

Migrating On-Prem MySQL DB to AWS Cloud MySQL DB without DMS

Step 1: Create a MySQL DB Instance on RDS at Mumbai Region

RDS Management Console

ap-south-1.console.aws.amazon.com/rds/home?region=ap-south-1#launch-dbinstance:gdb=false;isHermesCreate=true;s3-import=false

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Create database

Choose a database creation method [info](#)

☒ **Standard create**
You set all of the configuration options, including ones for availability, security, backups, and maintenance.

☐ **Easy create**
Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

Engine options

Engine type [info](#)

☐ Amazon Aurora

☒ **MySQL**

☐ MariaDB

☐ PostgreSQL

☐ Oracle

☐ Microsoft SQL Server

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ap-south-1.console.aws.amazon.com/rds/home?region=ap-south-1#launch-dbinstance:gdb=false;isHermesCreate=true;s3-import=false

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Edition

☒ **MySQL Community**

Known issues/limitations
Review the [Known issues/limitations](#) to learn about potential compatibility issues with specific database versions.

Version

MySQL 8.0.28

Templates
Choose a sample template to meet your use case.

☐ **Production**
Use defaults for high availability and fast, consistent performance.

☐ **Dev/Test**
This instance is intended for development use outside of a production environment.

☒ **Free tier**
Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS. [Info](#)

Settings

DB instance identifier [info](#)
Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

Homo-Mig-RDS-Karthik

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➤ Specify the password as “Admin1234”

Settings

DB instance identifier [Info](#)
Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

Homo-Mig-RDS-Karthik

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 60 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

▼ **Credentials Settings**

Master username [Info](#)
Type a login ID for the master user of your DB instance.

admin

1 to 16 alphanumeric characters. First character must be a letter.

☐ **Auto generate a password**
Amazon RDS can generate a password for you, or you can specify your own password.

Master password [Info](#)

Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), ' (single quote), " (double quote) and @ (at sign).

Confirm password [Info](#)

Instance configuration
The DB instance configuration options below are limited to those supported by the engine that you selected above.

DB instance class [Info](#)

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➤ Remove Storage Auto Scaling check box.

Instance configuration
The DB instance configuration options below are limited to those supported by the engine that you selected above.

DB instance class [Info](#)

- Standard classes (includes m classes)
- Memory optimized classes (includes r and x classes)
- ☒ **Burstable classes (includes t classes)**

db.t3.micro
2 vCPUs 1 GIB RAM Network: 2,085 Mbps

☐ Include previous generation classes

Storage

Storage type [Info](#)

General Purpose SSD (gp2)
Baseline performance determined by volume size

Allocated storage

200 GIB

Minimum: 20 GIB. Maximum: 6,144 GIB

Storage autoscaling [Info](#)
Provides dynamic scaling support for your database's storage based on your application's needs.

☐ **Enable storage autoscaling**
Enabling this feature will allow the storage to increase after the specified threshold is exceeded.

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➤ **Select the default VPC and Subnet in Mumbai Region and Set the Public access to Yes**

Connectivity Info

Compute resource
Choose whether to set up a connection to a compute resource for this database. Setting up a connection will automatically change connectivity settings so that the compute resource can connect to this database.

☒ Don't connect to an EC2 compute resource
Don't set up a connection to a compute resource for this database. You can manually set up a connection to a compute resource later.

☐ Connect to an EC2 compute resource
Set up a connection to an EC2 compute resource for this database.

Virtual private cloud (VPC) Info
Choose the VPC. The VPC defines the virtual networking environment for this DB instance.

Default VPC (vpc-01ae1eb62976a41c6)

Only VPCs with a corresponding DB subnet group are listed.

ⓘ After a database is created, you can't change its VPC.

DB Subnet group Info
Choose the DB subnet group. The DB subnet group defines which subnets and IP ranges the DB instance can use in the VPC that you selected.

default-vpc-01ae1eb62976a41c6

Public access Info

☒ Yes
RDS assigns a public IP address to the database. Amazon EC2 instances and other resources outside of the VPC can connect to your database. Resources inside the VPC can also connect to the database. Choose one or more VPC security groups that specify which resources can connect to the database.

☐ No
RDS doesn't assign a public IP address to the database. Only Amazon EC2 instances and other resources inside the VPC can connect to your database. Choose one or more VPC security groups that specify which resources can connect to the database.

VPC security group (firewall) Info
Choose one or more VPC security groups to allow access to your database. Make sure that the security group rules allow the appropriate incoming traffic.

