# Module 7: Aurora Assignment

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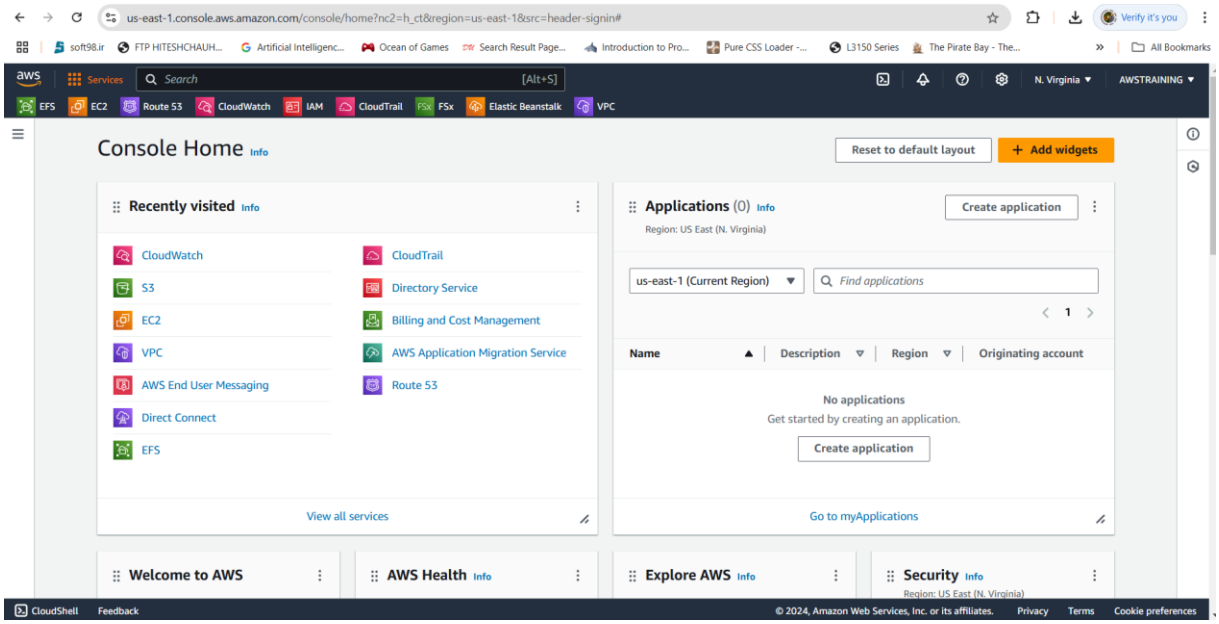
**Course Offered: -Advanced Cloud Computing and Devops**
**Assignment By: -Intellipaat**
**Trainer: -Puneet Gavri**
**Date Of Submission: -06/11/2024**

**Problem Statement:**
You work for XYZ Corporation. Their application requires a SQL service that can store data which can be retrieved if required. Implement a suitable RDS engine for the same.

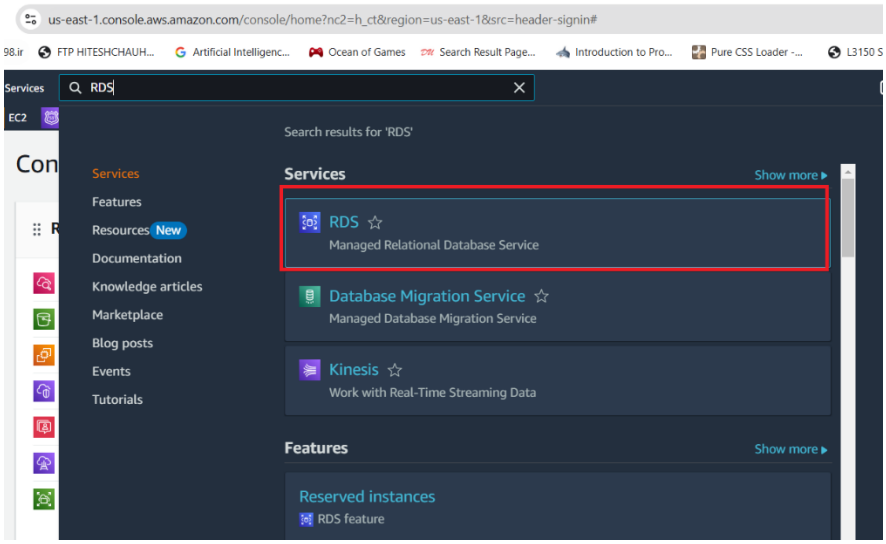
**While migrating, you are asked to perform the following tasks:**
1. Create an AuroraDB Engine based RDS Database.
2. Create 2 Read Replicas in different availability zones for better infrastructure availability.

