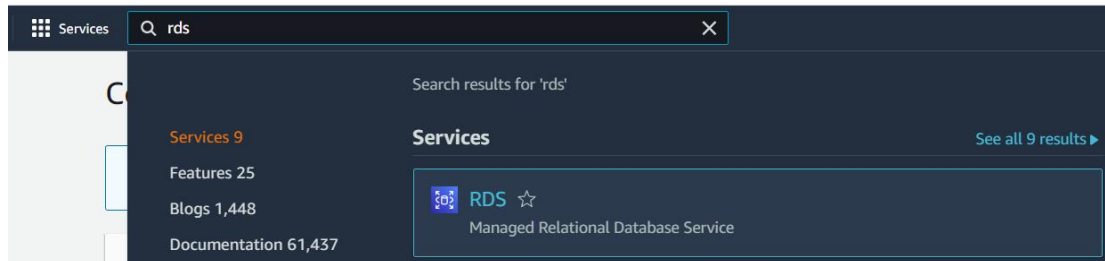
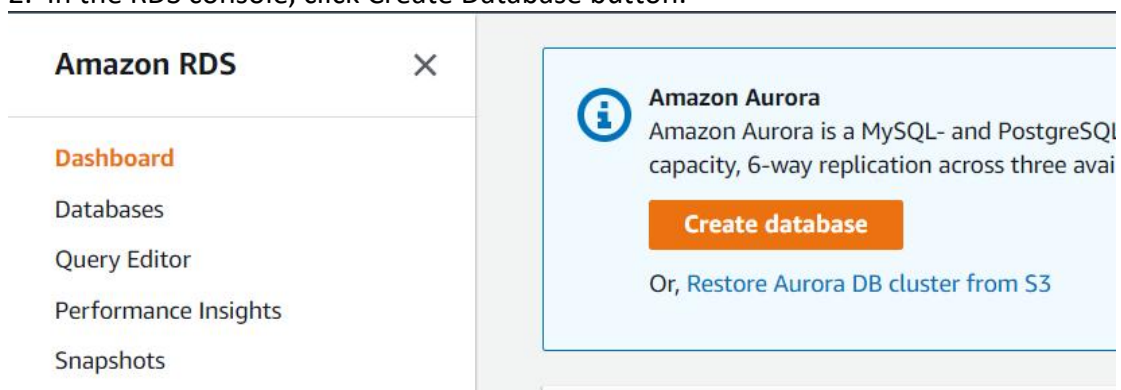


## Create a MySQL Database Instance in RDS and connect it using MySQL Workbench

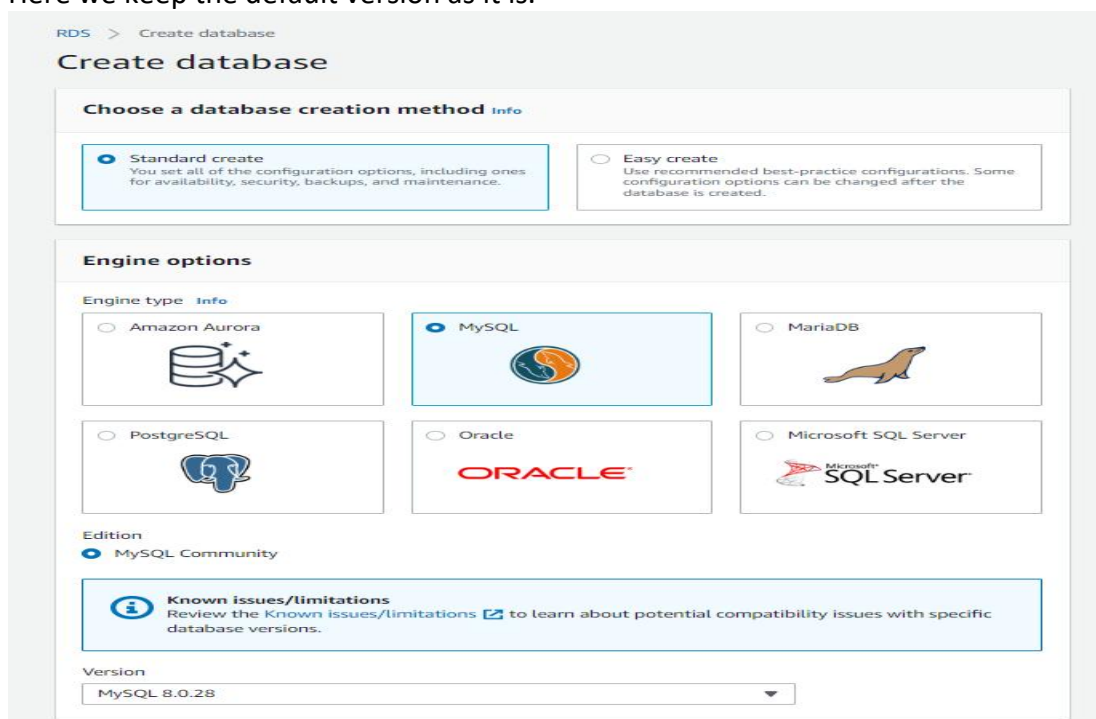
1. Login to the AWS console. In the search bar type RDS. In the search result click RDS to enter into RDS console.