☒ Choose existing
Choose existing VPC security groups

☐ Create new
Create new VPC security group

Existing VPC security groups

Choose one or more options

default X

Availability Zone Info

No preference

► Additional configuration

Database authentication

Database authentication options Info

☒ Password authentication
Authenticates using database passwords.

☐ Password and IAM database authentication
Authenticates using the database password and user credentials through AWS IAM users and roles.

☐ Password and Kerberos authentication
Choose a directory in which you want to allow authorized users to authenticate with this DB instance using Kerberos Authentication.

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➤ **Set the default security group in Mumbai region and password authentication**

VPC security group (firewall) Info
Choose one or more VPC security groups to allow access to your database. Make sure that the security group rules allow the appropriate incoming traffic.

☒ Choose existing
Choose existing VPC security groups

☐ Create new
Create new VPC security group

Existing VPC security groups

Choose one or more options

default X

Availability Zone Info

No preference

► Additional configuration

Database authentication

Database authentication options Info

☒ Password authentication
Authenticates using database passwords.

☐ Password and IAM database authentication
Authenticates using the database password and user credentials through AWS IAM users and roles.

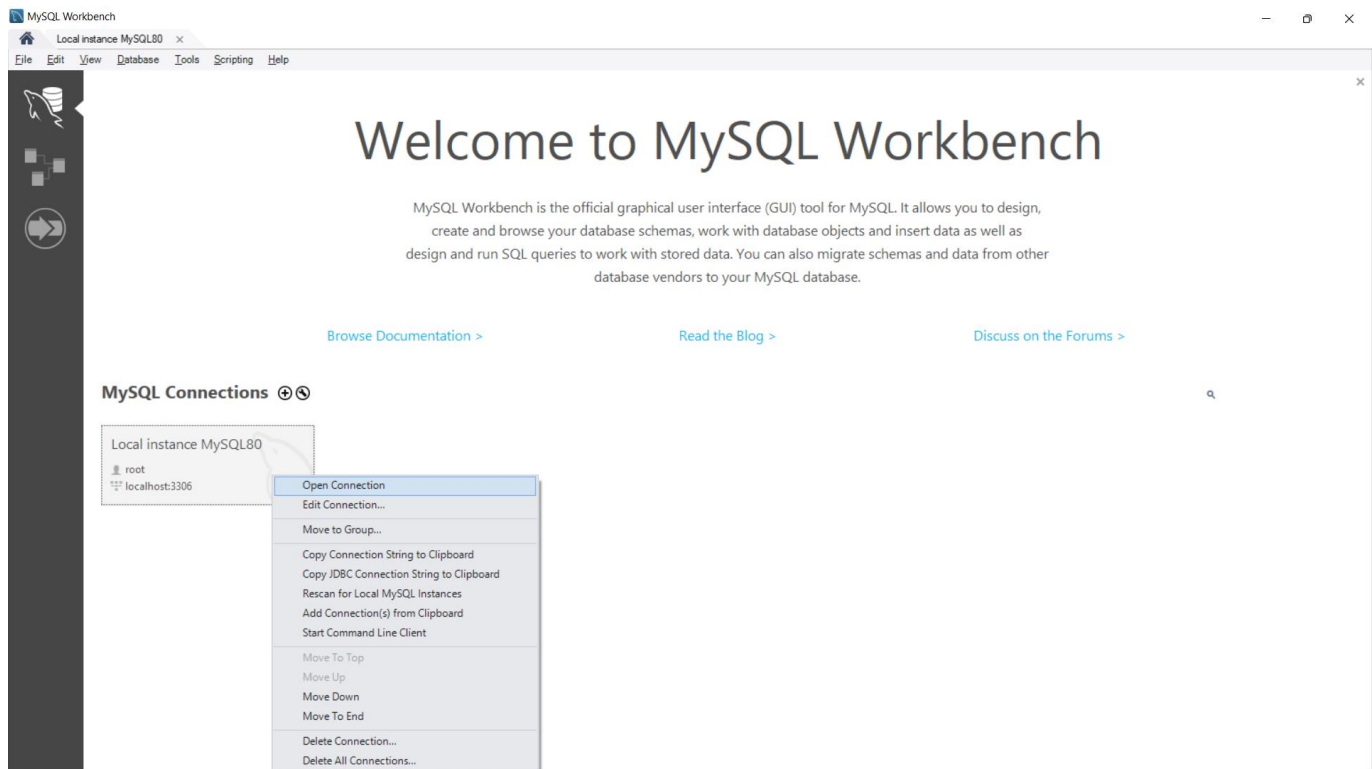
☐ Password and Kerberos authentication
Choose a directory in which you want to allow authorized users to authenticate with this DB instance using Kerberos Authentication.