**ANSWER:**

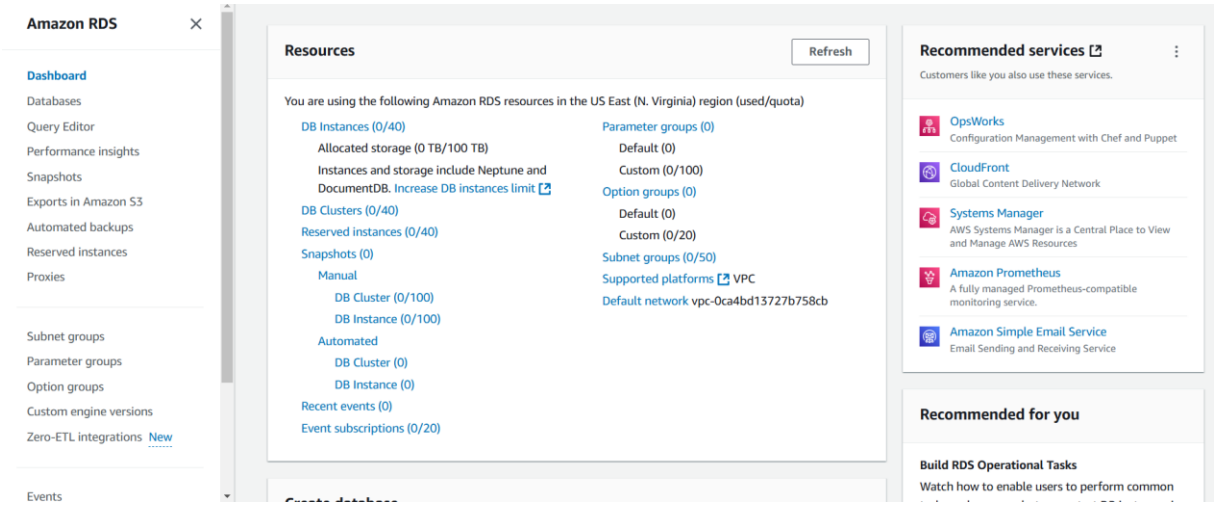
Login to AWS Management Console: -



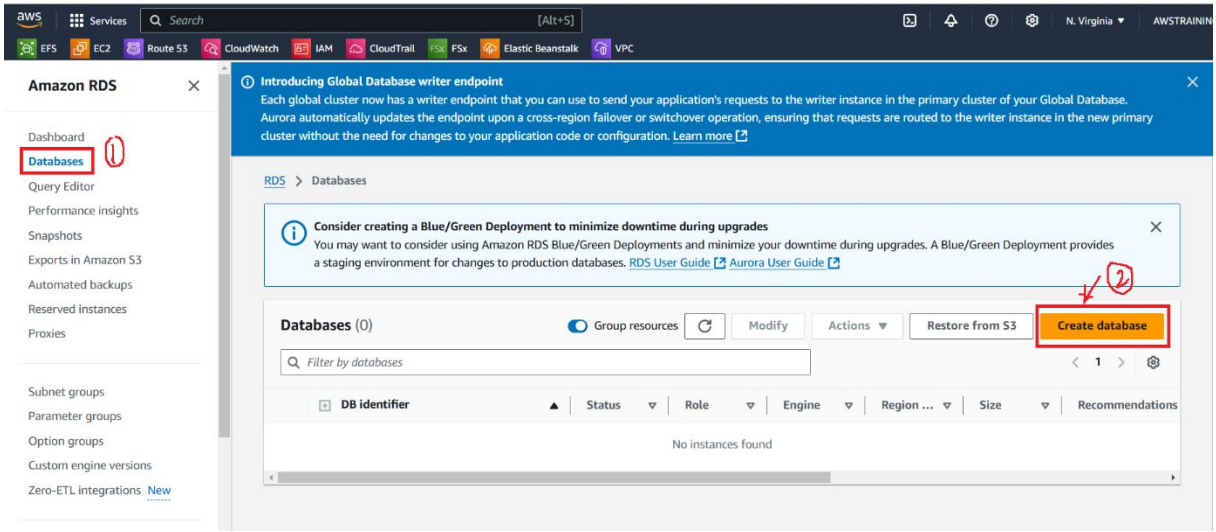

Then Search RDS



Then After click the rds will be open like this.




