**RDS-TASK**

**1.Create mariadb db on ec2.**

a. Launch ec2 Instance and connect through Public Ip.

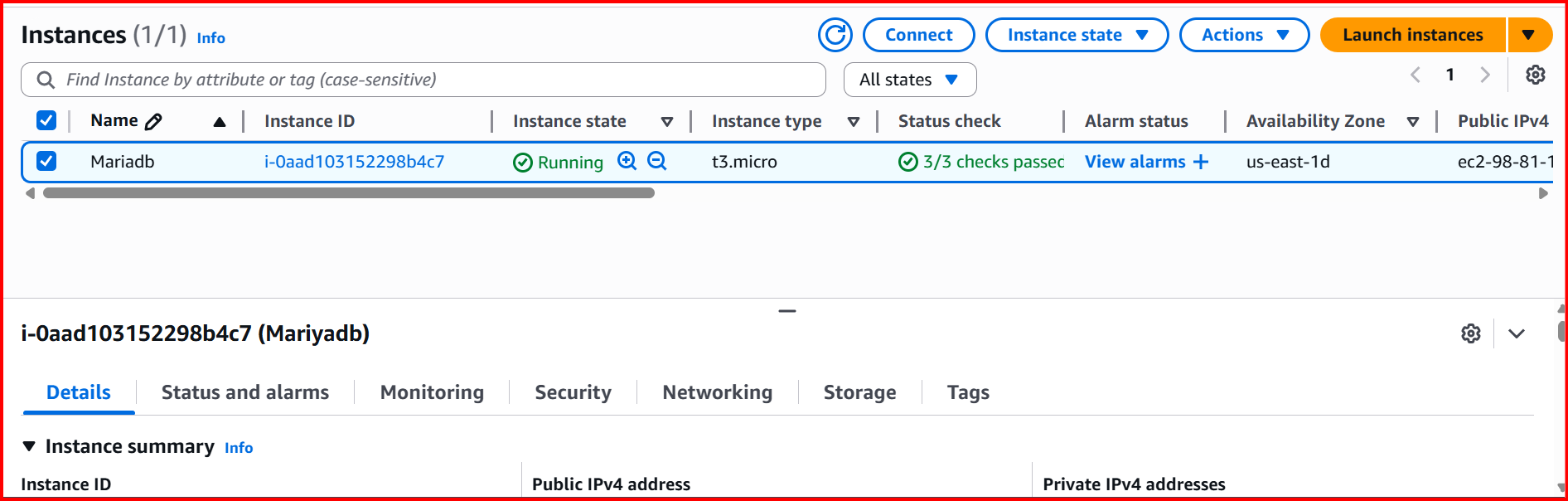
b. sudo dnf update -y

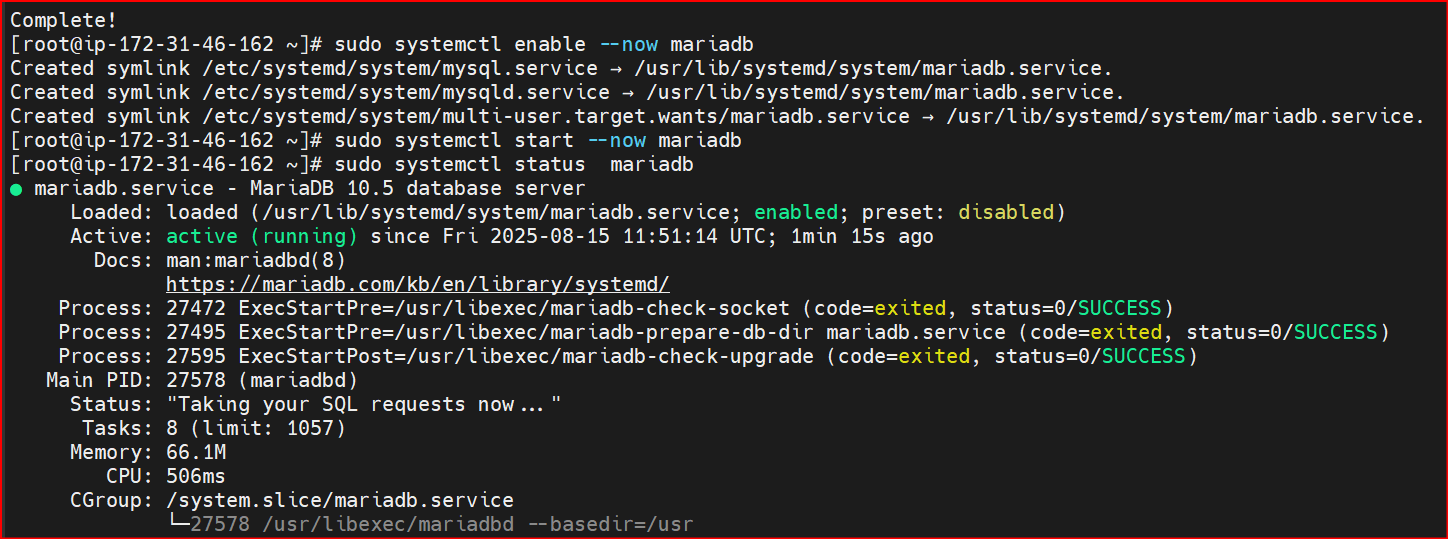
c. sudo dnf install -y mariadb105-server

d. sudo systemctl enable --now mariadb

e. sudo systemctl Start --now mariadb

f. systemctl status mariadb





Set Environment Variables:

DBName=ec2db

DBPassword=admin123456

DBRootPassword=admin123456

DBUser=ec2dbuser

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

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

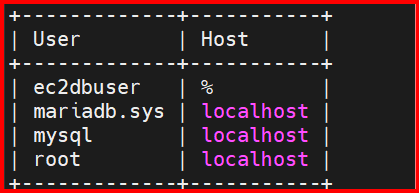
echo "GRANT ALL PRIVILEGES ON \*.\* TO '${DBUser}'@'%' WITH GRANT OPTION;" >> /tmp/db.setup

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

sudo mysql < /tmp/db.setup

sudo mysql -e "SHOW DATABASES;"

sudo mysql -e "SELECT User, Host FROM mysql.user;”



**2. Insert some dummy data.**

Log into MariaDB as your database user

mysql -u ec2dbuser -p ec2db

Password: admin123456

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Create New Table:

CREATE TABLE users (

id INT AUTO\_INCREMENT PRIMARY KEY,

name VARCHAR(50),

email VARCHAR(100)

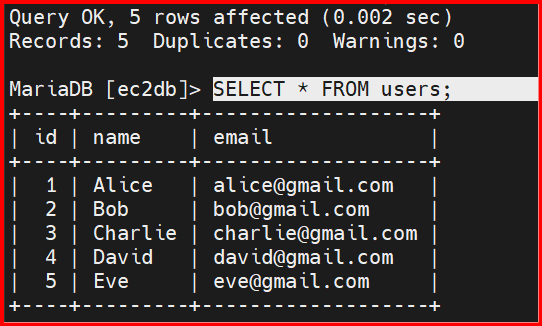
);

-------------------------------------------------------------------

INSERT INTO users (name, email) VALUES

('Alice', 'alice@gmail.com'), ('Bob', 'bob@gmail.com'), ('Charlie', 'charlie@gmail.com'), ('David', 'david@gmail.com'), ('Eve', 'eve@gmail.com');

SELECT \* FROM users;



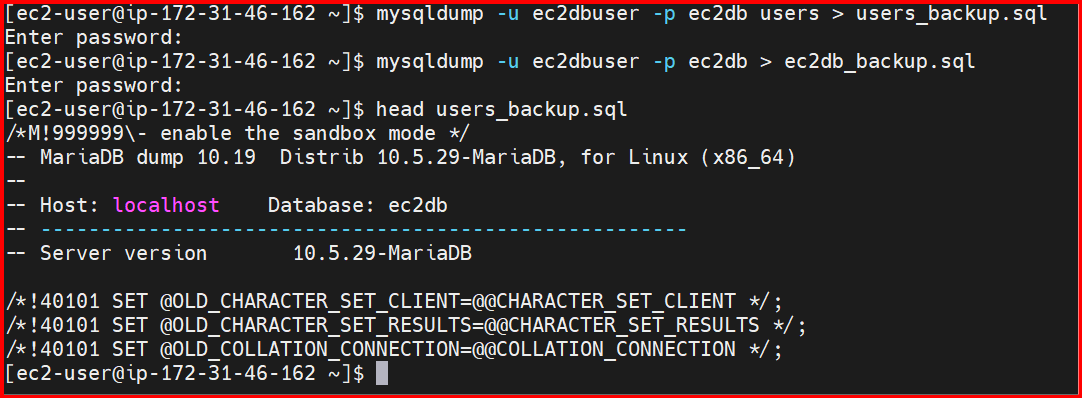
**3.Take the backup of dummy data on ec2.**

created a backup of only the users table from the ec2db database.