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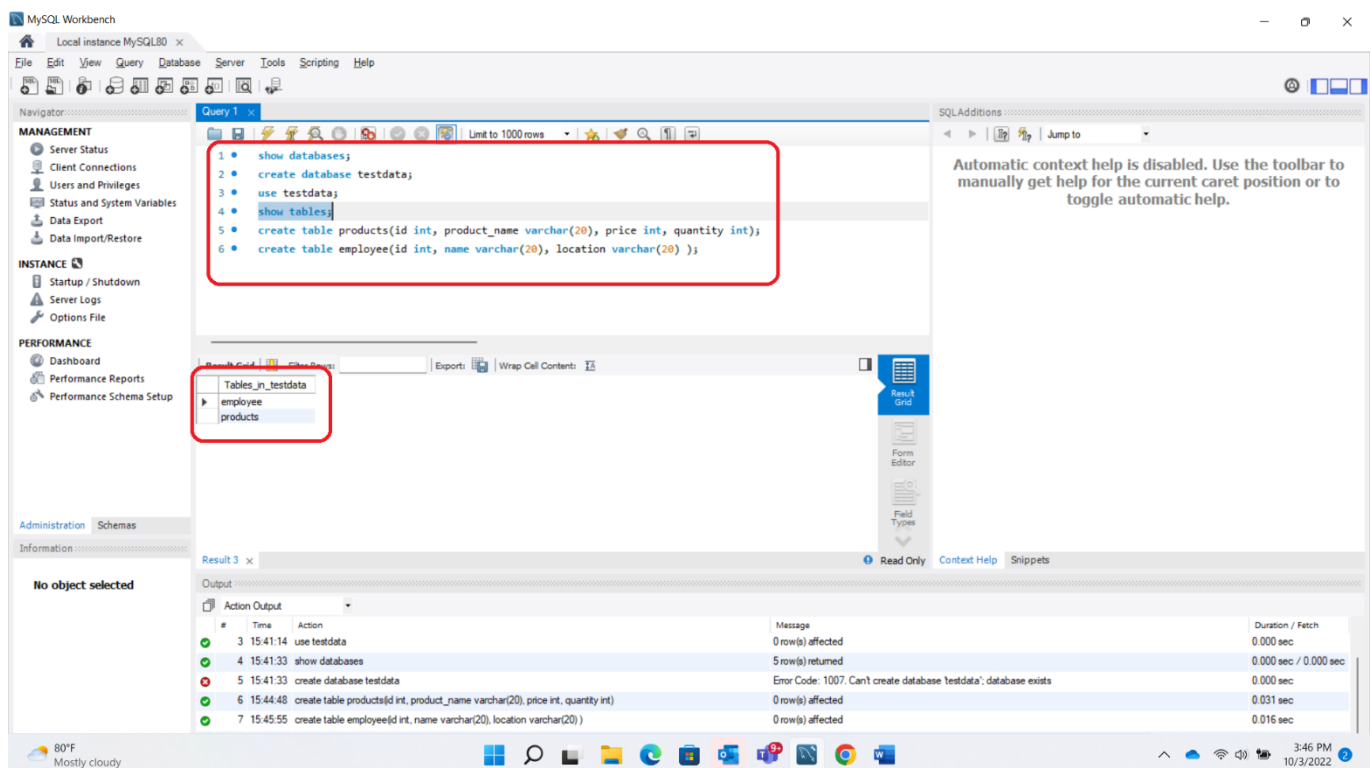
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Keep rest of all settings to default and click on create

Step 2 : Now Connect to local MySQL Instance



Create the source database and table on the local MySQL instance :



- Let us insert few rows into both the tables

The screenshot shows the MySQL Workbench interface. The 'Query 1' window contains the following SQL script:

```
1 show databases;
2 create database testdata;
3 use testdata;
4 show tables;
5 create table products(id int, product_name varchar(20), price int, quantity int);
6 create table employee(id int, name varchar(20), location varchar(20));
7 insert into products values(1000,'Iphone',40000,10);
8 insert into products values(1001,'Ipad',20000,20);
9 insert into employee values(2000,'Karthik','BDC6');
10 insert into employee values(2001,'Kiran','HDC2');
11 insert into employee values(2000,'Prakhar','DCC2');
12 select * from products;
```

The 'Result Grid' shows the output of the last query:

id	product_name	price	quantity
1000	Iphone	40000	10
1001	Ipad	20000	20

The 'Action Output' window shows the execution log:

#	Time	Action	Message	Duration / Fetch
2	15:41:14	create database testdata	1 row(s) affected	0.015 sec
3	15:41:14	use testdata	0 row(s) affected	0.000 sec
4	15:41:33	show databases	5 row(s) returned	0.000 sec / 0.000 sec
5	15:41:33	create database testdata	Error Code: 1007. Can't create database 'testdata'; database exists	0.000 sec
6	15:44:48	create table products(id int, product_name varchar(20), price int, quantity int)	0 row(s) affected	0.031 sec
7	15:45:55	create table employee(id int, name varchar(20), location varchar(20))	0 row(s) affected	0.016 sec

Step 3 : Now connect to the AWS Cloud MySQL Instance :

The screenshot shows the MySQL Workbench interface with the 'Setup New Connection' dialog box open. The dialog box has the following fields:

- Connection Name: Cloud-RDS-Karthik
- Connection Method: Standard (TCP/IP)
- Hostnames: nbzhp6j.ap-south-1-rds.amazonaws.com
- Port: 3306
- Username: admin
- Password: [Redacted]

Annotations on the dialog box:

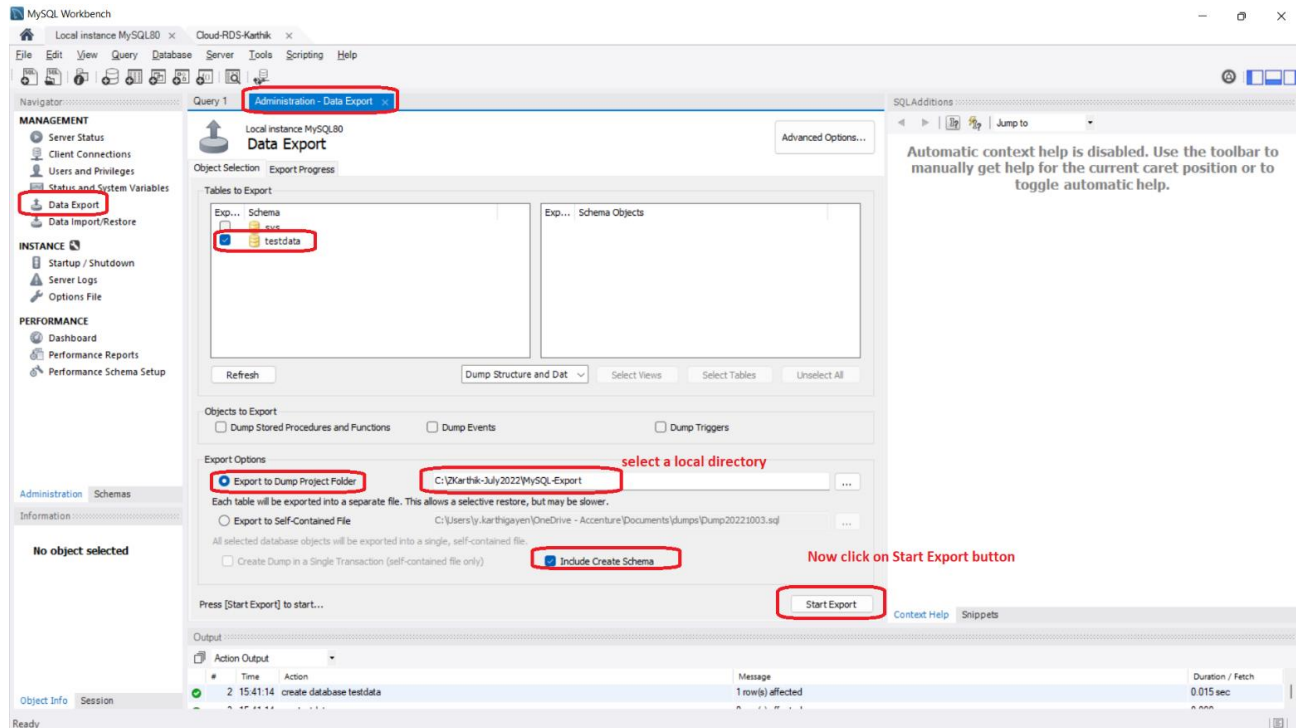
- Copy the RDS Endpoint here (pointing to the Hostnames field)
- Change it to admin (pointing to the Username field)
- Type the password - admin123 (pointing to the Password field)

The 'Store Password For Connection' dialog box is also open, showing the service name and user name.

