VeSion™ RTU410 RFTS

Installation Guide

VeSion RTU410 Introduction
Remote Fiber Optics Monitoring & Test System

- Remote Fiber Test System (RFTS)

  ○ Monitors optical fiber infrastructure in Core, Metro, Access and FTTx/PON networks, improves workflow and reduces Mean Time to Repair (MTTR).

  ○ Comprises of RTU-4000 mainframe with RTU-4100+ OTDR optical test module and OXA4000-series optical switches, controlled by VeSion RTU410 Probe Server.

  ○ VeSion RTU410 Probe Server is also in charge of data collection, scheduling and alarming.

VeSion™ System
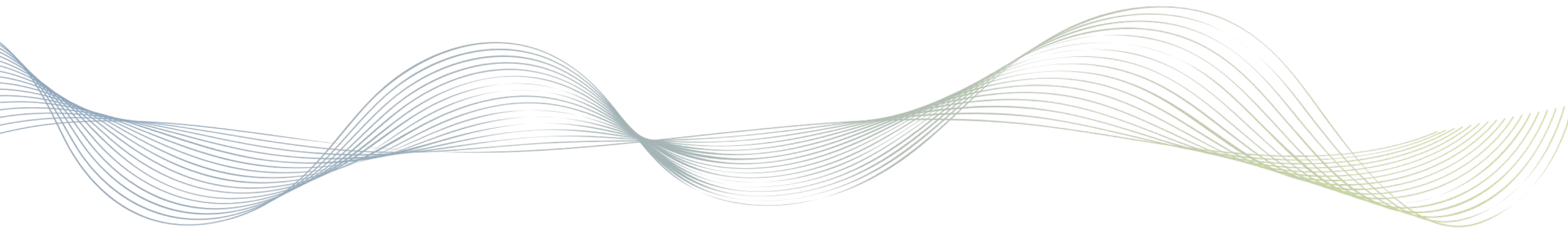## Major Software Components

- The VeSion system software runs on Microsoft Windows operating system. The operating system can be:
  - Windows Server 2008 R2
  - Windows Server 2012
  - Windows Server 2016

- This quick guide provides detailed steps to install the applications needed for a VeSion RTU410 Server as part of a VeSion RFTS system. Below are the major software and server role that need to be installed on the server, in addition to the relevant tools to facilitate the installation.
  - MySQL database and workbench
  - VeSion RTU410 Server Application

Installation Highlights

- This guide is based on the use of Windows Server 2016

- Procedure highlights

  - Add operating system features and Install Microsoft applications
    - Turn on Remote Desktop Connection
    - Add .NET Framework 3.5 feature
    - Add Telnet Client feature
    - Install Microsoft Visual C++ Runtime Libraries 2015 Redistribution

  - Open TCP ports on firewall (assuming that the built-in firewall of the Windows Operating System is used)

  - Install database and configure VeEX applications
    - Install MySQL Installer version 8
    - Install MySQL Server
    - Install MySQL Workbench
    - Configure MySQL Database
    - Install and configure VeSion RTU410 Sever application

  - Add application shortcuts to Startup

Software and Tools

- MySQL Installer for Windows version 8.0.17.0. Consult VeEX Customer Care for compatibility for other versions.
  - https://dev.mysql.com/downloads/mysql/

- MySQL configuration tool <MySQLConfigurationHelper(3.0.0)190218>
  - Provided by VeEX

- VeSion RTU410 Server
  - Provided by VeEX

Organizing the Software on the Server

- To allow an easy reference to the software installation history and access to the software for future use, it is recommended to put the installation software on the server.

- If Drive C: has good amount of disk space, use the default Documents folder.

- Create a Software_Archive folder under Documents.

- Under the Software_Archive folder, create the following folders
  - MySQL, which contains the MySQL installation software, MySQL Configuration Helper
  - VeSion_Package, which contains the VeSion RTU410 Server software

Server Roles and Features

Step 1

Server Manager
Add Roles and Features

- The first step of the installation is to use the Add Roles and Features of the Server Manager to add the below roles and features
  - .NET Framework 3.5 Features
  - Telnet Client
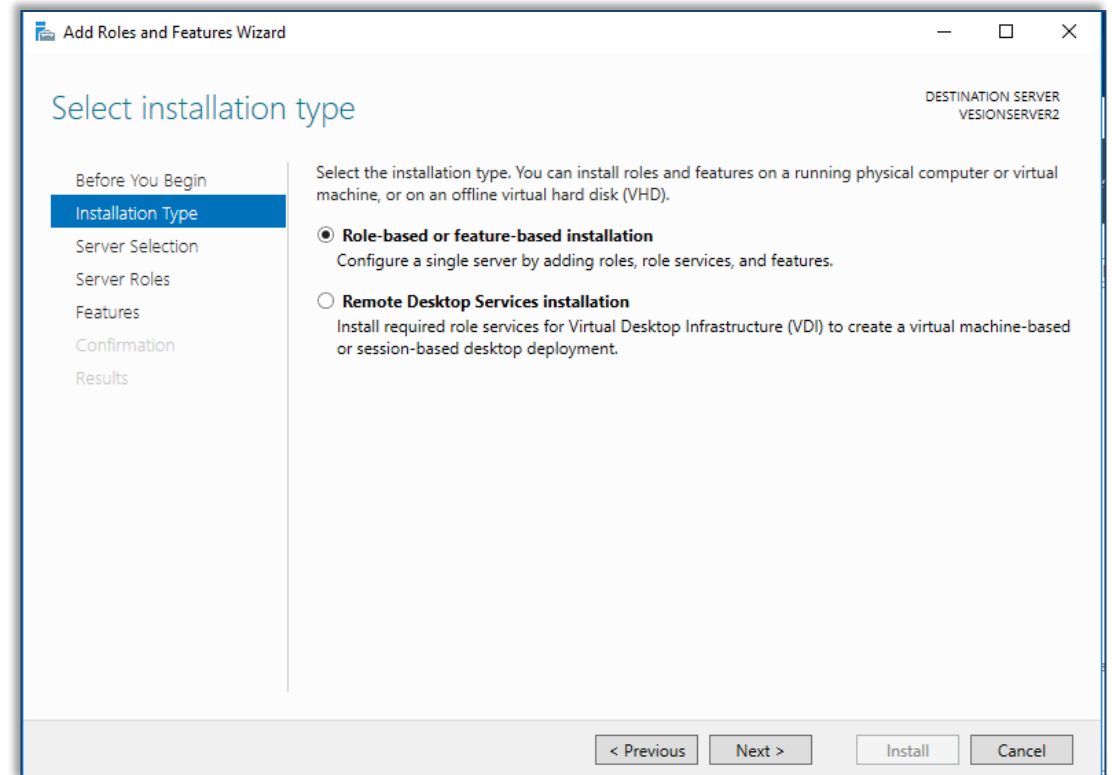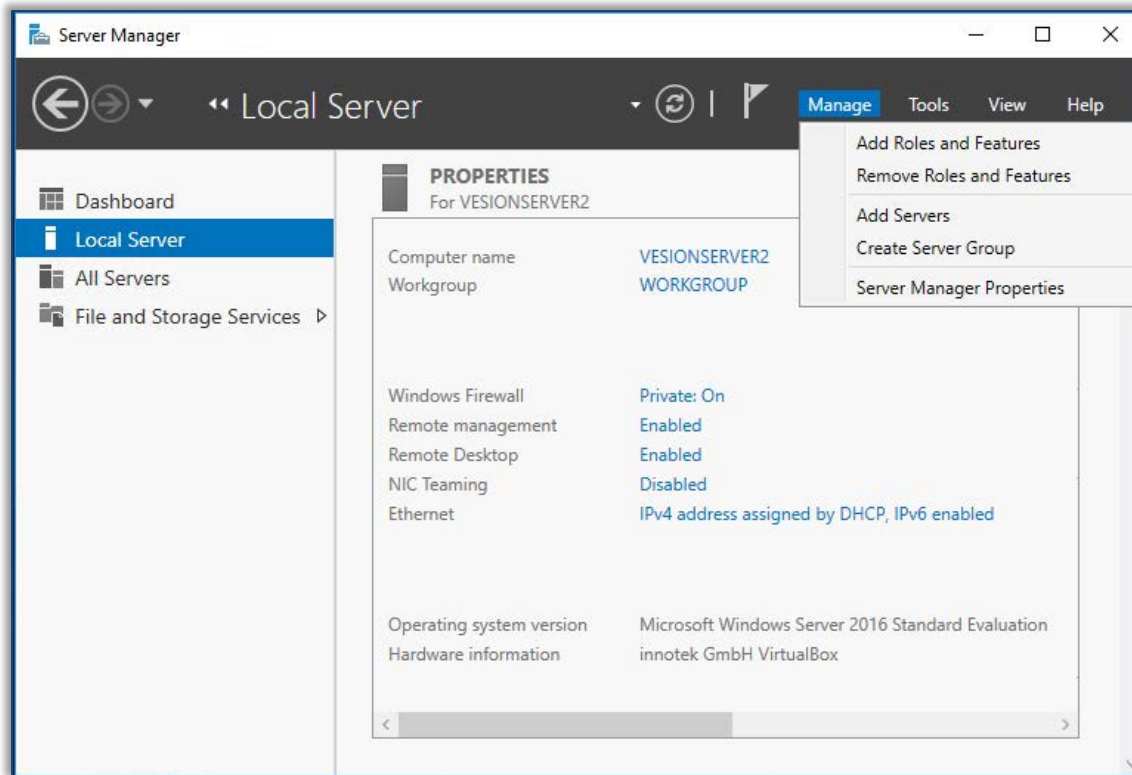
Server Manager
Add .NET Framework and Telnet Features

- **.NET Framework 3.5 Features**
  - The .NET Framework 3.5 features are needed to run the MySQL Configuration Tool when setting up the database

- **Telnet client**
  - The telnet client is needed for probe troubleshooting, if needed.
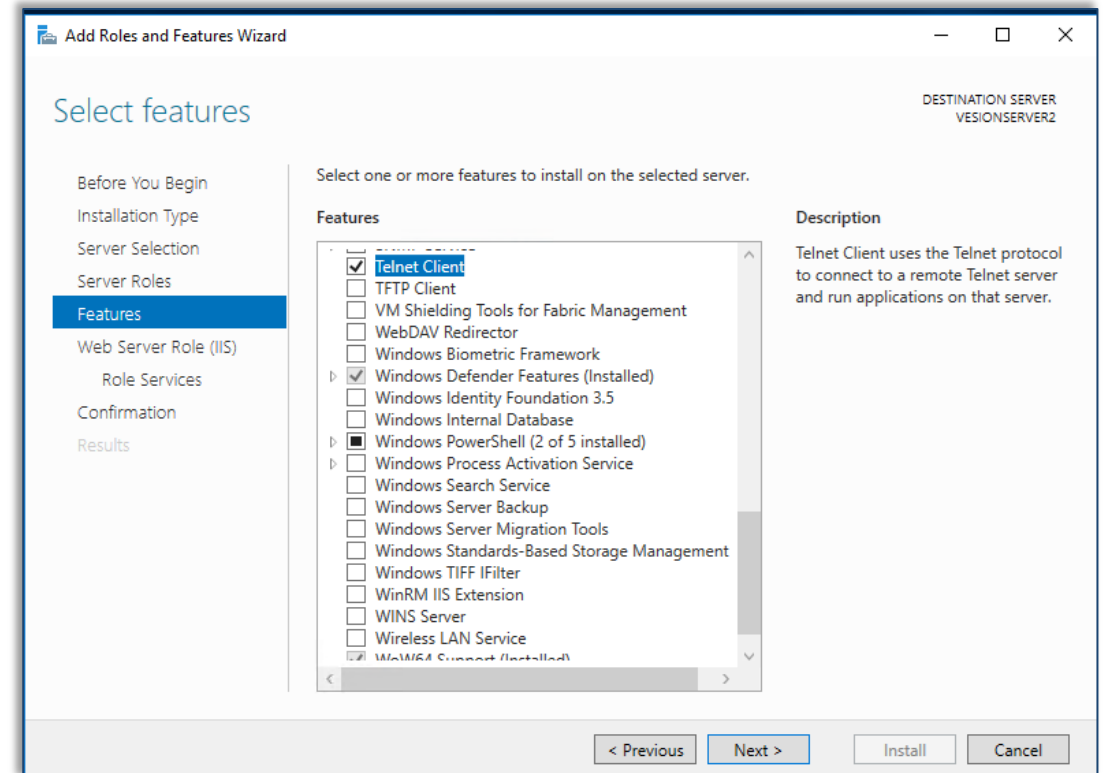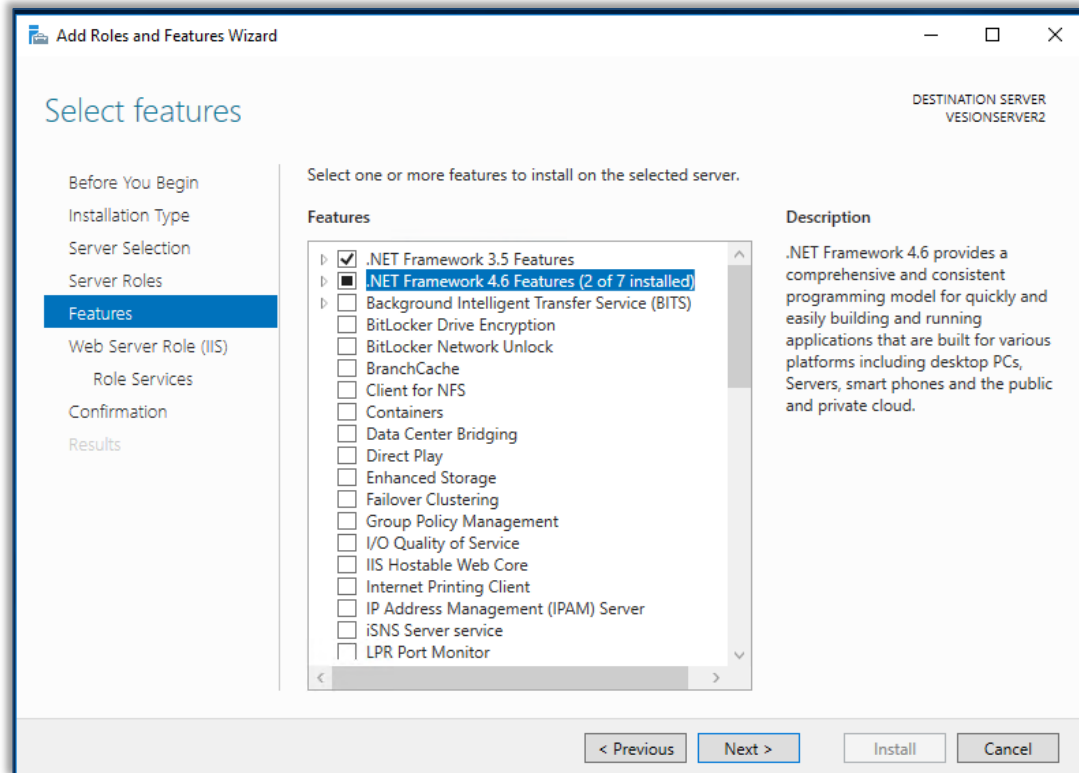
Server Manager
Add Roles and Features

- Click Install in the Confirmation to proceed add the .NET Framework and Telnet Client features. Let it finish the installation.
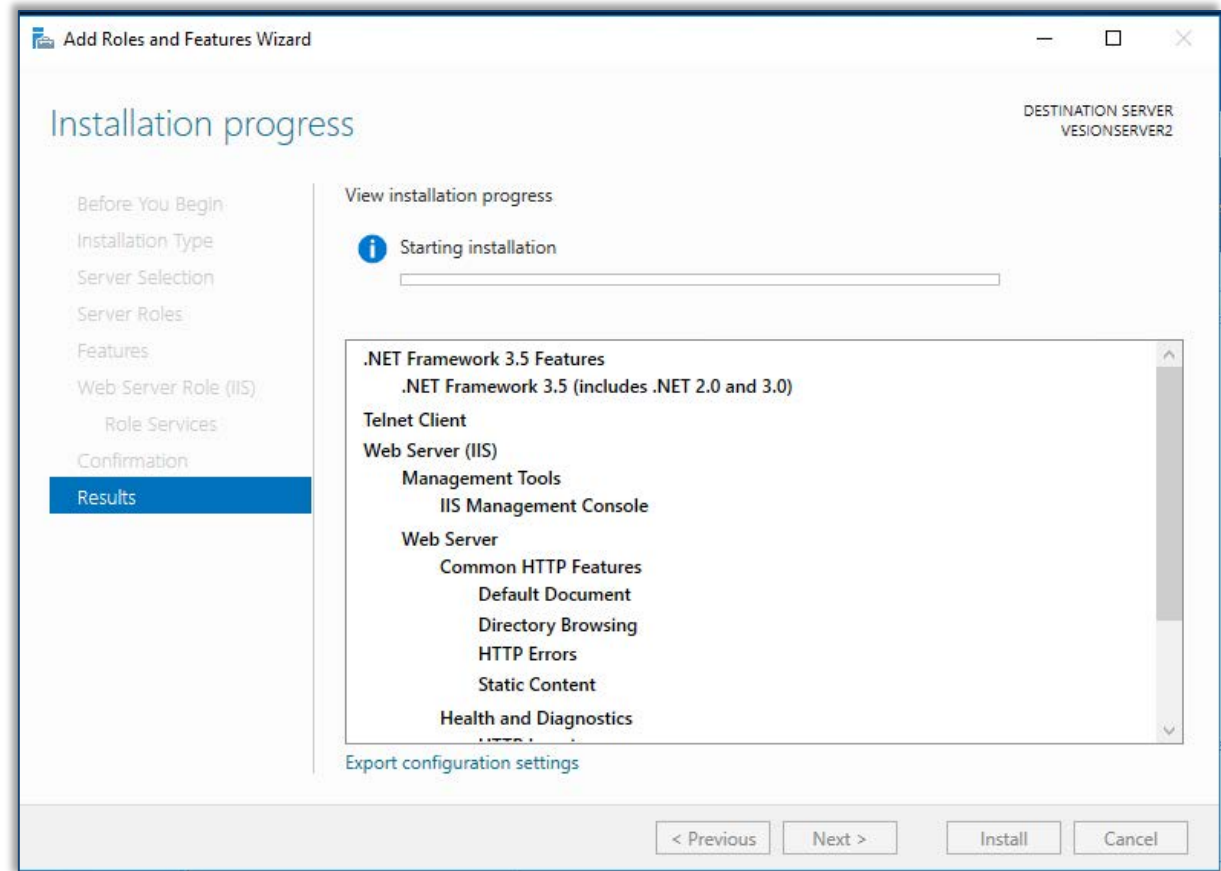
Open Ports on Windows® Firewall

Step 2

Open Required Ports on Windows Firewall

- The inbound TCP port 12300 needs to be opened, so an RTU-4000/RTU-4100 probe can connect to the VeSion RTU410 Server.

- Launch Windows Firewall with Advanced Security
  - Click Inbound Rules at the left pane, then click New Rule… at the right under Actions > Inbound Rules to bring up the Rule setting pop-up.
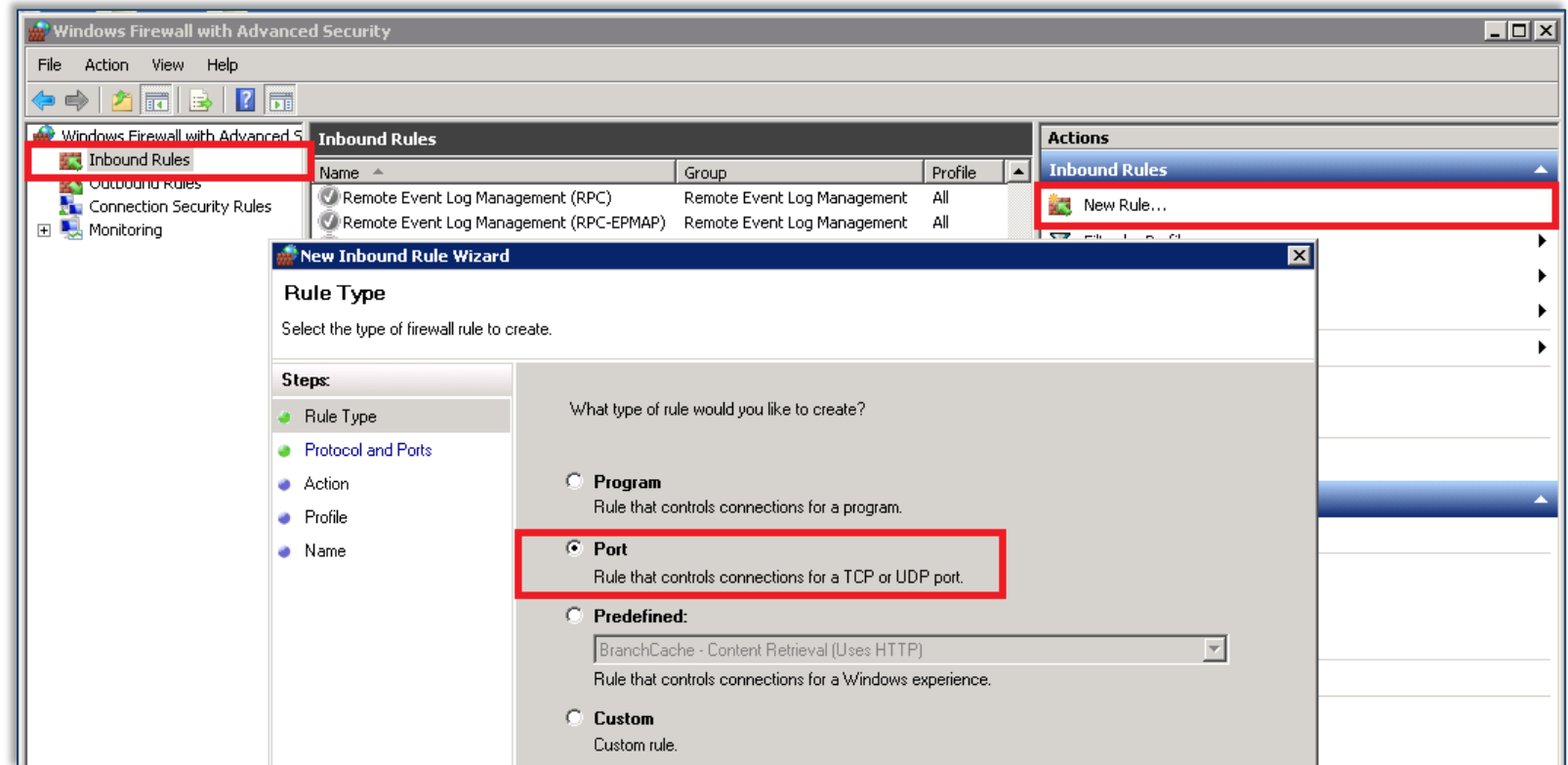
Open Required Ports on Windows Firewall
Inbound Rules

- Click Inbound Rules at the left pane, then click New Rule... at the right under Actions > Inbound Rules to bring up the Rule setting pop-up.

