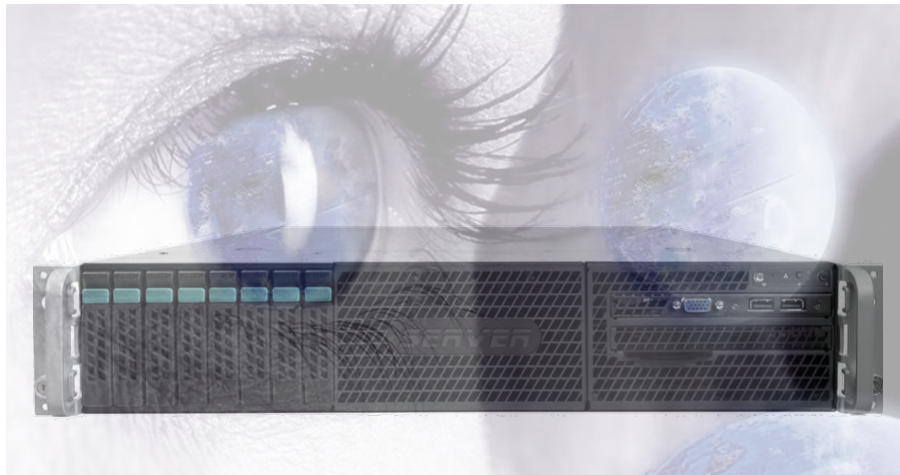# VeSion® Server

June 2021 | Rev. A01

P/N: D08-00-075

Notice:

The information contained in this document is subject to change without notice.

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The features or functions described in this document may or may not be available in your test equipment or may look slightly different. Make sure it is updated to the latest software packages available and that is has any related licenses that may be required.

For assistance or questions related to this document and procedures, or to get a test set serviced by VeEX or an authorized service facility, please contact:

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Phone: +1 510 651 0500
E-mail: CustomerCare@veexinc.com
Web: www.veexinc.com

VeSion® Server Installation Overview

VeSion System

Major Software Components

The VeSion system software runs on Microsoft Windows operating system. The operating system can be:

- Windows Server 2012

- Windows Server 2016

- Windows Server 2019

This quick guide provides detailed steps to install the applications needed for a VeSion Server. Below are the major software and server roles that need to be installed on the server, in addition to the relevant tools to facilitate the installation.

- Web Server (IIS), .NET Framework 3.5 and Telnet Client features

- MySQL database and workbench

- MySQL Connect 6.9.5

- GnuGPG Privacy Guard for VeSion system license

- VeSion Server Application

- VeSion Web HTML5 Application running under Internet Information Services (IIS)

Installation Highlights

This guide is based on the use of Windows Server 2016 and includes the following procedure highlights:
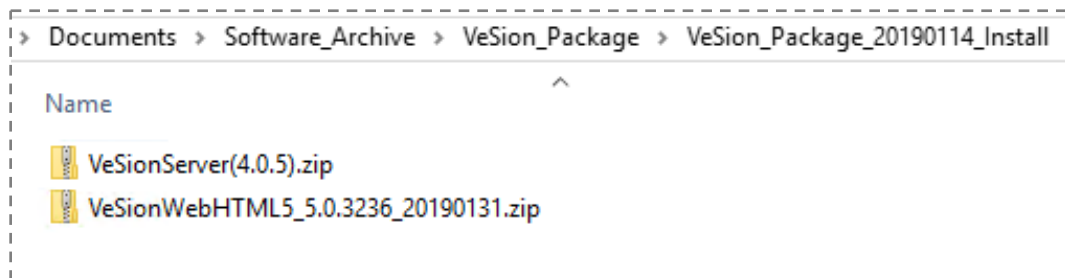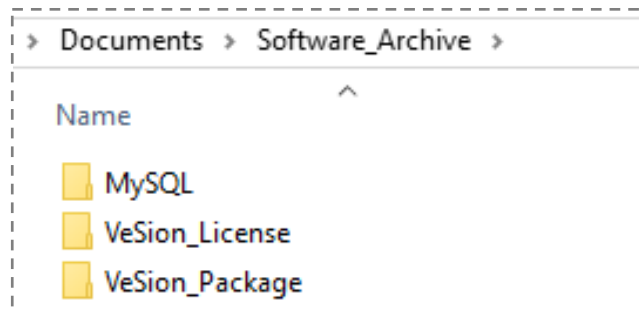
- Add operating system features and Install Microsoft applications
    - Turn on Remote Desktop Connection
    - Add Web Server (Internet Information Services) role
    - Add .NET Framework 3.5 feature
    - Add Telnet Client feature
    - Install Microsoft Visual C++ Runtime Libraries 2015 Redistribution
- 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 MySQL Connector 6.9.5
    - Install and configure VeSion Sever application
    - Install VeSion Web HTML5 application and upload system license
- Add application shortcuts to Startup

Software and Tools

- MySQL Installer for Windows version 8.0.17.0.
    - https://dev.mysql.com/downloads/mysql/
    - Consult with VeEX Customer Care for compatibility with other versions
- MySQL Connector 6.9.5
    - https://downloads.mysql.com/archives/c-net/
- MySQL configuration tool <MySQLConfigurationHelper(3.0.0)190218> (Provided by VeEX)
- PnuGPG <gpg4win-vanilla-2.3.3.zip> (Provided by VeEX)
- VeSion GPG public key file <vesion_public.key> (Provided by VeEX)
- VeSion license file:
    - Provided by VeEX for the ordered configuration and license duration
- VeSion Server (Provided by VeEX)
- VeSion Web HTML5 (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 a good amount of free 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_License, which contains the gnu installation software and the vesion_public.key file
  - VeSion_Package, which contains the VeSion Server and the VeSion Web HTMLT software

> Documents > Software_Archive >

Name

- MySQL
- VeSion_License
- VeSion_Package

> Documents > Software_Archive > VeSion_Package > VeSion_Package_20190114_Install

Name

- VeSionServer(4.0.5).zip
- VeSionWebHTML5_5.0.3236_20190131.zip

Upgrades

- If upgrading VeSion server version, perform step 5 <u>only</u>
  - Make sure to uninstall previous VeSion server version first
- If upgrading VeSion HTML5 version, perform step 6 <u>only</u>
  - Make sure to delete previous HTML5 folder first

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

    o Web Server (IIS)

