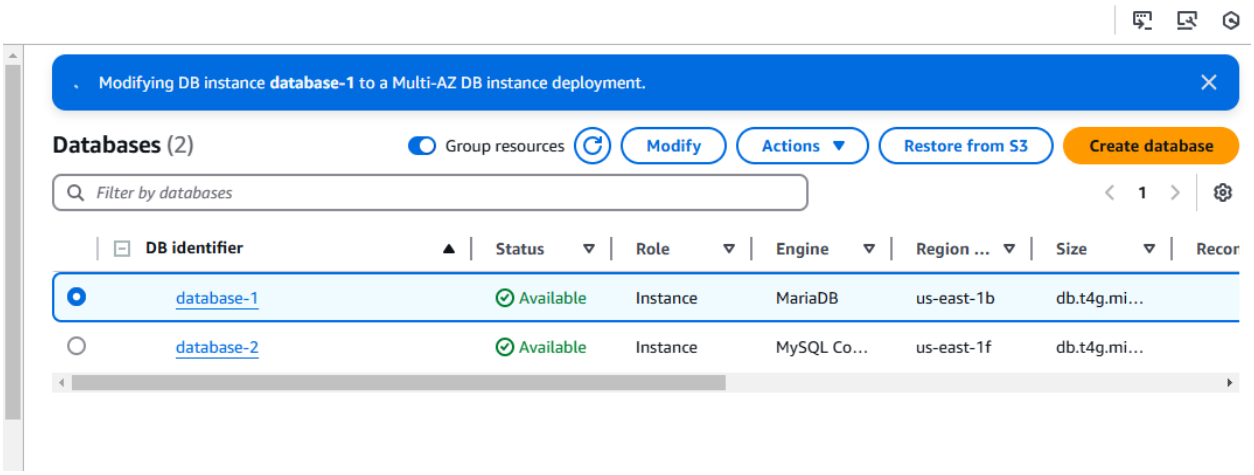
```
  Verifying        : mysql-community-client-plugins-8.4.3-1.el9.x86_64
  Verifying        : mysql-community-common-8.4.3-1.el9.x86_64
  Verifying        : mysql-community-icu-data-files-8.4.3-1.el9.x86_64
  Verifying        : mysql-community-libs-8.4.3-1.el9.x86_64
  Verifying        : mysql-community-server-8.4.3-1.el9.x86_64

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
  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

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