Then Go to Database and create database.




After Click the Create Database.

Then Choose a database creation method.

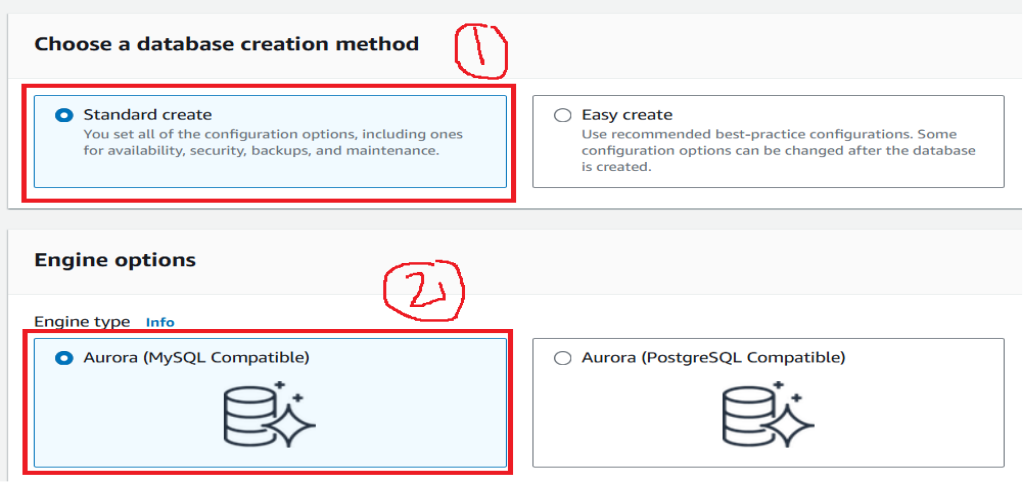
There is two options.

1.Standard Create

2.Easy Create

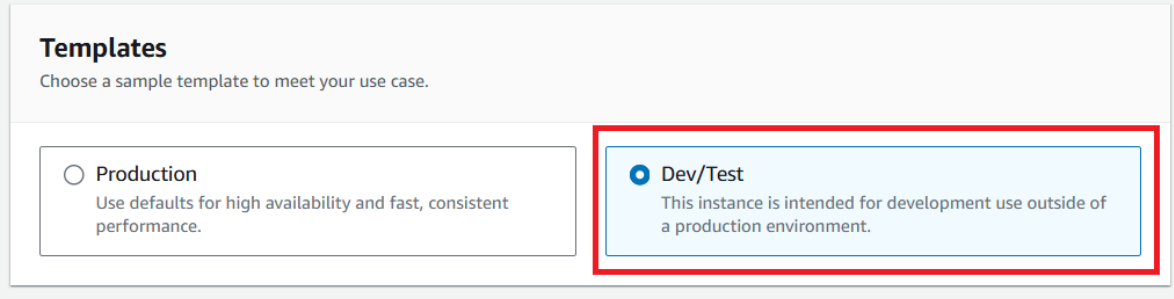
In my case I choose database creation method is **standard create**.

You will give you many options of database but right now I want to create engine option is aurora database.




Select Aurora

Then Select Templates of Dev/Test.




Then Go to Settings And Assign the Name of DB Cluster Name.