mysqldump -u ec2dbuser -p ec2db users > users\_backup.sql

mysqldump -u ec2dbuser -p ec2db > ec2db\_backup.sql

head users\_backup.sql

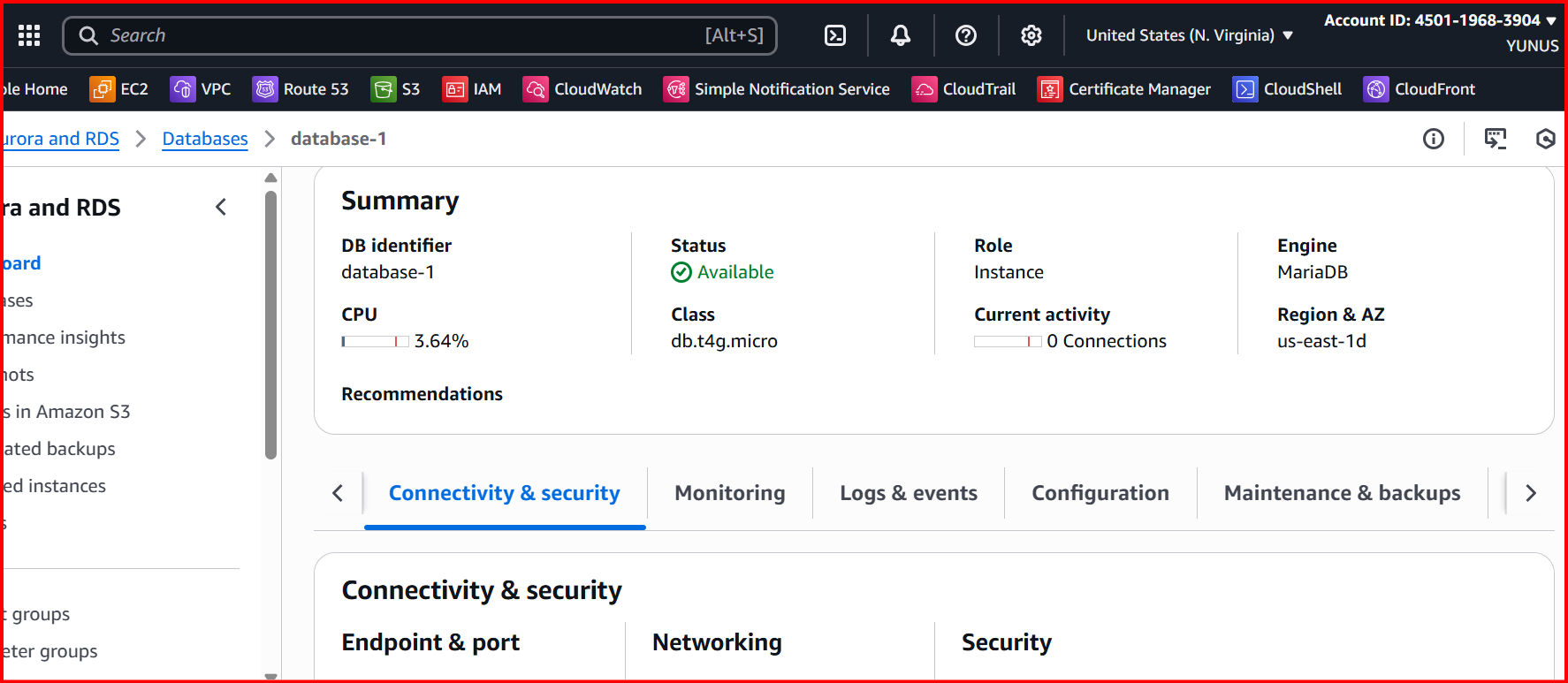
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**4.Launch MariaDB RDS instance.**

**Go to EC2 Console**

**RDS 🡪 Database 🡪 Choose a database creation method🡪 Easy Create 🡪Configuration 🡪 MariaDB 🡪 DB instance size 🡪 Free tier 🡪DB instance identifier🡪 database (Name) 🡪 Master username 🡪admin 🡪 Credentials management 🡪 choose the password 🡪 Instance 🡪 choose the instance 🡪Security group: Choose SG that allows port 3306 from EC2.**

**Wait for Status → Available**

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**5.Migrate database from ec2 to RDS**

**a.Take a backup BD 🡪 EC2**

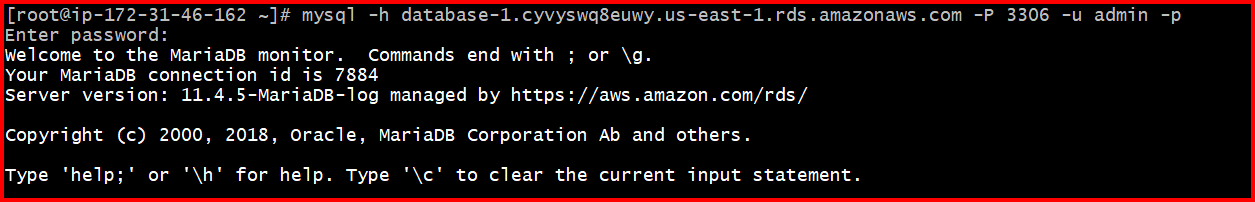
**mysqldump -u root -p ec2db > ec2db.sql**

**Password: enter the password**

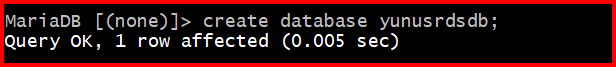
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**b. Login to maridb  
mysql -h database-1.cyvyswq8euwy.us-east-1.rds.amazonaws.com -P 3306 -u admin -p**

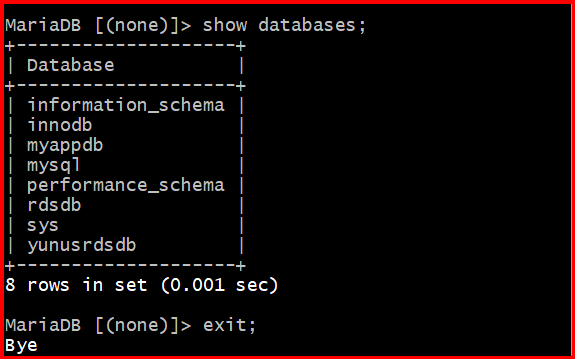
**Password:enter the password**

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**c.create database**

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**d.Show databases and exit**