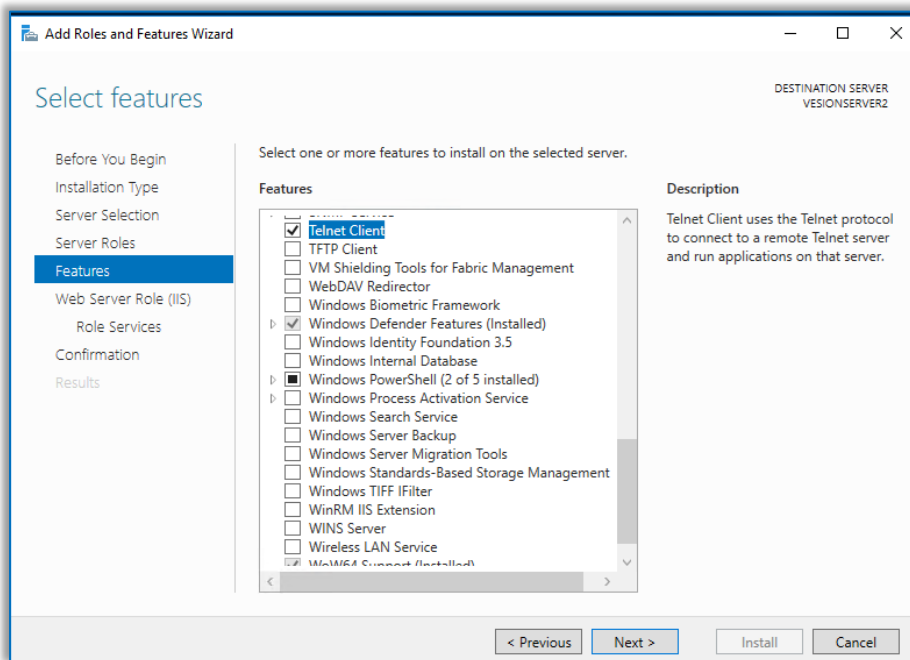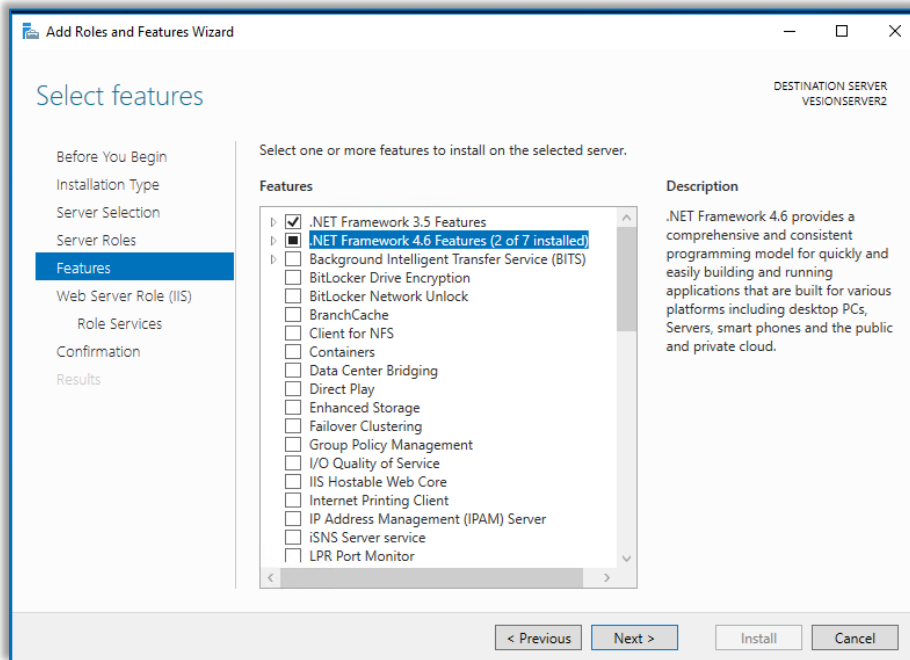   o .NET Framework 3.5 Features

    o Telnet Client
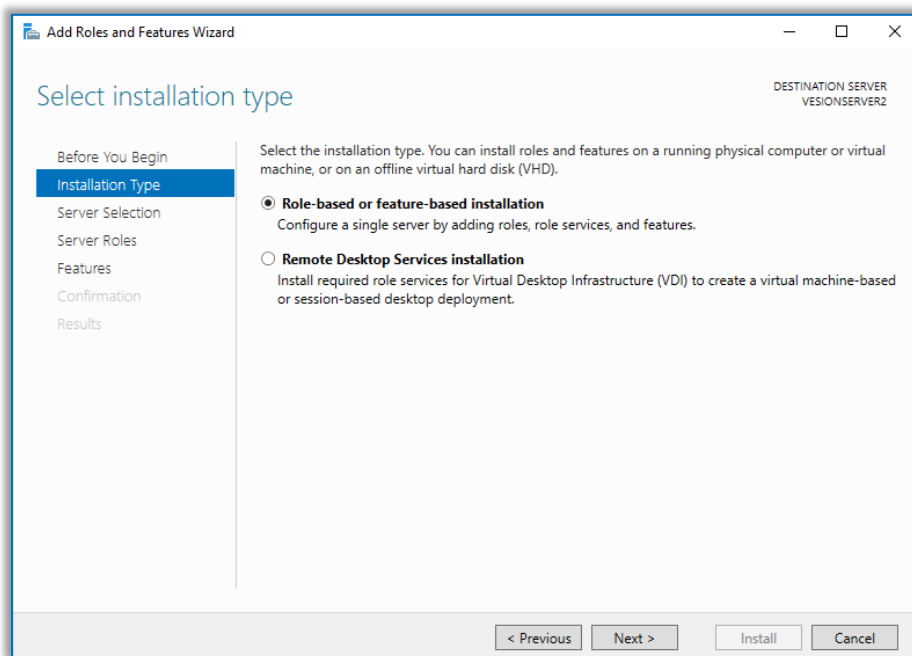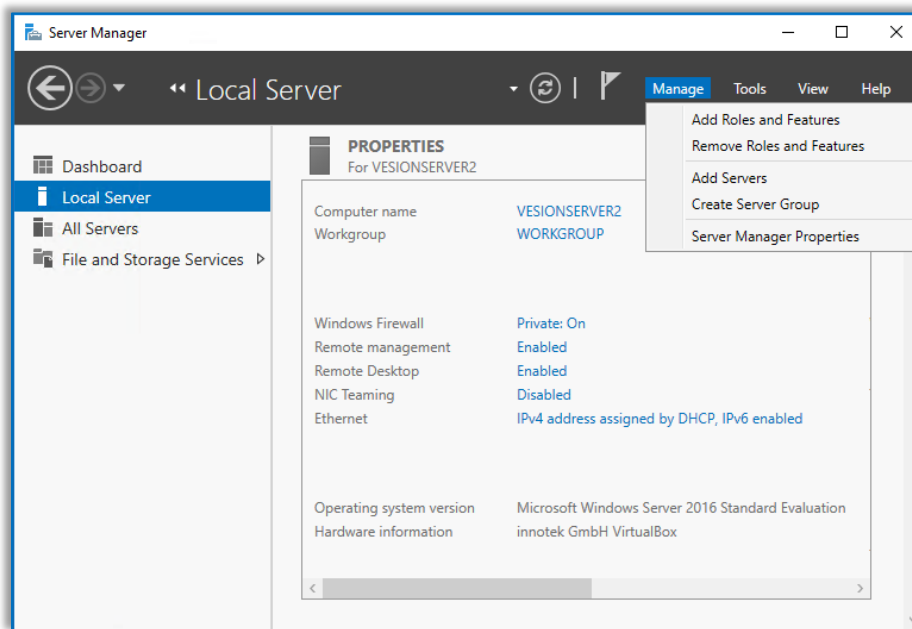
# Add Web Server (IIS) Role