- Select Port, click Next > to continue then pick Specific local ports and enter the tcp port 12300. Click Next > to continue. Select Allow the connection and apply the rule to Domain, Private and Public networks

Open Required Ports on Windows Firewall
Inbound Rules

- In the next screen enter VeSion RTU410 Server for the Name and a short statement, e.g. VeSion RTU410 Server inbound firewall rule for RTU-4000/RTU-41000 connection for the Description.

- Make sure that the rule is enabled, then click Apply.
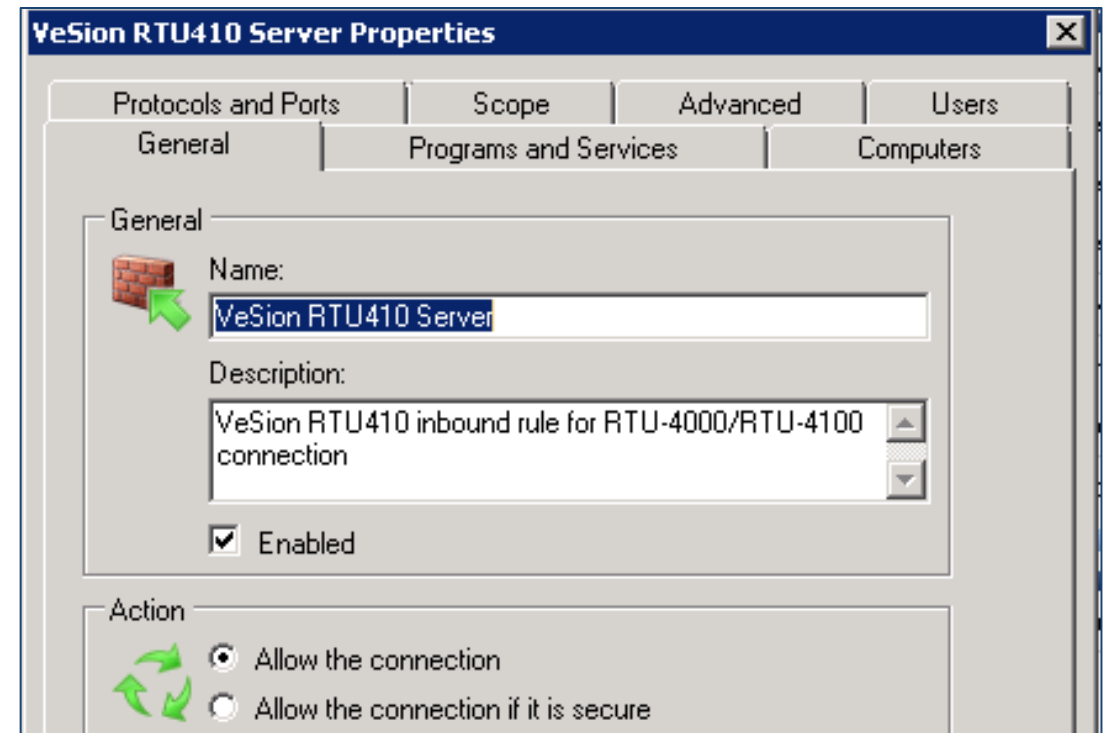
Installing MySQL

Step 3
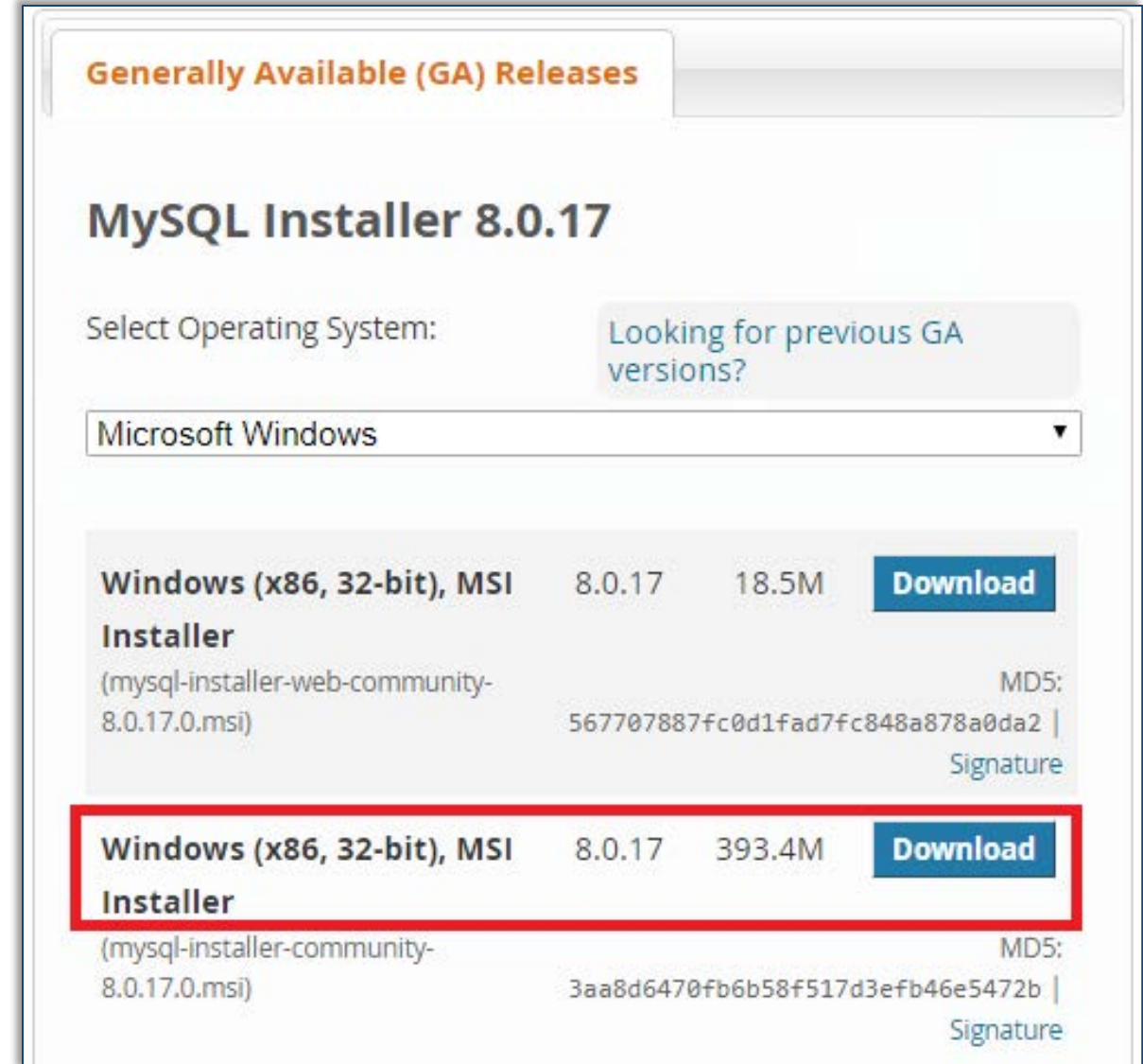
MySQL Installer
Download

- Download MySQL Installer for Windows for MySQL Community Server from
  - https://dev.mysql.com/downloads/mysql/
  - Download the mysql-installer-community version, which has a large file size and keep a copy on the server. this way if there is a need to reinstall/reconfigure MySQL Server or Workbench the software is readily available.

MySQL Installer

- Run the installer and choose Customs as the Setup Type

MySQL Installation
MySQL server
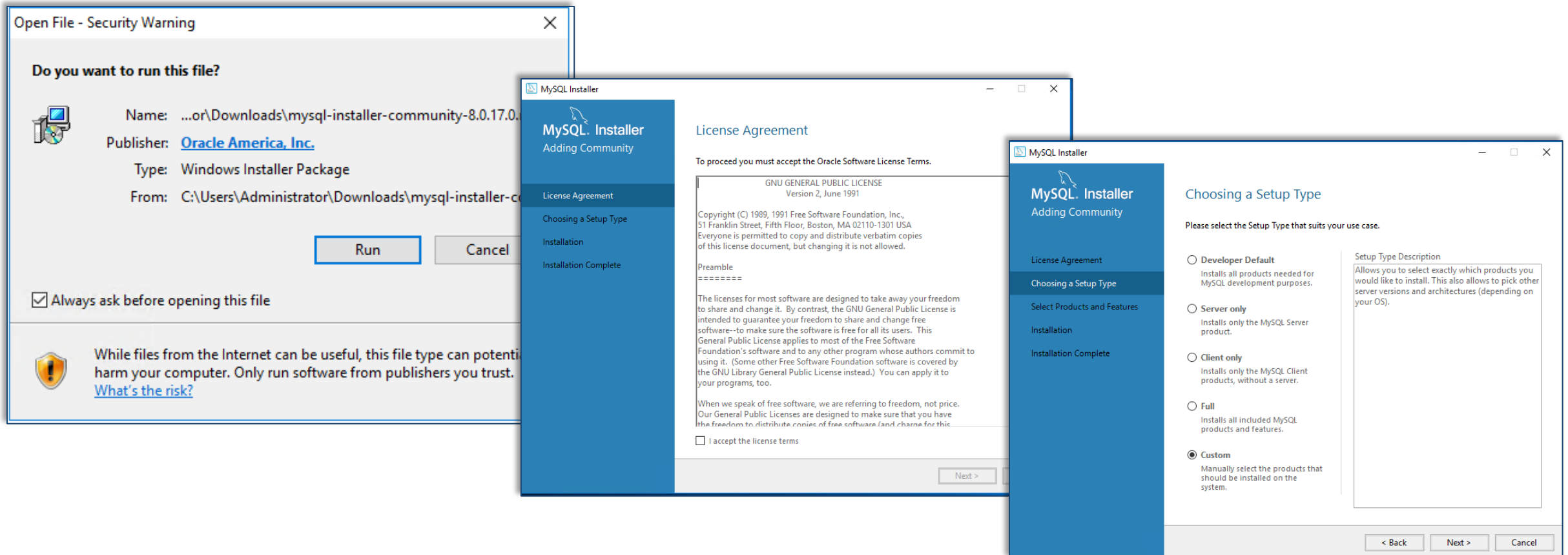
- Expand the MySQL Servers tree and select the MySQL Server version available to install.
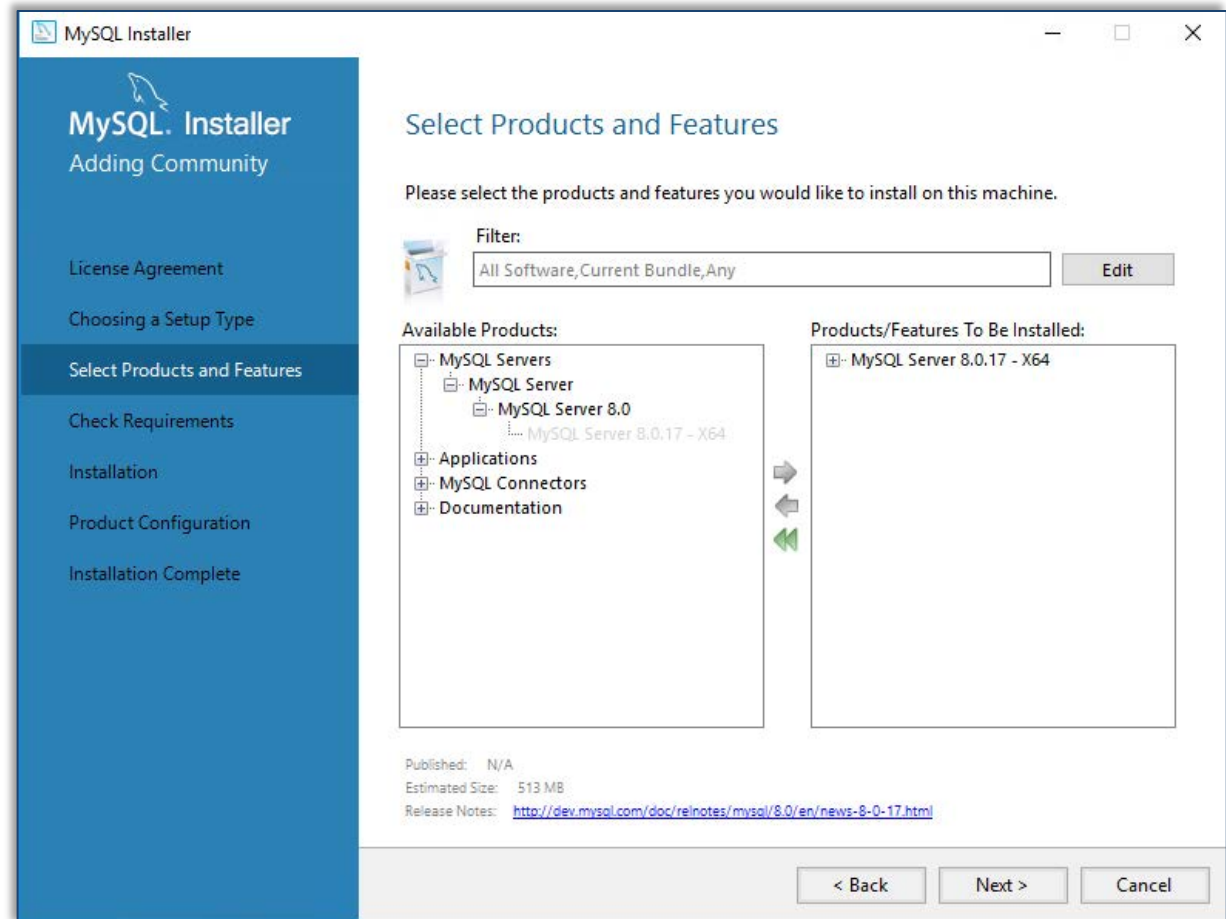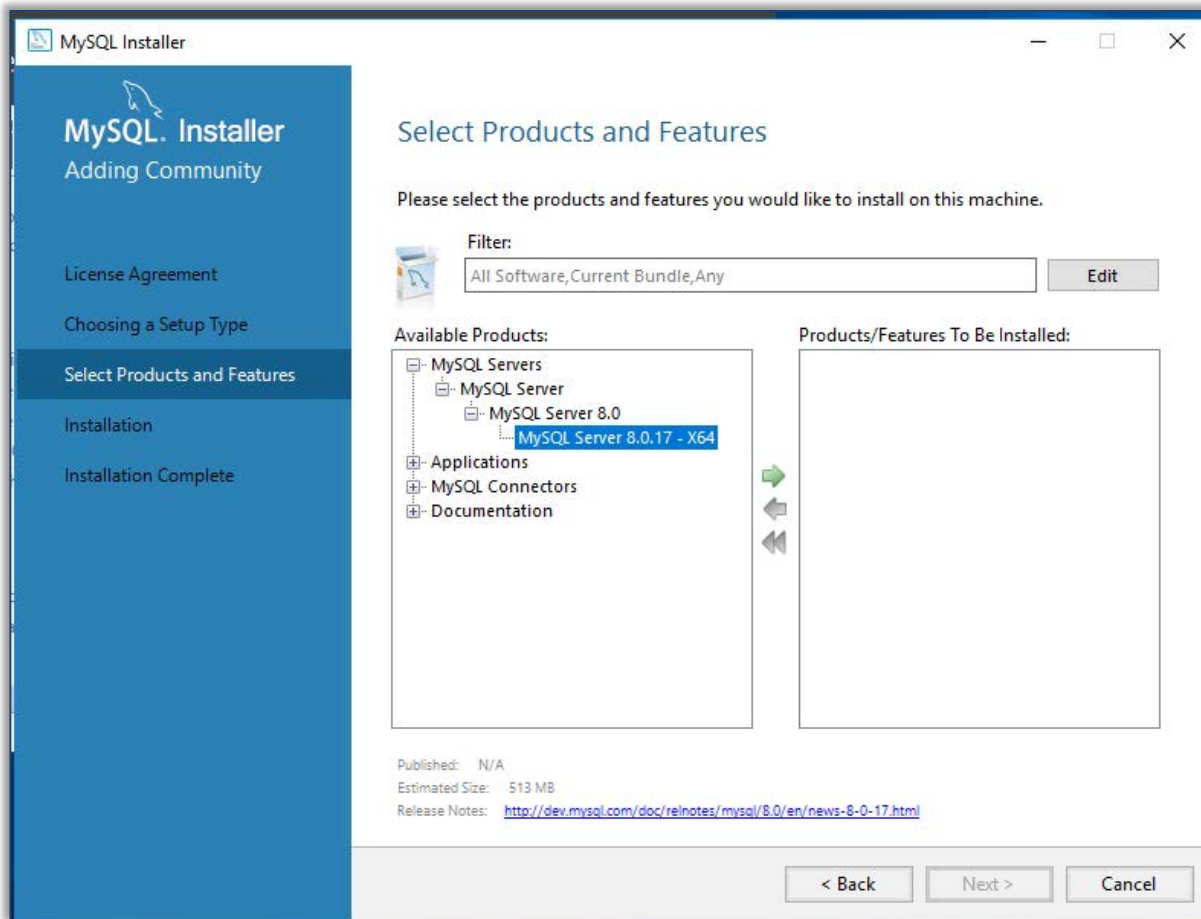
MySQL Installation
MySQL server installation location