In My Case My DB cluster identifier is myaurora

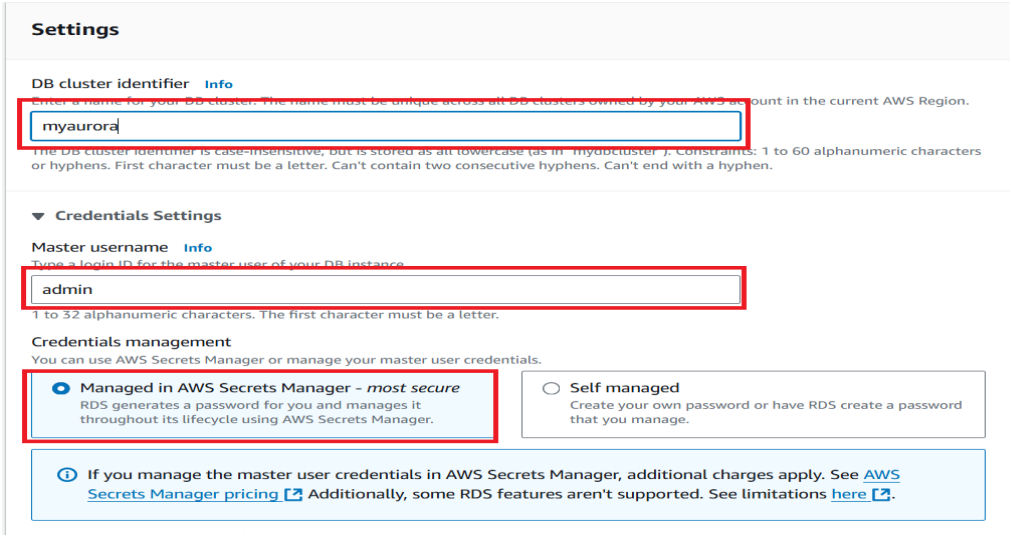
In Credential Settings

Master Username will be admin

In my case I assigned the name of master username is admin.

Then another important Setting is the Credential Management.in credential management there is two option first is Managed in AWS Secrets Manager-Most Secure and second one is Self-managed.

In my I choose to First Option is Managed in AWS Secrets Manager-Most Secure

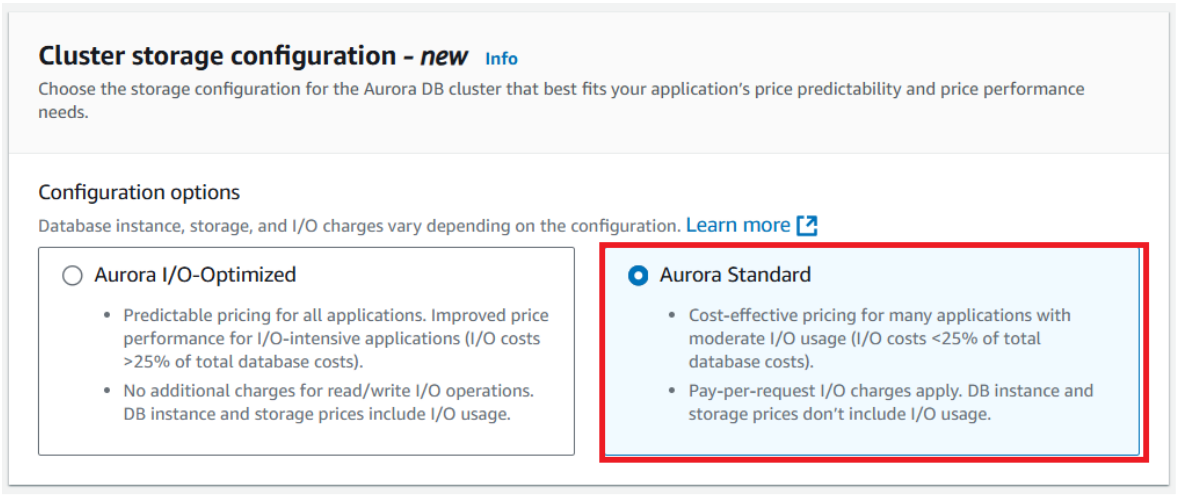



Next is Cluster Storage Configuration.

In Cluster storage option, there is two options.

1.Aurora I/O-Optimized.

2.Aurora Standard.