2. In the RDS console, click Create Database button.



3. On the create database page, Keep the standard create option. Then select MYSQL. Below in the version drop down list, you can select the required version of MySQL. Here we keep the default version as it is.



4. Scroll Below. In the template section make sure you select Free Tier.

The screenshot shows the 'Templates' section with three radio buttons: 'Production', 'Dev/Test', and 'Free tier'. The 'Free tier' option is selected. Below this is the 'Settings' section. The 'DB instance identifier' is set to 'dbinst1'. The 'Master username' is set to 'admin'. The 'Auto generate a password' checkbox is unchecked. The 'Master password' and 'Confirm password' fields are both filled with asterisks.

**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.  
  
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.  
  
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](#)

In the Settings, Provide a name for the database instance to be created or keep the default.

In Credential Settings you can change the Master username or keep the default as admin.

Similarly provide password for the master user. Read password requirements mentioned below the first password box and provide password according to the requirements.

Remember the username and password as it will be required to connect to the database from MySQL workbench.

5. Scroll down. In the Instance section you can select the required capacity server. However as we are using Free tier keep default.

The screenshot shows the 'Instance configuration' section with three radio buttons: 'Standard classes', 'Memory optimized classes', and 'Burstable classes'. The 'Burstable classes' option is selected. Below this is the 'Storage' section. The 'Storage type' is set to 'General Purpose SSD (gp2)'. The 'Allocated storage' is set to '20 GiB'. The 'Enable storage autoscaling' checkbox is unchecked.

**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)**

2 vCPUs 1 GiB RAM Network: 2,085 Mbps

☐ Include previous generation classes

**Storage**

**Storage type** [Info](#)  
  
Baseline performance determined by volume size

**Allocated storage**  
 GiB  
(Minimum: 20 GiB. Maximum: 16,384 GiB) Higher allocated storage can improve IOPS performance.

**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.

In the storage section keep everything as default.

However **remove the check mark from Enable Storage autoscaling**.

6. Scroll down to the connectivity section. Keep all the settings to default. Change Public Access setting from No to Yes.

The screenshot shows the 'Connectivity' section of the AWS RDS console. It includes a 'Virtual private cloud (VPC)' dropdown set to 'Default VPC (vpc-0e8fbe90191fa232e)', a 'Subnet group' dropdown set to 'default-vpc-0e8fbe90191fa232e', and 'Public access' radio buttons where 'Yes' is selected. Below this, there are options for 'VPC security group' with 'Create new' selected, a text field for 'New VPC security group name' containing 'dbinst-sg', and an 'Availability Zone' dropdown set to 'No preference'. An 'Additional configuration' section is visible at the bottom.

**Connectivity**

Virtual private cloud (VPC) [Info](#)  
VPC that defines the virtual networking environment for this DB instance.

Default VPC (vpc-0e8fbe90191fa232e)

Only VPCs with a corresponding DB subnet group are listed.

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

Subnet group [Info](#)  
DB subnet group that defines which subnets and IP ranges the DB instance can use in the VPC you selected.

default-vpc-0e8fbe90191fa232e

Public access [Info](#)

☒ Yes  
Amazon EC2 instances and devices outside the VPC can connect to your database. Choose one or more VPC security groups that specify which EC2 instances and devices inside the VPC can connect to the database.

