

# Installing/Configuring MySQL Workbench

## Windows Installation

Go to <https://dev.mysql.com/downloads/workbench/> and select the OS **Microsoft Windows**. Download the MSI Installer for mysql-workbench-community (under **Other Downloads**) and select **Open** from the download file menu when this is complete. Then follow the Setup Wizard as usual.

## MacOS Installation

Go to <https://dev.mysql.com/downloads/workbench/> and select the Operating System **macOS**. Download the DMG Archive file and select **Open** from the download file menu when this is complete. Then drag the MySQL Workbench icon into the Applications folder when prompted.

## Ubuntu/Debian-based Linux Installation

Go to <https://dev.mysql.com/downloads/repo/apt/> and download the MySQL APT repository configuration. Install this using

```
sudo dpkg -i mysql-apt-config_{version}_all.deb
```

In principal, it should be possible to Open the downloaded package from within your web browser, which will typically invoke the Software Installer automatically – and then click **Install**. However this didn't work for me – the installation remained stuck at 0% and never progressed.

Accept the defaults (mysql v8, plus *Tools & Connectors*), highlight **Ok** and press Return. Then run the command

```
sudo apt-get update
```

Install MySQL Workbench by running the command

```
sudo apt-get install mysql-workbench-community
```

## RedHat/Fedora-based Linux Installation

Go to <https://dev.mysql.com/downloads/repo/yum/> and download the MySQL YUM repository configuration appropriate for your system. Install this using

```
sudo rpm -Uvh mysql80-community-release-{dist}-1.noarch.rpm
```

or

```
sudo yum localinstall mysql80-community-release-{dist}-1.noarch.rpm
```

Install MySQL Workbench by running the command

```
sudo yum install mysql-workbench-community
```

or

```
sudo dnf install mysql-workbench-community
```

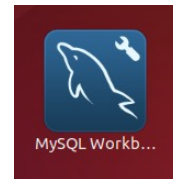
The Windows Download Page and the Linux repositories can also be used to install a full MySQL server and/or client applications locally. Such a configuration will not be covered here.

Note that MySQL clients running locally will **not** be able to connect directly with the departmental MySQL services – the `studdb` server is deliberately configured to only accept connections from within the CS department. This effectively means either connecting from PCs in teaching labs within the George Holt building, establishing an SSH session to the departmental teaching Linux farm and connecting from there. The staff MySQL server is only accessible by machines connected to the departmental internal network, or via the departmental VPN service.

The rest of this document describes how to configure MySQL Workbench to connect to these services transparently.

### Configuring MySQL Workbench

Open or search Applications, and select the MySQL Workbench icon



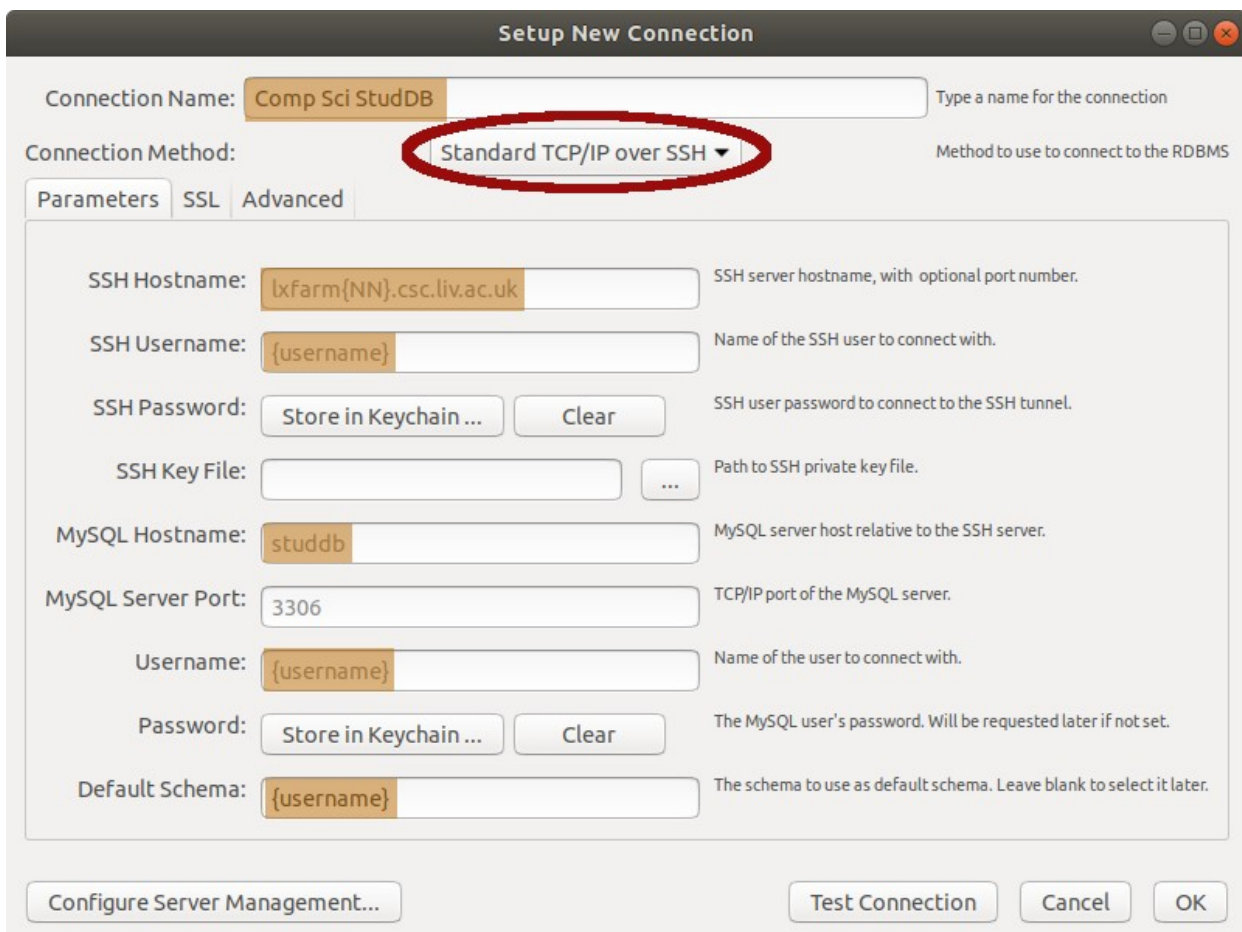
This will typically report that it “cannot detect a MySQL server running”  
This is to be expected.