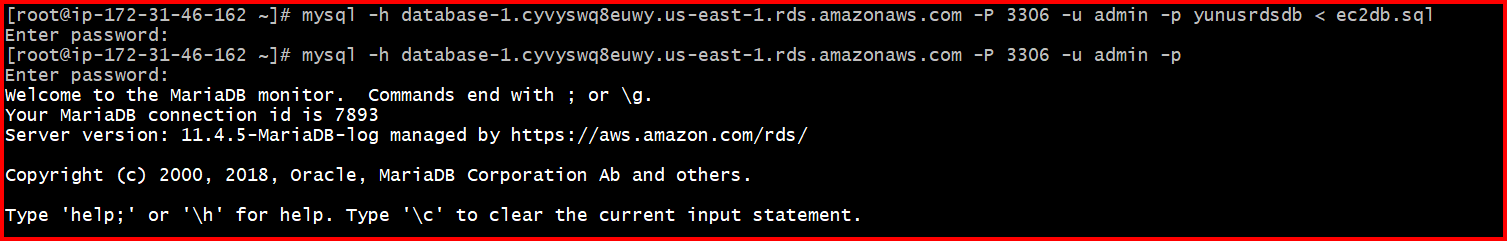
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**e.Login to mariadb**

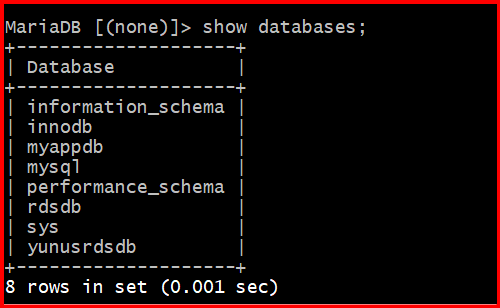
**Make sure to check the Created user name and endpoint**

**mysql -h database-1.cyvyswq8euwy.us-east-1.rds.amazonaws.com -P 3306 -u admin -p yunusrdsdb < ec2db.sql**

**mysql -h database-1.cyvyswq8euwy.us-east-1.rds.amazonaws.com -P 3306 -u admin -p**

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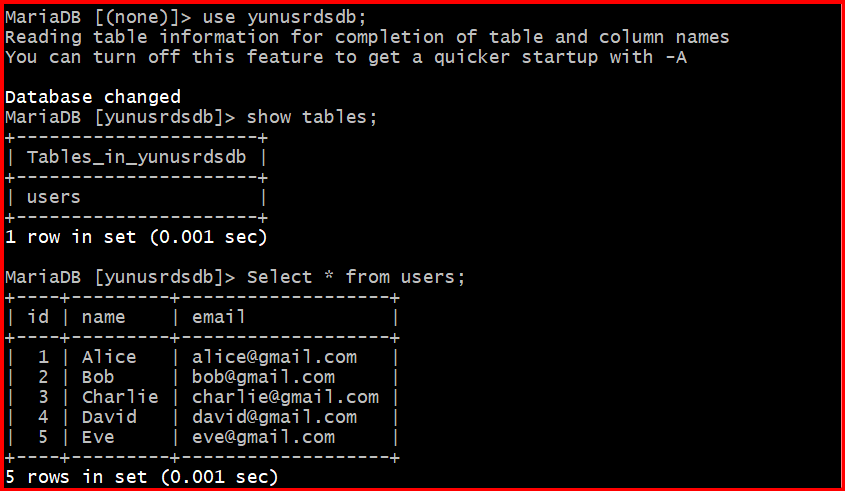
**f.Show databases**



g.Use yunusrdsdb;

Show tables;

Select \* from users;



6.Install MySQL DB on ec2.

1.Update system

sudo dnf update -y

2. Add MySQL repository

sudo dnf install -y https://dev.mysql.com/get/mysql80-community-release-el9-1.noarch.rpm