☐ No  
RDS will not assign a public IP address to the database. Only Amazon EC2 instances and devices inside the VPC can connect to your database.

VPC security group  
Choose a VPC security group to allow access to your database. Ensure that the security group rules allow the appropriate incoming traffic.

☐ Choose existing  
Choose existing VPC security groups

☒ Create new  
Create new VPC security group

New VPC security group name

dbinst-sg

Availability Zone [Info](#)

No preference

► Additional configuration

In VPC Security group section click Create New. Provide a name for this New VPC security group.

7. Scroll down. Expand the Additional configuration section. You will see the following settings. **Remove check mark from the Enable automated backup settings.**

The screenshot shows the 'Additional configuration' section of the AWS RDS console. It includes 'Database options' with fields for 'Initial database name', 'DB parameter group' set to 'default.mysql8.0', and 'Option group' set to 'default:mysql-8-0'. Under the 'Backup' section, the 'Enable automated backups' checkbox is unchecked. Under the 'Encryption' section, the 'Enable encryption' checkbox is checked.

▼ **Additional configuration**  
Database options, encryption turned on, backup turned off, backtrack turned off, Enhanced Monitoring turned off, maintenance, CloudWatch Logs, delete protection turned off.

**Database options**

Initial database name [Info](#)

If you do not specify a database name, Amazon RDS does not create a database.

DB parameter group [Info](#)

default.mysql8.0

Option group [Info](#)

default:mysql-8-0

**Backup**

☐ Enable automated backups  
Creates a point-in-time snapshot of your database

**Encryption**

☒ Enable encryption  
Choose to encrypt the given instance. Master key IDs and aliases appear in the list after they have been created using the AWS Key Management Service console. [Info](#)

8. Scroll down. Keep all other settings to their default values.


### Estimated monthly costs

The Amazon RDS Free Tier is available to you for 12 months. Each calendar month, the free tier will allow you to use the Amazon RDS resources listed below for free:

- 750 hrs of Amazon RDS in a Single-AZ db.t2.micro, db.t3.micro or db.t4g.micro Instance.
- 20 GB of General Purpose Storage (SSD).
- 20 GB for automated backup storage and any user-initiated DB Snapshots.

[Learn more about AWS Free Tier.](#)

When your free usage expires or if your application use exceeds the free usage tiers, you simply pay standard, pay-as-you-go service rates as described in the [Amazon RDS Pricing page](#).

 You are responsible for ensuring that you have all of the necessary rights for any third-party products or services that you use with AWS services.

Cancel

Create database

Finally Click Create Database Button.

9. Following screen will be displayed.

Amazon RDS

Dashboard

Databases

Query Editor

Performance Insights

Snapshots

Automated backups

Reserved instances

Proxies

Subnet groups

Creating database dbinst1

Your database might take a few minutes to launch.

View credential details

RDS > Databases

Databases

Group resources

Modify

Actions

Restore from S3

Create database

Filter by databases

DB identifier	Role	Engine	Region & AZ	Size	Status	CPU	Current activity	Maintenance	VPC	Multi-AZ
dbinst1	Instance	MySQL Community	-	db.t3.micro	Creating	-	-	none	vpc-0e8fb90191fa232e	No

Check the status, it will be creating. It will take some time to start the database. Wait till the status is shown as available. You may use refresh button



10. Once the database status changes to available. Click on the name of the database instance. Following screen will open.

RDS Management Console

ap-south-1.console.aws.amazon.com/rds/home?region=ap-south-1#database-id=dbinst1;is-cluster=false

Amazon RDS

Successfully created database dbinst1

View connection details

RDS > Databases > dbinst1

dbinst1

Modify

Actions

Summary

DB identifier dbinst1	CPU -	Status Available	Class db.t3.micro
Role Instance	Current activity	Engine MySQL Community	Region & AZ ap-south-1b