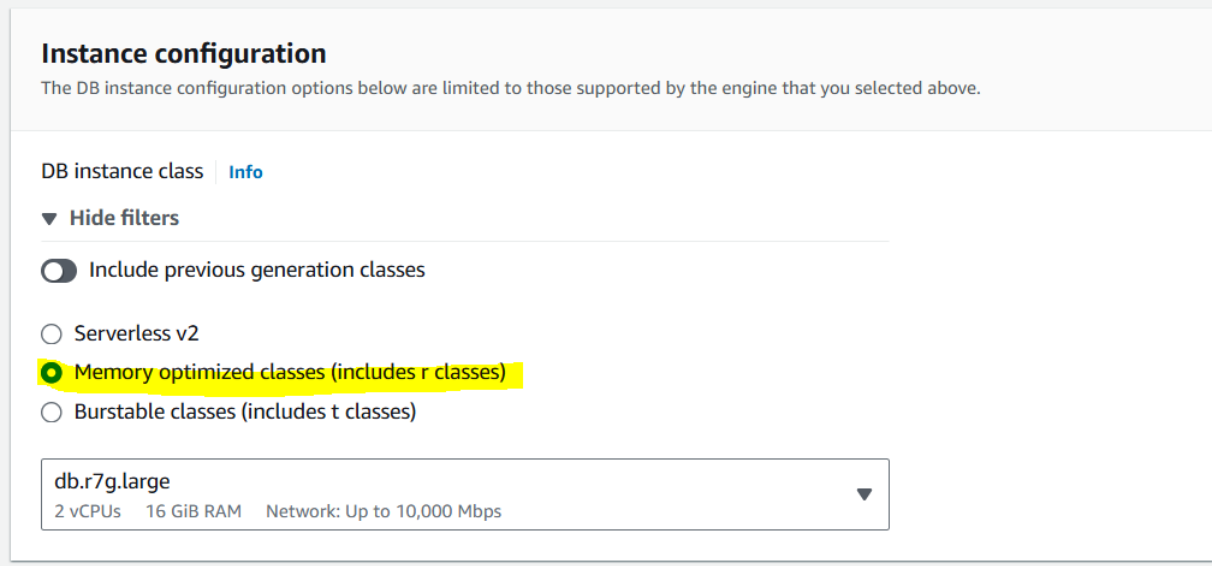

In My Case I Choose Aurora Standard.

Next, Instance Configuration Of Database there is three db. instance class

1.Serverless v2

2.Memory optimized classes (includes r classes) And

3.Burstable classes (includes t classes)

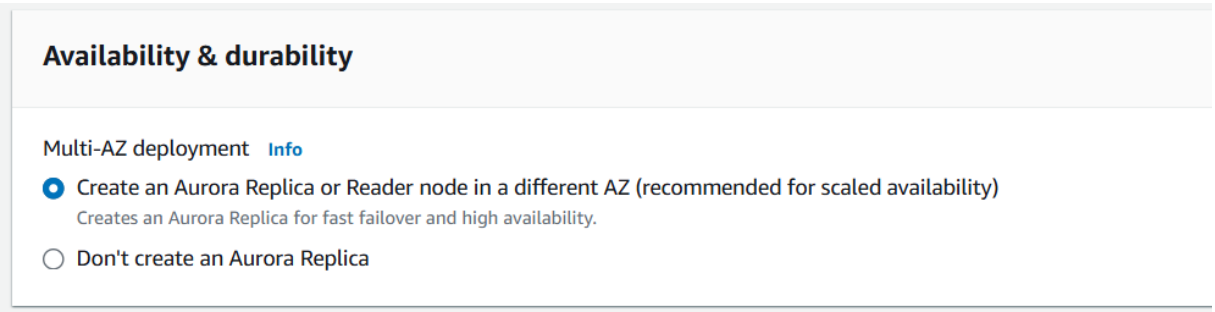



**Note: This DB Instance classes will be used different use cases but we need to just for testing and development process I choose Memory optimized classes.**

Next Is Availability and Durability.

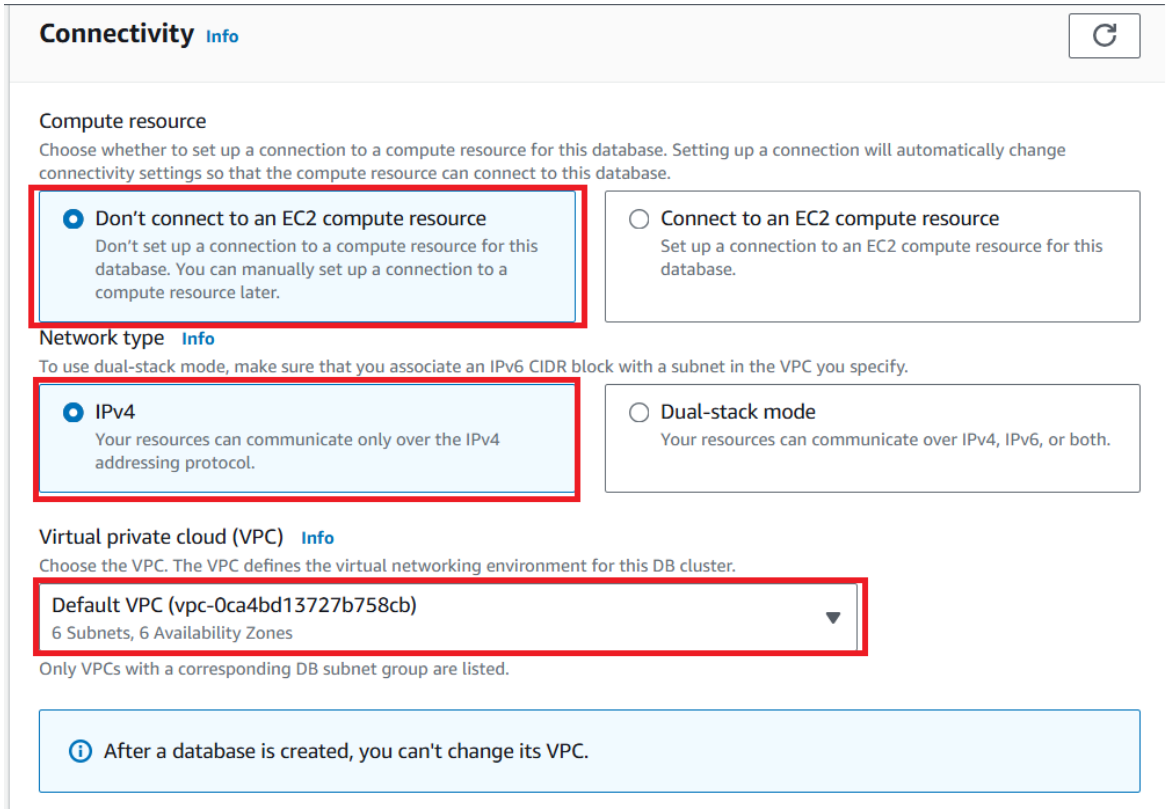
in this scenario Db instance replicas will be create in different AZ.this configuration is very important for db instance. If in case one replicas will be crashed so this db instance will be use another replica for failover instance and recommended by aws for create replicas.