- Highlight MySQL Server in the Products/Features To be Installed section

- Click Advanced Options to bring up the Install Directory and Data Directory. Change the directory as appropriate. In our example, drive D: is used for the installation.
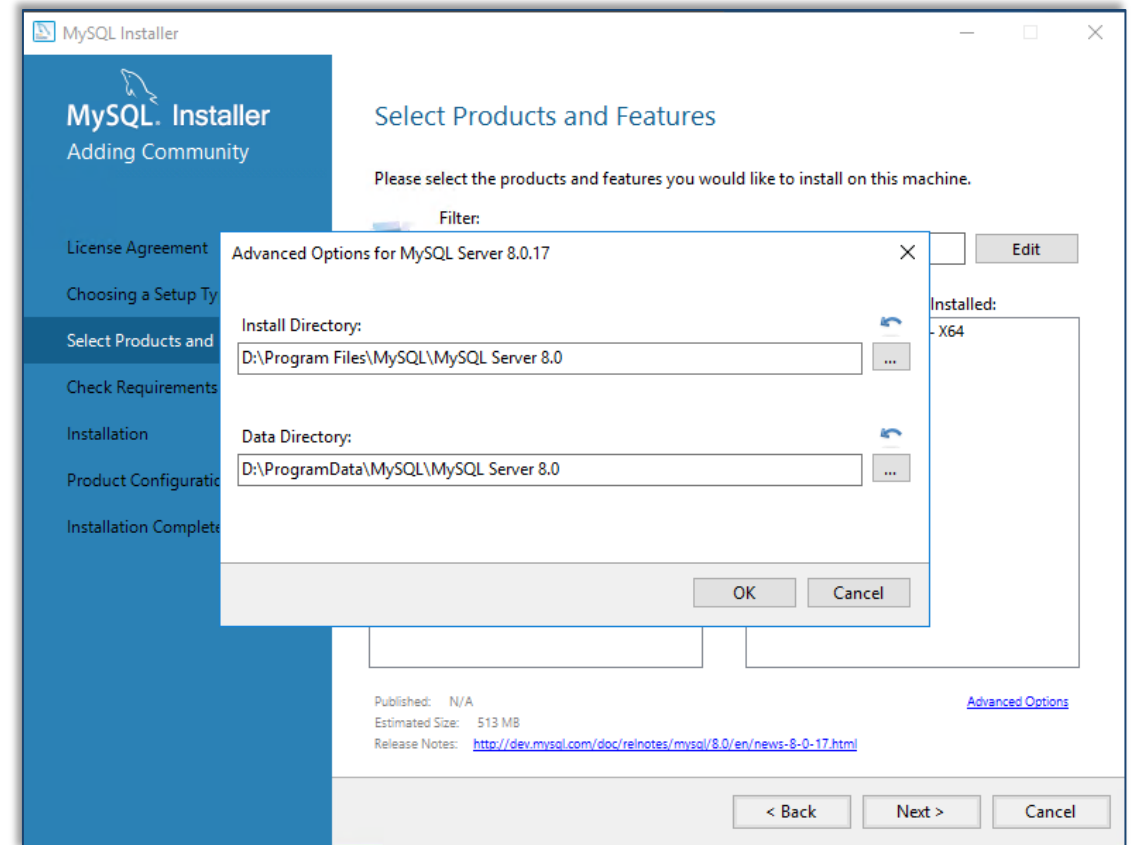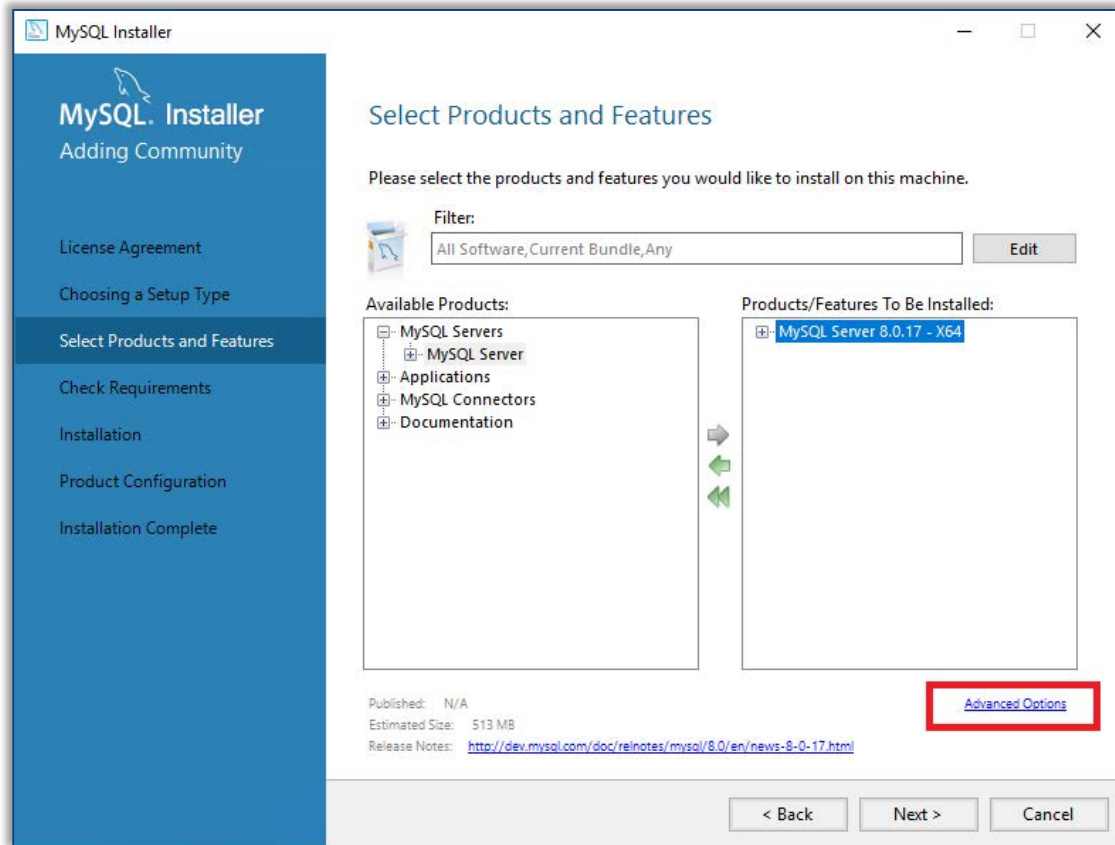
MySQL Installation
Add Workbench application

- Expand the Applications tree and navigate to the MySQL Workbench
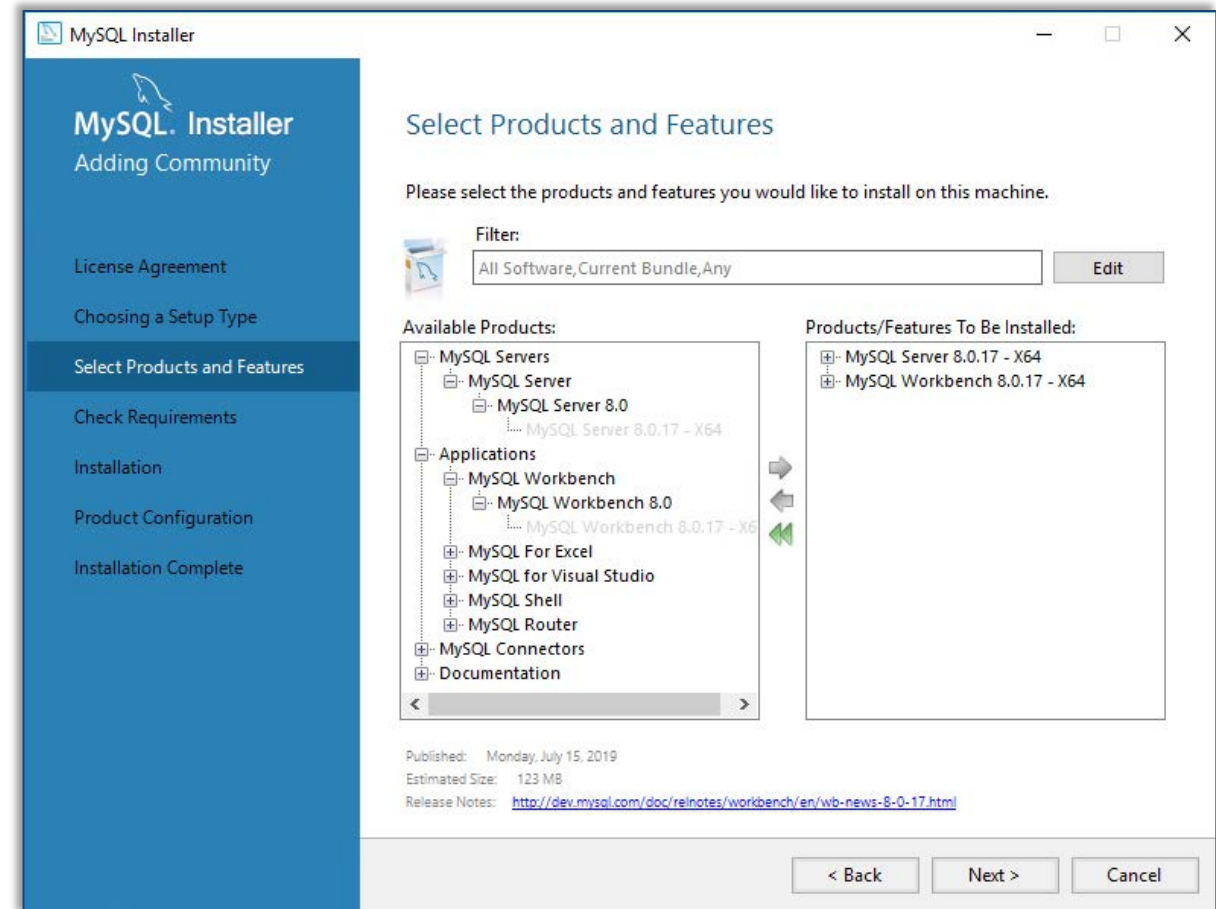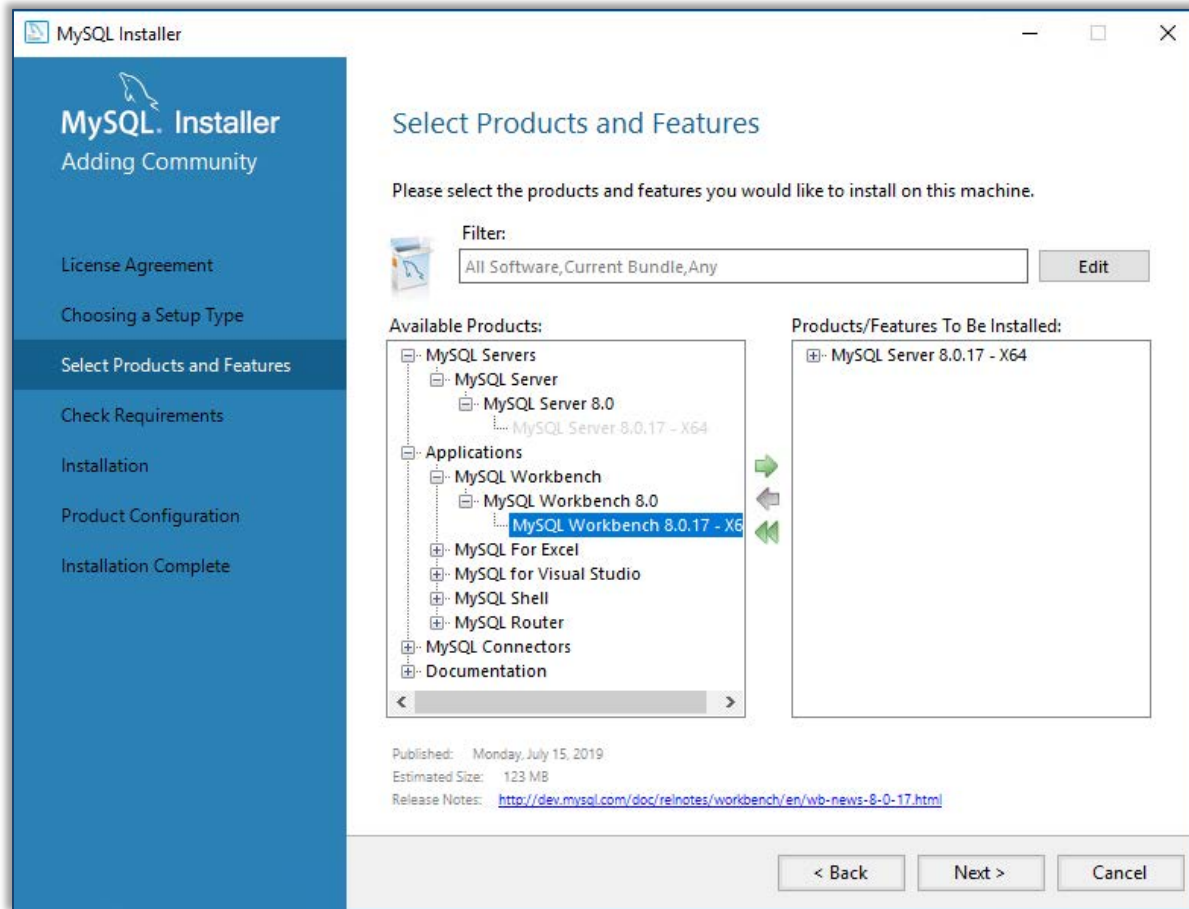
MySQL Installation
Workbench installation location

- Select MySQL Workbench in the Products/Features To Be Installed section.

- Click Advanced Options and change the directory as appropriate. Change the directory as appropriate. In our example, drive D: is used for the installation.
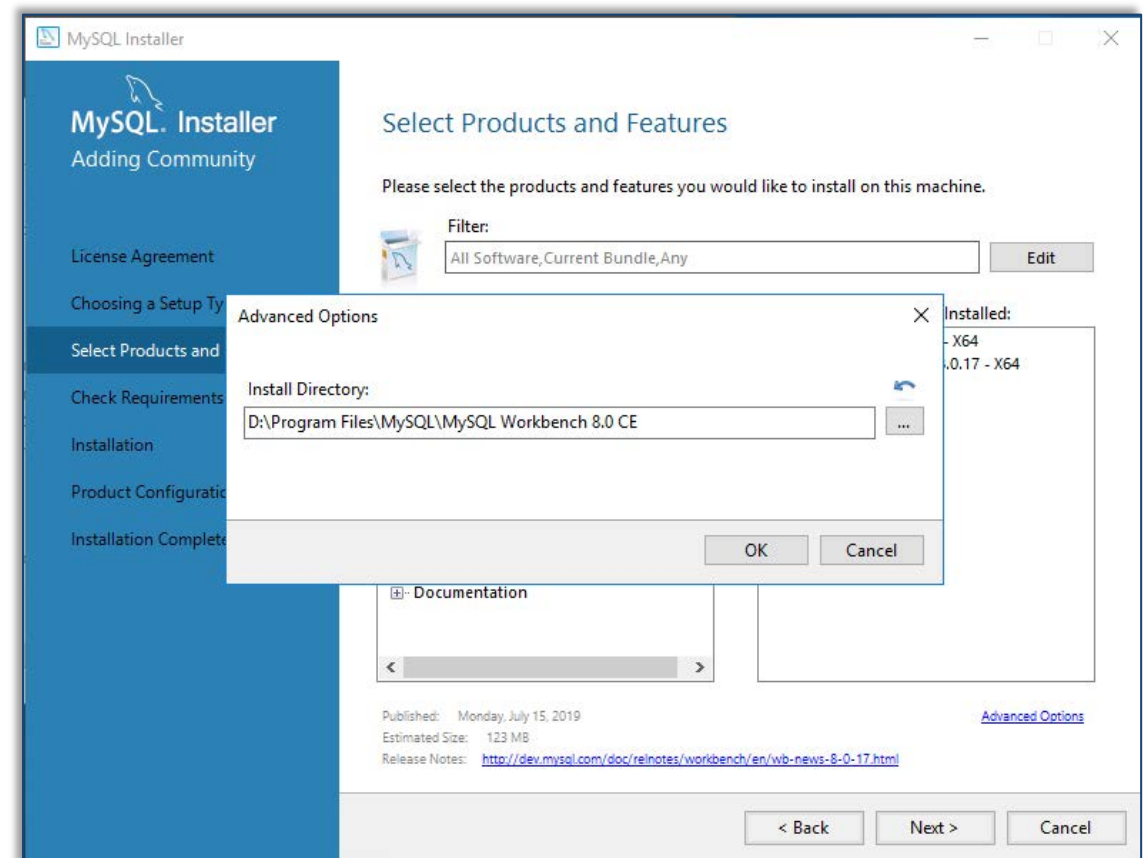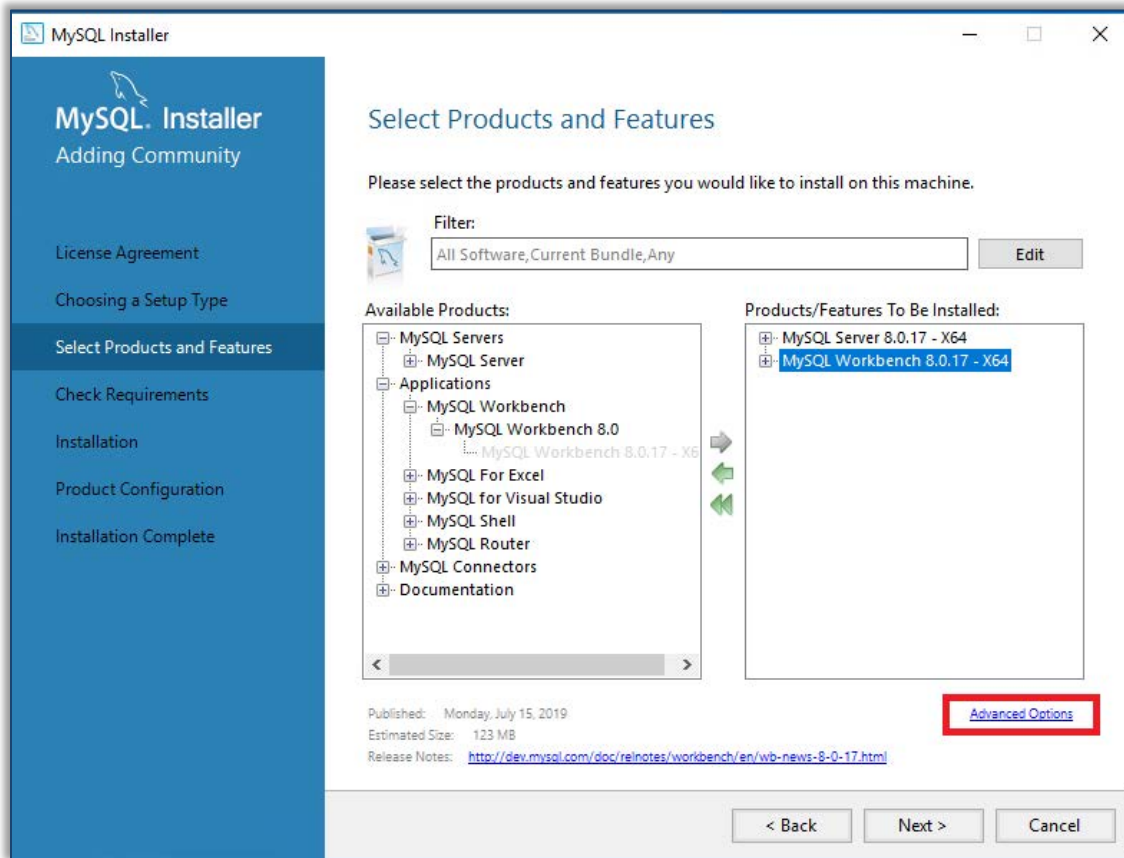
MySQL Installation
Visual C++ Redistribution

- Click Next > to proceed. The installer will check if the Microsoft Visual C++ redistribution required is already installed in the system and provides the relevant requirement. Click Execute and the installer will attempt to download and install the required redistribution software.
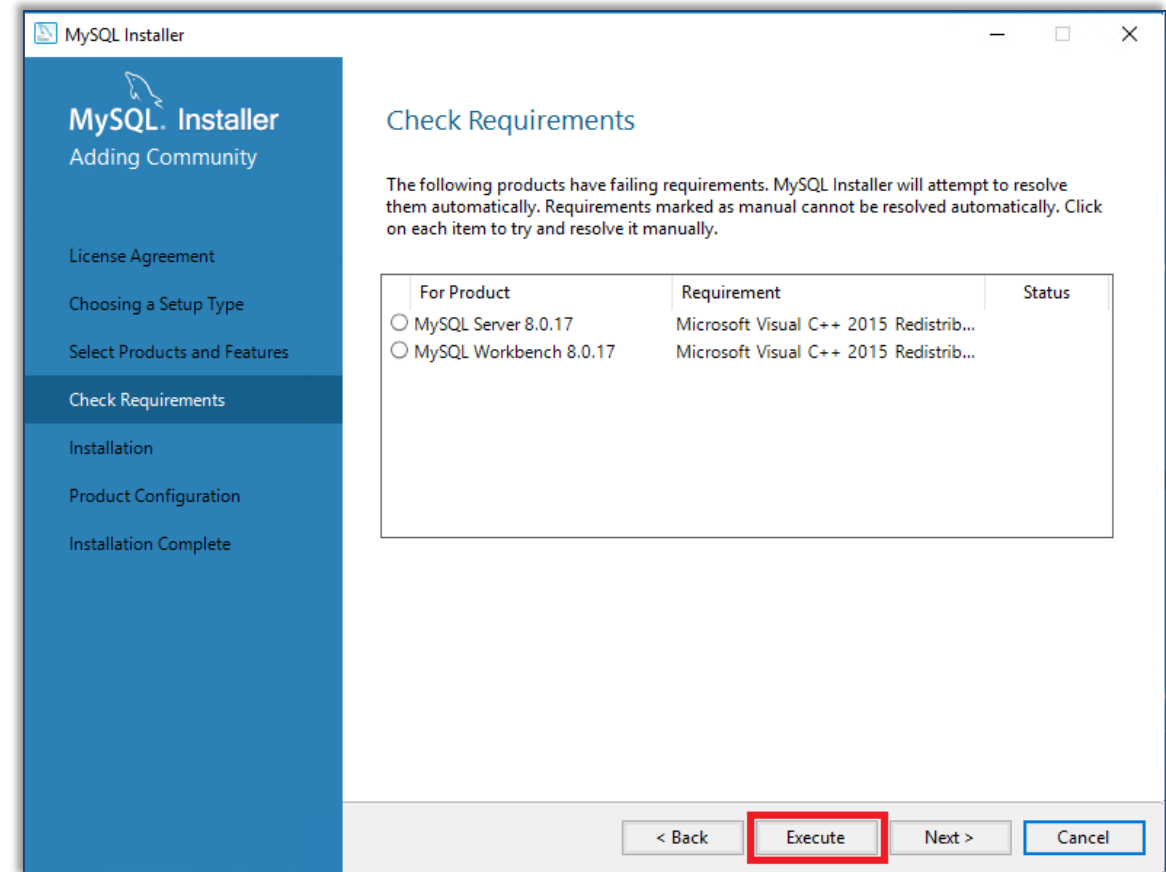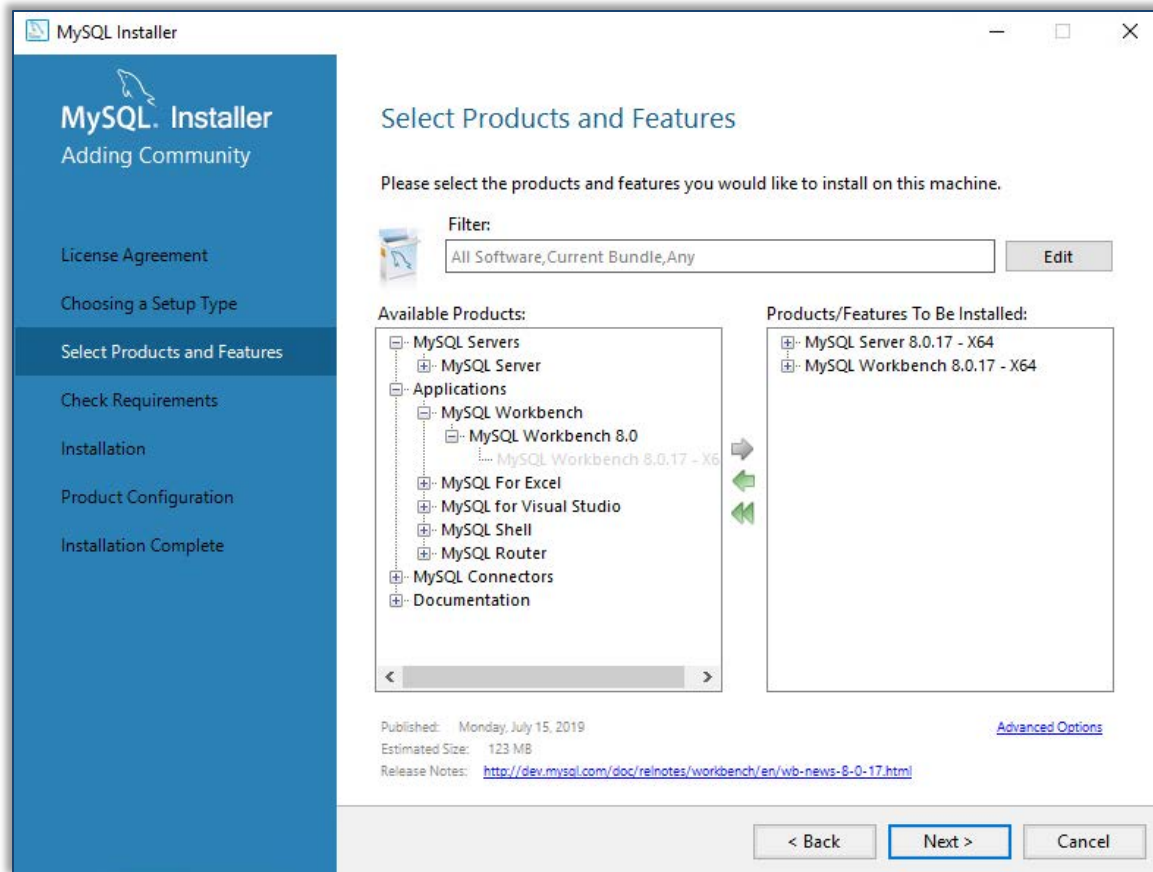
MySQL Installation
Visual C++ Redistribution

- Accept the agreement and click Install to proceed.