- Web Server (IIS) and associated features
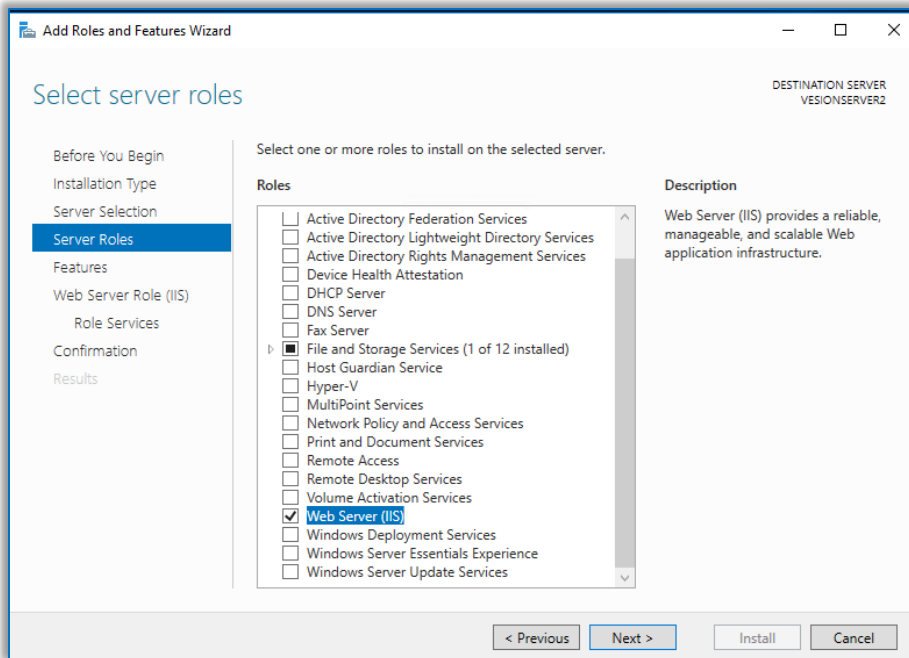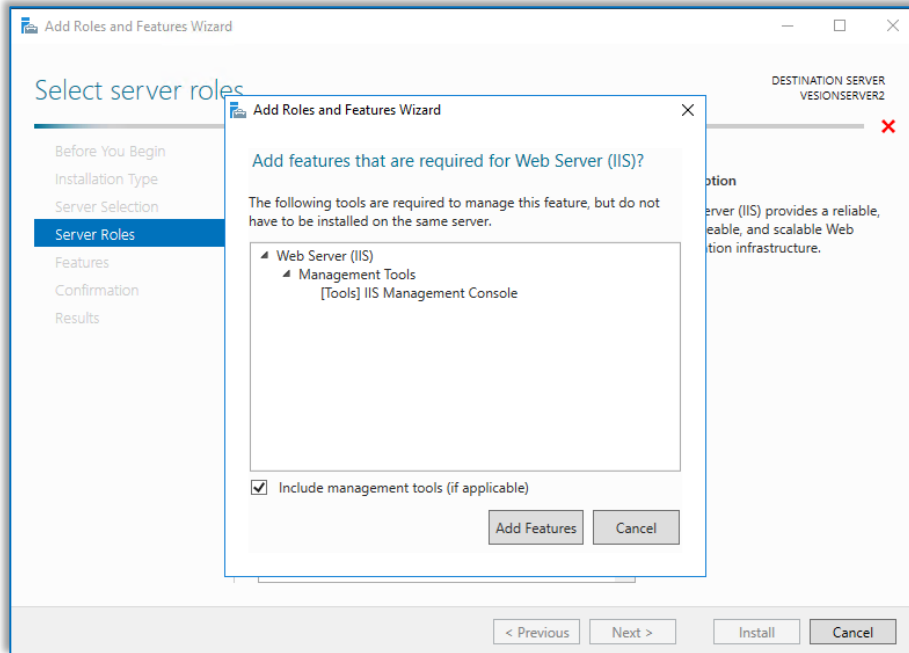
Add .NET Framework and Telnet Features

- NET Framework 3.5 Features

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

- Telnet client

    o The telnet client is needed for probe troubleshooting, if needed

Add Roles and Features

- Check in the Web Server Role (IIS) > Role Services includes Management Tools > IIS Management Console. Then click Next> to continue
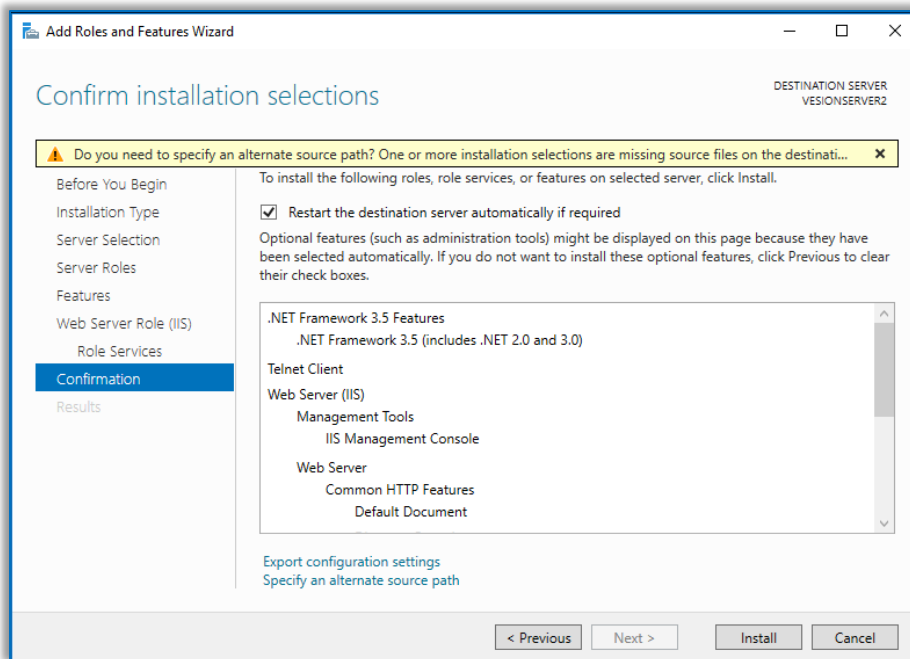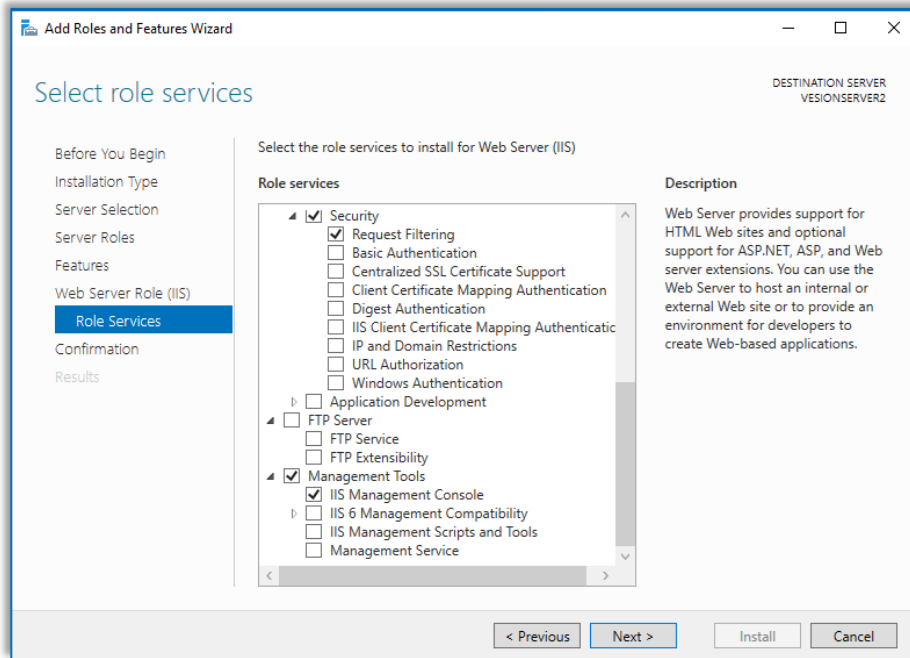
- Click Install in the Confirmation to proceed add the IIS role and the .NET Framework and Telnet Client features. Let it finish the installation
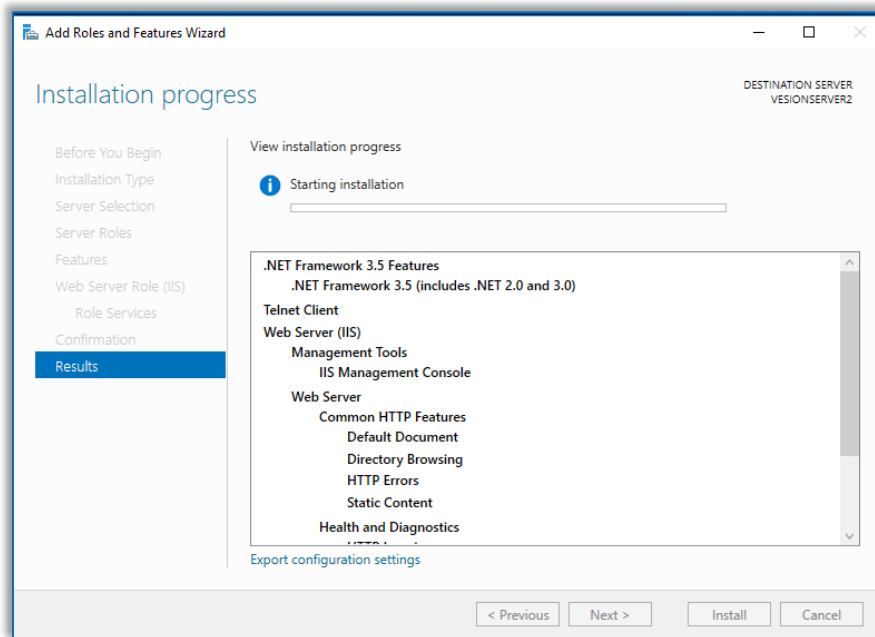
Open Required Ports on Windows® Firewall