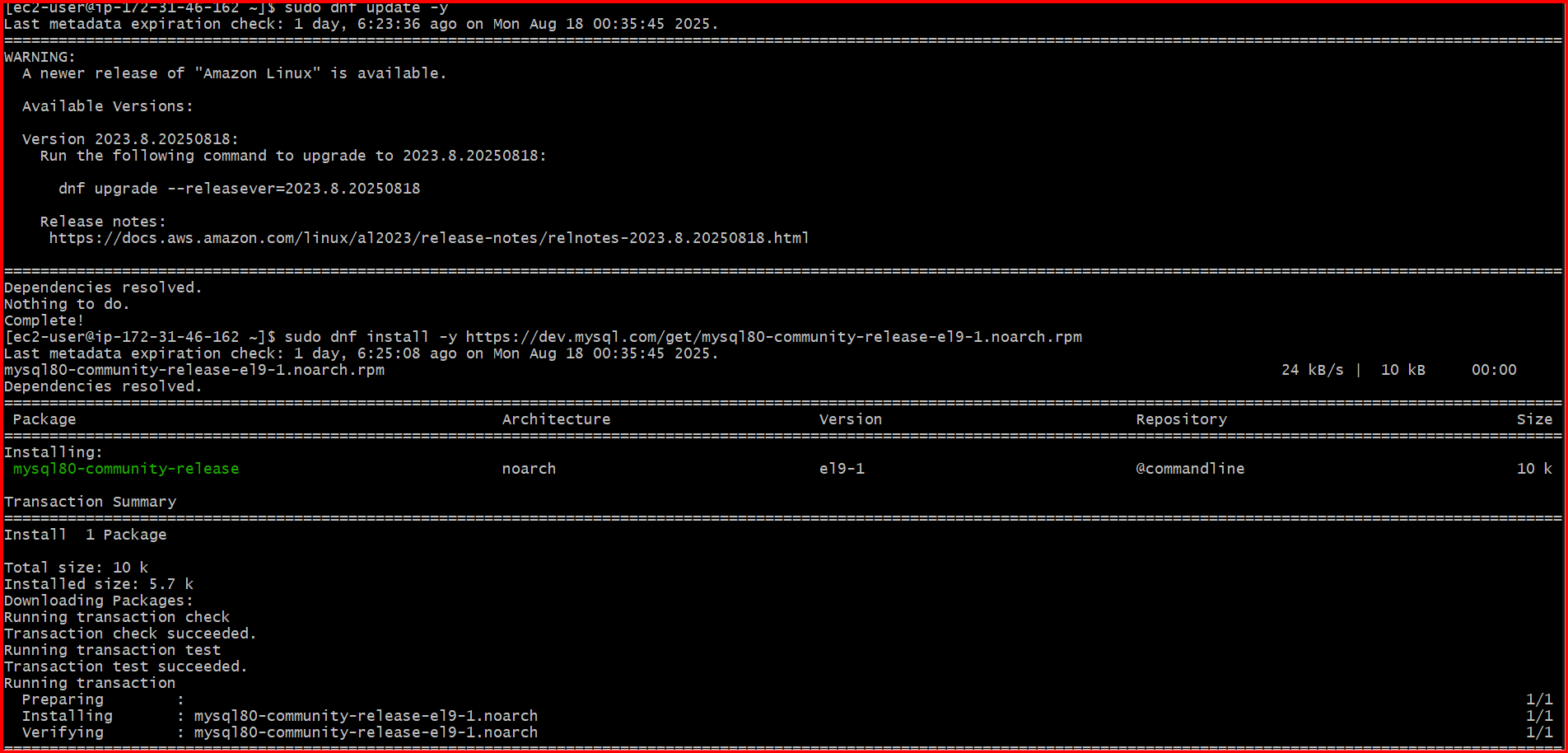
3. Install MySQL

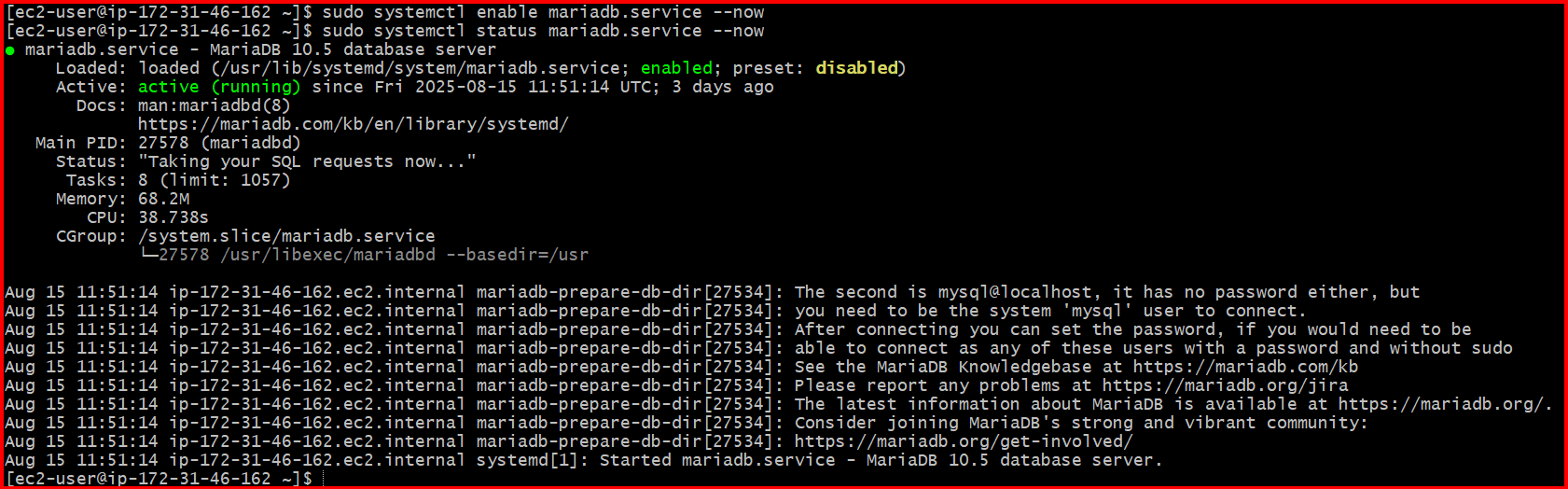
sudo dnf install -y mysql-community-server