MySQL Installation
Visual C++ Redistribution
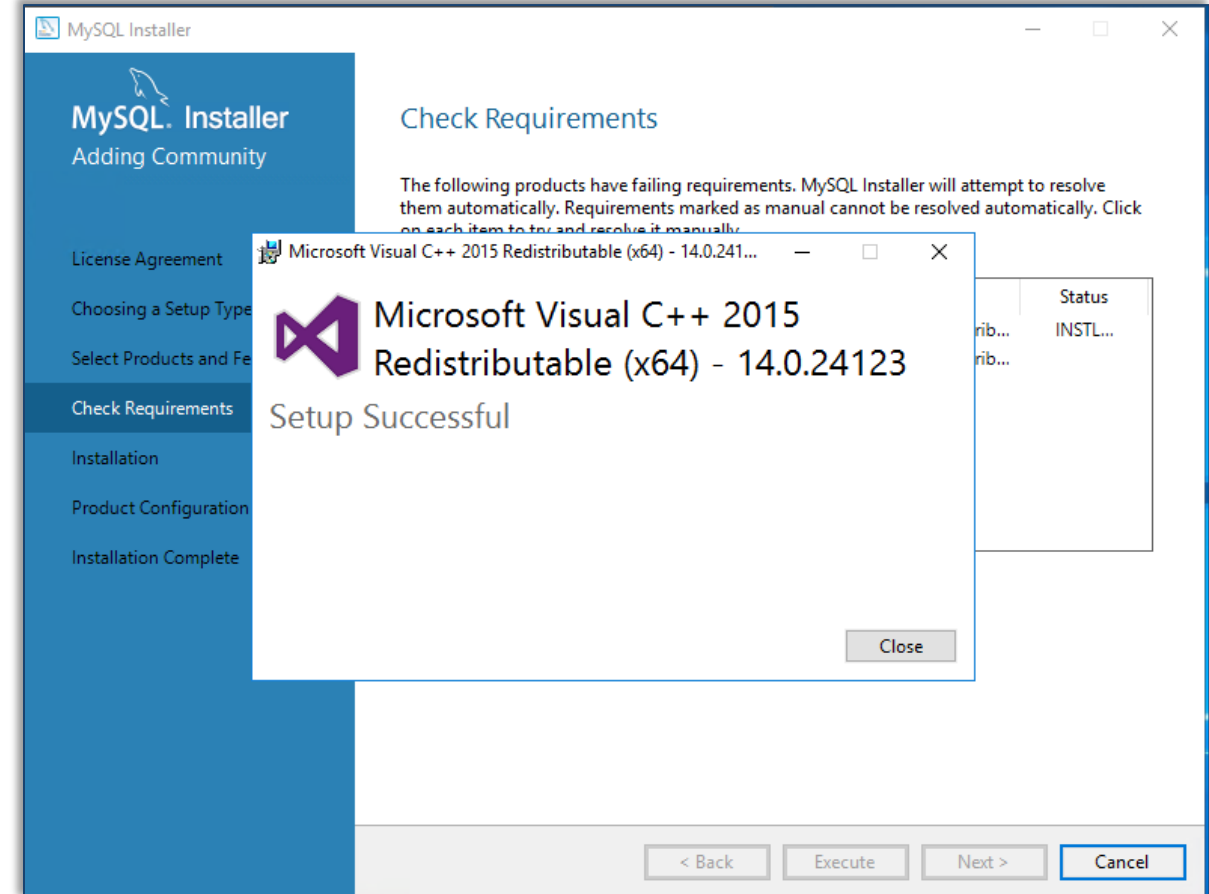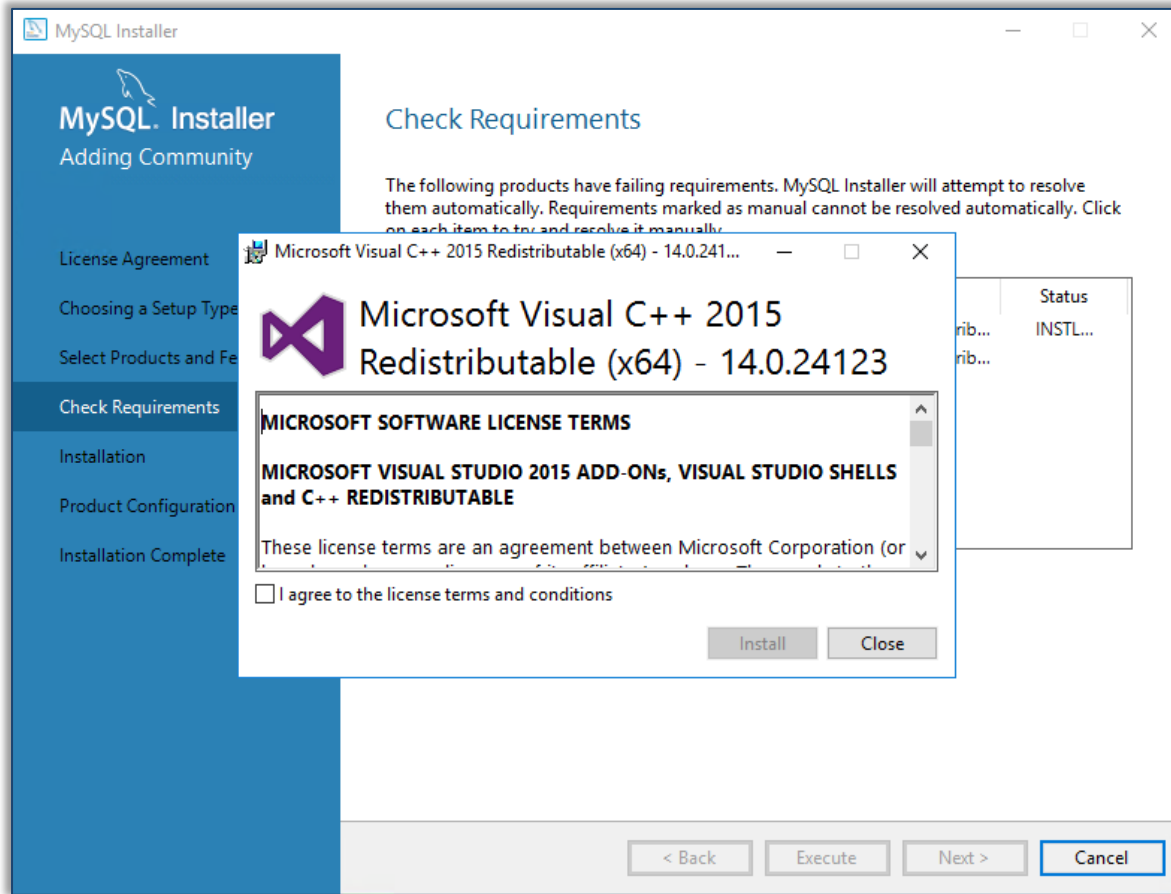
- Click Next > to verify the prerequisite of the installation has been met that the MySQL Server and MySQL Workbench are ready to install.

- Click Execute to continue the installation.
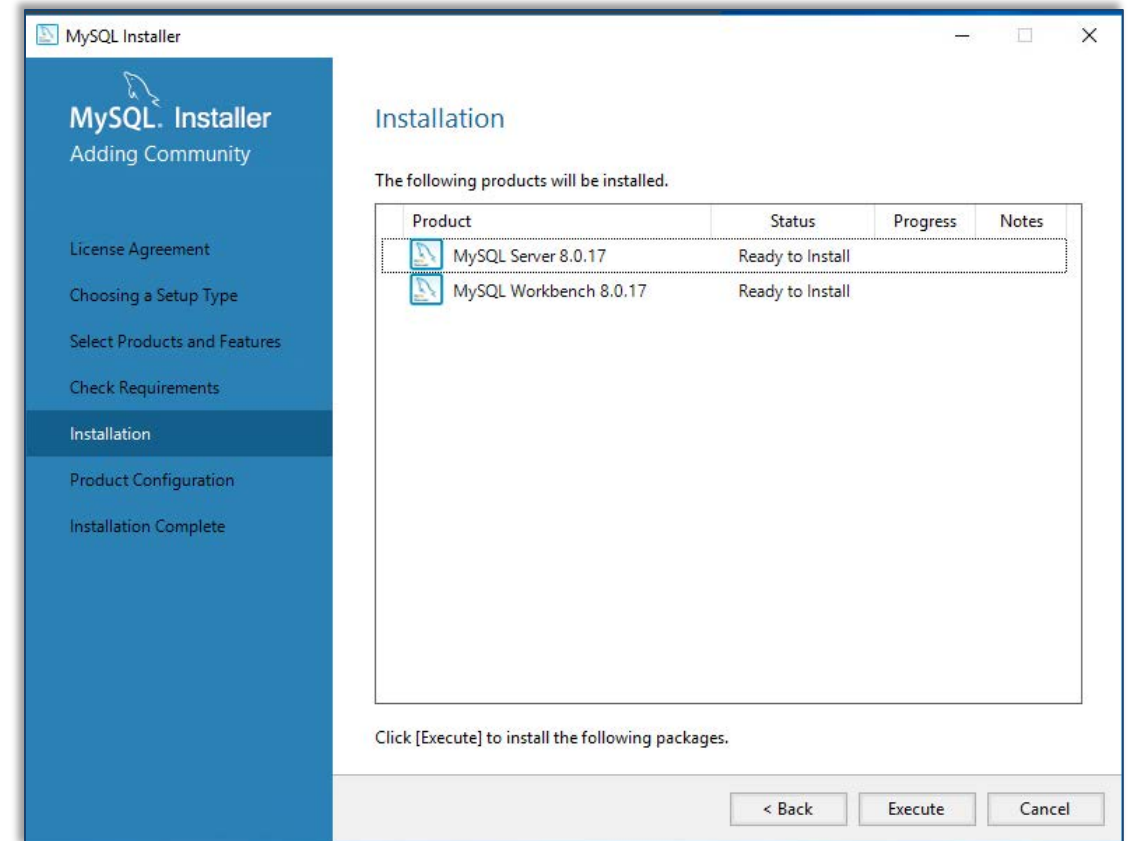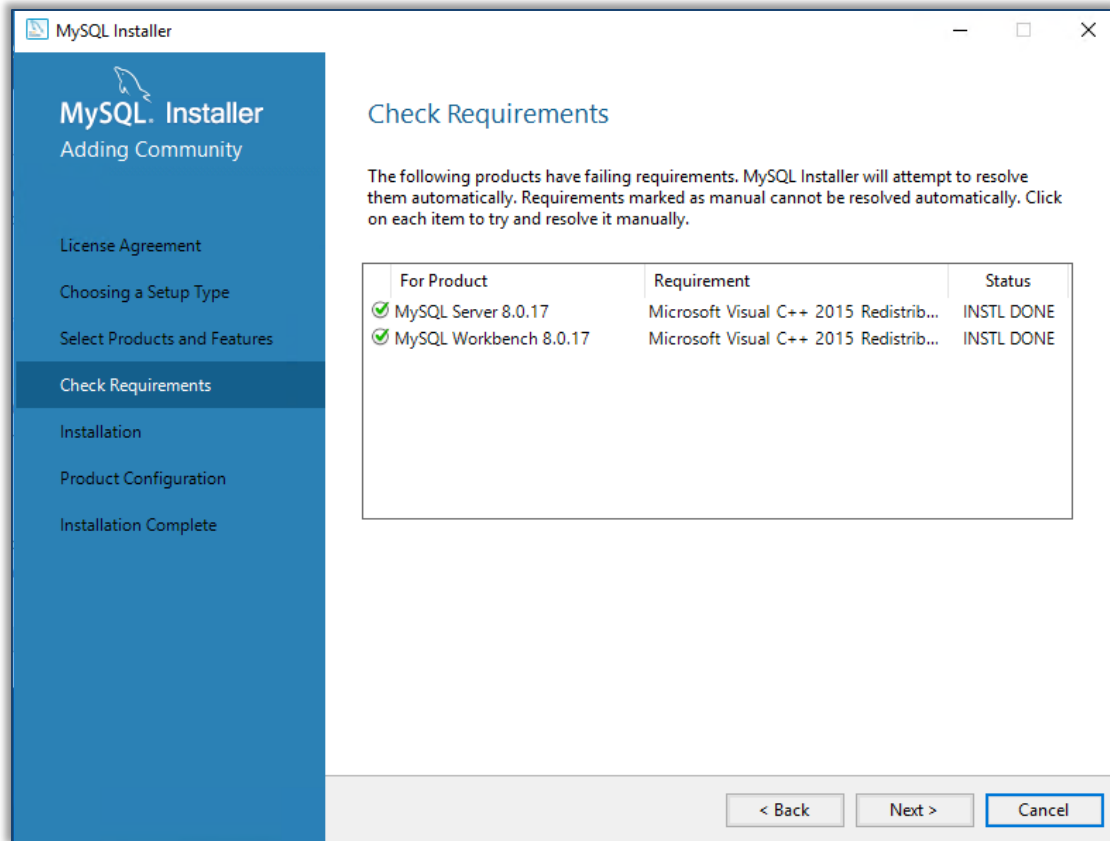
# MySQL Installation
Installation is complete

- Once the installation is complete, the next step is the configure MySQL Server.

MySQL Server
Basic configuration
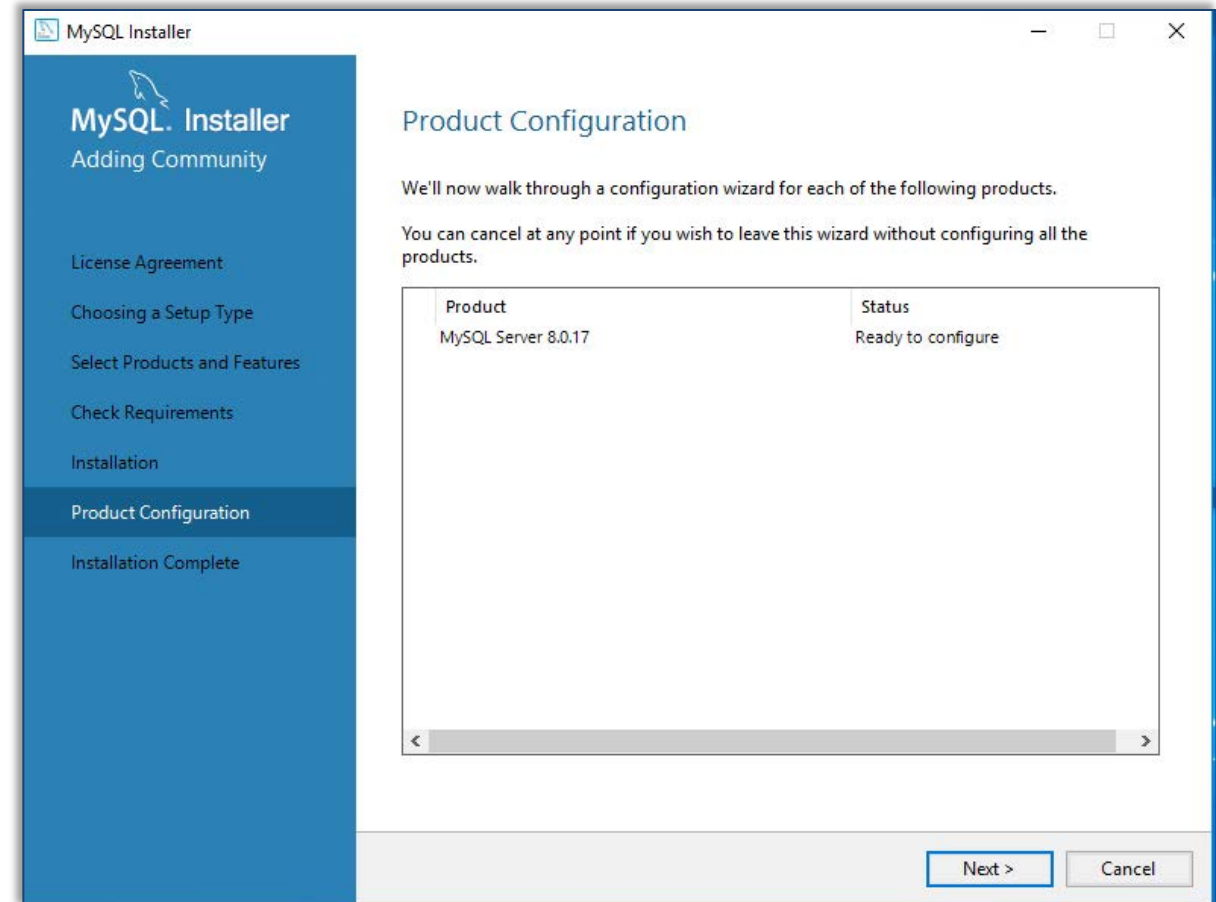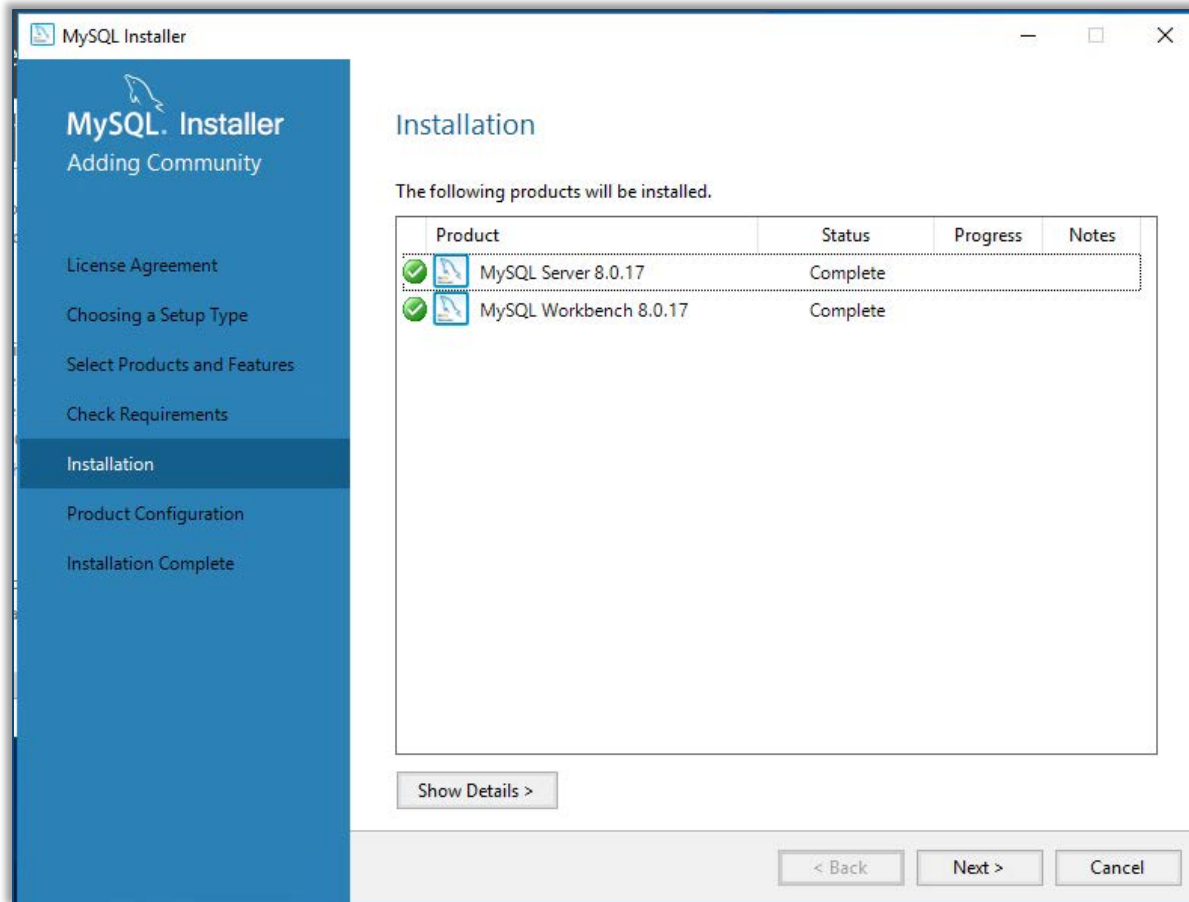
- Select Standalone MySQL Server / Classic MySQL Replication. Use the below settings:
  - Config type: Server Computer
  - TCP/IP port: 13300

