1. Create mariadb db on ec2.

To Create Maria Db on Ec2 I have launched an instance and connected through SSH

Then, Switched to Root User

Checking the system updates,

dnf update -y

Search available MariaDB versions

dnf search mariadb  
After checking the versions Install MariaDB server   
dnf install -y mariadb105-server  
After installing Enable and start MariaDB

systemctl start mariadb  
systemctl enable mariadb  
To Check status  
systemctl status mariadb

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#Set Environmental 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

After All these steps now, we can connect to Mariadb server

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

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2. Insert some dummy data

After Connecting to Mariadb – I need to connect to what database we are using

For that USE ec2db;

Now, we have created a database, connected and we can start using that data.

We need tables for that, To create a table we need

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

After creating the table we need to insert values in the table for that

INSERT INTO table1 VALUES(1, 'Shiva'), (2, 'Jatin'), (3, 'Sarath'), (4, 'Lalith');

To display the table we use

SELECT \* FROM table1;

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3) Take the backup of dummy data on ec2

To Create Backup of Dummy Data on ec2 we need

created a backup of only the users table from the ec2db database.  
mysqldump -u ec2dbuser -p ec2db table1 > 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 RDS Console  
RDS -> Database -> Choose a database creation method-> Standard   
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  
mysql -h maria-db.colegqeii25k.us-east-1.rds.amazonaws.com-P 3306 -u admin -p

Password: enter password

You will be logged in to mariadb

We need to cfreate a database rdsdb and then from our ec2 instance

mysql -h maria-db.colegqeii25k.us-east-1.rds.amazonaws.com -P 3306 -u admin -p ec2db < ec2db.sql

enter the password. You will be logged into MariaDB, then use rdsdb Database;

Now, Press select \* from table1;

You will get the output as follows

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6) Install MySQL DB on ec2

Install MySQL

dnf install -y mysql-community-server  
Start & enable service  
systemctl start mysqld

systemctl status mysqld

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7) Launch MySQL RDS image

Go to RDS Console  
RDS -> Database -> Choose a database creation method-> Standard   
Create ->Configuration -> my-sql-db -> 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.

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8) Configure multi AZ

In AWS Console → RDS → Select your DB → Modify/action → convert to  
Multi-AZ

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9) Take Backup of DB and restore the DB

1. Go to AWS Console → RDS.  
2. In the left panel, click Databases.  
3. Select your RDS MySQL instance.  
4. On the top right, click Actions → Take snapshot.  
5. Enter a Snapshot name   
6. click Take snapshot.

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Now, Delete the Database and Try to Restore the snapshot.

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The Backup has been created.

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10) Create Read Replica  
Go to Actions → Create read replica.  
Configure the read replica:  
DB instance identifier: maria-replica.  
VPC, Subnet, Security Group: Must match or allow access from your   
app.  
Then Create Read Replica

Done.

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