U18ISI5006 - Cloud Computing Architecture

Database creation using RDS

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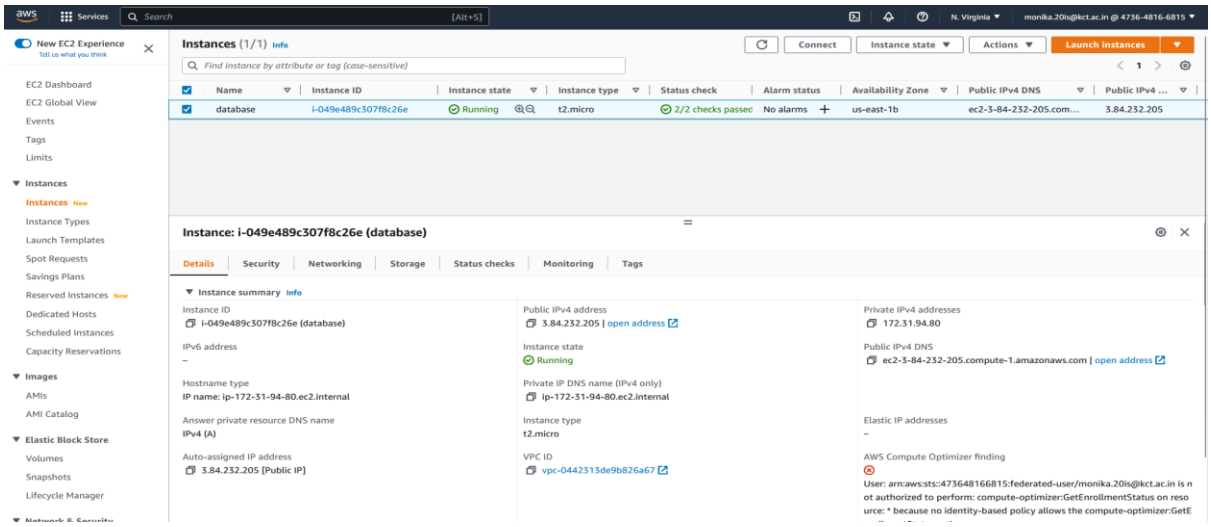
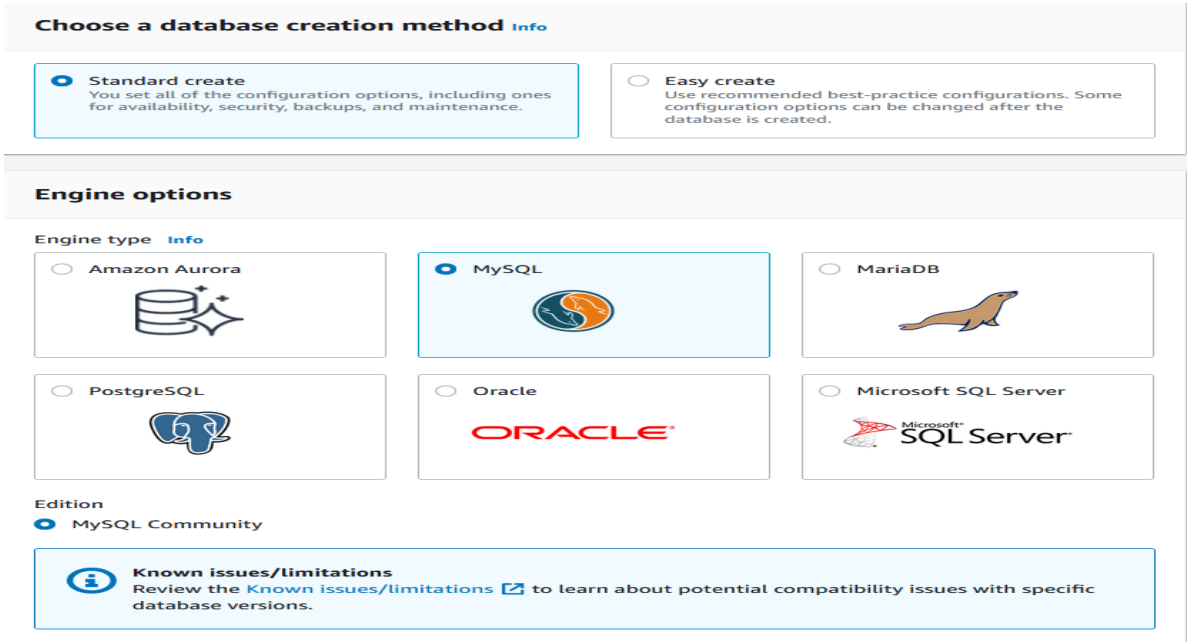
Roll no : 20BIS025

Topic : Database creation using RDS

1. Instance creation :



2. Database creation using RDS :



Hide filters

Show versions that support the Multi-AZ DB cluster Info
Create a 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 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 8.0.28

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

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.

db_student

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 60 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.

moni

1 to 16 alphanumeric characters. First character must be a letter.