MySQL Server
Basic configuration
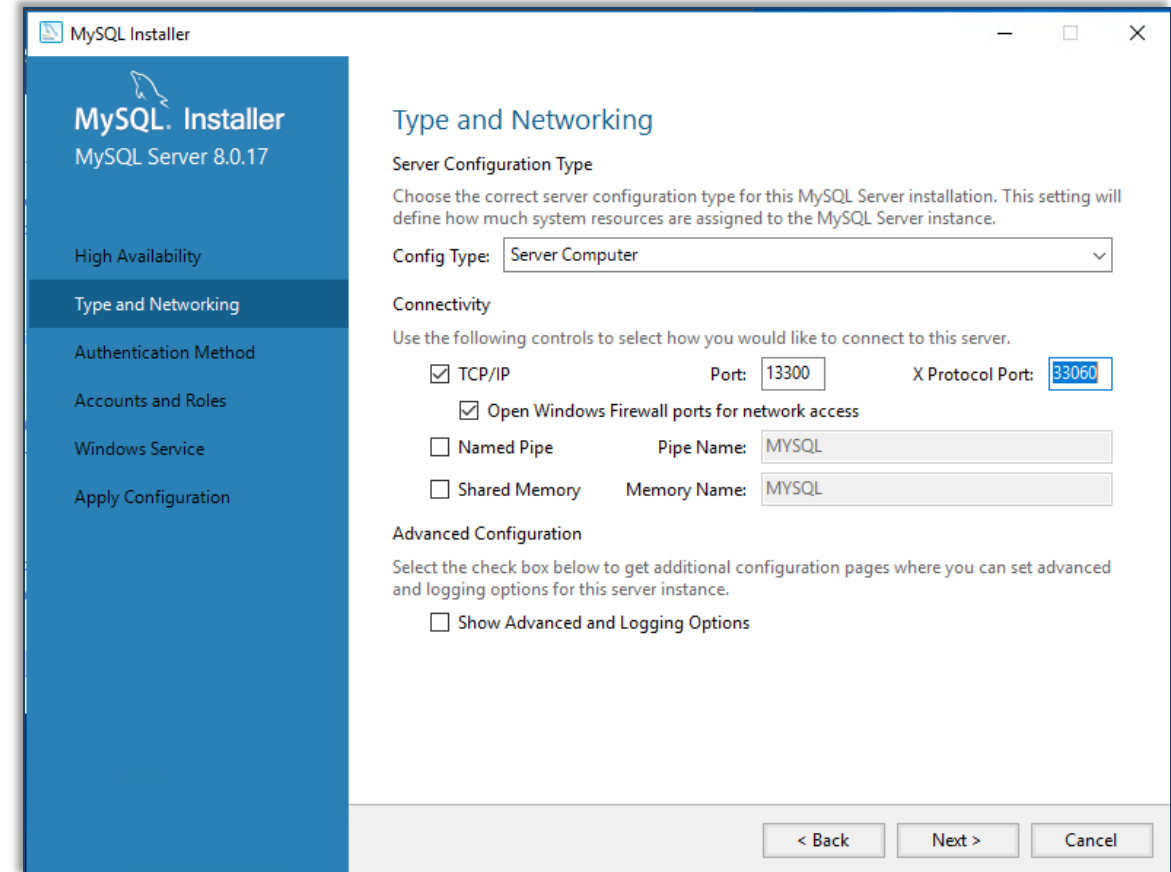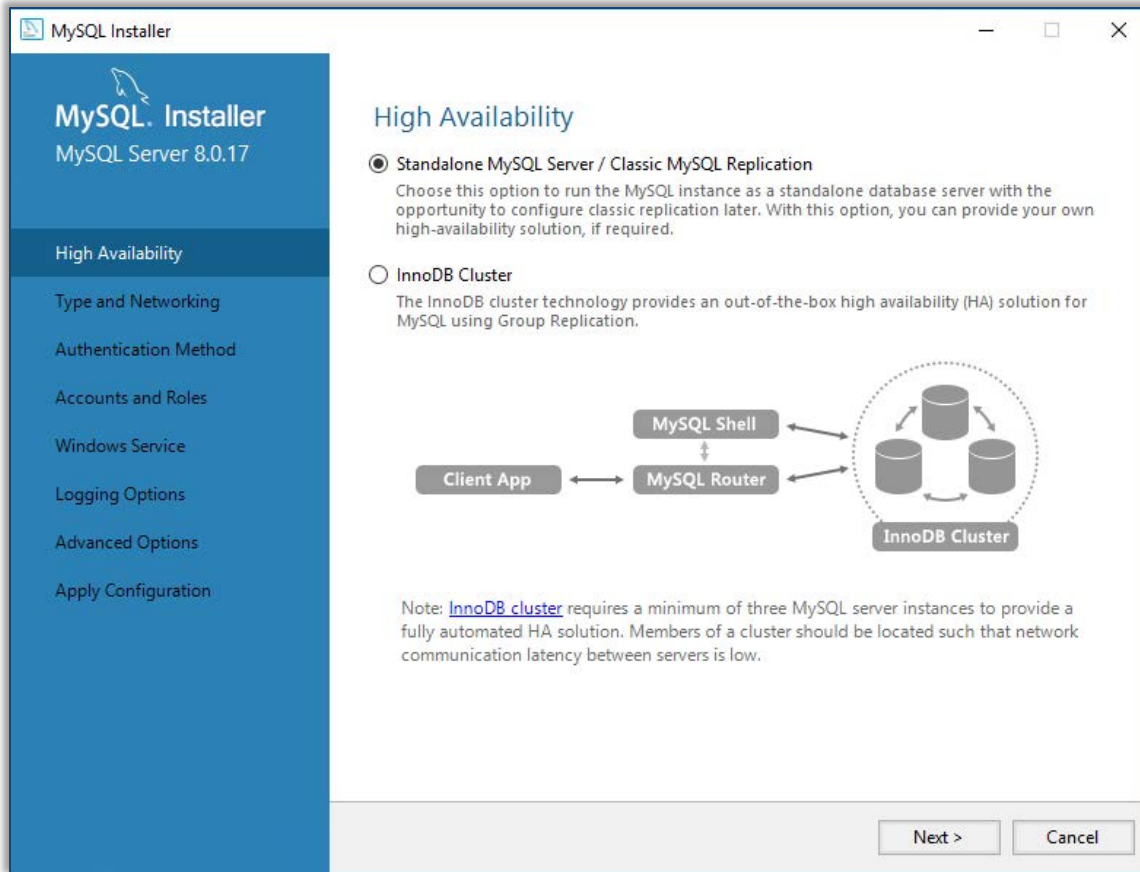
- Select Use Legacy Authentication Method. Click Next to continue

- Set the MySQL Root Password. Safe keep this root password and is needed to reconfigure MySQL and perform database export and import, if needed.

MySQL Server
Basic configuration
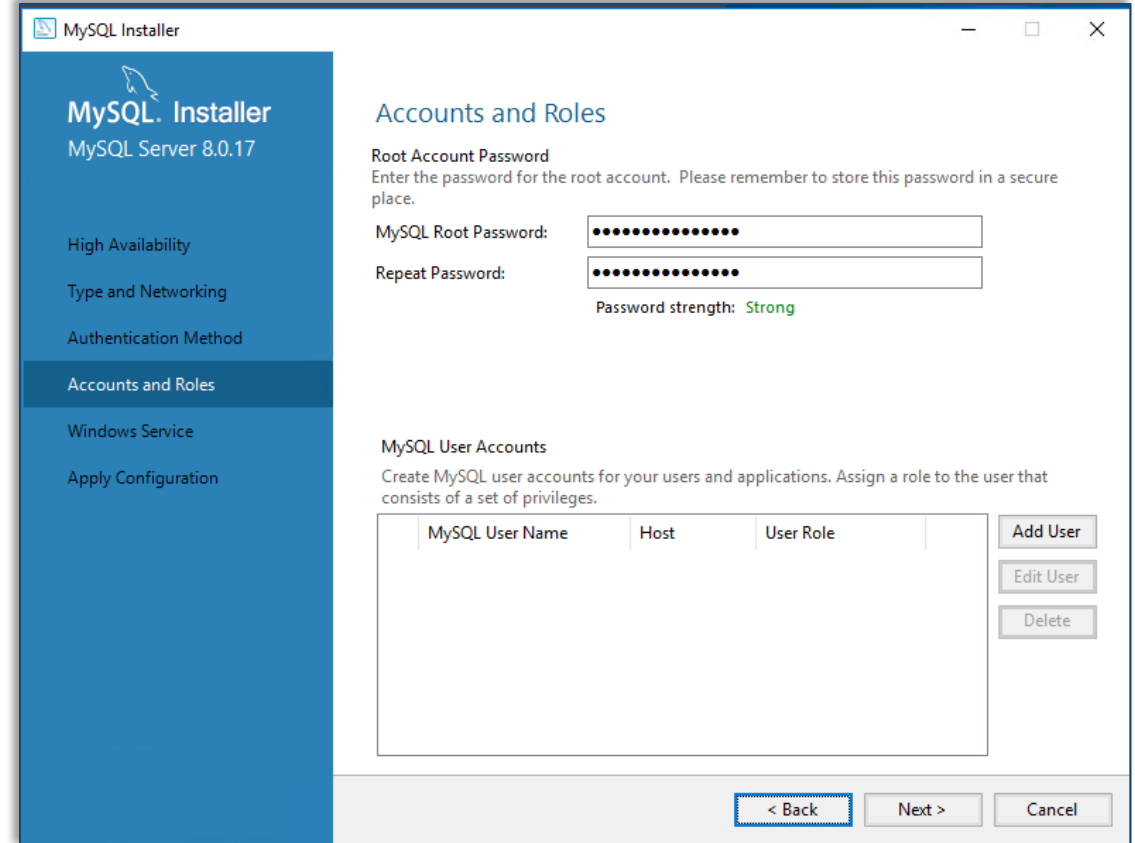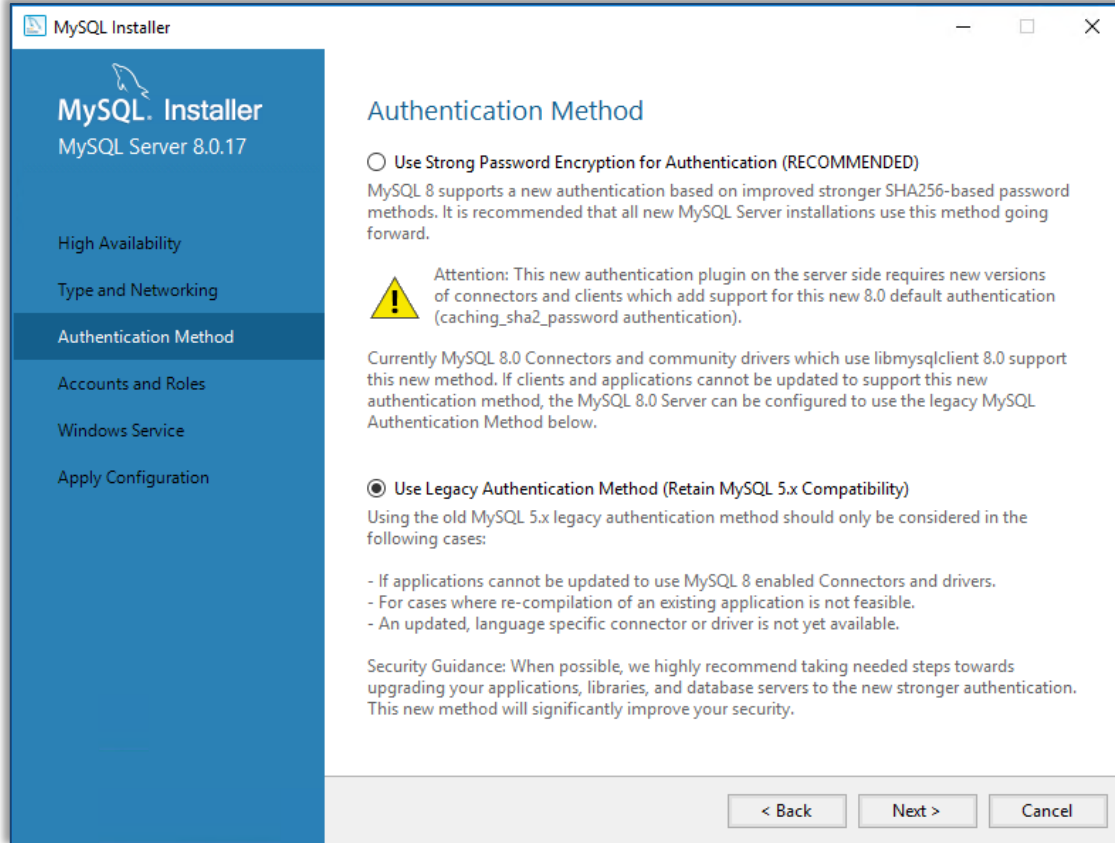
- Take note of the default Windows Service Name make sure that the MySQL Server starts at Windows system startup.

- Click Execute to apply and complete the configuration.
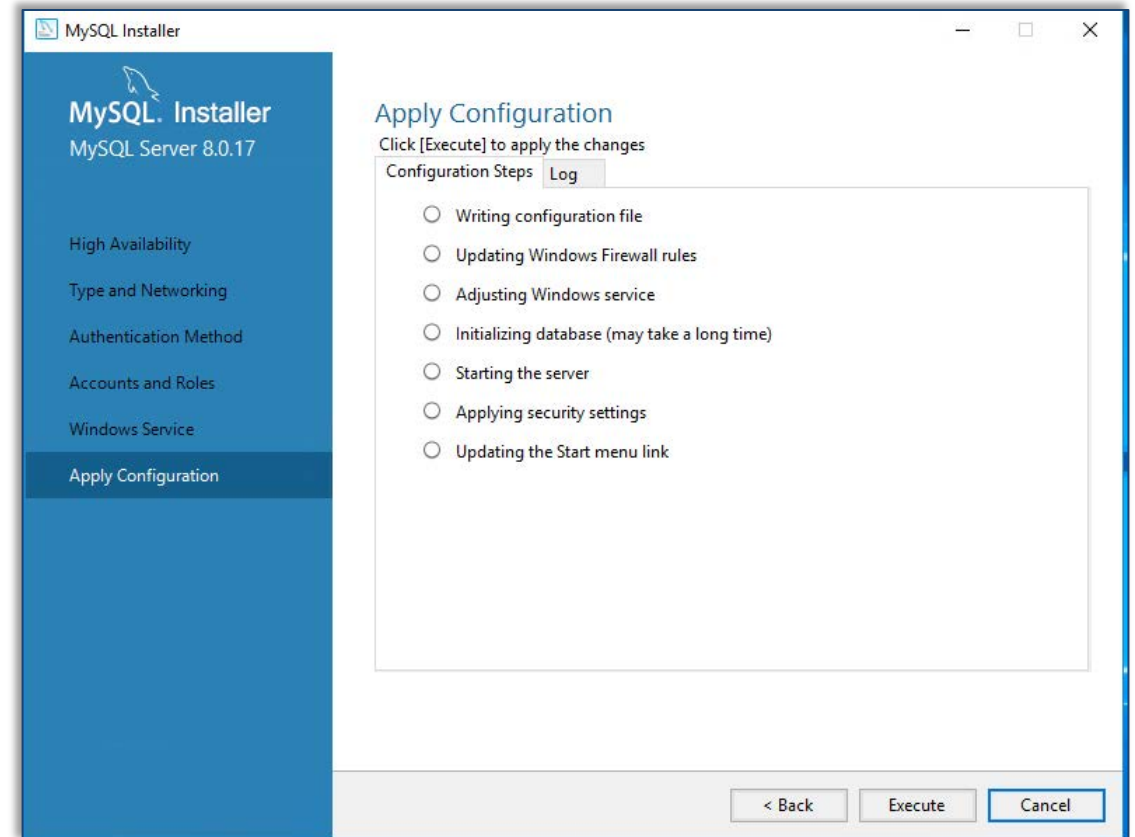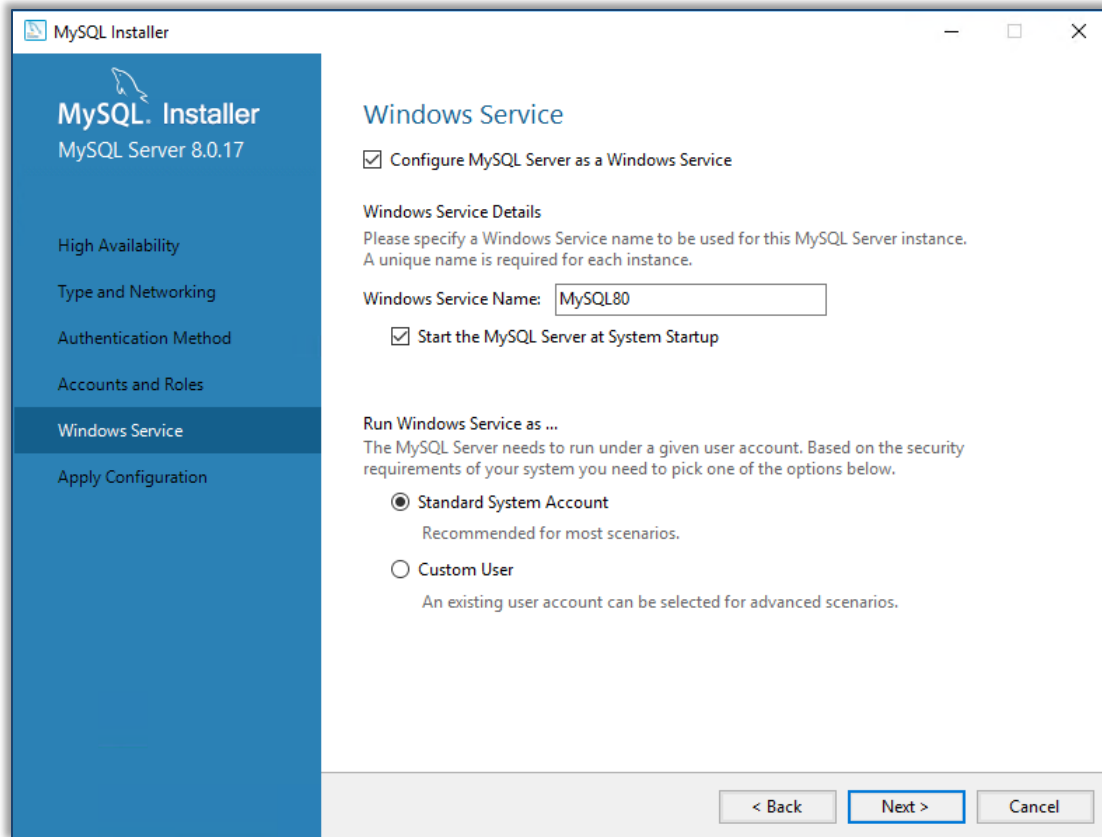
MySQL Server
Basic configuration

- At this point the basic configuration of MySQL is complete.