Step 2

- For the VeSion Server, the following inbound TCP ports need to be opened:

  o Port 80 for http web access

  o Port 4523 for access from HTML5 web client and mobile app

  o Port 40000 for VeSion probe servers to VeSion Server access

- Launch Windows Firewall with Advanced Security

  o 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
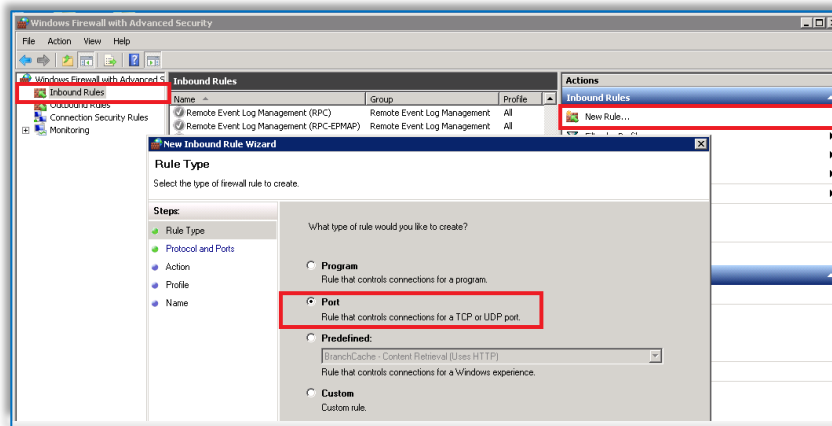
Inbound Rules

- 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 80, 4523 and 40000. Click Next > to continue. Select Allow the connection and apply the rule to all three

Does this rule apply to TCP or UDP?

- TCP
- UDP

Does this rule apply to all local ports or specific local ports?

- All local ports
- Specific local ports: 80, 4523, 40000
  Example: 80, 443, 5000-5010

What action should be taken when a connection matches the specified conditions?

- **Allow the connection**
  This includes connections that are protected with IPsec as well as those are not.

When does this rule apply?

- ☑ **Domain**
  Applies when a computer is connected to its corporate domain.

- ☑ **Private**
  Applies when a computer is connected to a private network location.

- ☑ **Public**
  Applies when a computer is connected to a public network location.

- Apply the rule to Domain, Private and Public networks

- In the next screen enter VeSion Server for the Name and a short statement, e.g. VeSion Server inbound firewall rule for the Description

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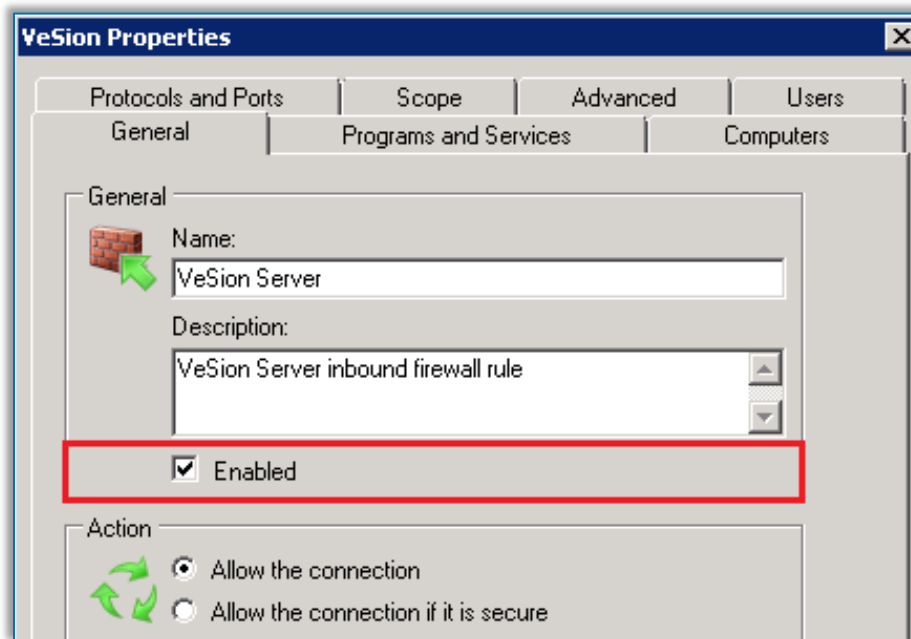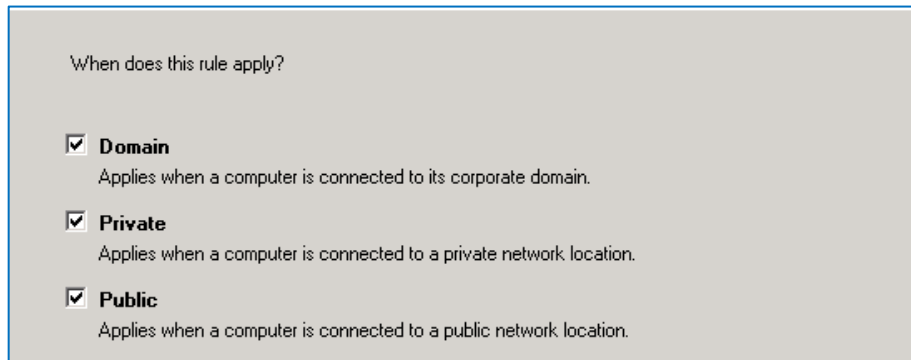
Installing MySQL