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

Master password Info

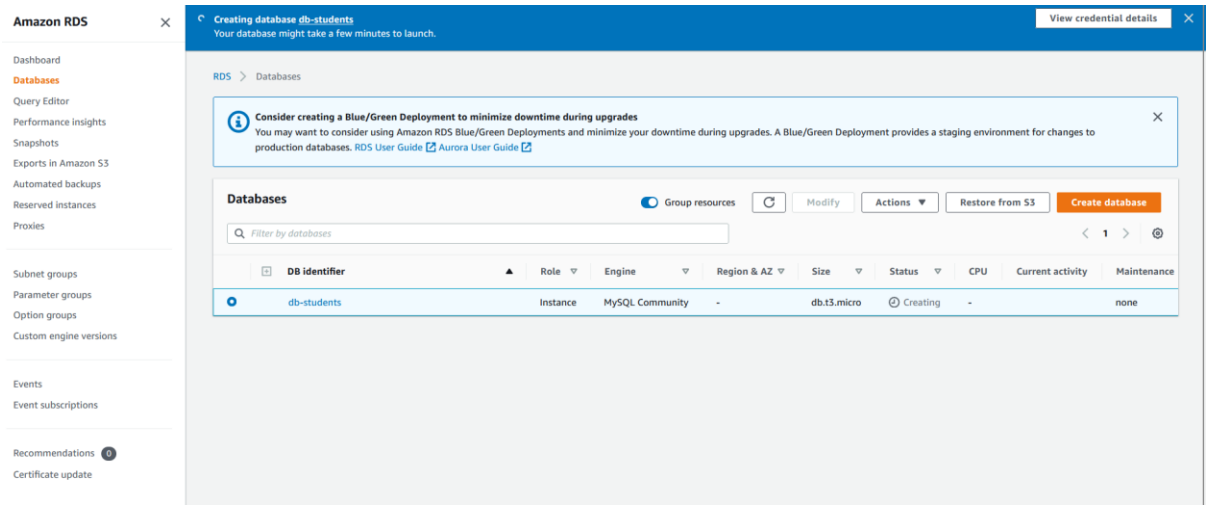
••••••••

Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), '(single quote), "(double quote) and @ (at sign).

Confirm master password Info

••••••••

3. Database created:



Wait until its created

4. Connect EC2 through putty :

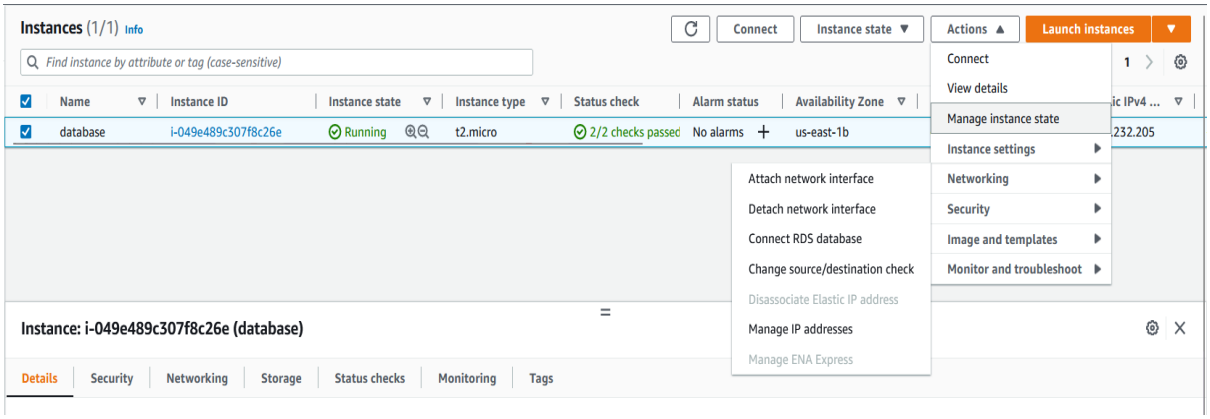
Executing ‘sudo yum install mariadb’

