



Module 11: Migration Assignment - 3

Problem Statement:

You work for XYZ Corporation. Your corporation wants to move its infrastructure to the cloud to improve the performance and availability of the application hosted. You are given the opportunity to accomplish the tasks for a successful migration.

Tasks To Be Performed:

1. Launch an RDS MySQL database. Login and insert some data into it.
2. Use Database Migration (DMS) System to migrate the MySQL database into an RDS PostgreSQL database.

Solution

Steps for creation of RDS MySQL database

Go to the Management console → Search RDS → Create Database → Standard Create → Select MySQL → Engine version (depends on your requirement) → Free tier → Database instance identifier name (mySourceDatabase) → Master username (admin) → Password → DB instance class (Burstable class, t3.micro) → Allocated storage (minimum 20GiB) → Don't connect to an EC2 → Default VPC → Public access (yes) → Password Authentication → Additional configuration (initial DB name) → disabled automatic backup → disabled encryption → enable auto minor version update → Maintenance Window (no preference) → Create Database

Like this, we also need to create a RDS PostgreSQL which is called a target DataBase.

Now we should configure our Database Migration Service (DMS) before filling in data over there. In DMS we need three things' Endpoints, Replication, and Database migration task. Always keep in mind that we have to first create a Replication instance then Endpoints and DB migration tasks.

Steps for creation of Replication instance

Go to management console → Search DMS → Replication → Create replication instance → name → instance class → Allocated size (20Gib) → VPC (default) → Multi AZ (Dev/test workload (single AZ)) → Public access (enable) → Advance security and networking (default) → CREATE

Before going to create Endpoints, let's fill in some data on the MySQL DB.

Steps for the Creation of Endpoints

Click on Endpoints→Create Endpoint→Source Endpoint (Source DB)→Source Endpoint(mysql)→Access to endpoint database (Provide access manually)→Server name→Copy the endpoint of the DB and paste it here→Port (3306)→Username→password→ Create Endpoint.

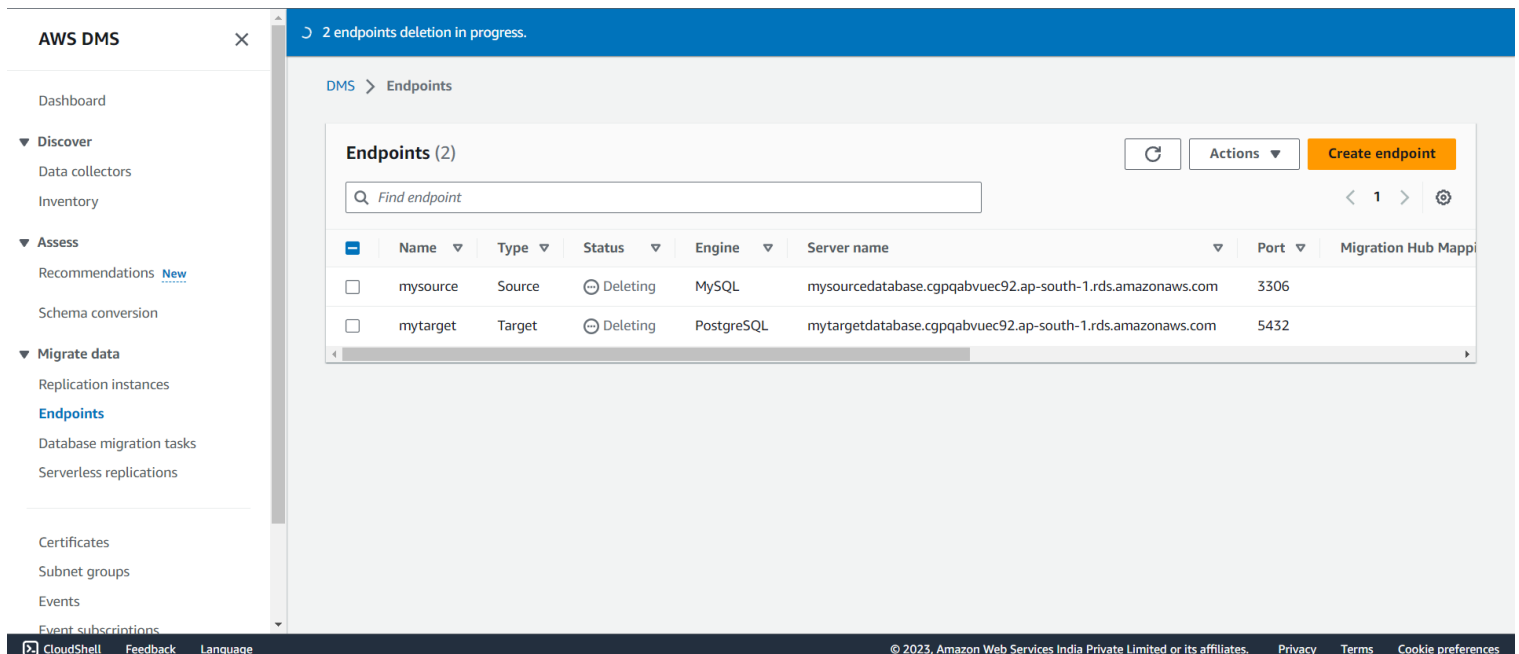
Now we need to create the Target Endpoints.

