04b Exposee Documentation

1 Database Overview

The database is provided by a MySQL server. The following sections describe the specific configurations applied to the MySQL server to provide an overview of the data structure, users and network configuration.

1.1 Sample Database

The MySQL server contains a sample database called “Demo” with a single table called “Users”. A user must have an ID (Primary Key, Auto Increment) and a name (Max Length: 45).

1.1 SQL Configuration Overview

```
CREATE DATABASE `Demo`;
CREATE TABLE `Demo`.`Users` (
 `id` INT NOT NULL AUTO_INCREMENT,
 `name` VARCHAR(45) NOT NULL,
 PRIMARY KEY (`id`));
```

1.2 User List

The following table provides an overview of the MySQL server’s users, which have different types of access to database resources.

Username	Password	Permissions
write	[REDACTED]	Cannot read (ALTER, DELETE, INSERT)
read	[REDACTED]	Can only read (SELECT)
read_write	[REDACTED]	Can read and write (ALTER, SELECT, DELETE, INSERT)

1.3 Cloud Network Configuration

The following table provides an overview of the MySQL server’s cloud network configuration.

Description	Value
IP Address	[REDACTED]
Port	[REDACTED]

2 How To

The following section provides a step-by-step guide that should be followed to test the granular access of the MySQL server's three different users found in section 2. User List.

Step 1: Download and install MySQL Workbench

First, ensure you have downloaded and installed MySQL Workbench. An installer for MySQL Workbench can be found at https://dev.mysql.com/downloads/workbench/.

Step 2: Connect to MySQL server using MySQL Workbench

Open MySQL Workbench and create a new connection using the IP address, [REDACTED], port [REDACTED], and the username and password of one of the users found in section 2. User List (see Figure 1).

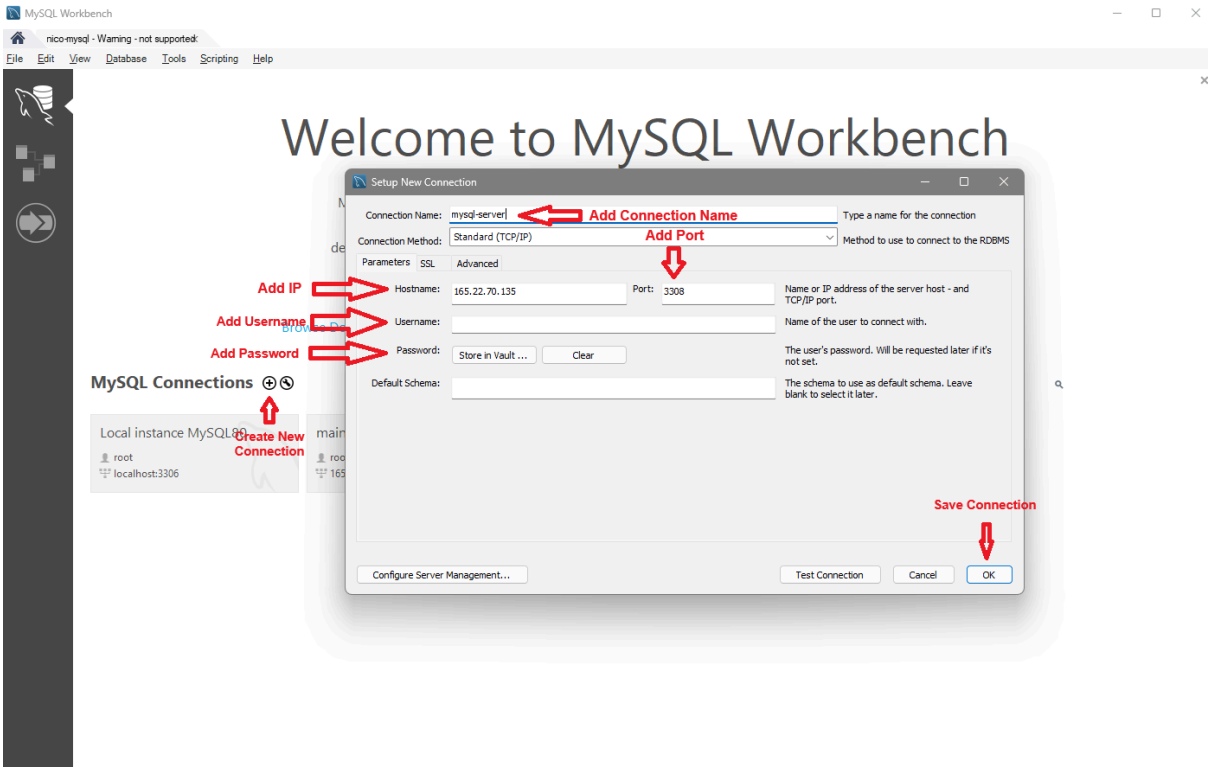

Figure 1: An overview of how to create a new connection within MySQL Workbench.

