

## **Database Migration Service : Homogeneous Migration between On-premise MySql to RDS MySQL**

**Step 1:** Create an EC2 instance (On-Premise) with MYSQL Server 5.7 installed on it

```
sudo wget http://repo.mysql.com/mysql-community-release-el7-5.noarch.rpm  
sudo rpm -ivh mysql-community-release-el7-5.noarch.rpm  
sudo yum install mysql-server -y  
sudo service mysqld start  
sudo systemctl enable mysqld
```

**Step 2:** Login to mysql and create a database. Also create a few tables that we want to migrate to AWS RDS Mysql Instance

```
mysql -uroot  
mysql> create database myonpremdb;  
mysql> CREATE USER 'onpremuser'@'localhost' IDENTIFIED BY  
'onpremuser';  
  
mysql> GRANT ALL PRIVILEGES ON *.* TO 'onpremuser'@'localhost' WITH  
GRANT OPTION;  
  
mysql> CREATE USER 'onpremuser'@'%' IDENTIFIED BY 'onpremuser';  
mysql> GRANT ALL PRIVILEGES ON *.* TO 'onpremuser'@'%' WITH GRANT  
OPTION;  
mysql> exit;
```

### **Login as onprem user**

```
$ mysql -u onpremuser -ponpremuser
```

```
mysql> use myonpremdb;
```

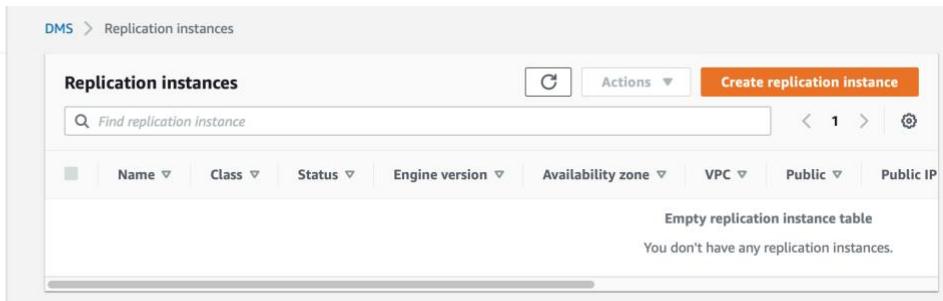
### **Create some tables**

```
mysql> create table customer (custid int,custname varchar(100),address  
varchar(200));  
insert into customer values(1,'Ravi','Hyderabad');  
insert into customer values(2,'Rakesh','Banglore');  
insert into customer values(3,'Vijay','Pune');
```

**Step 3:** Create a new DB in RDS with mysql 5.7 as the engine with old interface. Note down the endpoint once created.

Make sure the security group created by RDS has “everyone” in the source.

**Step 4:** Open DMS in AWS console and click on Replication Instances.



The screenshot shows the AWS DMS console with the 'Replication instances' page selected. The left sidebar includes options like Dashboard, Database migration tasks, Replication instances (which is highlighted in orange), Endpoints, Certificates, Subnet groups, Events, and Event subscriptions. The main area displays a table titled 'Replication instances' with columns for Name, Class, Status, Engine version, Availability zone, VPC, Public, and Public IP. A search bar at the top says 'Find replication instance'. Below the table, it says 'Empty replication instance table' and 'You don't have any replication instances.'