So I choose Create an aurora Replica or Reader node in a different AZ(recommended for scaled availability)



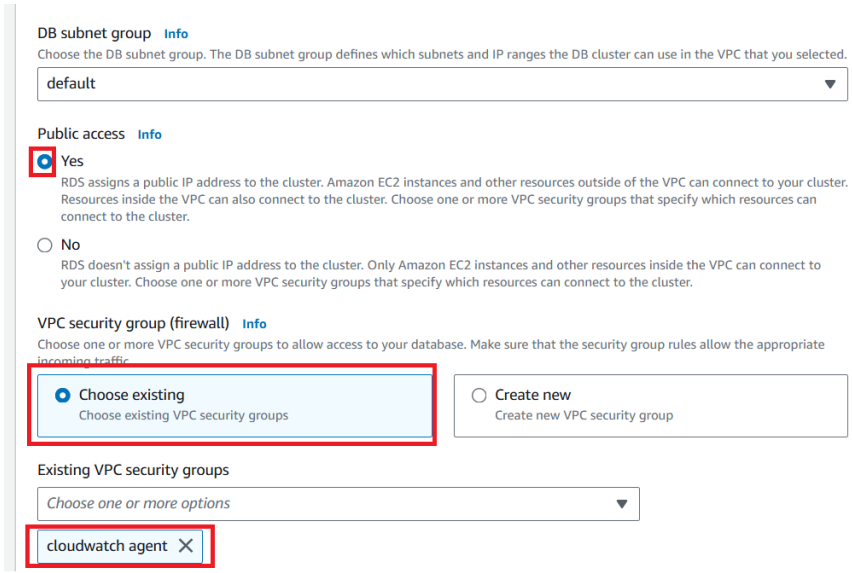

Next is very important Setting of Database Network Connectivity.

In Computer Resource I choose Don’t connect to an EC2 compute resource because right now not require of connect to an ec2 compute resource and Then Network Type Will be IPV4 and Choose VPC.in my case I choose default vpc for Create Aurora Replica or Reader node in different AZ.