Connectivity & security

Monitoring

Logs & events

Configuration

Maintenance & backups

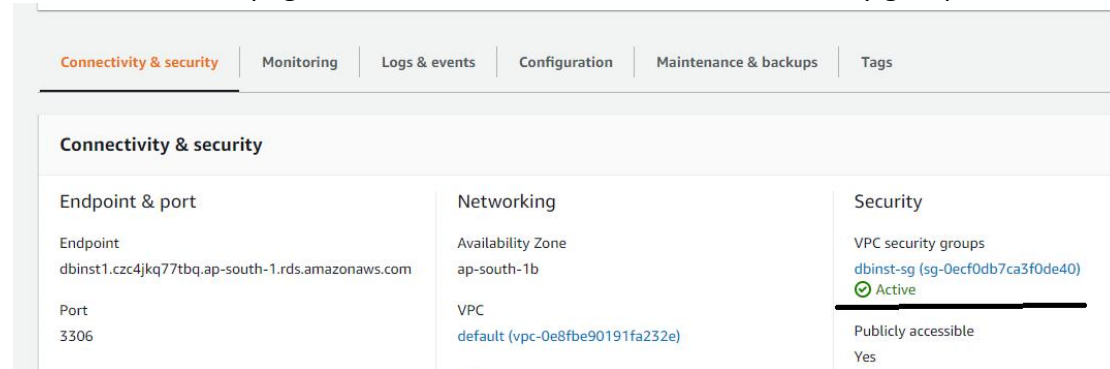
Tags

Connectivity & security

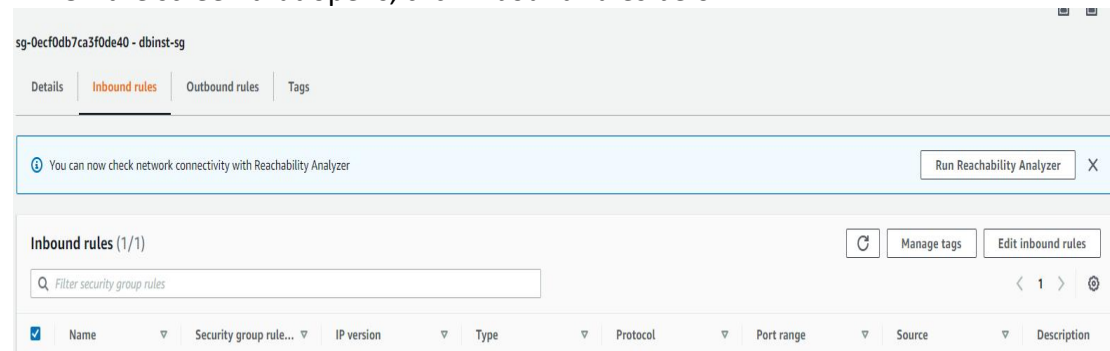
Endpoint & port	Networking	Security
Endpoint dbinst1.cx4qg77bq.ap-south-1.rds.amazonaws.com	Availability Zone ap-south-1b	VPC security groups dbinst-sg (sg-0e8fb90191fa232e)
Port 3306	VPC default (vpc-0e8fb90191fa232e)	Publicly accessible Yes
	Subnet group default-vpc-0e8fb90191fa232e	Certificate authority rds-ca-2019
	Subnets subnet-00b89e5a02d38c90f subnet-0a297af464c21312a9 subnet-07960ab995734649	Certificate authority date August 22, 2024, 10:38 (UTC+10:38)
	Network type IPv4	

Security group rules (2)

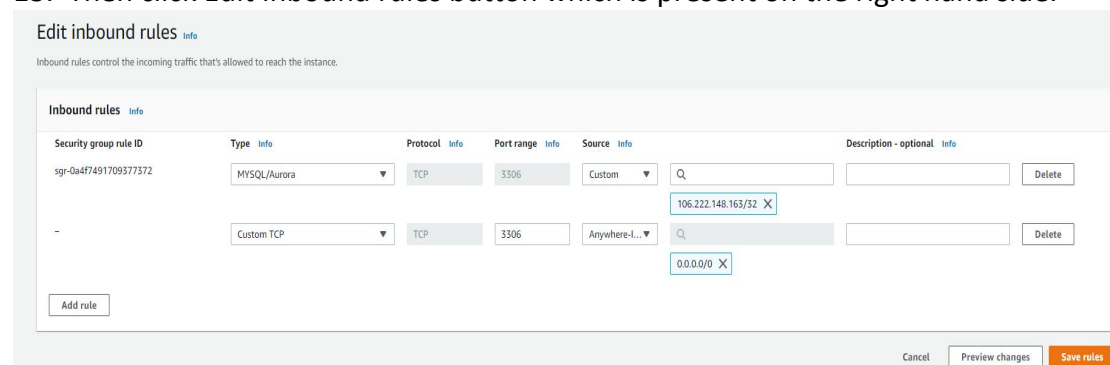
11. On the above page, click the blue name shown in VPC Security group.