**Step 5:** Click on Create Replication instance and choose the following options

Name : ReplicationInstance

Instance class : T2.micro

VPC: Default VPC

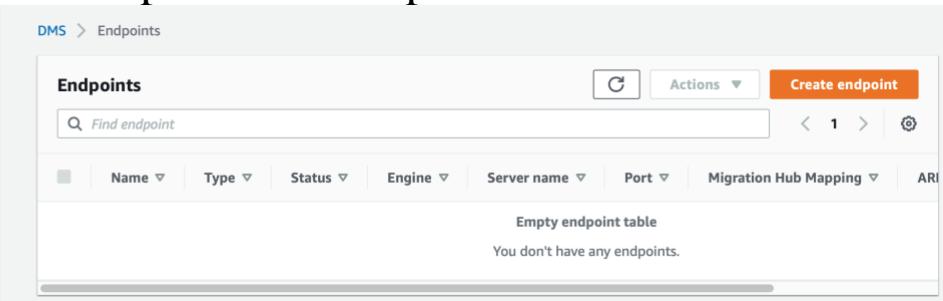
Publicly Accessible: Checked

Multi – AZ: Single AZ

Click Create

**Create end point connection for your source and Destination databases.**

**Step 6:** Click on endpoints on left panel



The screenshot shows the AWS DMS console with the 'Endpoints' page selected. The left sidebar includes options like Dashboard, Database migration tasks, Replication instances, Endpoints (which is highlighted in orange), Certificates, Subnet groups, Events, and Event subscriptions. The main area displays a table titled 'Endpoints' with columns for Name, Type, Status, Engine, Server name, Port, Migration Hub Mapping, and ARN. A search bar at the top says 'Find endpoint'. Below the table, it says 'Empty endpoint table' and 'You don't have any endpoints.'

**Step 7:** Click create endpoint. Choose Source endpoint and enter the following details

Endpoint identifier: Onprem-endpoint

Source Engine: MySQL

Access to endpoint database: Manual

Server name: Public IP of your MySQL instance(on prem)

User name:onpremuser

Password: onpremuser

Port: 3306

Click Test Endpoint and choose Default VPC. Click Run Test

**Note:** Make sure you have mysql protocol allowed in your ec2 instance(On-prem mysql instance) inbound rules

Filter security group rules					
	Name	Security group rule...	IP version	Type	Protocol
<input type="checkbox"/>	-	sgr-0222e0c214b90af59	IPv4	MYSQL/Aurora	TCP
<input type="checkbox"/>	-	sgr-0dc3df1f07d375a18	IPv4	SSH	TCP

Once the test is successful following screen is displayed

Endpoint identifier	Replication instance	Status	Message
onprem-endpoint	mymysqlreplication	successful	

Click Create Endpoint.

**Step 8:** Click create endpoint. Choose Target endpoint and enter the following details

Select RDS db instance: Check and select the RDS database

Endpoint identifier: AWS-endpoint

Source Engine: MySQL

Access to endpoint database: Manual

Server name: mysql endpoint

User name:mysqlinstance

Password: mysqlinstance

Port: 3306

Click Test Endpoint and choose Default VPC. Click Run Test

Once the test is successful following screen is displayed

Endpoint identifier	Replication instance	Status	Message
aws-endpoint	mymysqlreplication	successful	

Click Create Endpoint.

## Step 9: Click Database Migration Task on left panel

## Step 10: Click Create task and enter following details

Task Identifier: MyDMS Task

Replication instance: Select

Source DB Endpoint: Select

Target DB Endpoint: Select

Under table Mappings do the following

Click Add New selection rule

Schema: Enter a schema

Source name: %myonpremdb

Table name: %

Click Create task. Wait till the state is changed to Load complete

## Step 11: Use the DB tool of your choice and connect to RDS DB and check if the DB tables and data are migrated

Database Navigator Projects

Enter a part of table name here

65.2.57.217 - 65.2.57.217:3306

mysqldbinstance.ctodq1wwifxa.ap-south-1.rds.amazonaws

Databases

- awsdms\_control
- innodb
- myonpremdb

Tables

- customer
- Views
- Indexes
- Procedures
- Triggers
- Events

<ORCL> Script myorainstance customer

Properties Data ER Diagram

mysqldbinstance.ctodq1wwifxa.ap-south-1.rds.amazonaws

customer Enter a SQL expression to filter results (use Ctrl+Space)

Grid	123 custid	ABC custname	ABC address
1	1	Ravi	Hyderabad
2	2	Rakesh	Banglore
3	3	Vijay	Pune
Text			
ord			