Click the **+** sign to define a new MySQL connection



Define a name for the new connection, and select the connection method  
Standard TCP/IP over SSH

Then fill in the highlighted fields as shown

The image is a screenshot of the "Setup New Connection" dialog box in MySQL Workbench. The "Connection Name" field is set to "Comp Sci StudDB". The "Connection Method" dropdown is set to "Standard TCP/IP over SSH" and is circled in red. The "Parameters" tab is selected. The "SSH Hostname" field is set to "lxfarm{NN}.csc.liv.ac.uk". The "SSH Username" field is set to "{username}". The "SSH Password" field has "Store in Keychain ..." and "Clear" buttons. The "SSH Key File" field is empty. The "MySQL Hostname" field is set to "studdb". The "MySQL Server Port" field is set to "3306". The "Username" field is set to "{username}". The "Password" field has "Store in Keychain ..." and "Clear" buttons. The "Default Schema" field is set to "{username}". At the bottom, there are buttons for "Configure Server Management...", "Test Connection", "Cancel", and "OK".

In particular, when connecting to the student MySQL server:

MySQL Hostname should be set to **studdb**

SSH Hostname should be set to one of the teaching Linux farm machines  
(lxfarm08 – see below)

The other highlighted fields should each be set to match your username

Then click **Test Connection**

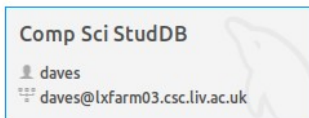
This will prompt you for your University username  
If you select the **Save password in keychain** box then this password will be remembered, and you will not be asked for it again.

(Note that if you subsequently change your University password, you will need to update it here too)



Then click **OK**

## MySQL Connections



Subsequently, this connection will be shown on the main MySQL Workbench startup screen.

## Two Factor authentication

Following an increase in security exploits targetting universities, security has now been tightened when accessing computing facilities from outside the University network. Unfortunately this has some impact on using MySQL Workbench remotely.

Previously, it had been possible to use *any* of the teaching Linux farm machines to access the MySQL database server. However these systems now offer a choice of two factor authentication challenges, after having accepted the username and password. This confuses the MySQL “TCP/IP-over-SSH” connection handling.

To address this, the system `lxfarm08.csc.liv.ac.uk` has been configured to automatically send a Duo Push challenge to the primary registered device. This is now the only system that can be used with MySQL Workbench. It will also be necessary to confirm the connection (on your smartphone or primary device) whenever a database session is started. It is *not* possible to use this mechanism with SMS text message passcodes.

This step is not required when accessing the database server from systems on the University network, such as the MWS labs, or the CS teaching Linux farm machines. Nor will it be needed for connections from the student webserver (which is on the University network), so web-based front-ends should continue to work.

## Staff configuration

The approach for connecting to the staff MySQL server is essentially the same – the only differences are in the settings for **MySQL Hostname** and **SSH Hostname**:

**MySQL Hostname** should be set to **mysql**

**SSH Hostname** should be set to `ssh1.csc.liv.ac.uk` or `ssh2.csc.liv.ac.uk`

In addition, a connection via the University or department VPN service is required for this mechanism to work, just as for terminal (SSH) connections to internal sessions.

Note that if a VPN session to the departmental VPN service is in place, then a **Standard (TCP/IP)** connection can be configured directly to the staff MySQL server (**mysql**), without the need for the SSH settings. This approach is *not* available when connecting to the student MySQL service (**studdb**).