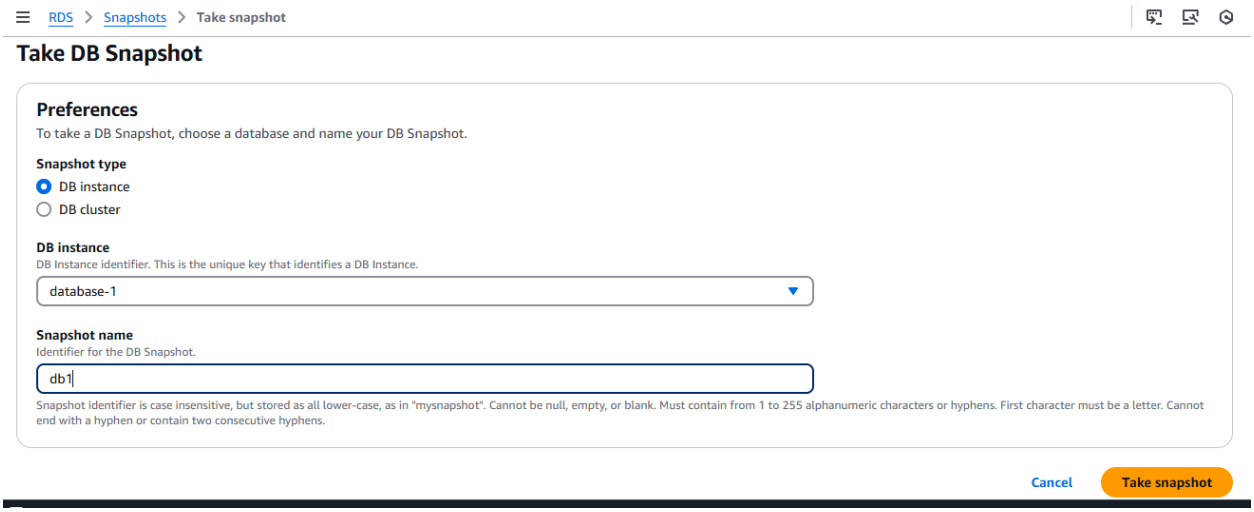


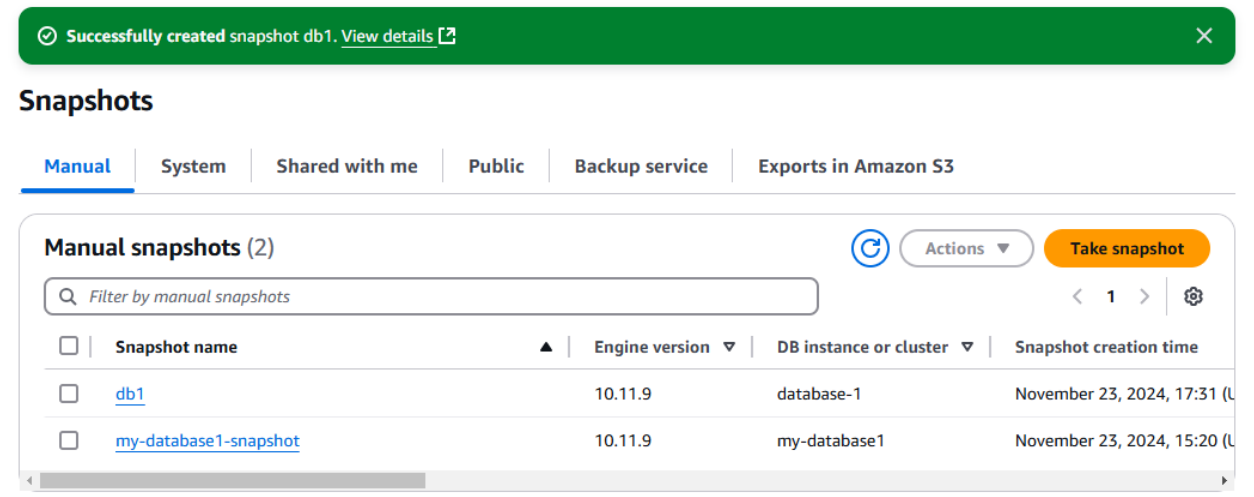
8) COnfigure multi AZ

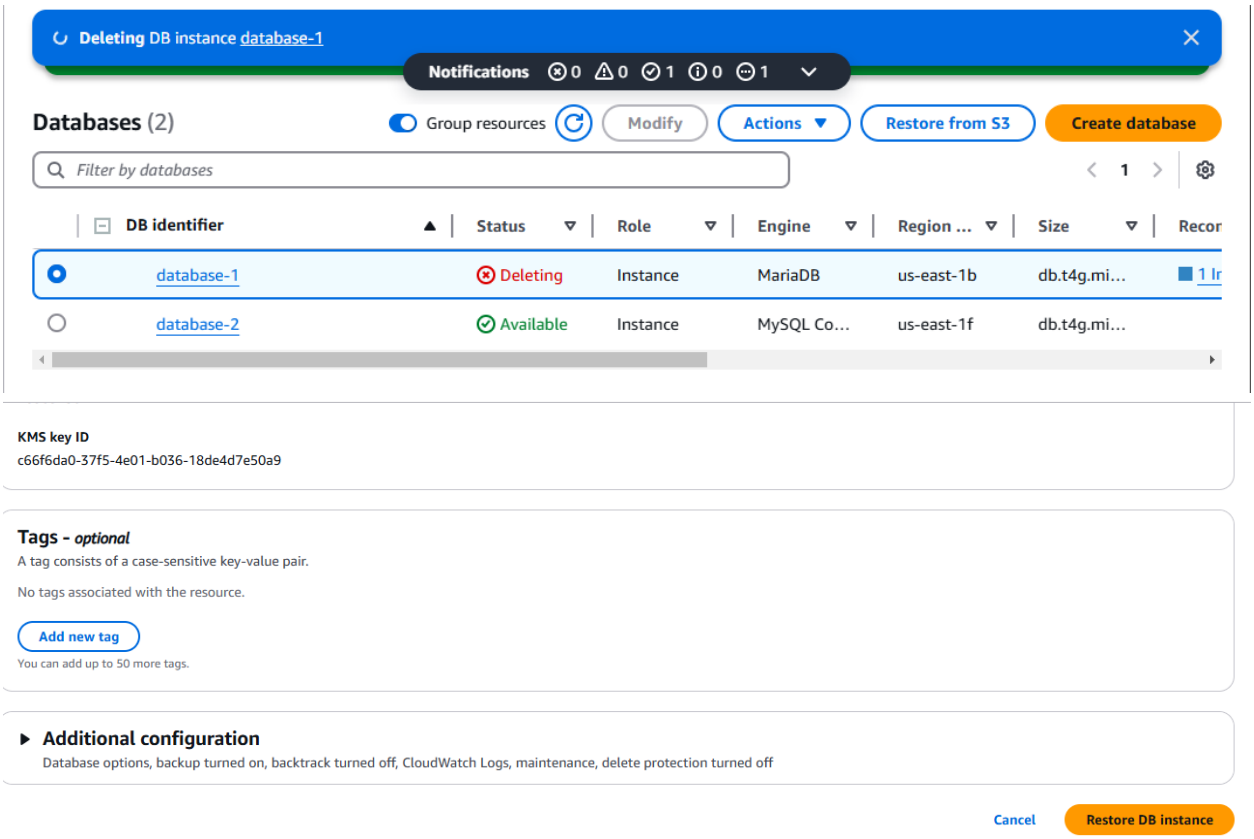




9) Take Backup of db and restore the DB


RDS > Snapshots > Take snapshot
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
Snapshot name
Engine version
DB instance or cluster
Snapshot creation time
db1
10.11.9
database-1
November 23, 2024, 17:31 (U
my-database1-snapshot
10.11.9
my-database1
November 23, 2024, 15:20 (U



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.