Step 3: Execute read and write operations using SQL

Execute the following SQL Select and Insert statements to test both read and write operations (see Figure 2):

```
INSERT INTO Demo.Users (name) VALUES ('test');
SELECT * FROM Demo.Users;
```

Important: *You must execute the Select and Insert command as two singular operations because if you try to execute both and the first one fails, the second one will never execute.*

If you are testing a user with write-only access, the Select statement should fail, and if the user has read-only access, the Insert statement should fail. The expected outcome for the specific users are:

- **Username**: write; **Select**: fail; **Insert**: success;
- **Username**: read; **Select**: success; **Insert**: fail;
- **Username**: read_write; **Select**: success; **Insert**: success;

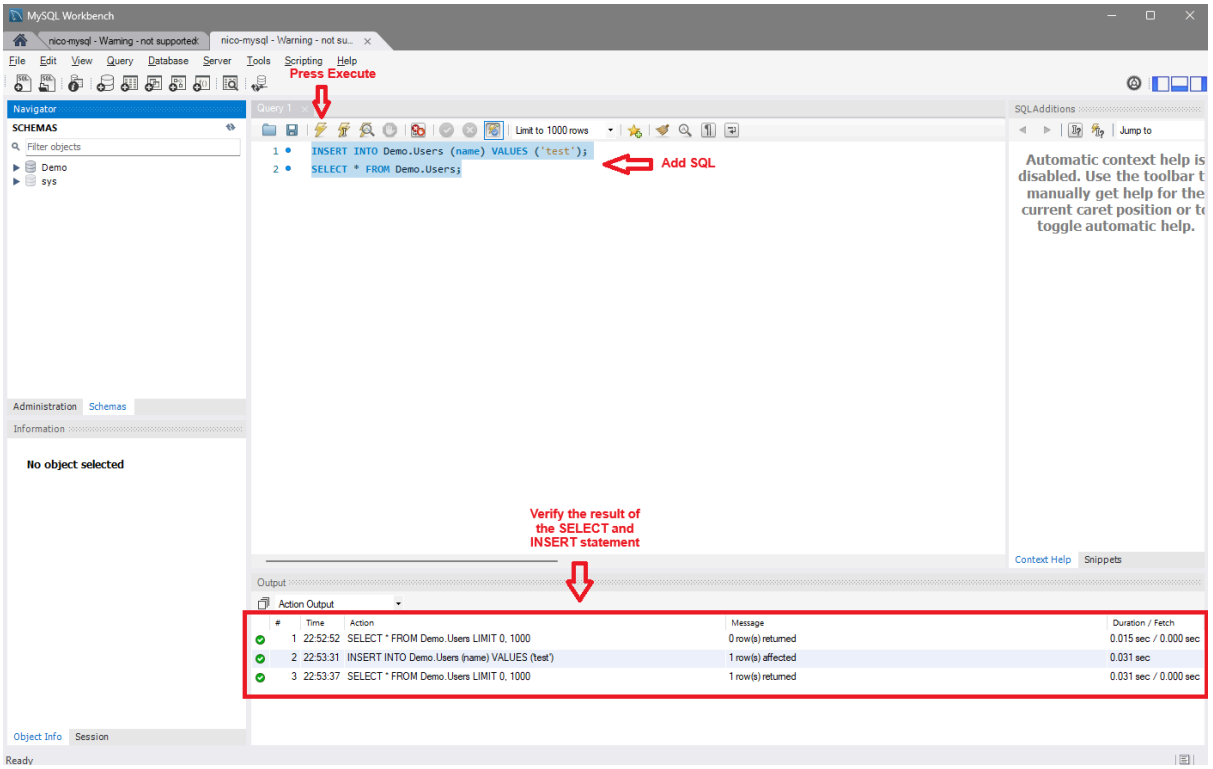

Figure 2: An overview of how to execute SQL within MySQL Workbench and where to find log output.

Step 4: Repeat Steps 2-3 for all users

All users need to be verified whether their permissions work as intentional, steps 2-3 should, therefore, be repeated for all users.