4. Start & enable service

sudo systemctl enable --now mysqld

sudo systemctl status mysqld

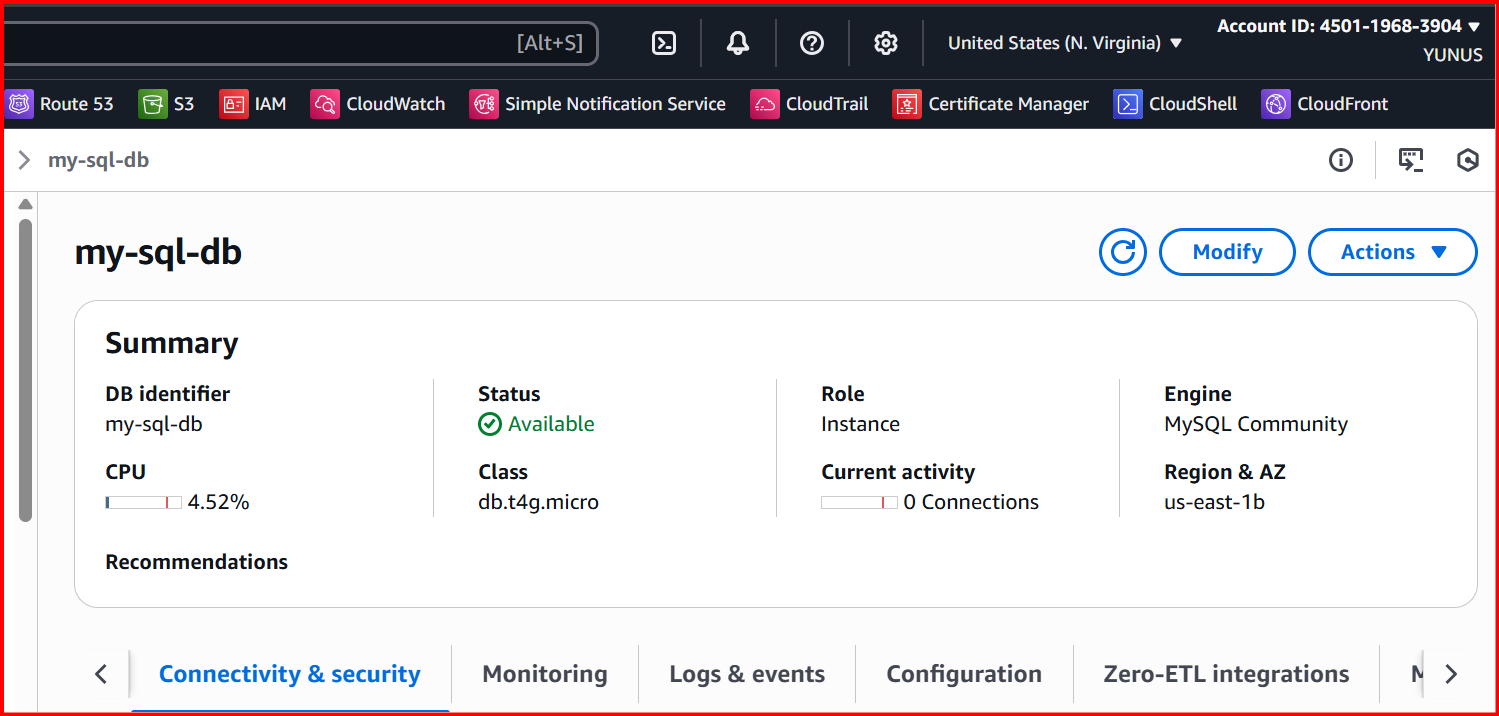




7.Launch MySQL RDS image.

**Go to AWS Console → RDS → Create database  
Engine type**: MySQL  
**Templates**: Free tier  
**Settings**:

**DB instance identifier**: my-mysql  
**Master username**: admin  
**Master password**: choose your password  
**DB instance size**: Choose db.t3.micro   
**Storage**: Default