Step 3

Download

- Download MySQL Installer for Windows for MySQL Community Server from

  o https://dev.mysql.com/downloads/mysql/

  o 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
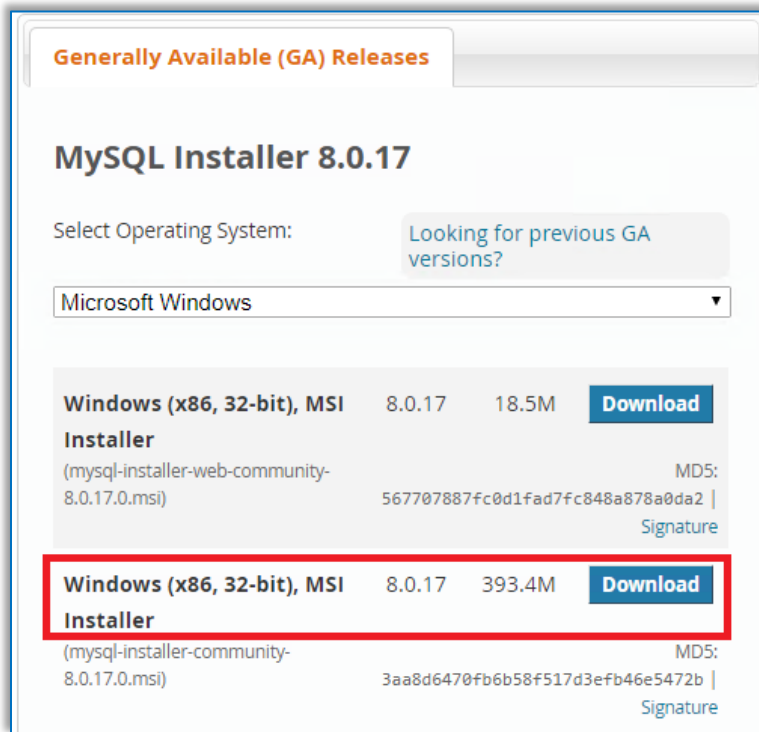
- Run the installer and choose Customs as the Setup Type
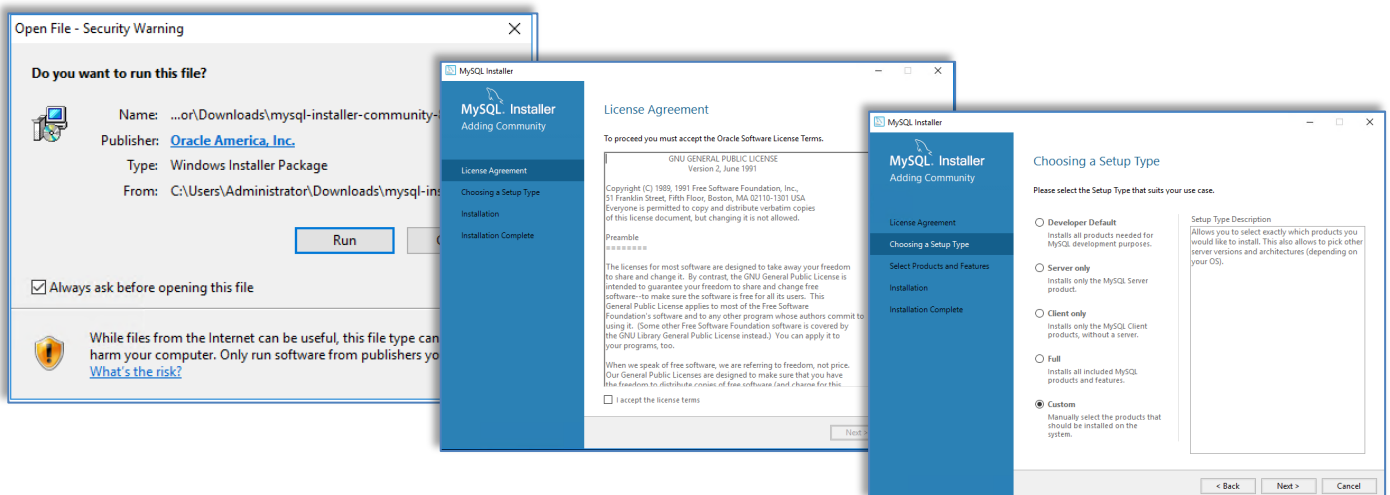
MySQL Server

- Expand the MySQL Servers tree and select the MySQL Server version available to install
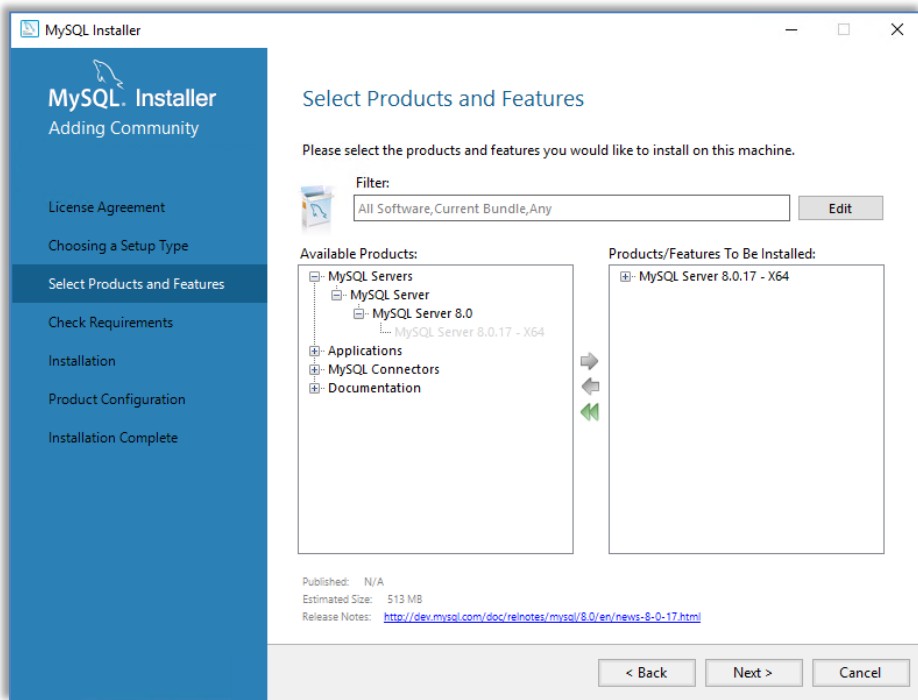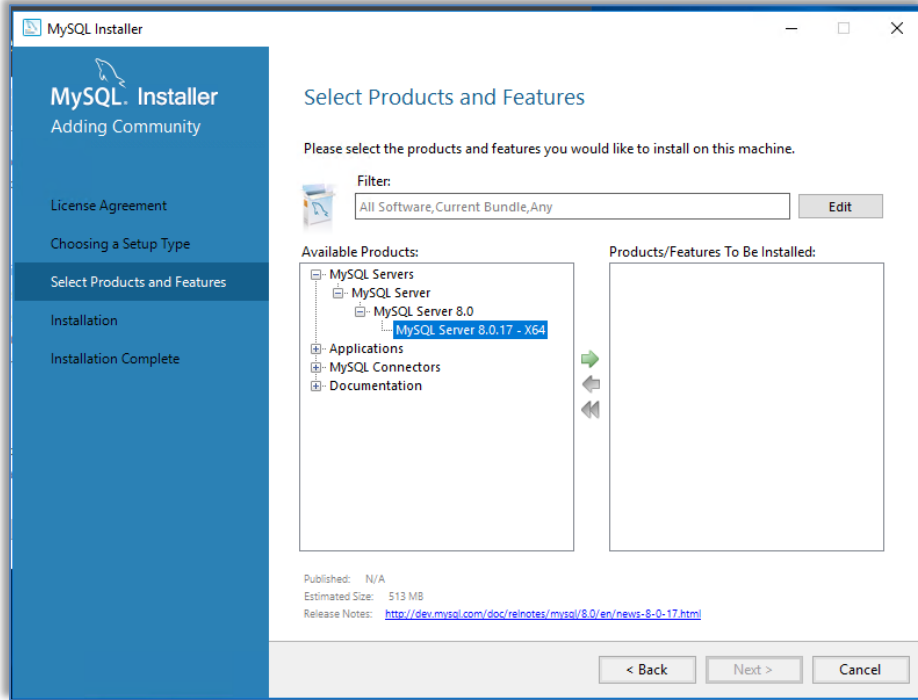
MySQL Server Installation Location