- Click Next to finish and it will bring up Workbench.
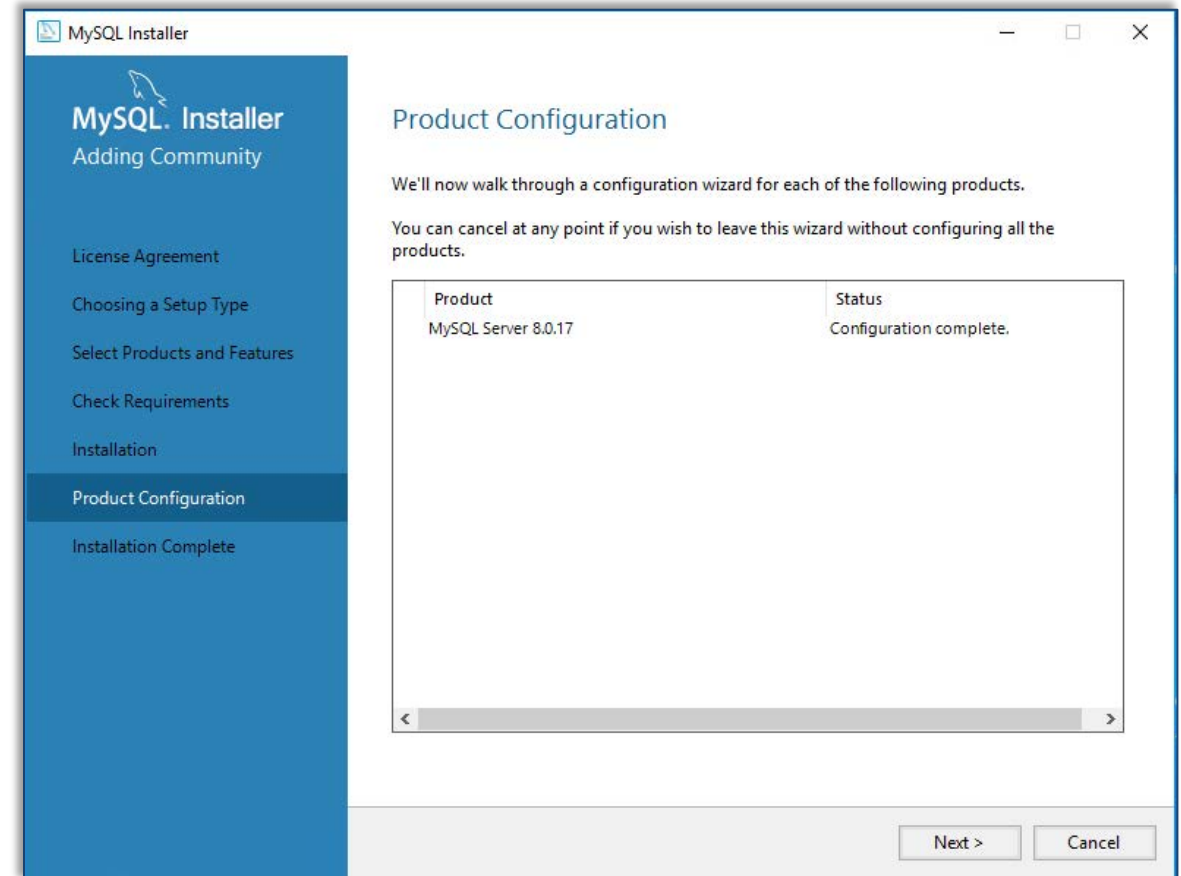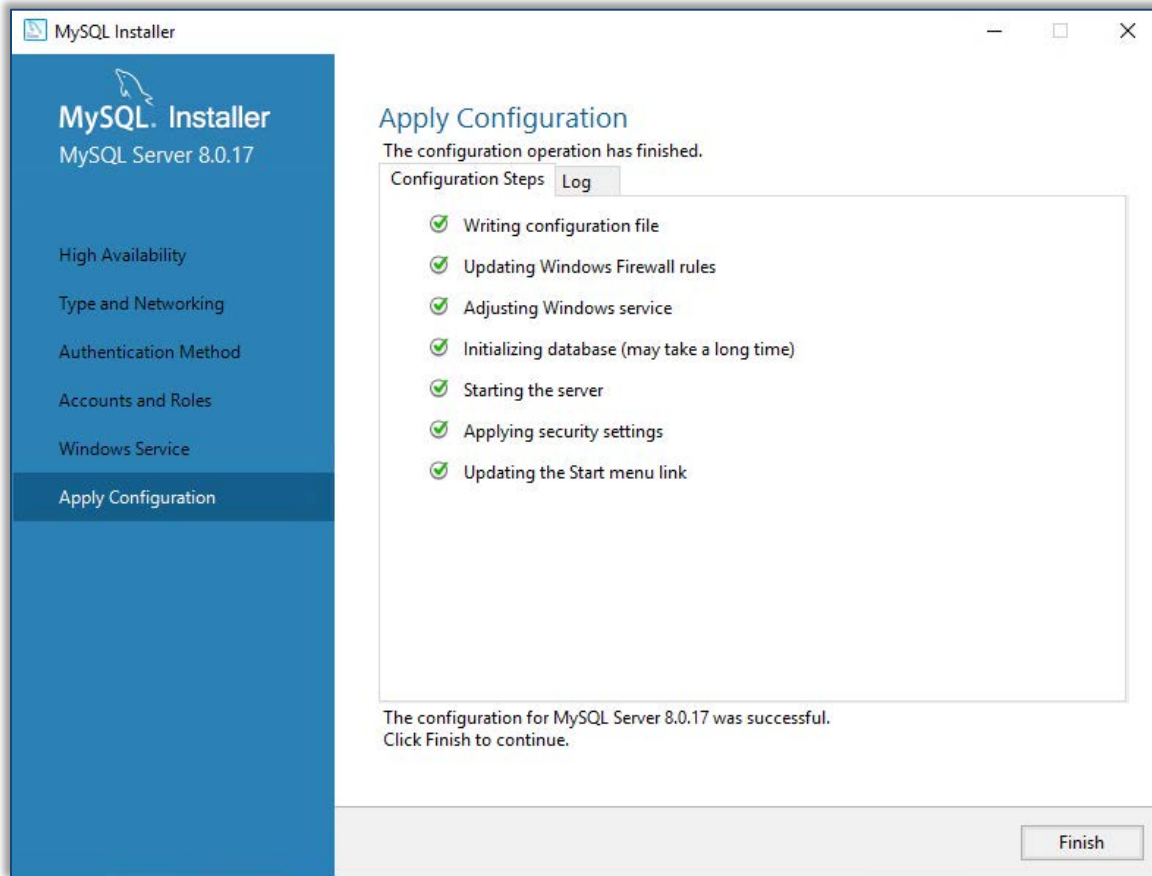
MySQL Workbench

- When done, the MySQL Workbench opening menu is displayed.

- There is a Local Instance MySQL80 in the MySQL Connections list.

  ○ The connection was set up during MySQL configuration phase earlier.
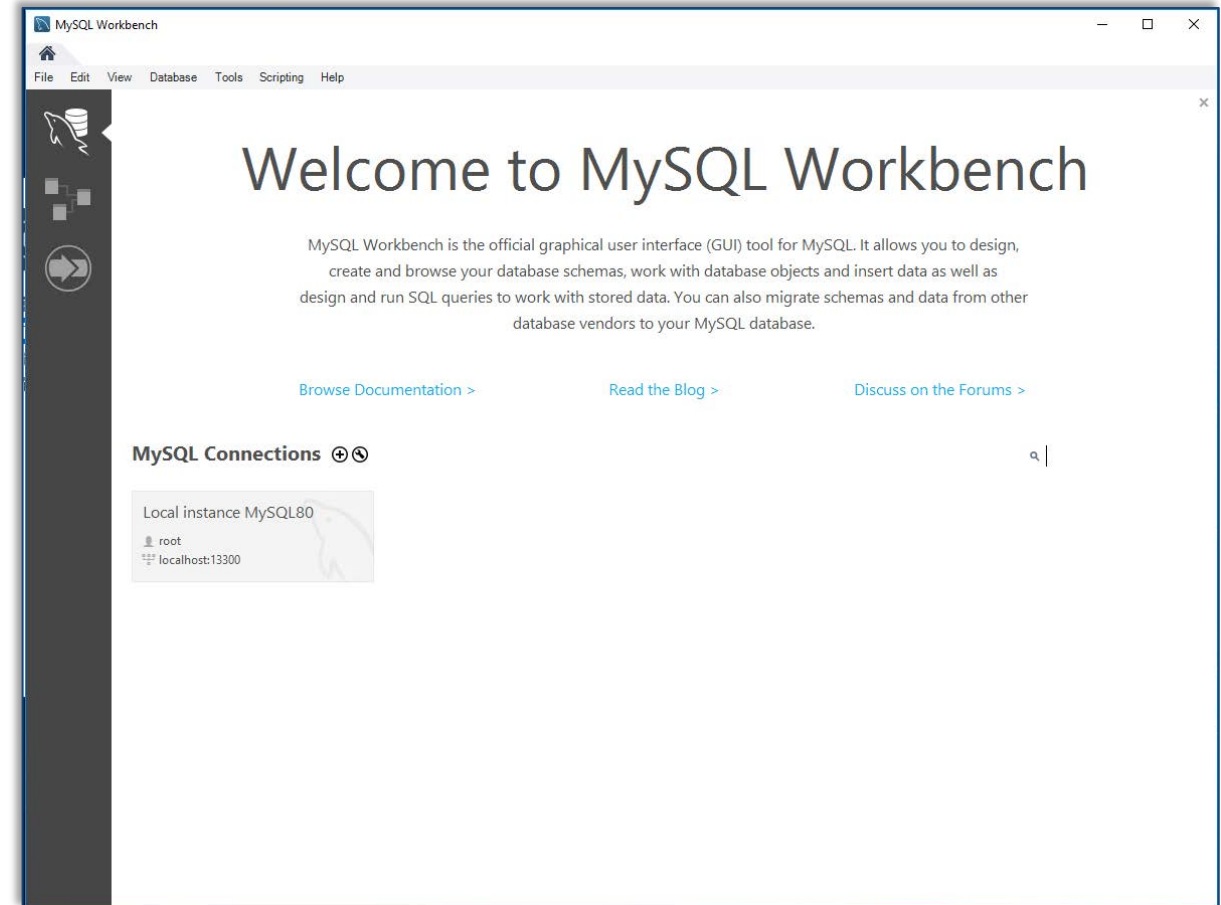
MySQL Database
Setup for VeSion

- Double click on the Local instance MySQL80 connection and log in as root
  - Use the password previously set up during MySQL Server installation and configuration.
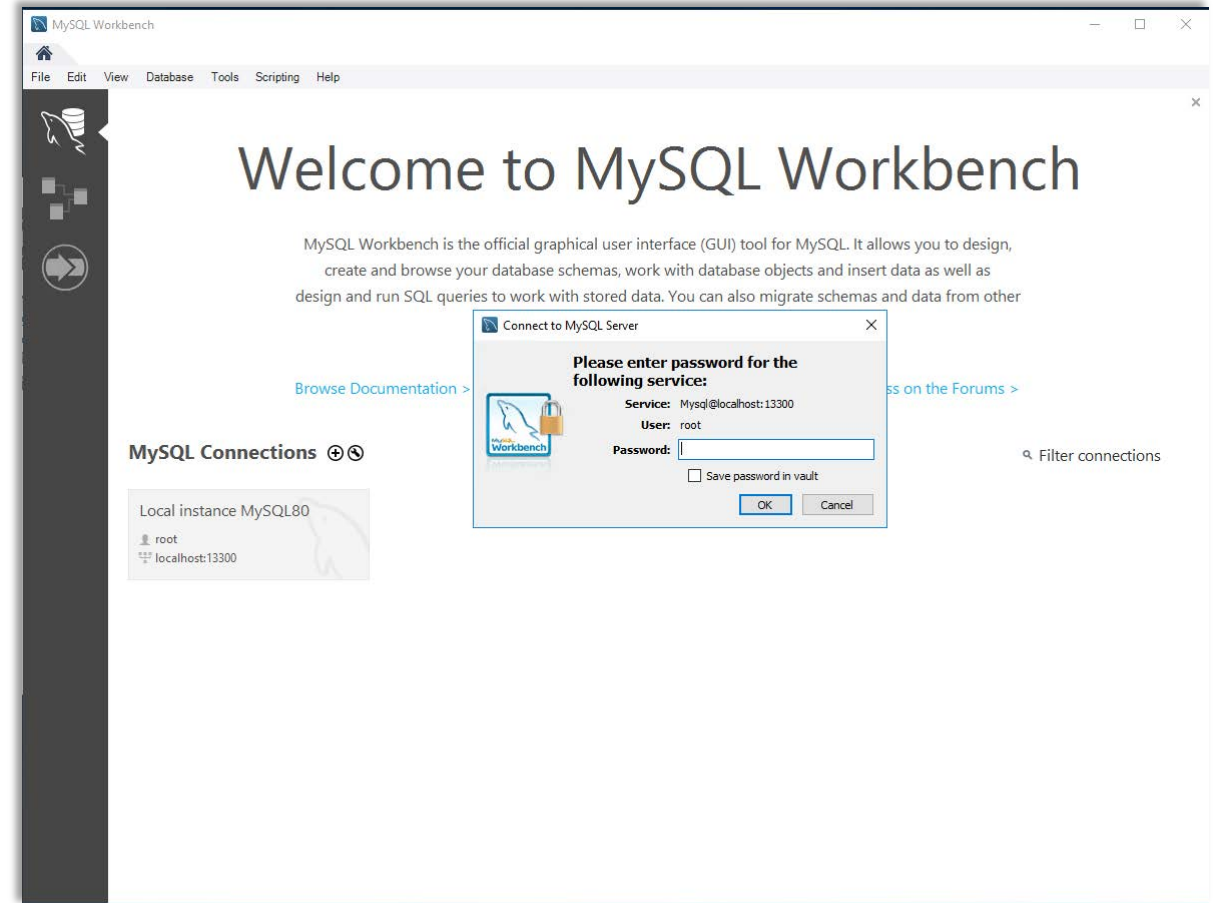
MySQL Database
Create Schema

- Select the Schemas tab near the bottom left, then
  - Click on the Create a New Schema icon on the tool bar.
  - Type `rtu_data` as the name of the schema. Click Apply.
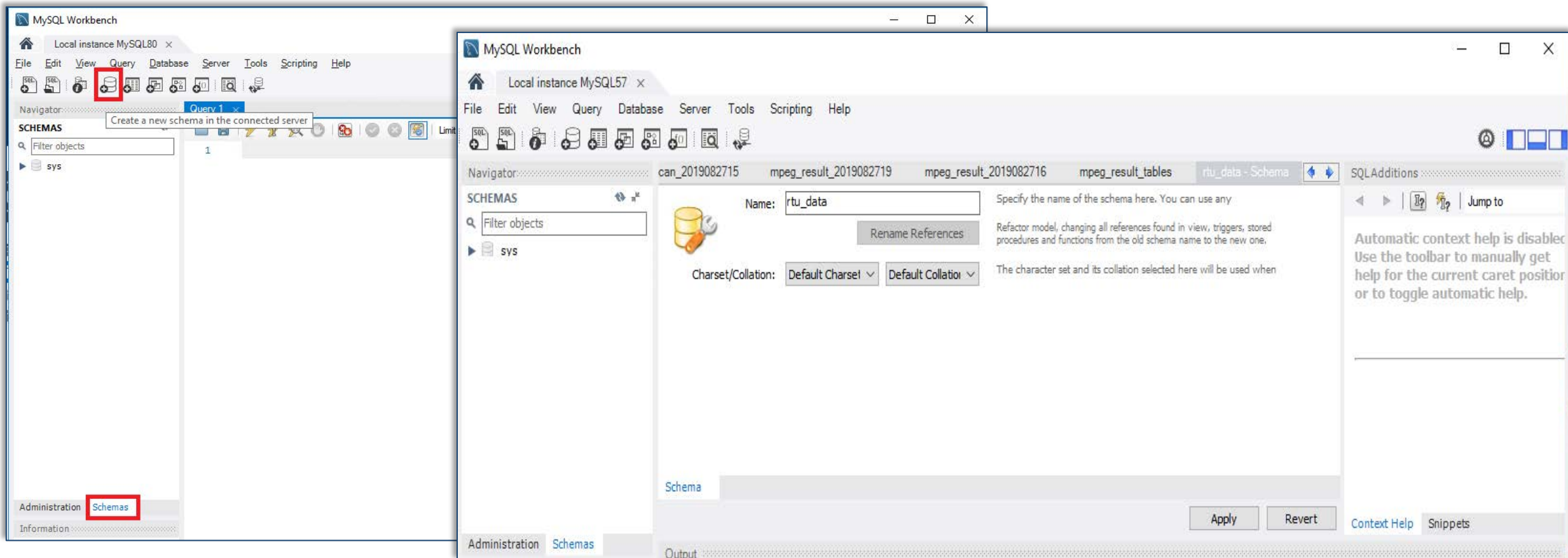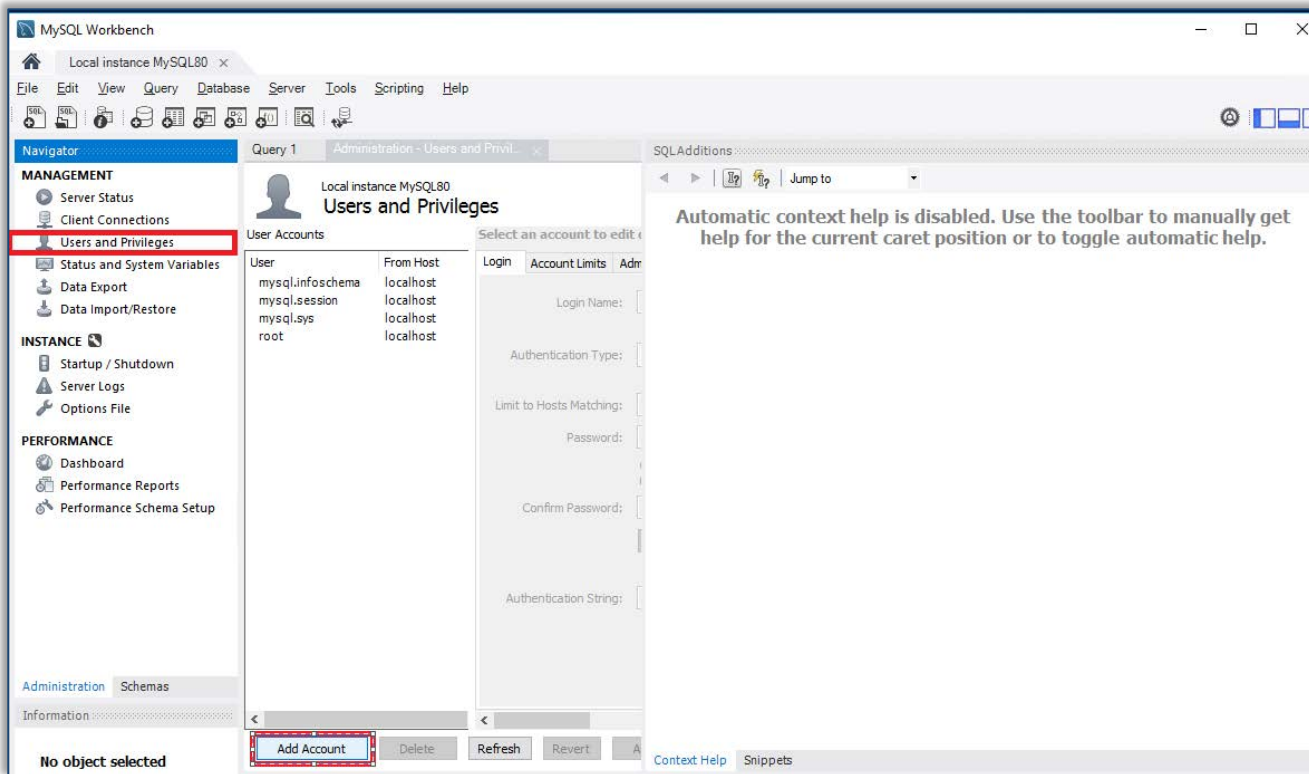
MySQL Database
Create Vesion Schema

- In the Review SQL script click Apply to create the schema. Click Finish to complete creating the schema.