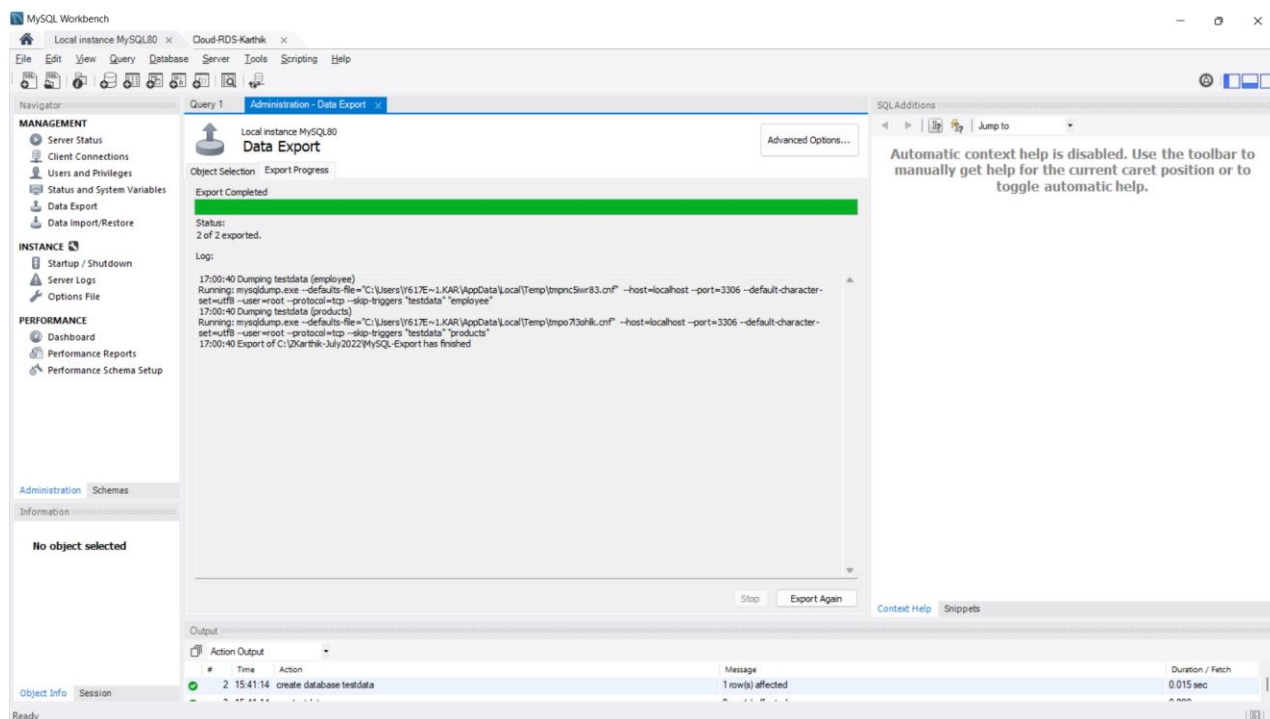
- Now Test the connection , once it shows successful, click on OK button