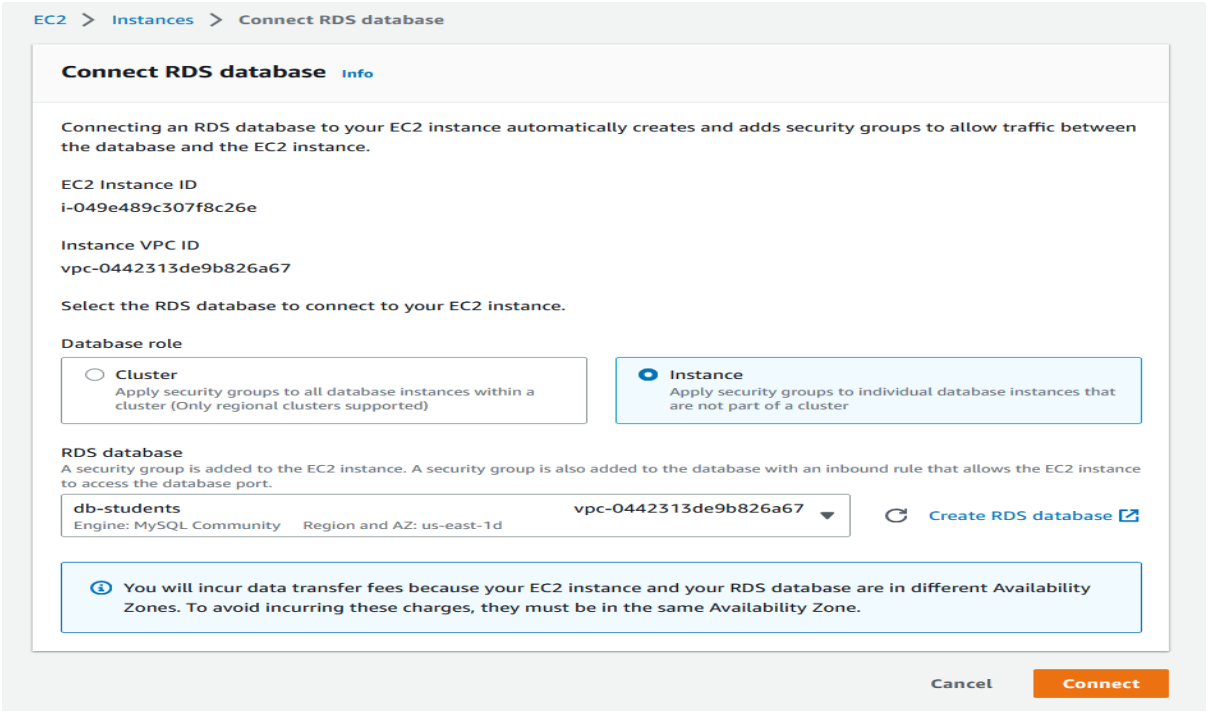
```
login as: ec2-user
Authenticating with public key "database"
Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
[ec2-user@ip-172-31-94-80 ~]$ sudo yum install mariadb
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use subscripti
on-manager to register.

Last metadata expiration check: 0:05:02 ago on Mon 12 Dec 2022 07:04:19 AM UTC.
Dependencies resolved.
================================================================================
 Package               Arch    Version            Repository                  Size
================================================================================
Installing:
 mariadb               x86_64 3:10.5.16-2.el9_0 rhel-9-appstream-rhui-rpms 1.6 M
Installing dependencies:
 mariadb-common        x86_64 3:10.5.16-2.el9_0 rhel-9-appstream-rhui-rpms  39 k
 mariadb-connector-c   x86_64 3.2.6-1.el9_0     rhel-9-appstream-rhui-rpms 203 k
 mariadb-connector-c-config
                       noarch 3.2.6-1.el9_0     rhel-9-appstream-rhui-rpms  11 k
 perl-AutoLoader       noarch 5.74-479.el9      rhel-9-appstream-rhui-rpms  31 k
 perl-B                x86_64 1.80-479.el9      rhel-9-appstream-rhui-rpms 194 k
 perl-Carp             noarch 1.50-460.el9      rhel-9-appstream-rhui-rpms  31 k
 perl-Class-Struct     noarch 0.66-479.el9      rhel-9-appstream-rhui-rpms  32 k
 perl-Data-Dumper      x86_64 2.174-462.el9     rhel-9-appstream-rhui-rpms  59 k
 perl-Digest           noarch 1.19-4.el9        rhel-9-appstream-rhui-rpms  29 k
 perl-Digest-MD5       x86_64 2.58-4.el9        rhel-9-appstream-rhui-rpms  39 k
 perl-Encode           x86_64 4:3.08-462.el9    rhel-9-appstream-rhui-rpms 1.7 M
 perl-Errno            x86_64 1.30-479.el9      rhel-9-appstream-rhui-rpms  25 k
 perl-Exporter         noarch 5.74-461.el9      rhel-9-appstream-rhui-rpms  34 k
 perl-Fcntl            x86_64 1.13-479.el9      rhel-9-appstream-rhui-rpms  32 k
 perl-File-Basename    noarch 2.85-479.el9      rhel-9-appstream-rhui-rpms  27 k
 perl-File-Path        noarch 2.18-4.el9        rhel-9-appstream-rhui-rpms  38 k
 perl-File-Temp        noarch 1:0.231.100-4.el9 rhel-9-appstream-rhui-rpms  63 k
 perl-File-stat        noarch 1.09-479.el9      rhel-9-appstream-rhui-rpms  27 k
 perl-FileHandle       noarch 2.03-479.el9      rhel-9-appstream-rhui-rpms  26 k
 perl-Getopt-Long      noarch 1:2.52-4.el9      rhel-9-appstream-rhui-rpms  64 k
 perl-Getopt-Std       noarch 1.12-479.el9      rhel-9-appstream-rhui-rpms  26 k
 perl-HTTP-Tiny        noarch 0.076-460.el9     rhel-9-appstream-rhui-rpms  58 k
 perl-IO               x86_64 1.43-479.el9      rhel-9-appstream-rhui-rpms 103 k
 perl-IO-Socket-IP     noarch 0.41-5.el9        rhel-9-appstream-rhui-rpms  45 k
 perl-IPC-Open3        noarch 1.21-479.el9      rhel-9-appstream-rhui-rpms  34 k
 perl-MIME-Base64      x86_64 3.16-4.el9        rhel-9-appstream-rhui-rpms  34 k
 perl-Net-SSLeay       x86_64 1.92-2.el9        rhel-9-appstream-rhui-rpms 392 k
 perl-POSIX            x86_64 1.94-479.el9      rhel-9-appstream-rhui-rpms 108 k
 perl-PathTools        x86_64 3.78-461.el9      rhel-9-appstream-rhui-rpms  92 k
 perl-Pod-Escapes      noarch 1:1.07-460.el9    rhel-9-appstream-rhui-rpms  22 k
 perl-Pod-Perldoc      noarch 3.28.01-461.el9   rhel-9-appstream-rhui-rpms  92 k
 perl-Pod-Simple       noarch 1:3.42-4.el9      rhel-9-appstream-rhui-rpms 229 k
 perl-Pod-Usage        noarch 4:2.01-4.el9      rhel-9-appstream-rhui-rpms  43 k
 perl-Scalar-List-Utils
                       x86_64 4:1.56-461.el9    rhel-9-appstream-rhui-rpms  77 k
 perl-SelectSaver      noarch 1.02-479.el9      rhel-9-appstream-rhui-rpms  22 k
 perl-Socket           x86_64 4:2.031-4.el9     rhel-9-appstream-rhui-rpms  58 k
 perl-Storable         x86_64 1:3.21-460.el9    rhel-9-appstream-rhui-rpms  98 k
 perl-Symbol           noarch 1.08-479.el9      rhel-9-appstream-rhui-rpms  24 k
 perl-Sys-Hostname     x86_64 1.23-479.el9      rhel-9-appstream-rhui-rpms  29 k
```