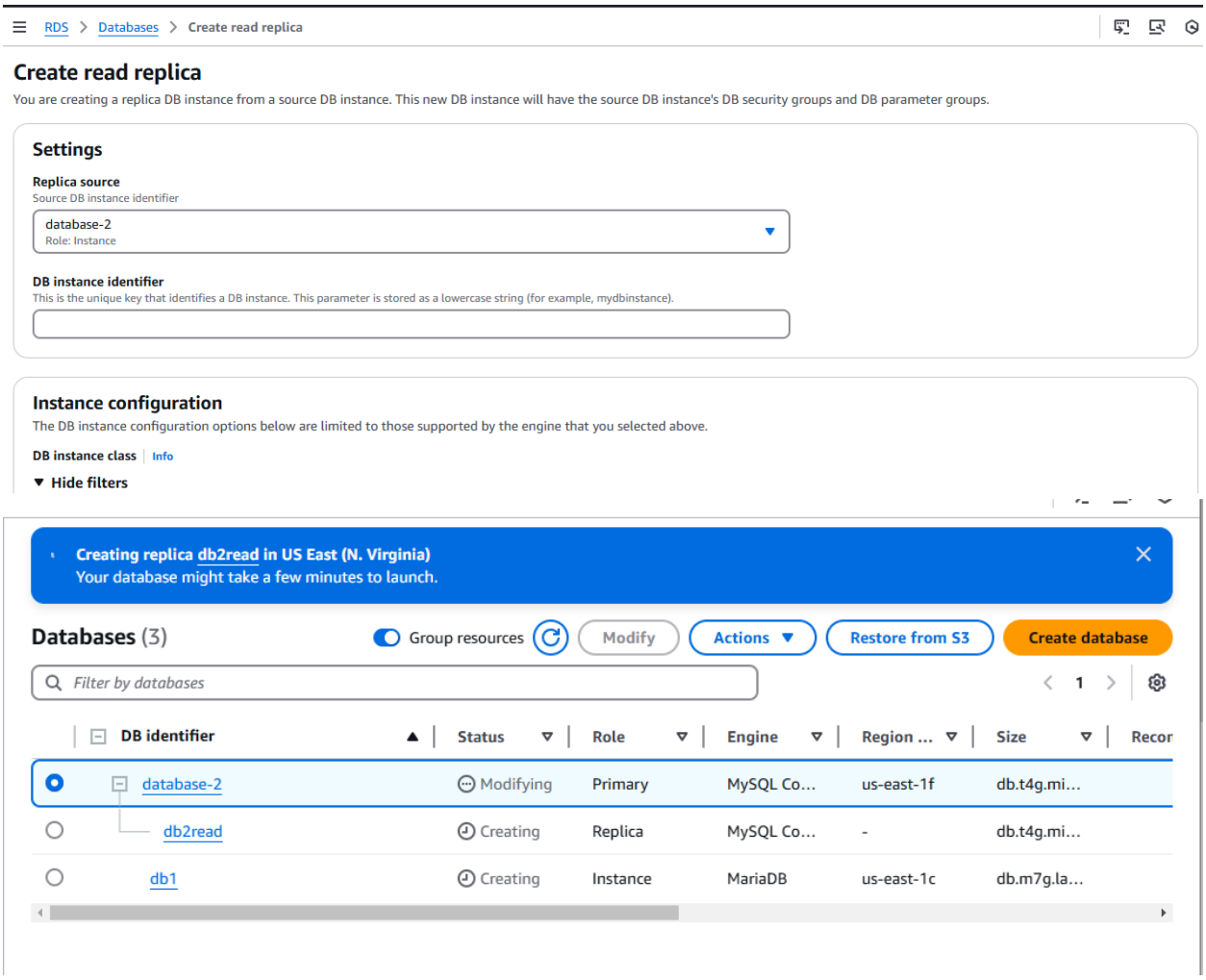
Add new tag

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


RDS > Databases > Create read replica
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
database-2
Modifying
Primary
MySQL Co...
us-east-1f
db.t4g.mi...
db2read
Creating
Replica
MySQL Co...
-
db.t4g.mi...
db1
Creating
Instance
MariaDB
us-east-1c
db.m7g.la...