Once both the connections are created

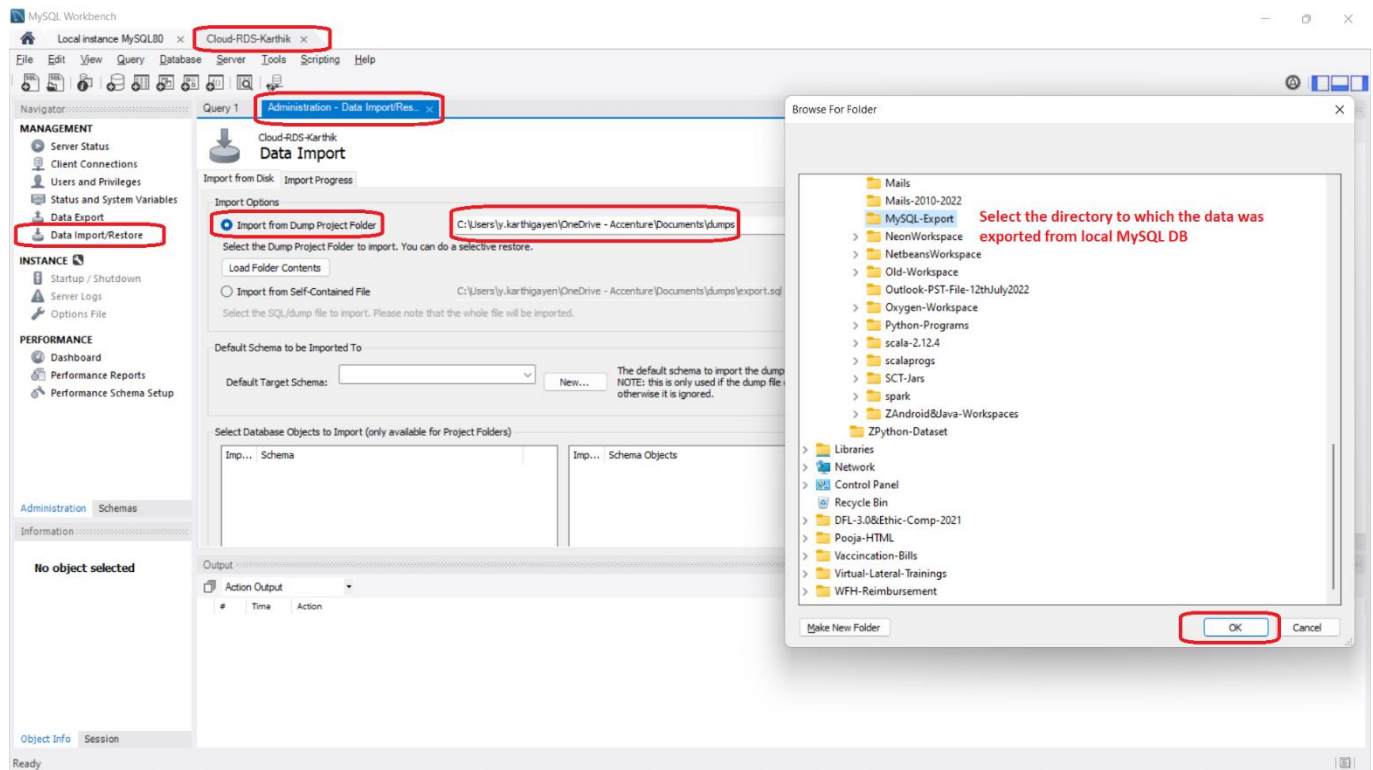
Step 4 : Go to the local MySQL editor and export the data using the below steps



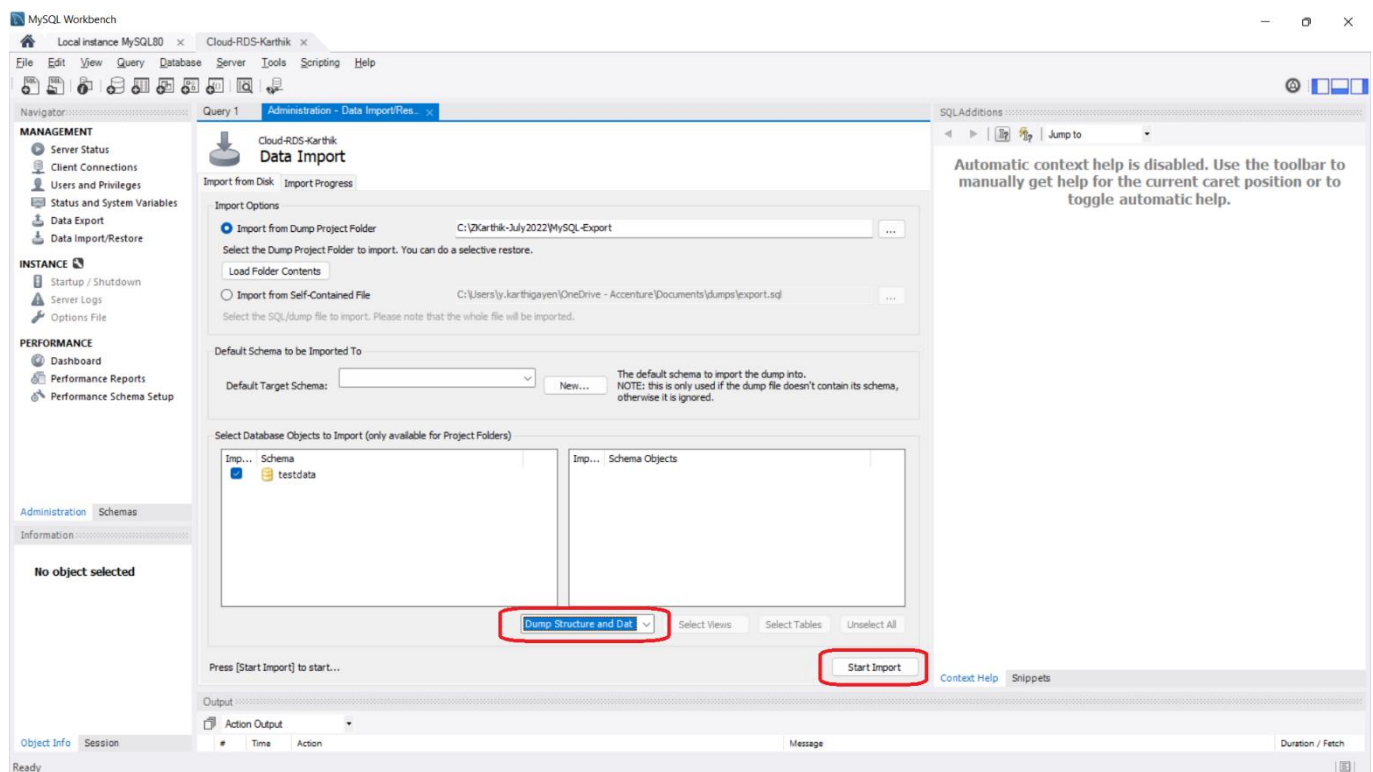
- Now it will ask if you want to overwrite the destination folder – click Yes, the export will be completed