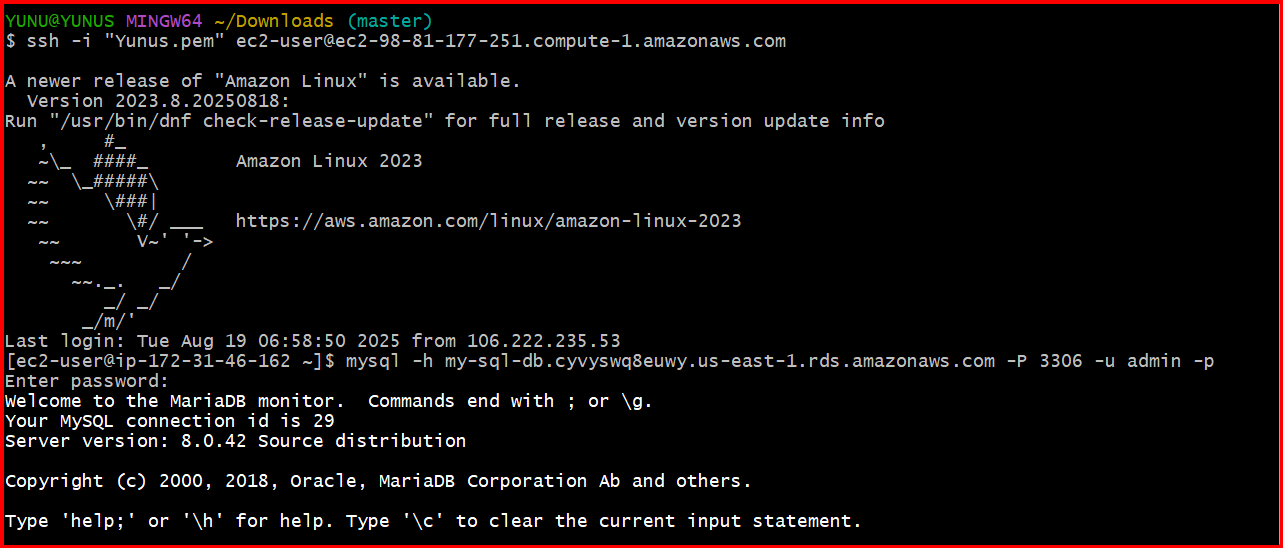


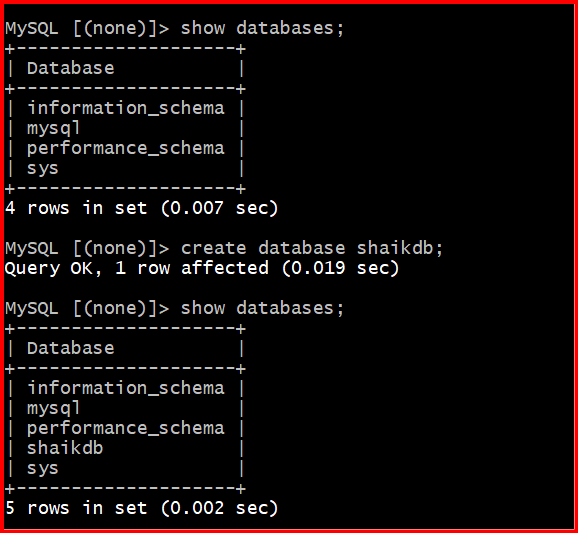
Add the instance to Mysql database

Connect ssh

Connect to mysql 🡪 check the endpoint

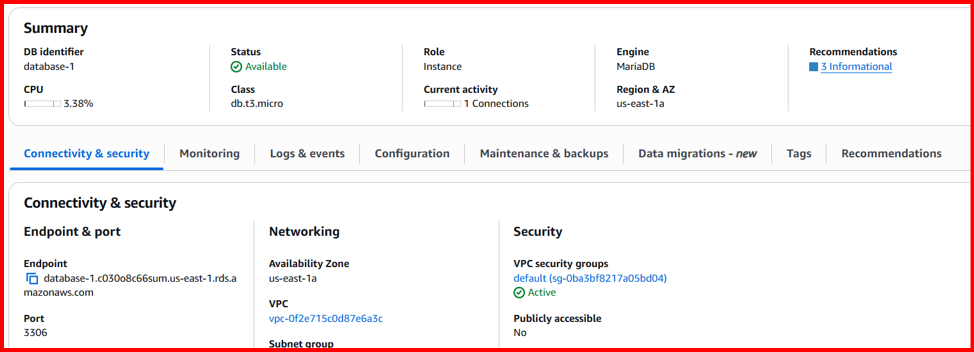
mysql -h my-sql-db.cyvyswq8euwy.us-east-1.rds.amazonaws.com -P 3306 -u admin -p

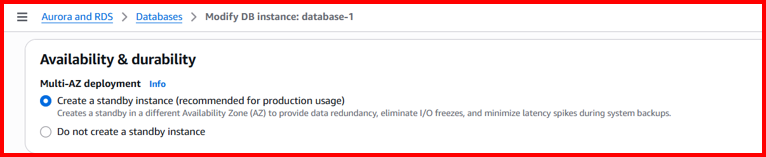




8.Configure multi AZ.