12. On the screen that opens, click inbound rules below.



13. Then click Edit Inbound rules button which is present on the right hand side.



In the Edit inbound rules page, click Add rule button. Keep type as it is. In the Port range type 3306. Then click in the Source search box. Select 0.0.0.0/0. Then click Save rule.

14. Go back to RDS console by typing RDS in the search box at the top.

## Installing MySQL Workbench

1. Go to the following link and download MySQL workbench for Windows or as per your OS.

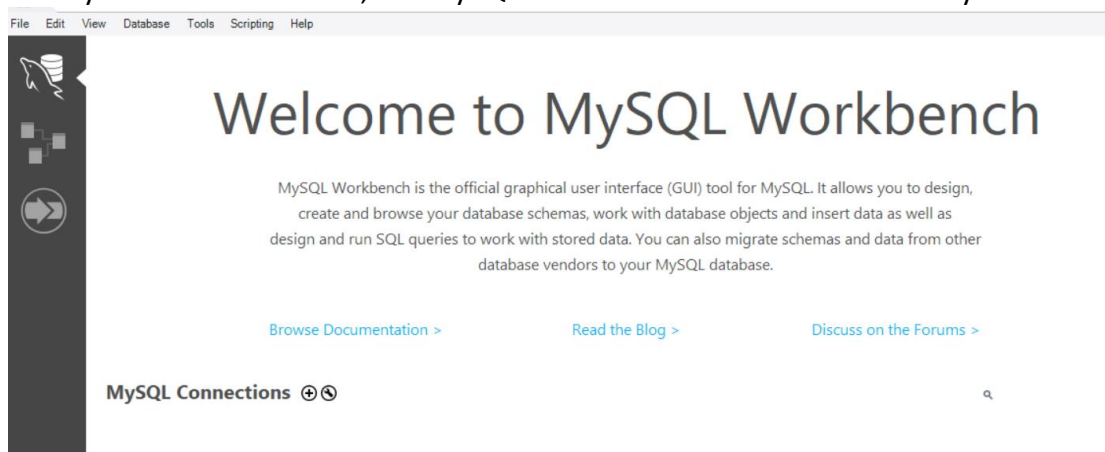
<https://dev.mysql.com/downloads/workbench/>

2. Once download is complete, click to start installation.

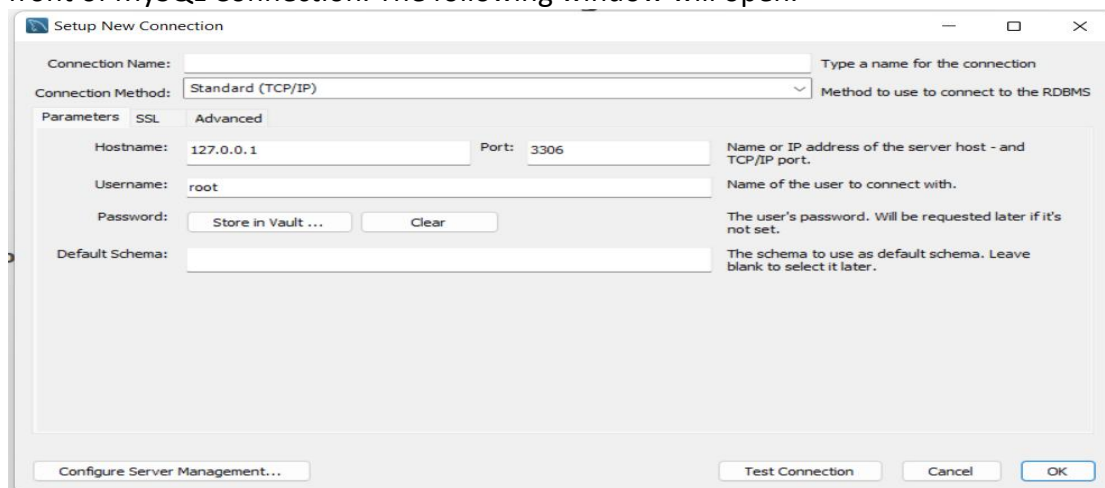


Click Next and keep all default settings and complete installation.