- 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
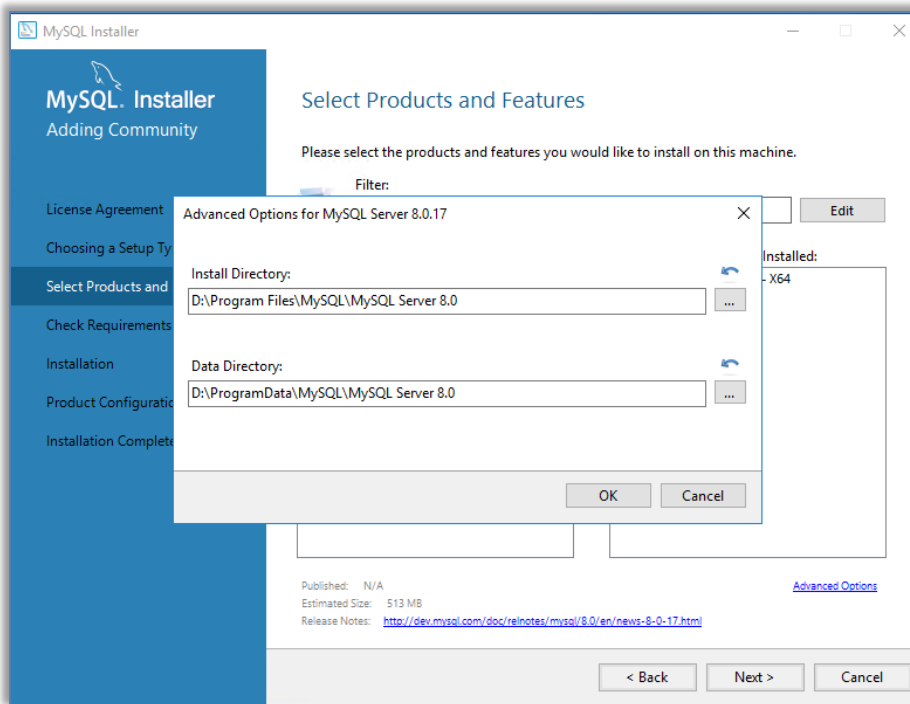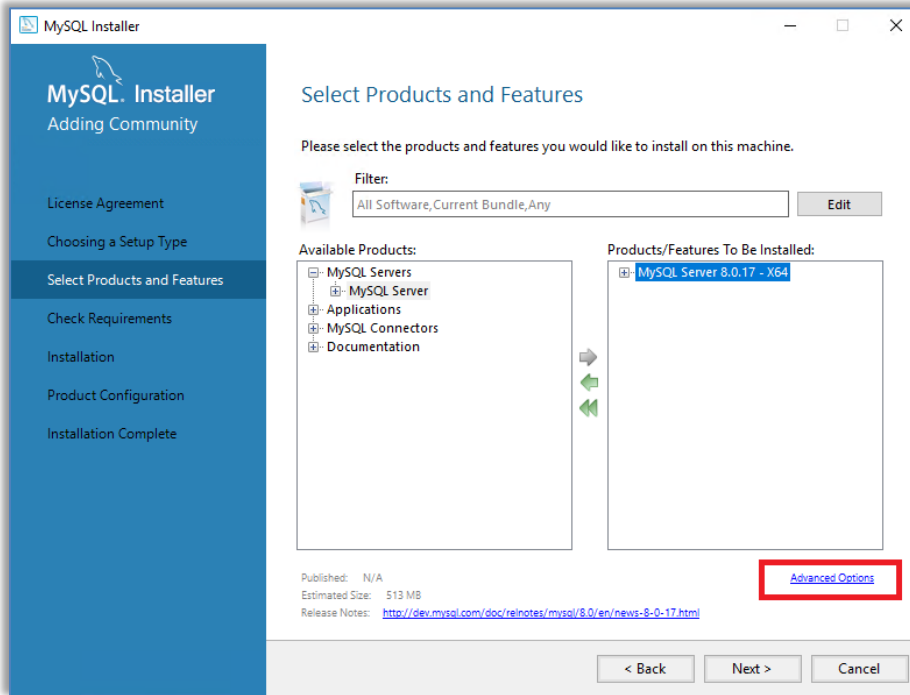
Add Workbench Application