Click on Endpoints→Create Endpoint→Target Endpoint (Target DB)→Source Endpoint (PostgreSQL)→Access to endpoint database (Provide access manually)→Server name→Copy the endpoint of the DB and paste it here→Port (5432)→Username→password→ Create Endpoint.

Now, we need to create DB Migration Tasks

DB Migration Task→ Create Task→ Task identifier (name)→Replication Instance→ Source DB Endpoints→ Target DB Endpoint→ Migration type(Migration existing data)→ Rules(at least make one rule over here)→ Add new selection rules→ Schema(Enter a schema)→ Create Task

RESULT



AWS DMS ×

2 endpoints deletion in progress.

DMS > Endpoints

Endpoints (2) Refresh Actions Create endpoint

Find endpoint

	Name	Type	Status	Engine	Server name	Port	Migration Hub Mapping
<input type="checkbox"/>	mysource	Source	Deleting	MySQL	mysourcedatabase.cgpbvuc92.ap-south-1.rds.amazonaws.com	3306	
<input type="checkbox"/>	mytarget	Target	Deleting	PostgreSQL	mytargetdatabase.cgpbvuc92.ap-south-1.rds.amazonaws.com	5432	

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```

XAMPP for Windows
5 rows in set (0.062 sec)

MySQL [(none)]> use myDatabase;
Database changed
MySQL [myDatabase]> create table myTable(eid int, name varchar(20));
Query OK, 0 rows affected (0.081 sec)

MySQL [myDatabase]> show tables;
+-----+
| Tables_in_myDatabase |
+-----+
| myTable               |
+-----+
1 row in set (0.060 sec)

MySQL [myDatabase]> insert into mytable values (1,"Bikiron"),(2,"Sharma"),(3,"Intellipaat");
ERROR 1146 (42S02): Table 'myDatabase.mytable' doesn't exist
MySQL [myDatabase]> insert into myTable values (1,"Bikiron"),(2,"Sharma"),(3,"Intellipaat");
Query OK, 3 rows affected (0.061 sec)
Records: 3  Duplicates: 0  Warnings: 0

MySQL [myDatabase]> select * from myTable;
+-----+
| eid | name |
+-----+
| 1   | Bikiron |
| 2   | Sharma |
| 3   | Intellipaat |
+-----+
3 rows in set (0.059 sec)

```

AWS DMS

Dashboard

Discover

- Data collectors
- Inventory

Assess

- Recommendations New
- Schema conversion

Migrate data

- Replication instances**
- Endpoints
- Database migration tasks
- Serverless replications

Certificates

Subnet groups

Events

Event subscriptions

DMS > Replication instances

DMS supports both IPv4 and IPv6

You can specify the network when creating your replication instance to support both IPv4 and IPv6 addresses in your virtual private cloud (VPC). With this support, you can work with simpler network stack management and offer the option to use a larger number of IP addresses. Also, you can modify an existing replication instance to support IPv6. [Learn more](#)

Replication instances (1)

<input type="checkbox"/>	Name	Status	VPC	Class	Engine version	Availability zone	Network type	Public	Pub
<input type="checkbox"/>	myreplica	Available	vpc-0780...	dms.t3.mi...	3.5.1	ap-south-1c	IPv4	Yes	15.2

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Full load

Source

mysource

Target

mytarget

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Table statistics

CloudWatch metrics

Mapping rules

Premigration assessments

Tags

Overview details

Basic configuration

Task ARN

arn:aws:dms:ap-south-1:086667160461:task:TWDOMDAHCGFEGSLKZD3A6HJXWR3YD3V3LEGUINY

Progress

Ready

100%

Created

August 21, 2023 at 06:38:25 (UTC+05:30)

Replication instance

myreplica

Last failure message

-

Started

-

Task logs

Info

CloudShell

Feedback

Language

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