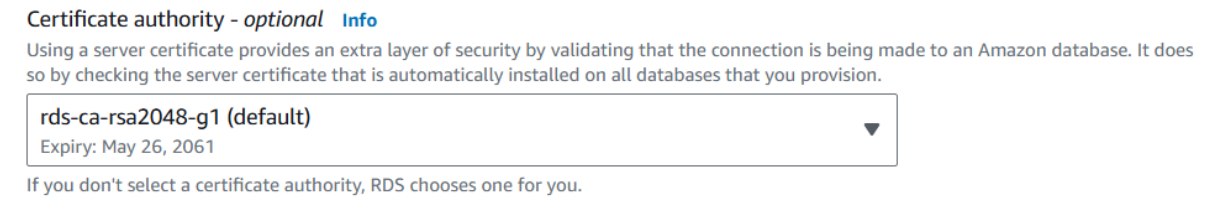



Then Next Setting will be DB subnet group

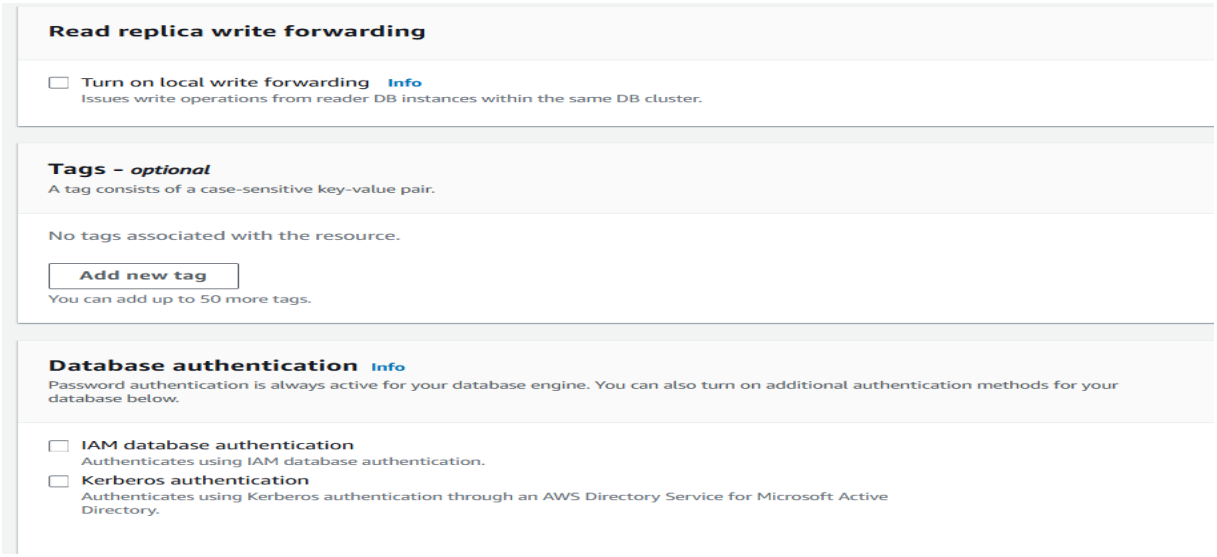
There is default and public access I choose Yes because my db instance will be on public then other most important setting is VPC Security Group Firewall by default I choose existing created Security group by default so I created security group is cloudwatch agent.



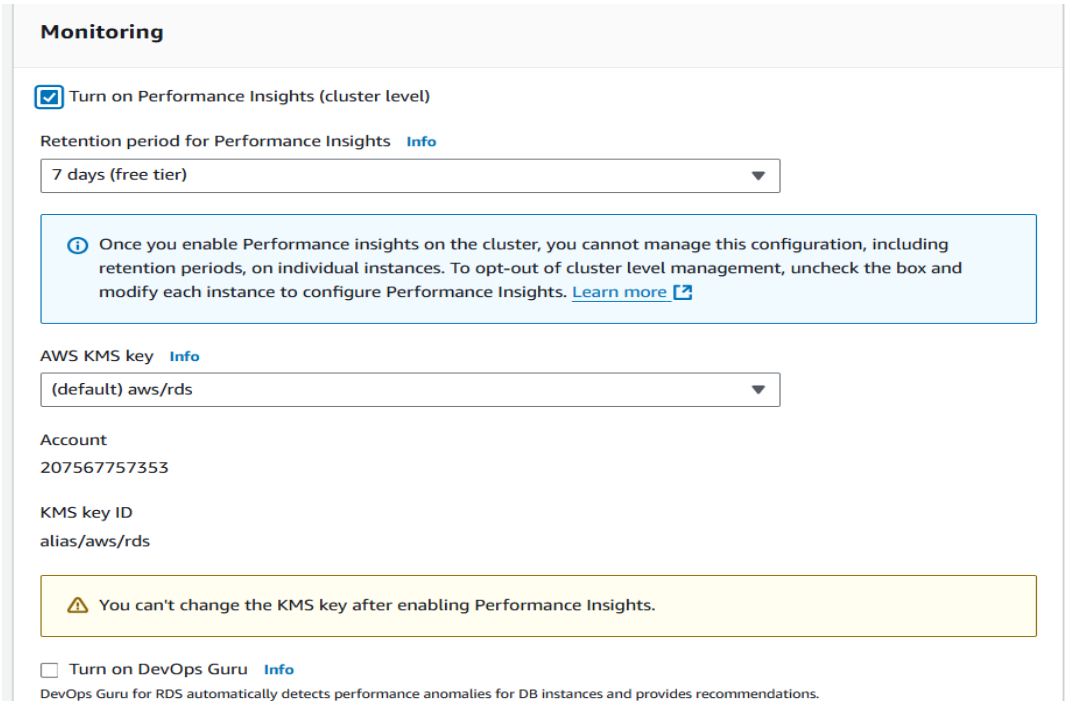
Then Certificate Authority is select by default.