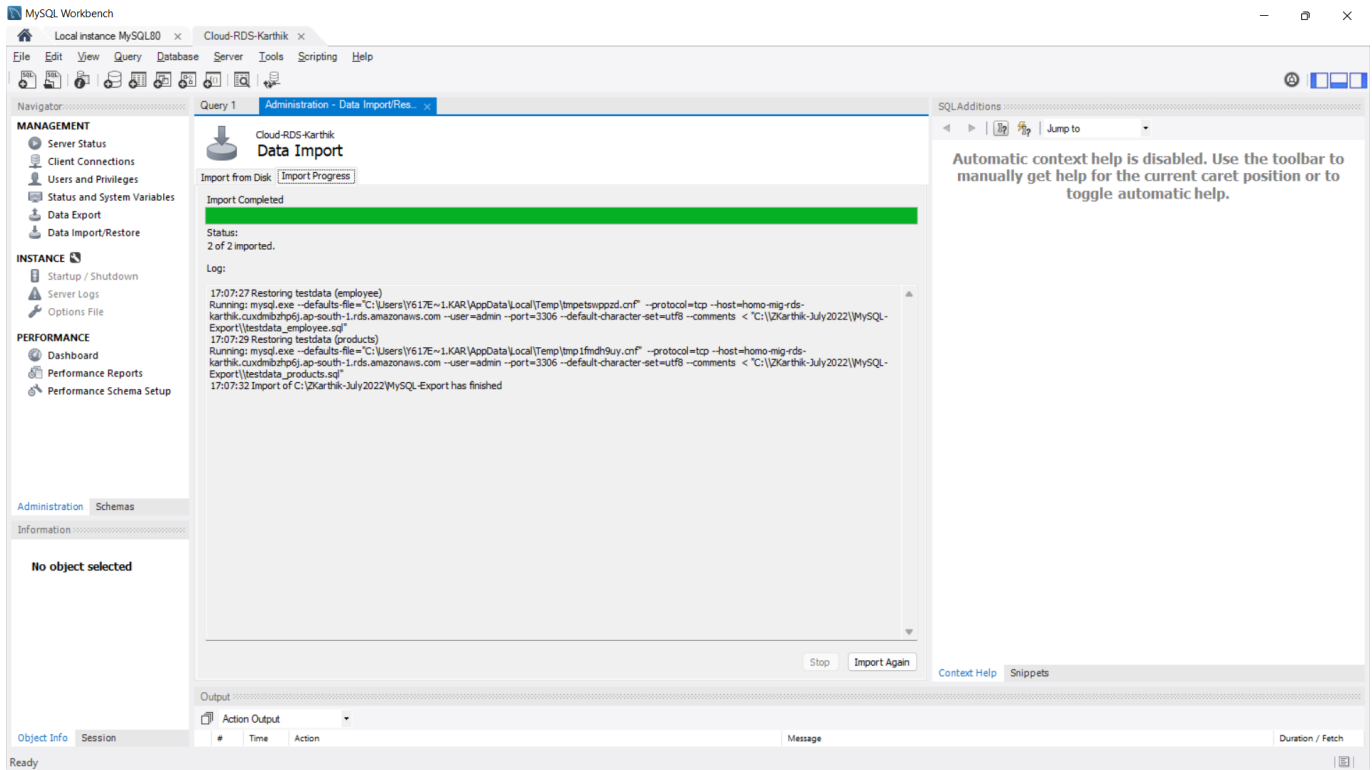
Step 5 : Now go to the Cloud RDS editor and import the data as shown in the below steps :