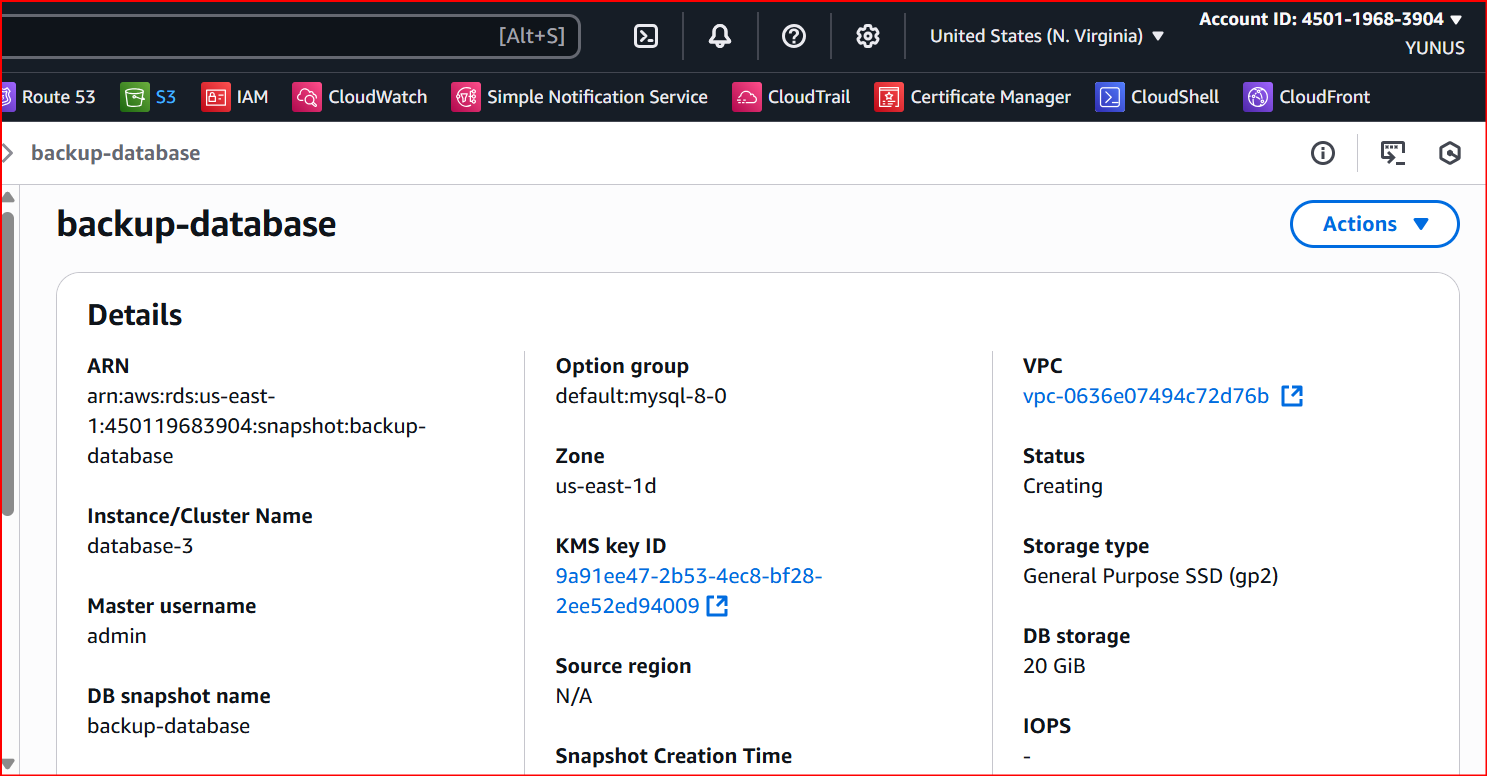
In AWS Console → RDS → Select your DB → **Modify/action → convert to Multi-AZ**Under **Availability & durability**, enable **Multi-AZ deployment**

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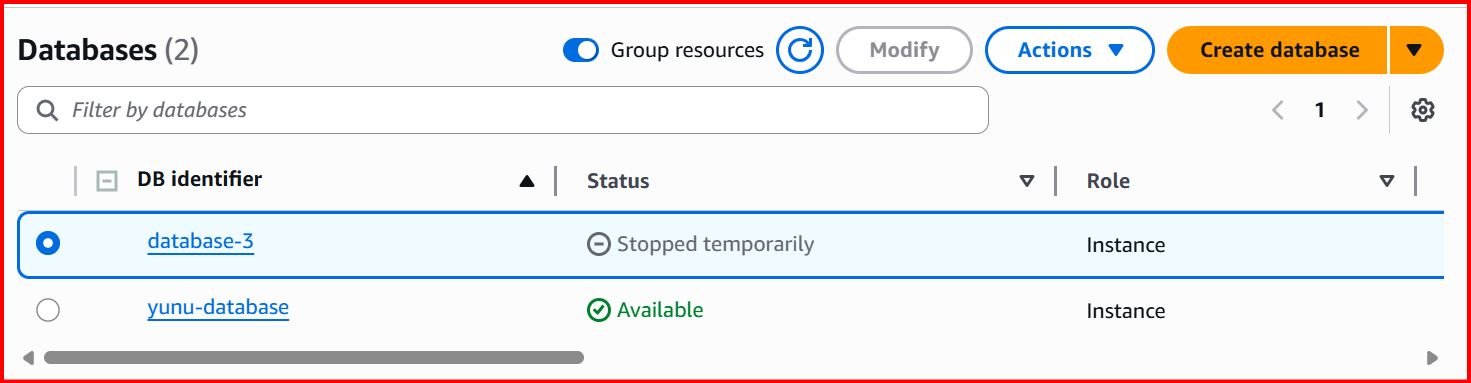
9.Take Backup of DB and restore the DB.

Go to actions🡪 take a snapshot



Delete the database

From the snapshot restore the database



10.Create Read Replica

Go to RDS → Databases.(Make sure your database Enabled Automatic Backup )  
Select your MySQL instance.  
Click Actions → Create read replica.