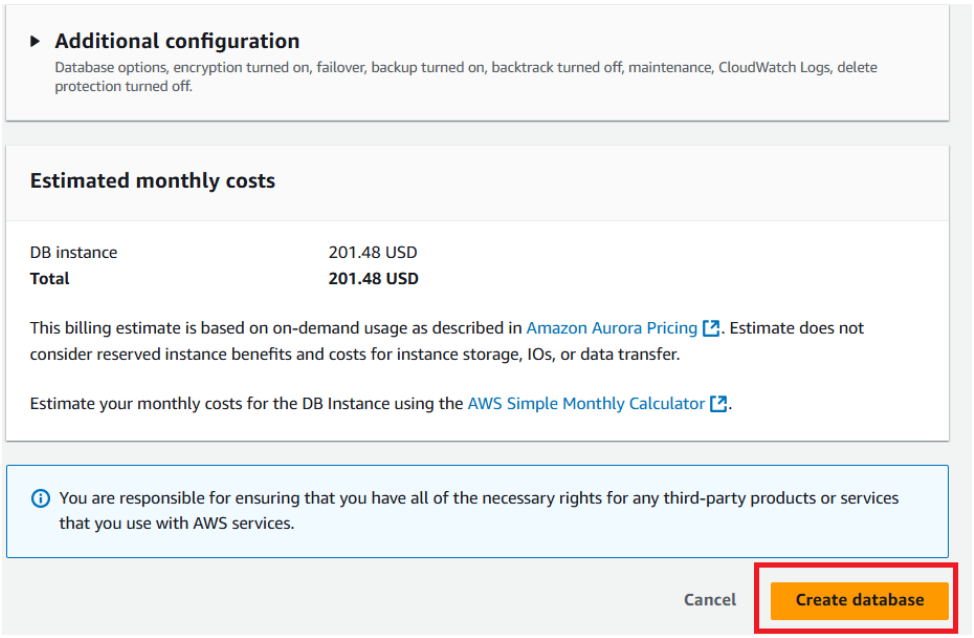



Then Read Replica I don't to Turn On then database authentication will be nothing.



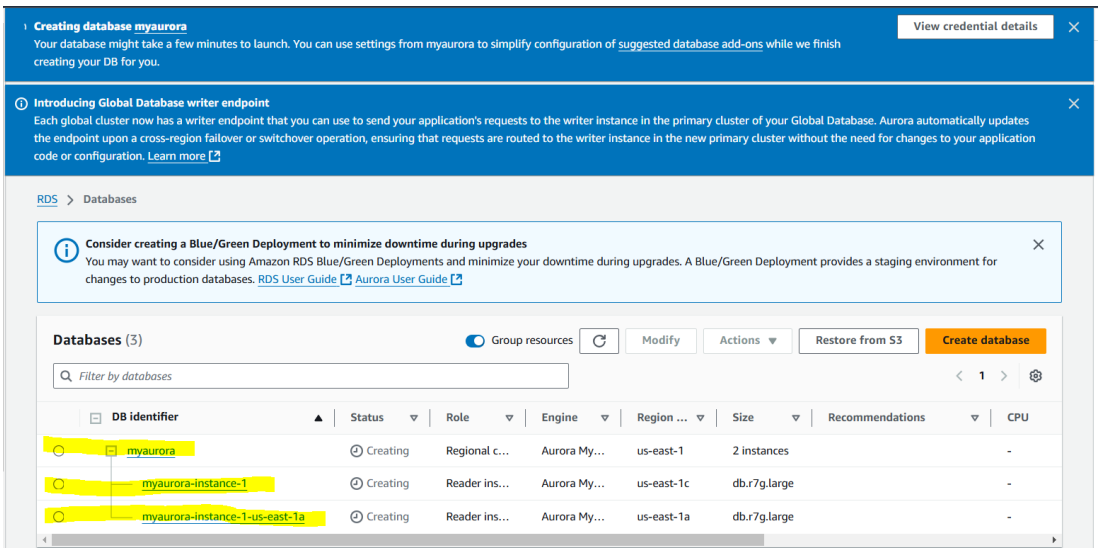

In monitoring Setting Retention period will be 7 days in free tier available in free tier account.






Create Database.

You will see The Replicas of myaurora db instance.




Read-replica also created.