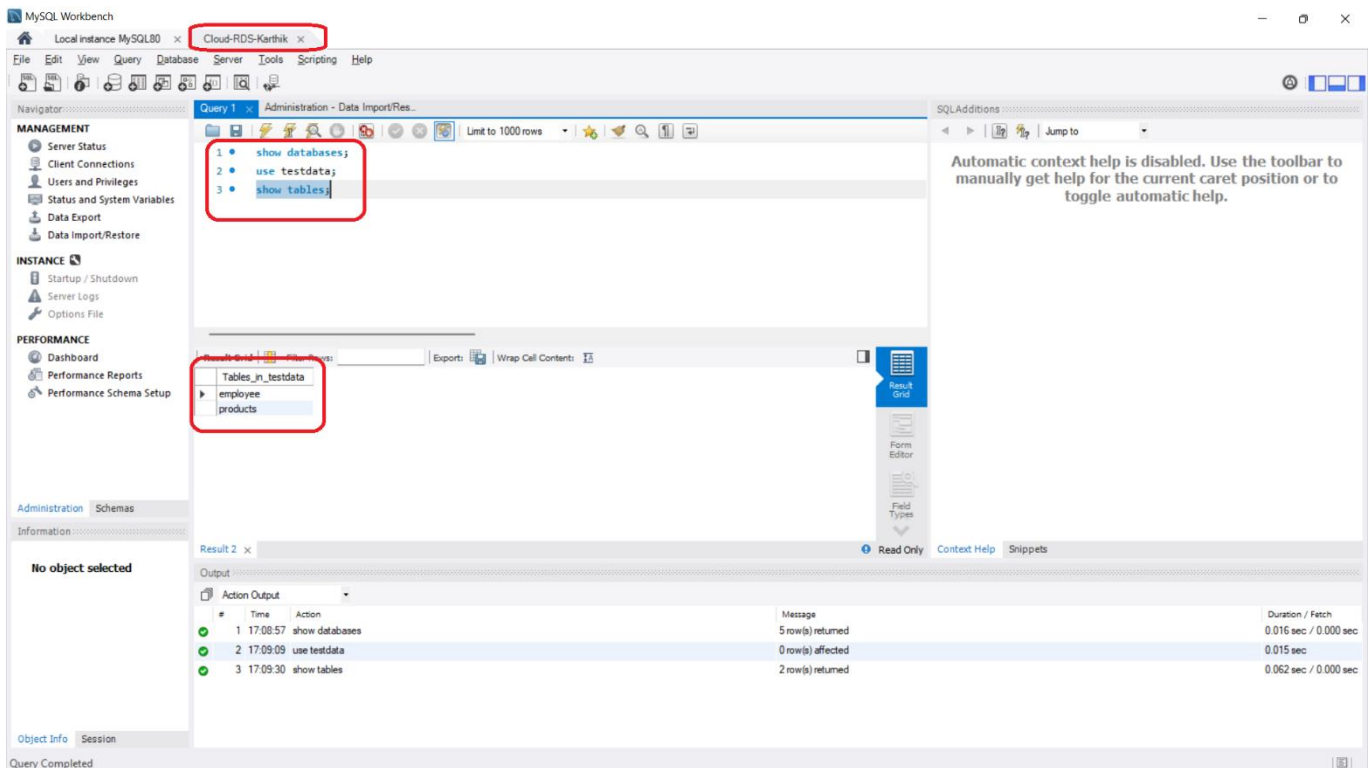
➤ **Now click on Start Import Button**



➤ Once the Import is completed, below status will be shown



➤ Now let us verify the Schema and the data on Cloud RDS DB



MySQL Workbench

Local Instance MySQL80 x Cloud-RDS-Karthik x

File Edit View Query Database Server Tools Scripting Help

Navigator

MANAGEMENT

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

INSTANCE

- Startup / Shutdown
- Server Logs
- Options File

PERFORMANCE

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

Information

No object selected

Object Info Session

Query 1 x Administration - Data Import/Res...

Limit to 1000 rows

```
1 • show databases;
2 • use testdata;
3 • show tables;
4 • select * from employees;
```

Result Grid

	id	name	location
▶	2000	Karthik	BDC6
	2001	Kiran	HDC2
	2000	Prakhar	DDC2

Database has been successfully Migrated

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Read Only Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	17:08:57	show databases	5 row(s) returned	0.016 sec / 0.000 sec
2	17:09:09	use testdata	0 row(s) affected	0.015 sec
3	17:09:30	show tables	2 row(s) returned	0.062 sec / 0.000 sec
4	17:10:20	select * from employee LIMIT 0, 1000	3 row(s) returned	0.031 sec / 0.000 sec

Query Completed