Once you finish installation, the MySQL workbench will start automatically.

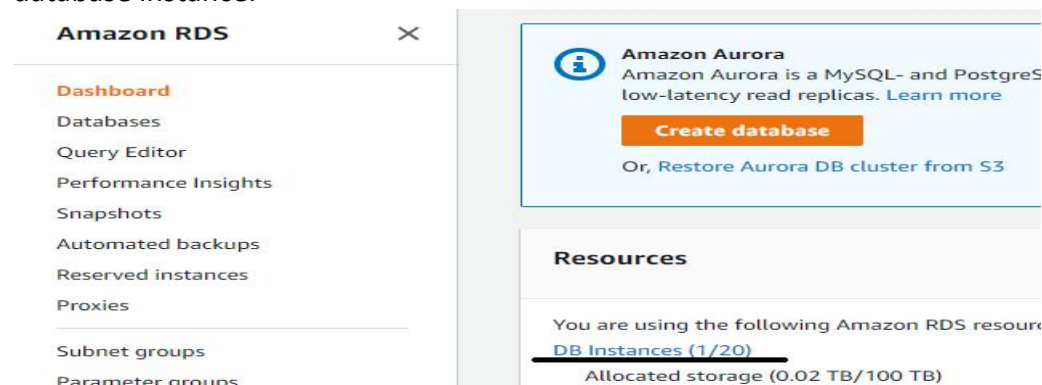


Now to connect to MySQL database instance. For this click the Plus sign shown in front of MySQL Connection. The following window will open.