- Check that rtu_data schema is listed in the SCHEMAS section
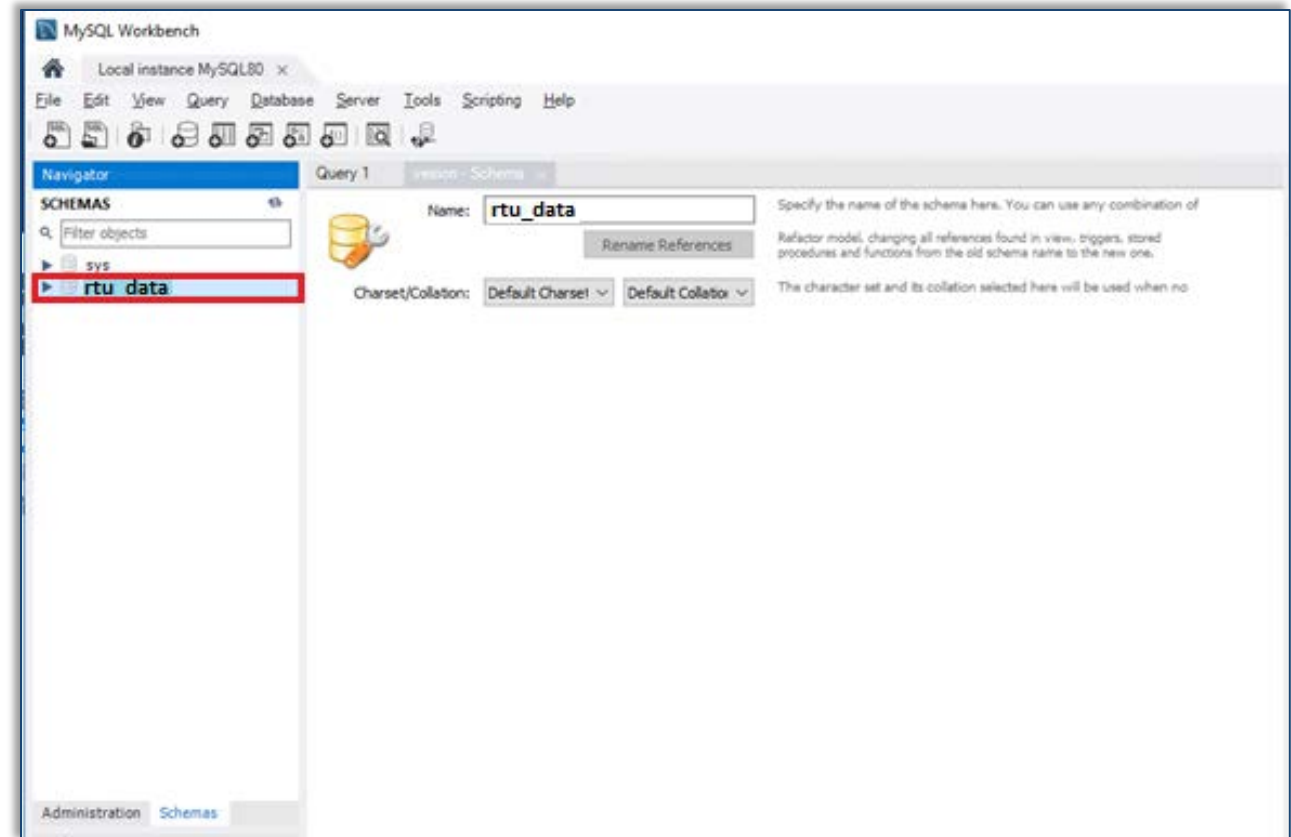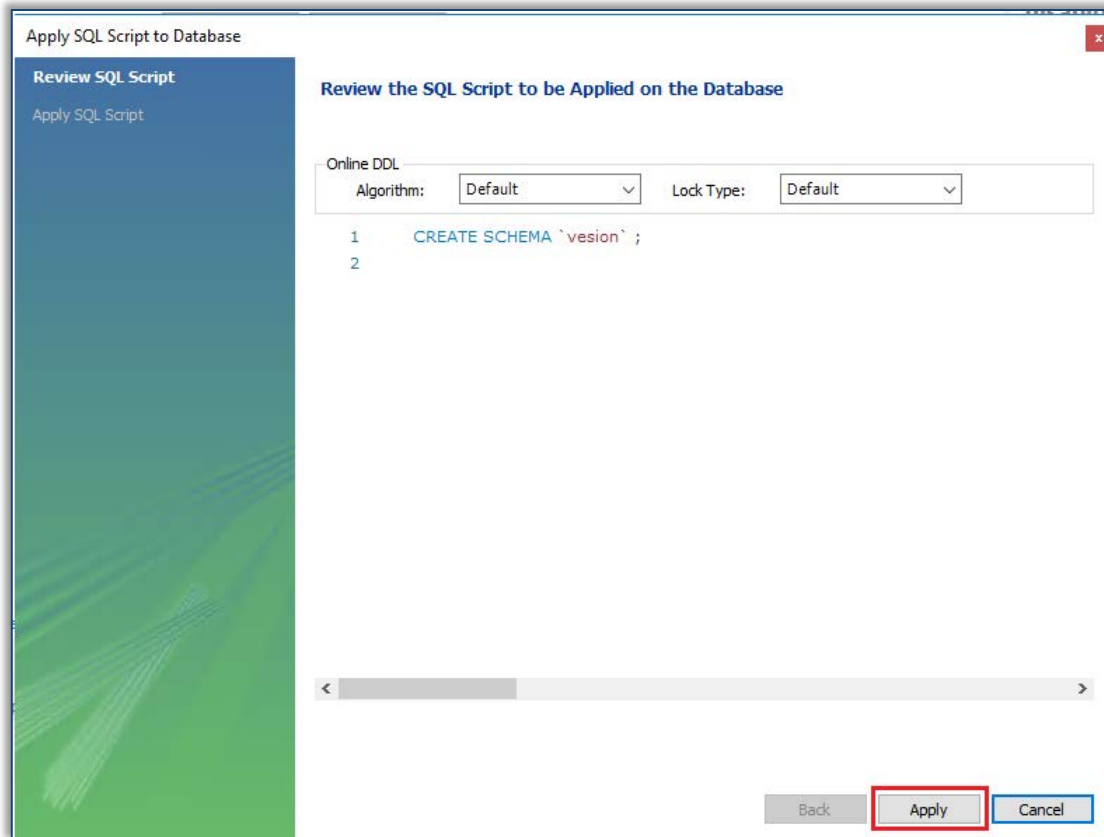
MySQL Database
Add user for VeSion server login

- Select Administration tab, at the bottom left, then click on Users and Privileges and Add Account.

- Add a new user account with login name "master". Enter a password and click Apply. Safe keep the user account password.
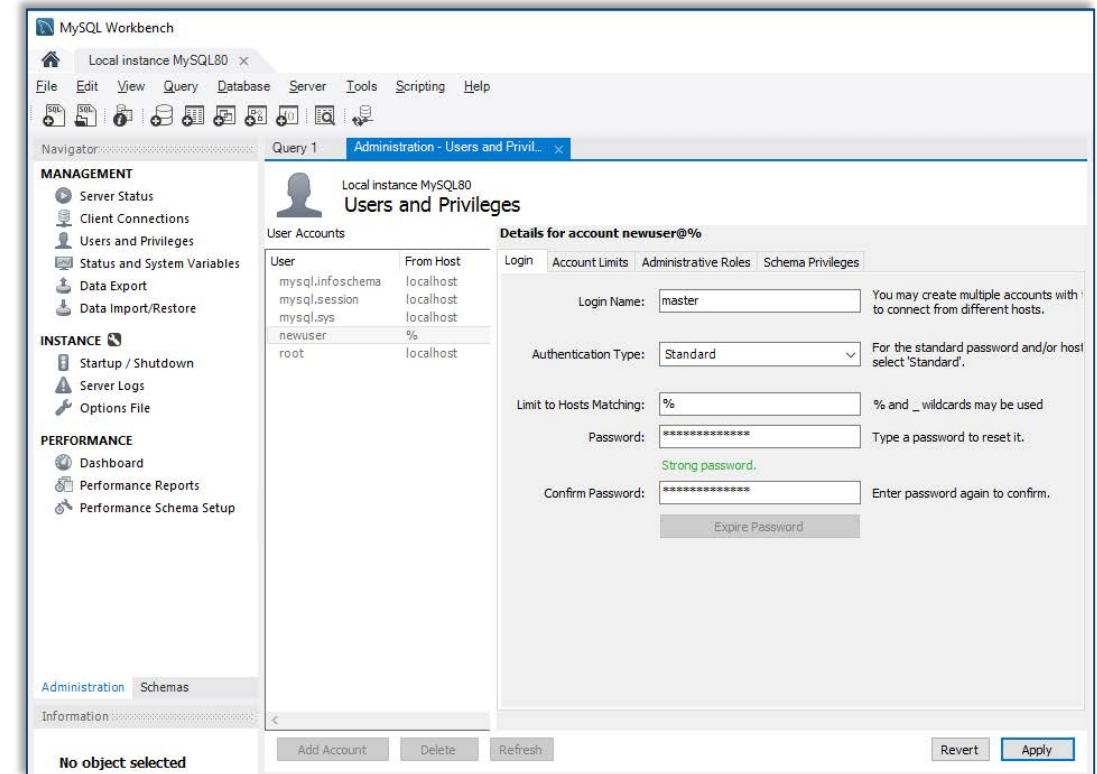
MySQL Database
Assign administrative roles

- While with user "master" selected in the User section, move to the Administrative Roles tab and enable DBA. This allocates all privileges to the user "master".
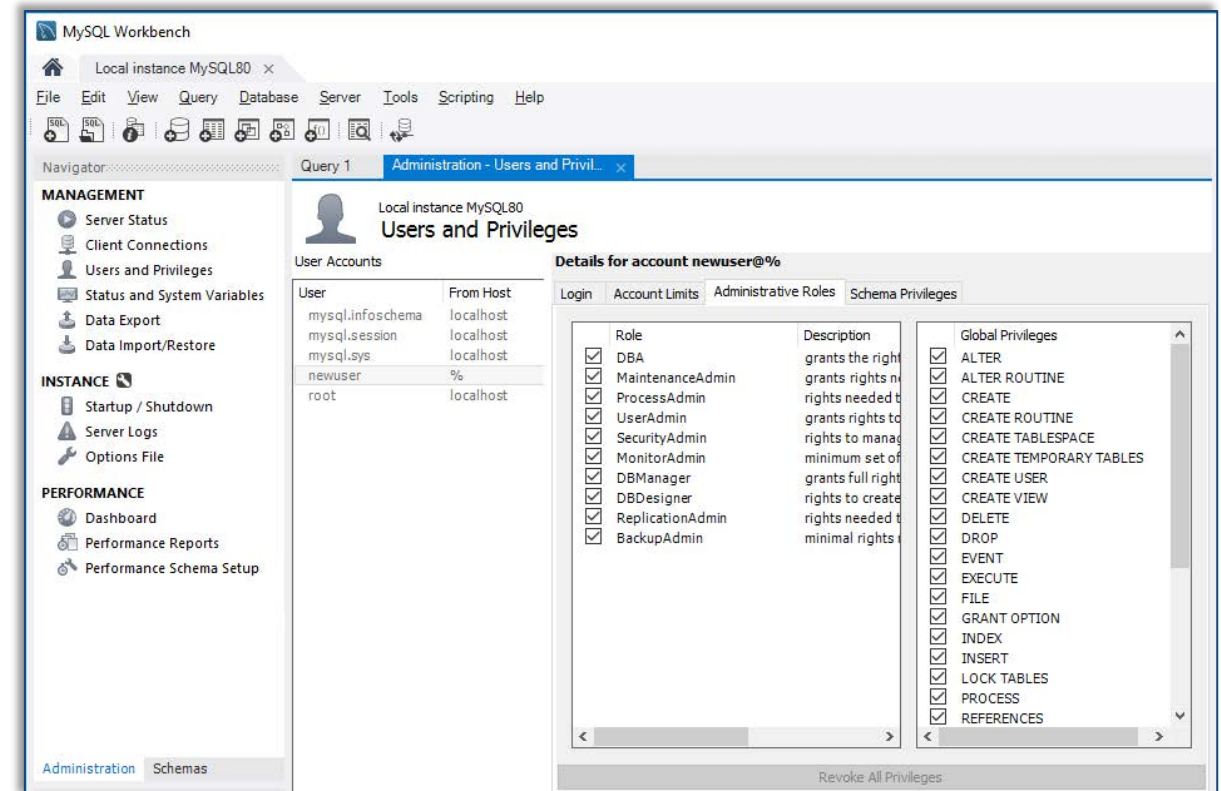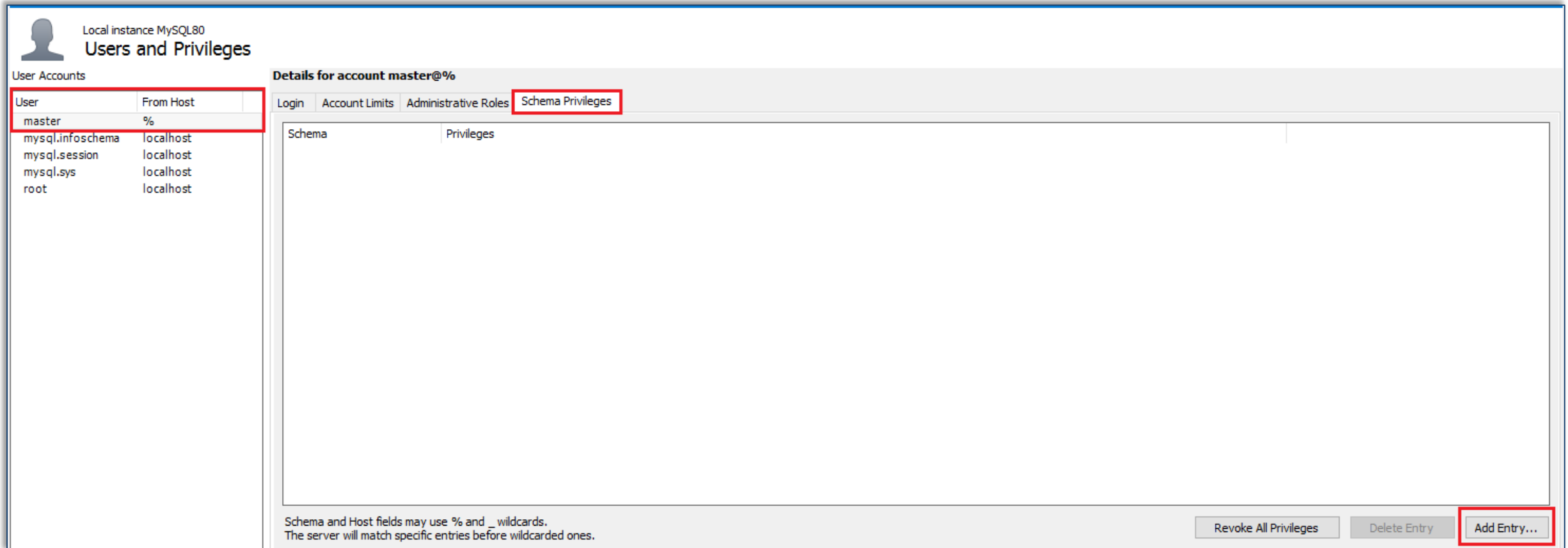
MySQL Database
Schema Privileges

- Now, make sure that the Workbench window is maximized to fully display the window select the Schema Privileges tab and hit the Add Entry... button to access the schema list.

MySQL Database
Assign VeSion Schema privileges to "master" user

- Choose the Selected schema option in the New Schema Privilege Definition pop-up. Pick the rtu_data schema from the list, then click OK to close the selection window.

- Click on Select "ALL" to allocate all applicable privileges.

MySQL Database

- Unzip MySQLConfigurationHelper(3.0.0) and put a copy in the local drive of the server.
  - Execute the software by clicking on MySQLConfigurationHelper.exe. If .NET Framework 3.5 features have not been added, then it will prompt for the need of the features.
 - Once the configuration tool is launched, enter the password for user "master" and then Connect.

MySQL Database
Set Up variable values
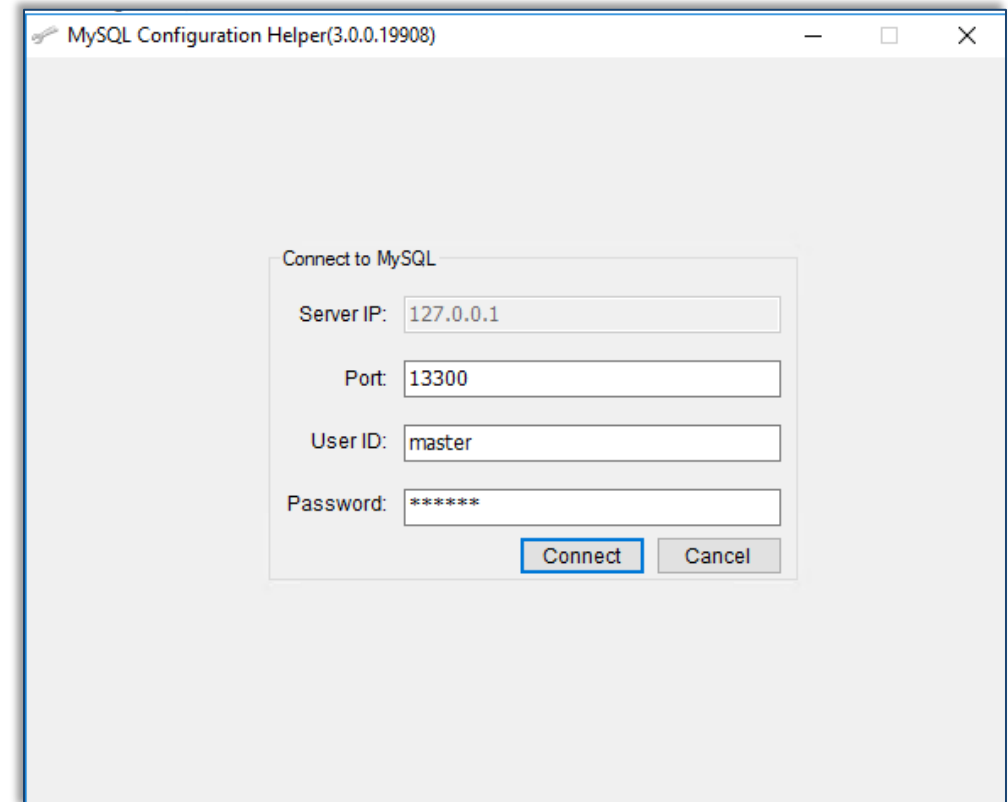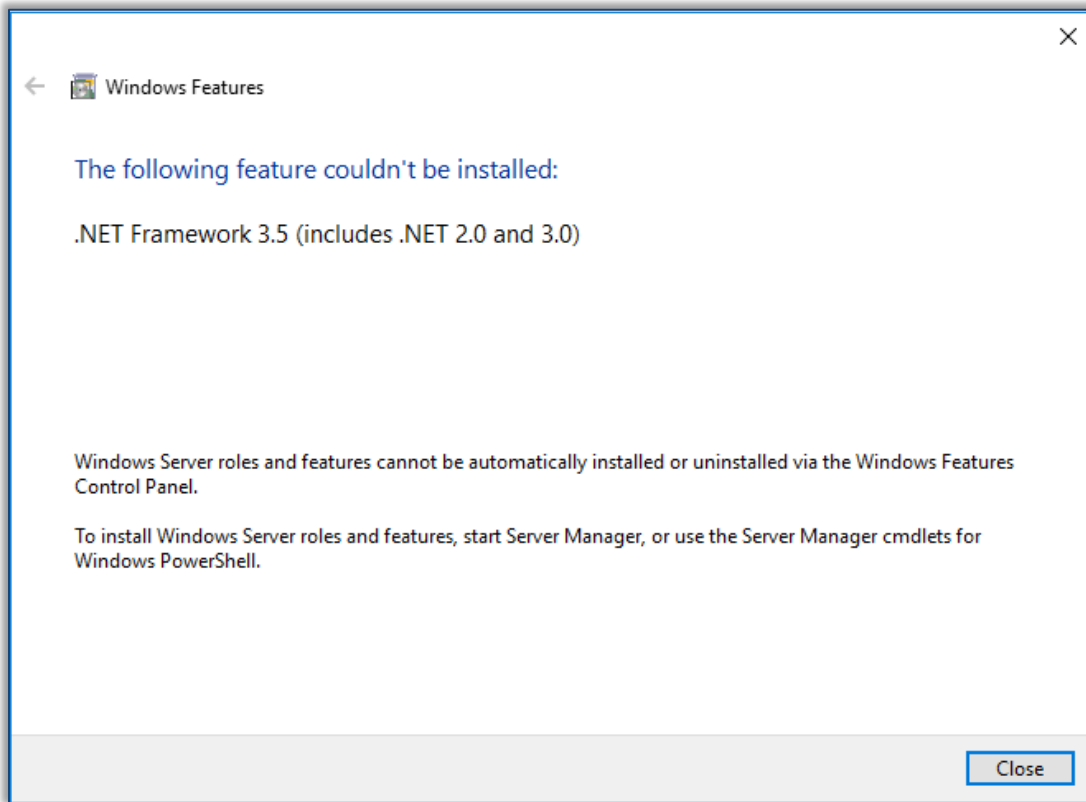
- Select Set All Automatically to run the configuration tool.
  - It will go through each variable setting and set the value. Click Forward when prompted.
  - Click Restart Server to restart MySQL to take the new variable settings. Or click Close to restart MySQL using Workbench.
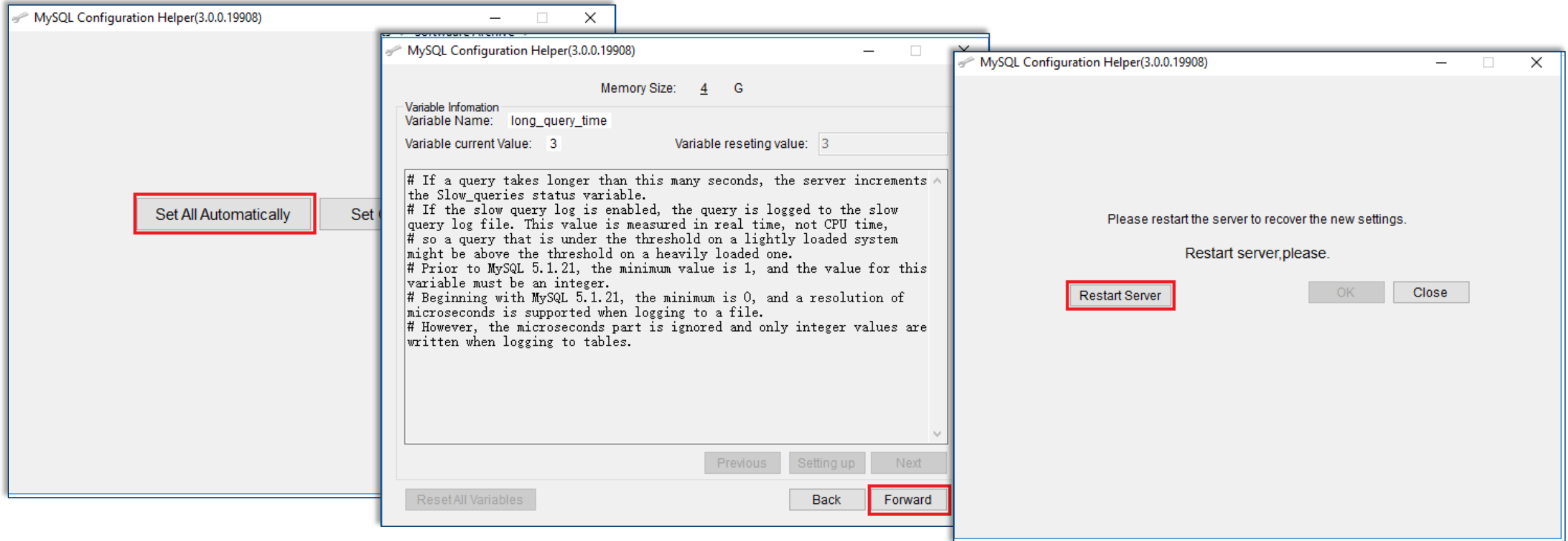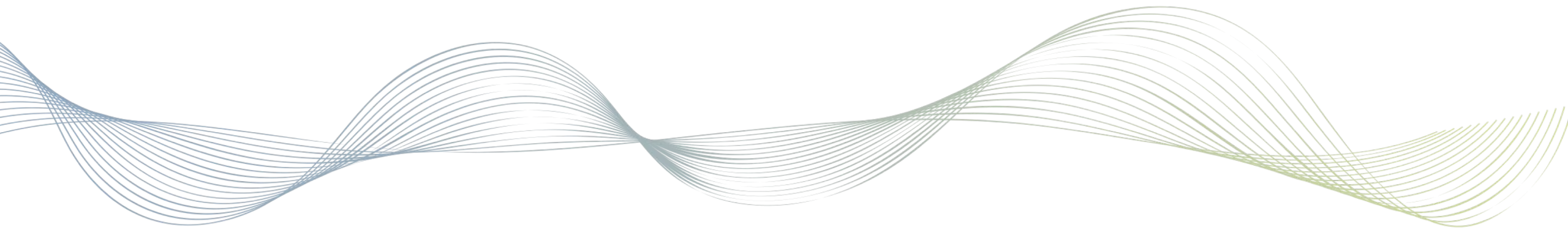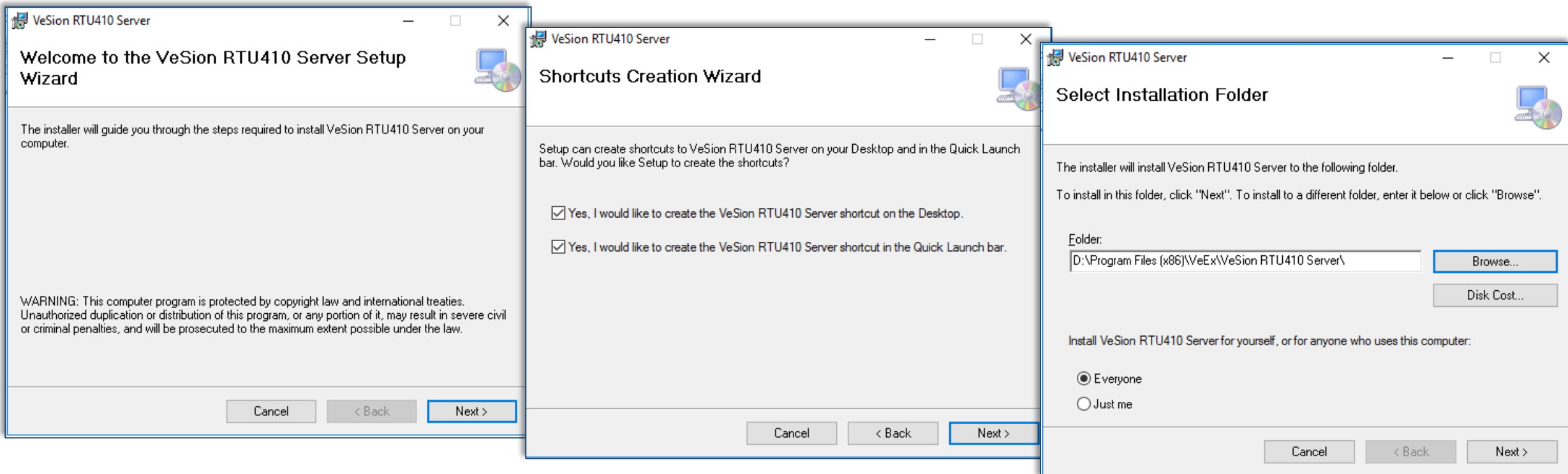
Installing VeSion RTU410 Server