- Expand the Applications tree and navigate to the MySQL Workbench
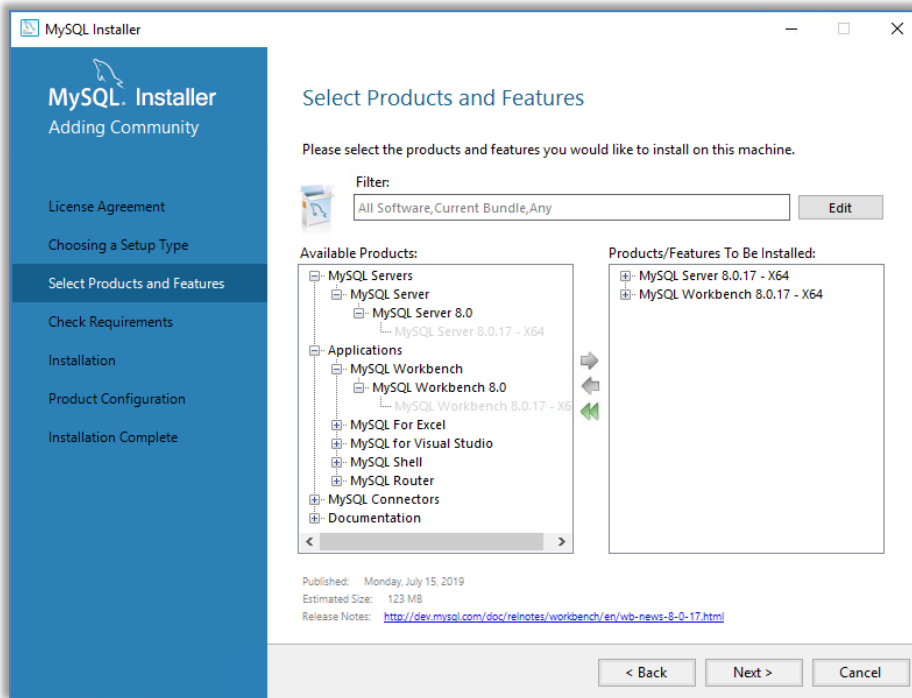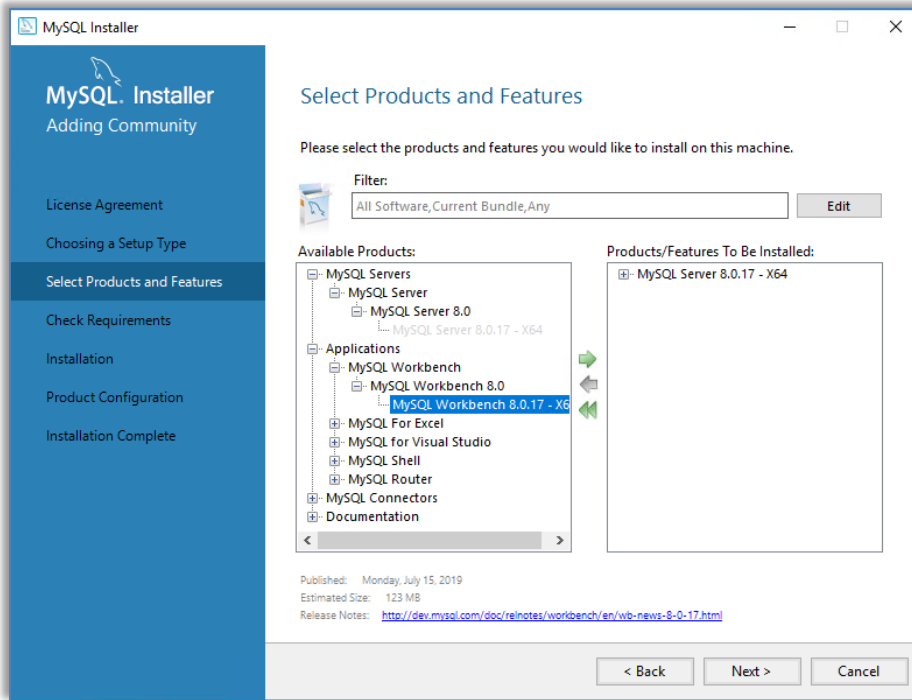
Workbench Installation Location

- 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
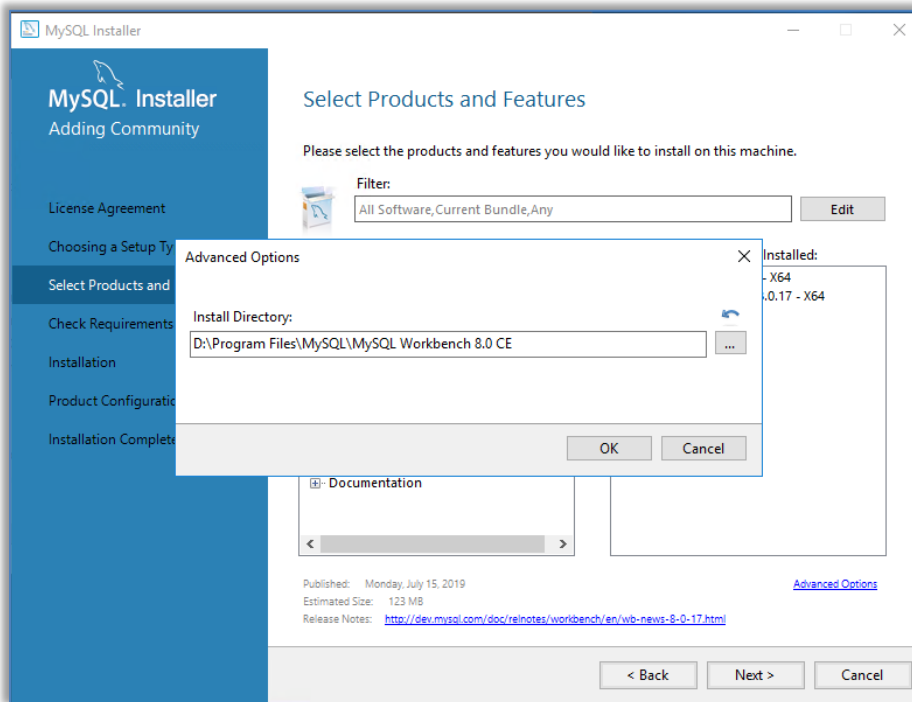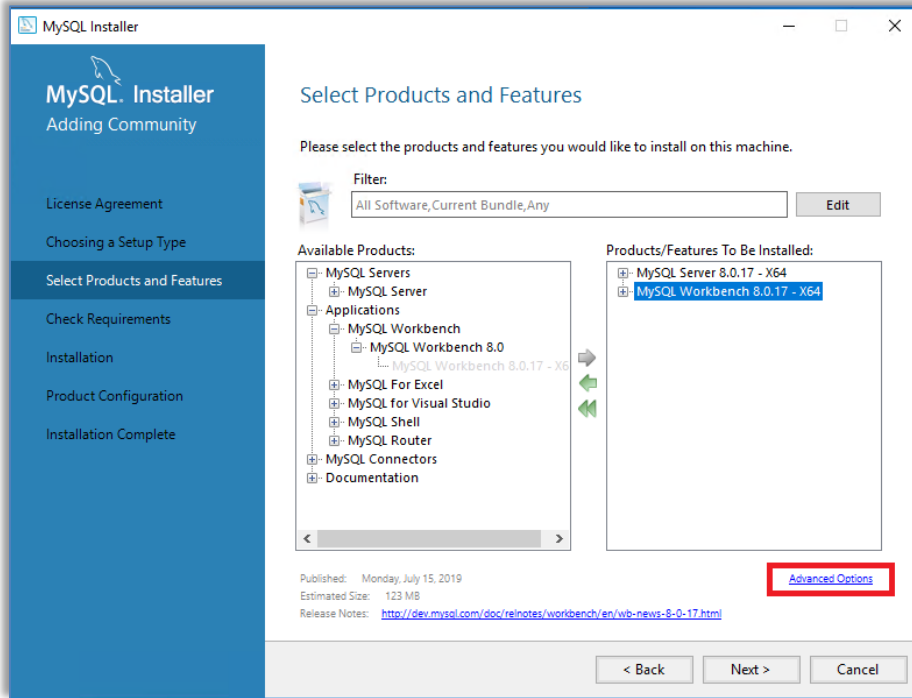
Visual C++ Redistribution