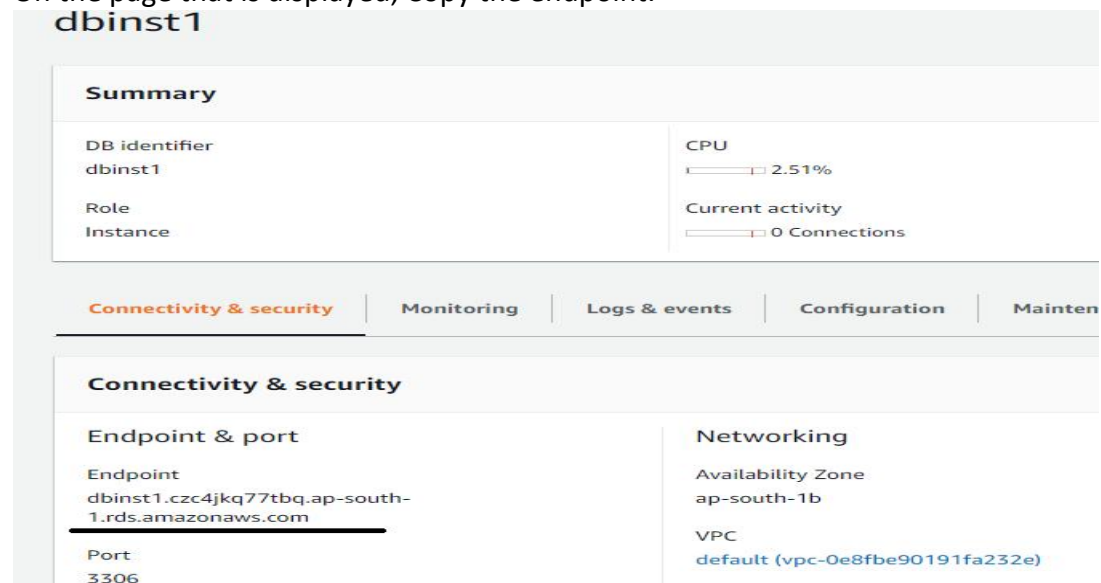




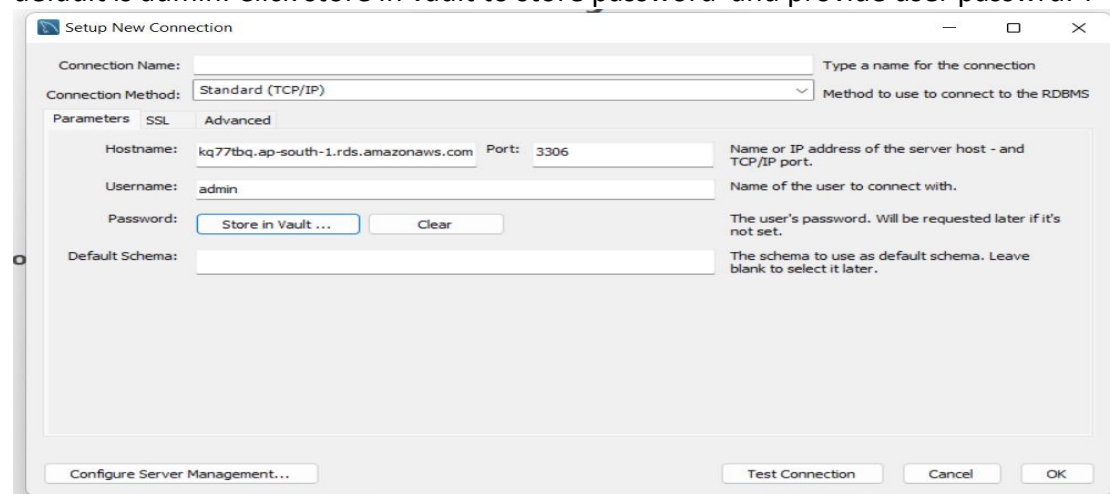
Go to your RDS console. Click DB instance(1/20) option. Then click the name of your database instance.



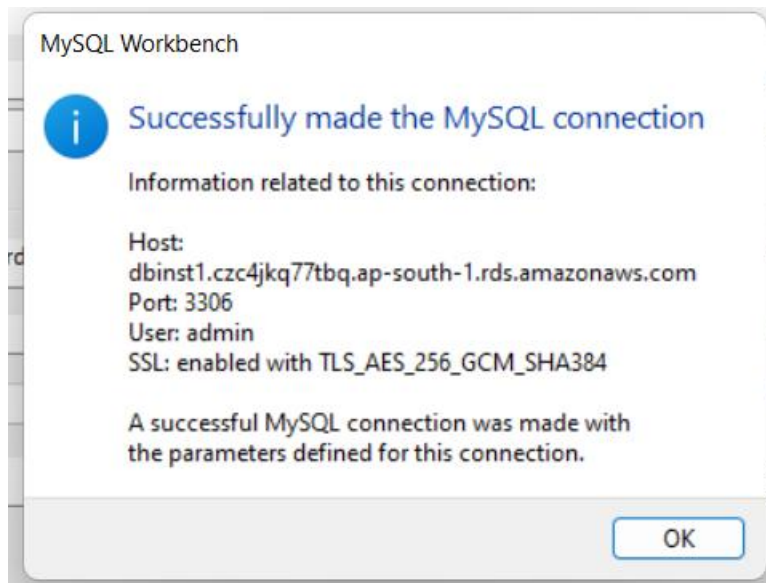
On the page that is displayed, Copy the endpoint.



Now paste the endpoint in the MySQL window. Paste the endpoint in the hostname field. Change username to the user that you specified while creating a database. The default is admin. Click store in vault to store password and provide user passwd. T



Then click Test Connection.



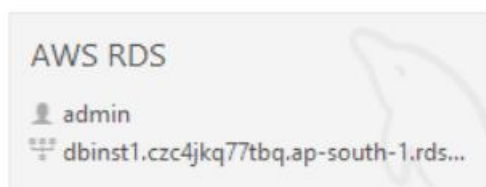
If you get this screen means you are able to connect to your database.

Click OK.

Enter a connection name in the window and click ok.

A button is displayed as below.

## MySQL Connections



Click the button to connect to your database. And run your queries.