Step 4

Install VeSion RTU410 Server Application

- Run `setup.exe` to install the VeSion RTU410 Server application to the target hard drive.
  - The VeSion RTU410 Server will be installed in the `\Program Files (x86)\VeEx\VeSion RTU410 Server\` by default. Set the target drive as appropriate. In the example below drive D: is the target drive.
  - Select install VeSion for Everyone.
  - Click Next> to continue.

Configure VeSion RTU410 Server Application
Common Setting

- Launch VeSion RTU410 Server Administrator and select the Configuration tab

- Select the Common Setting sub-tab and update the settings:

  ○ Server Number: the unique server number of the RTU410 server in the same VeSion Server

  ○ VeSion Server IP: enter the IP address of the VeSion Server that the VeSion RTU410 Server will be connected to
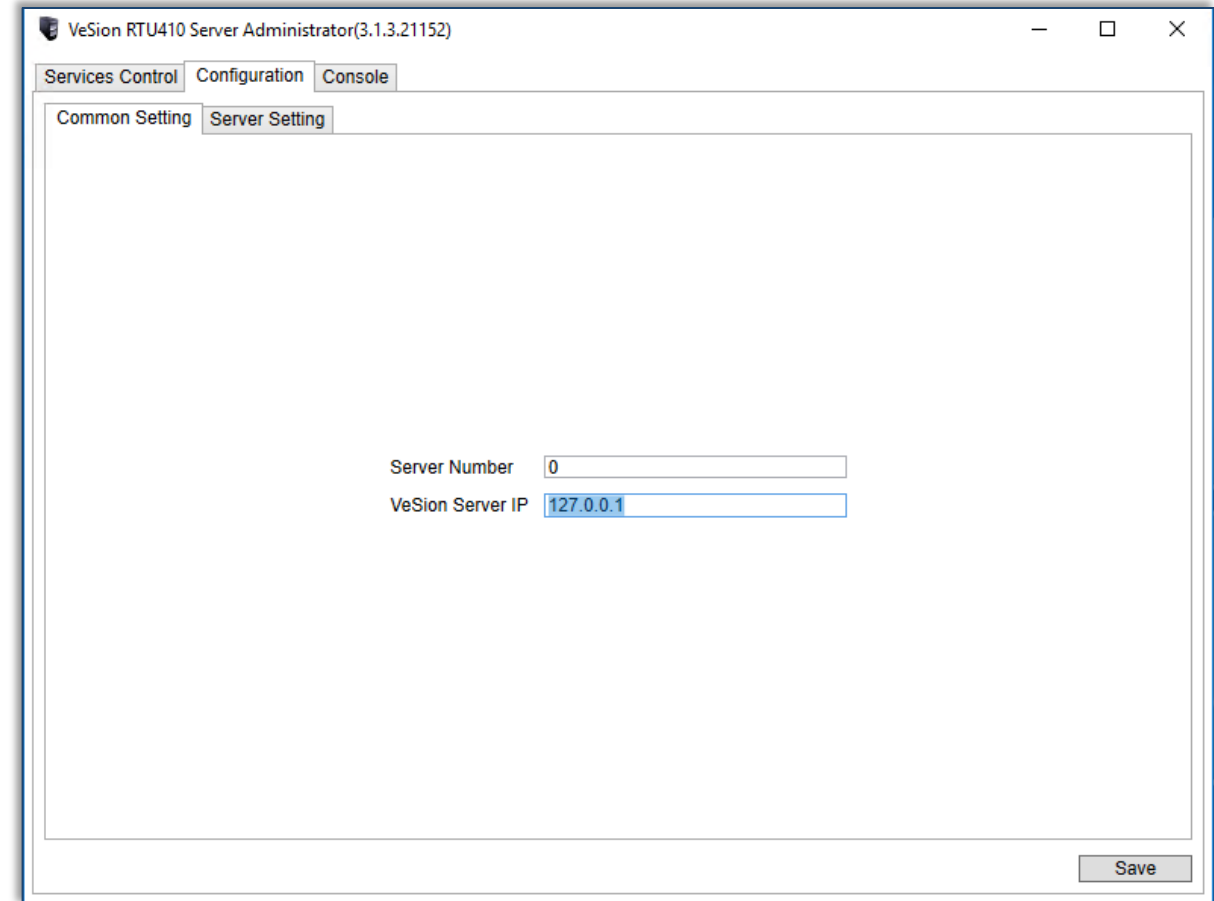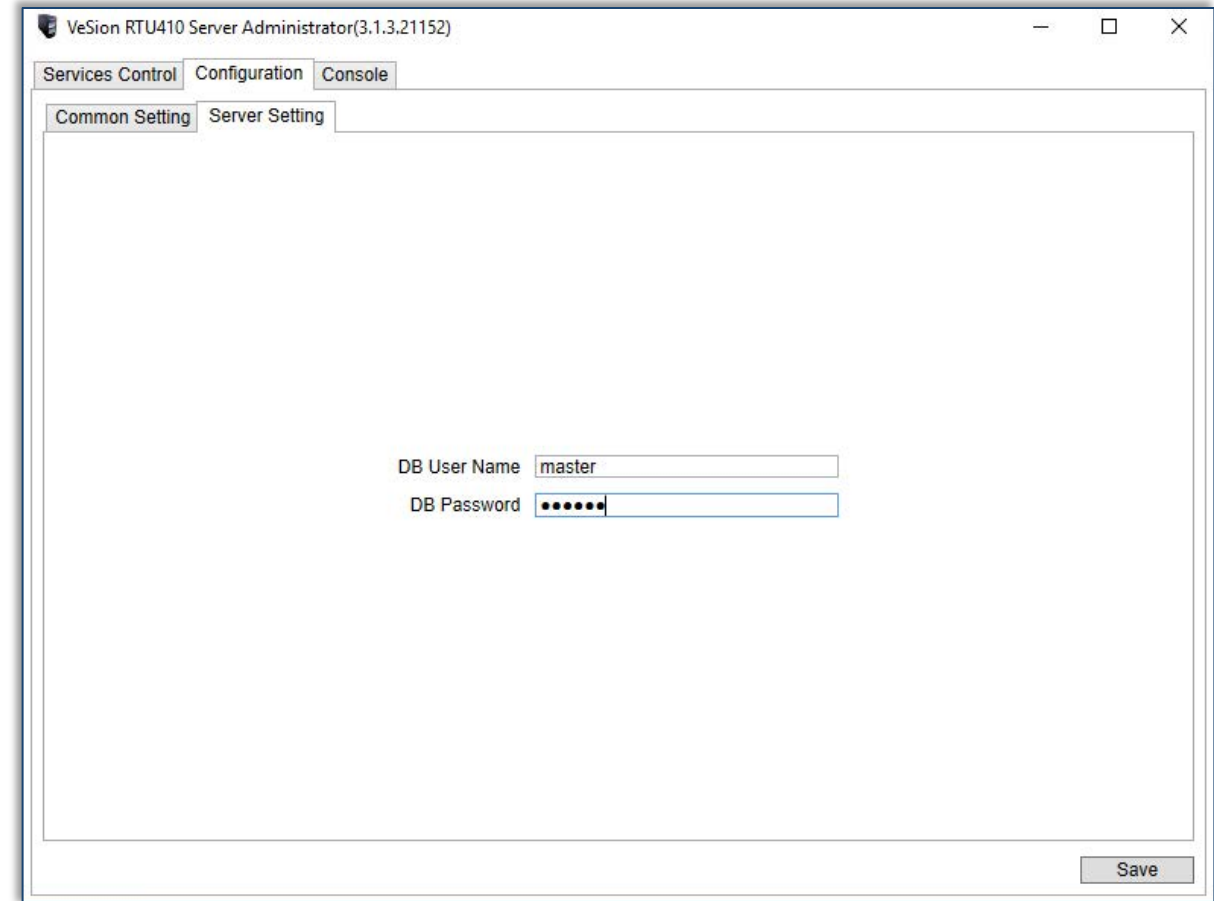
Configure VeSion RTU410 Server Application
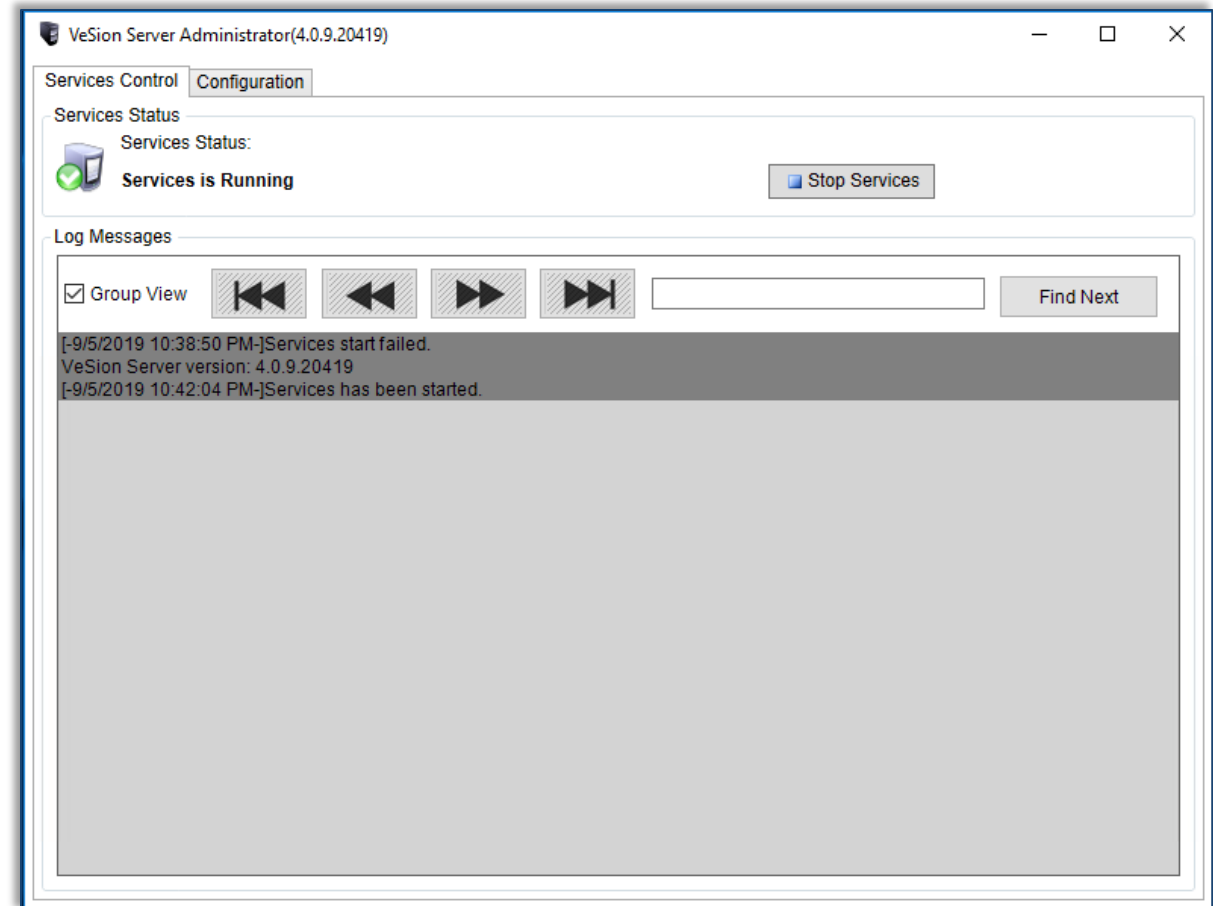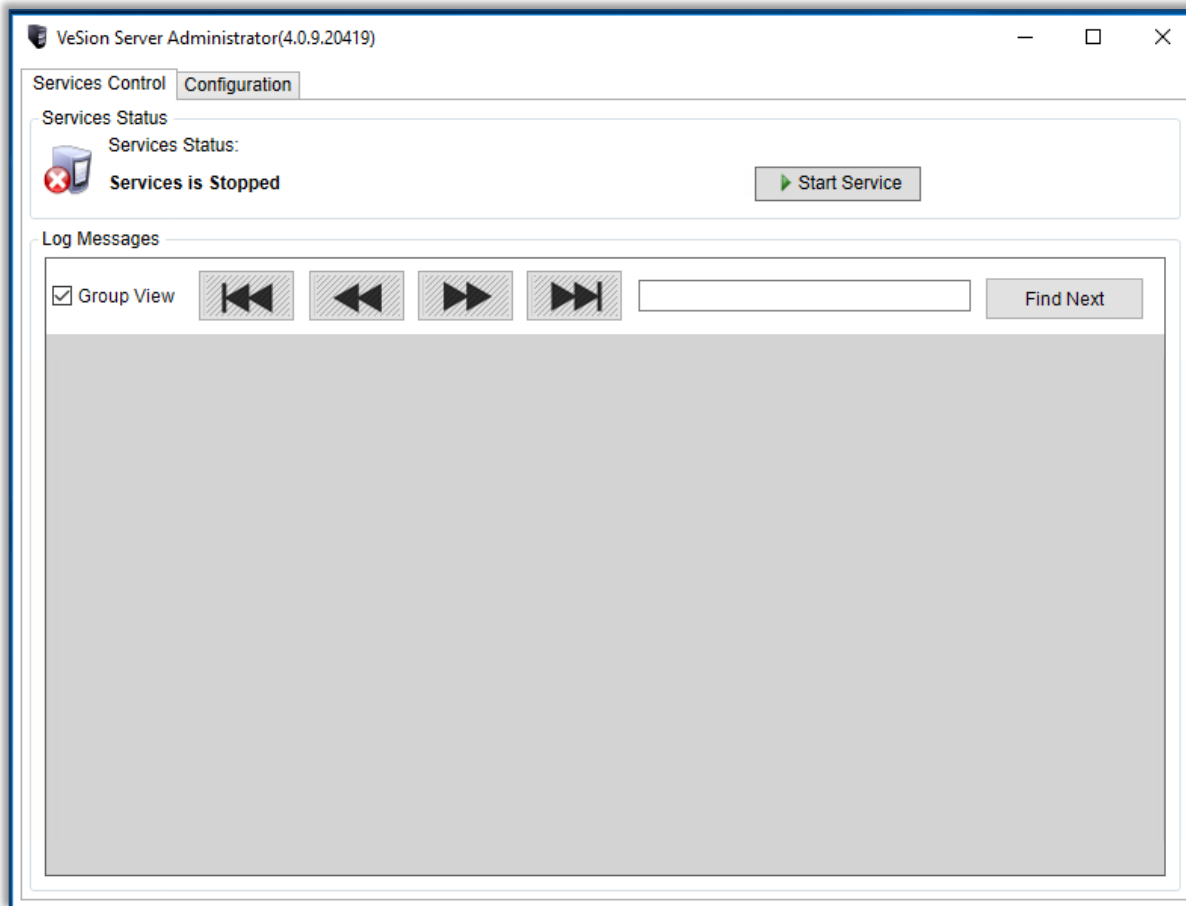## Server Setting

- Select the Server Settings sub-tab and update the settings:
    - DB User Name: master
    - DB Password: as previously configured

- Click Save to save settings

Starting VeSion RTU410 Server
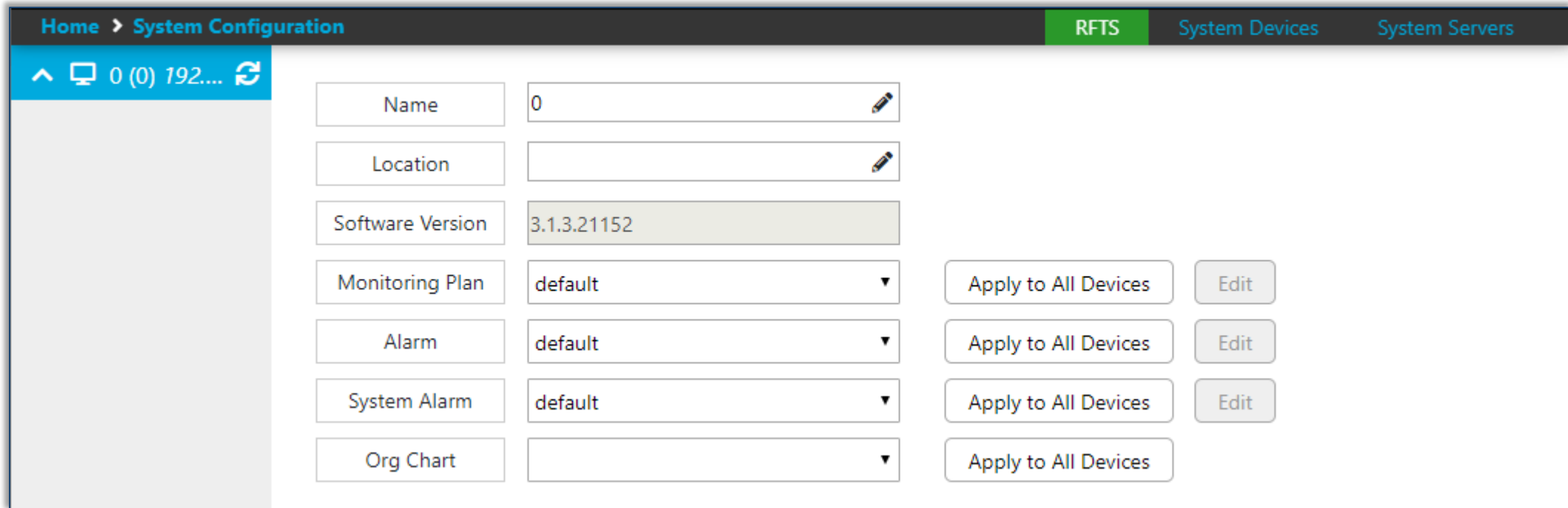## Services Control

- Go to the Services Control tab on the VeSion RTU410 Server Administrator.

- Click Start Service button to start the service.

Starting VeSion RTU410 Server
Verify the RTU410 server is online

- Log in to the VeSion system via web interface.

- Go to Main Menu > System Configuration > Server & Device, click the RFTS tab on the banner. Then verify that the RTU410 server is available in the server and device pane at the left.

- Enter the server name, location of the server as appropriate, then click Save at the bottom of the menu.

Thank you!

Any questions?

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