Verifying installation:

```
Complete!
[ec2-user@ip-172-31-94-80 ~]$ mysql --version
mysql  Ver 15.1 Distrib 10.5.16-MariaDB, for Linux (x86_64) using  EditLine wrap
per
```

5.Connecting Ec2 and RDS database :





Command to connect on instance terminal :

mysql -h db-students.c7fs0pkj8an3.us-east-1.rds.amazonaws.com -P 3306 -u moni -p

[note: db-students.c7fs0pkj8an3.us-east-1.rds.amazonaws.com - endpoint

moni – master name]

```
[ec2-user@ip-172-31-94-80 ~]$ mysql -h db-students.c7fs0pkj8an3.us-east-1.rds.am
azonaws.com  -P 3306 -u moni -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MySQL connection id is 20
Server version: 8.0.28 Source distribution

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

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

MySQL [(none)]>
```

6. Executing mysql commands :

```
MySQL [(none)]> create table profile;
ERROR 1046 (3D000): No database selected
MySQL [(none)]> use moni;
Database changed
MySQL [moni]> create table profile(name varchar(30) , roll_no varchar(50) PRIMAR
Y KEY, age int);
Query OK, 0 rows affected (0.047 sec)
```

```
Database changed
MySQL [moni]> insert into profile values("Monika","20BIs025",20);
Query OK, 1 row affected (0.008 sec)

MySQL [moni]> select* from profile;
+--------+----------+------+
| name   | roll_no  | age  |
+--------+----------+------+
| Monika | 20BIs025 |   20 |
+--------+----------+------+
1 row in set (0.001 sec)

MySQL [moni]>
```