- 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
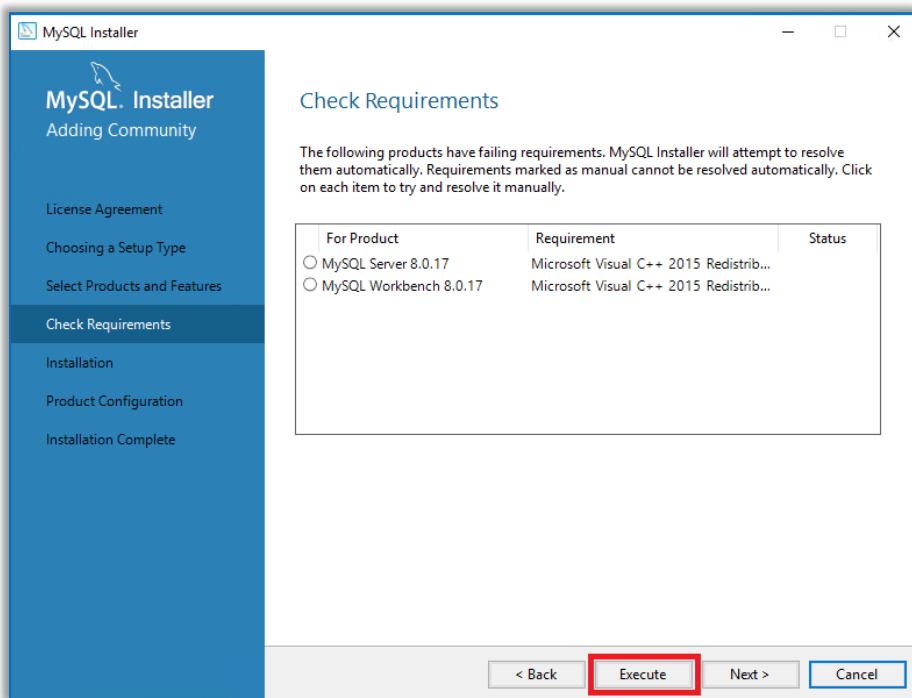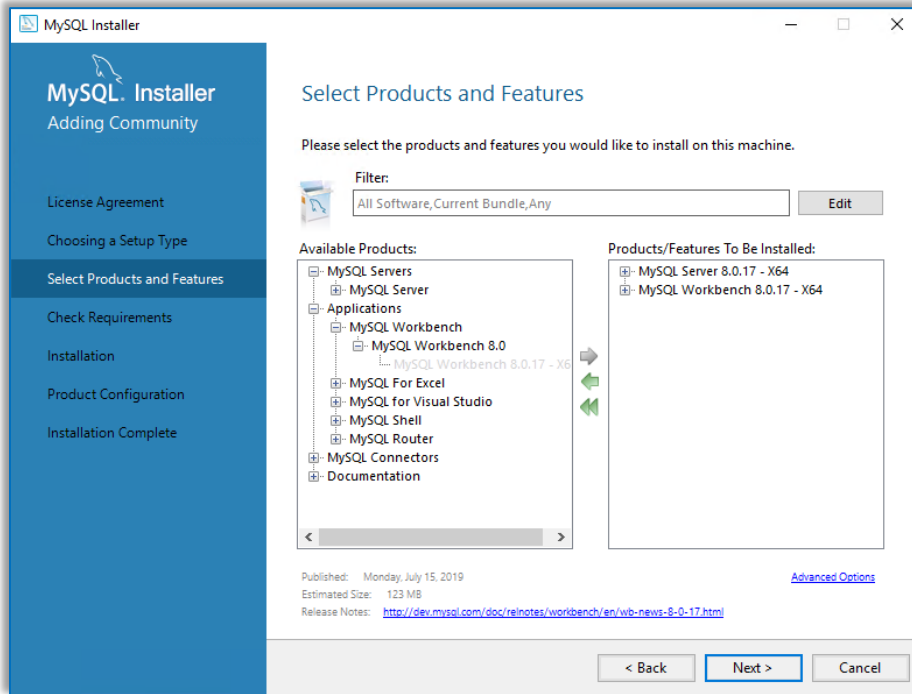
- Accept the agreement and click Install to proceed
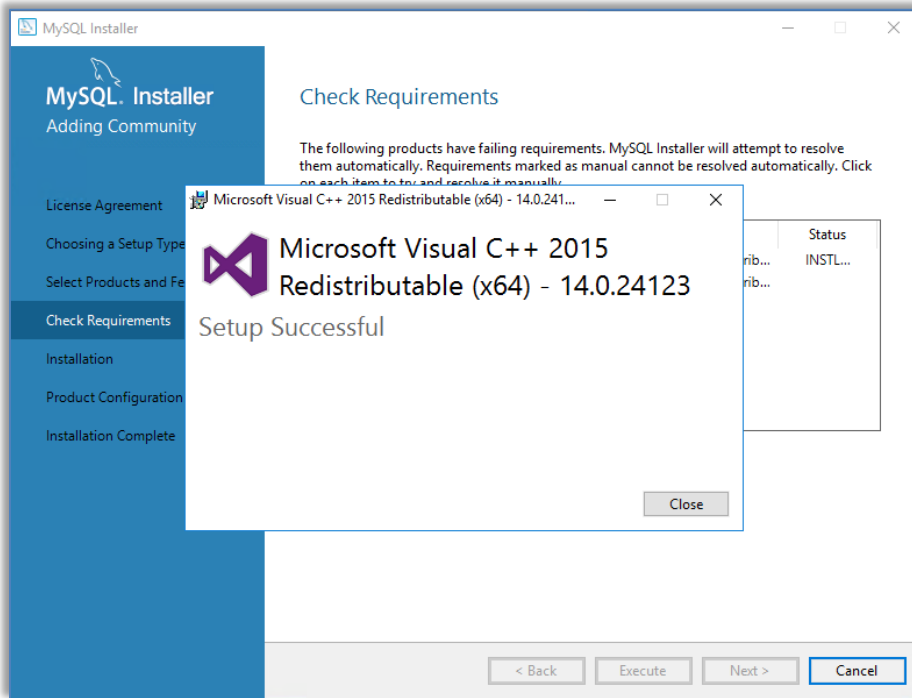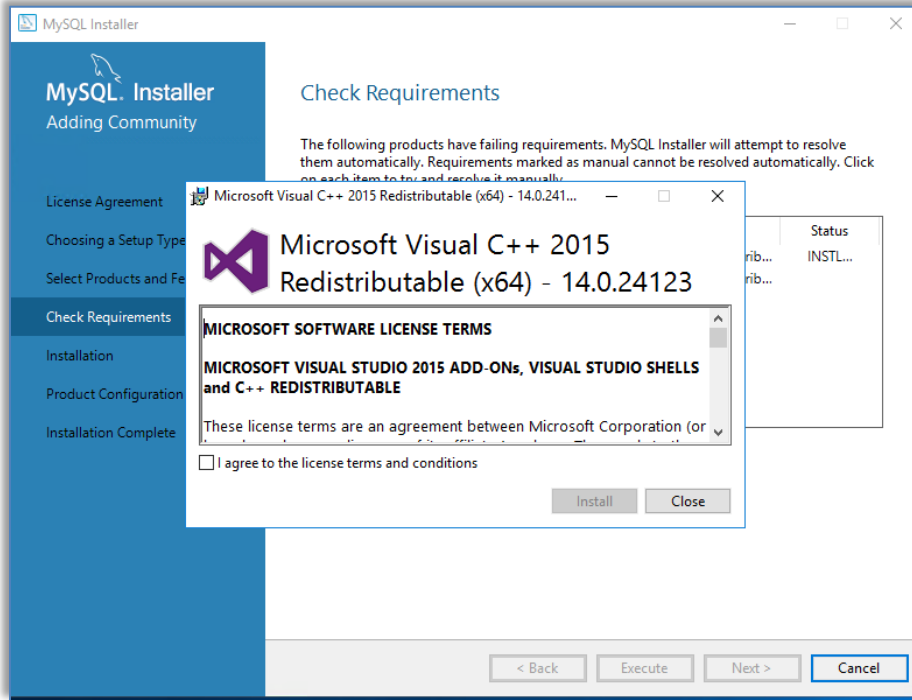
- Click Next > to verify the prerequisite of the installation has been met that the MySQL Server and MySQL Workbench are ready to install

- Click Execute to continue the installation
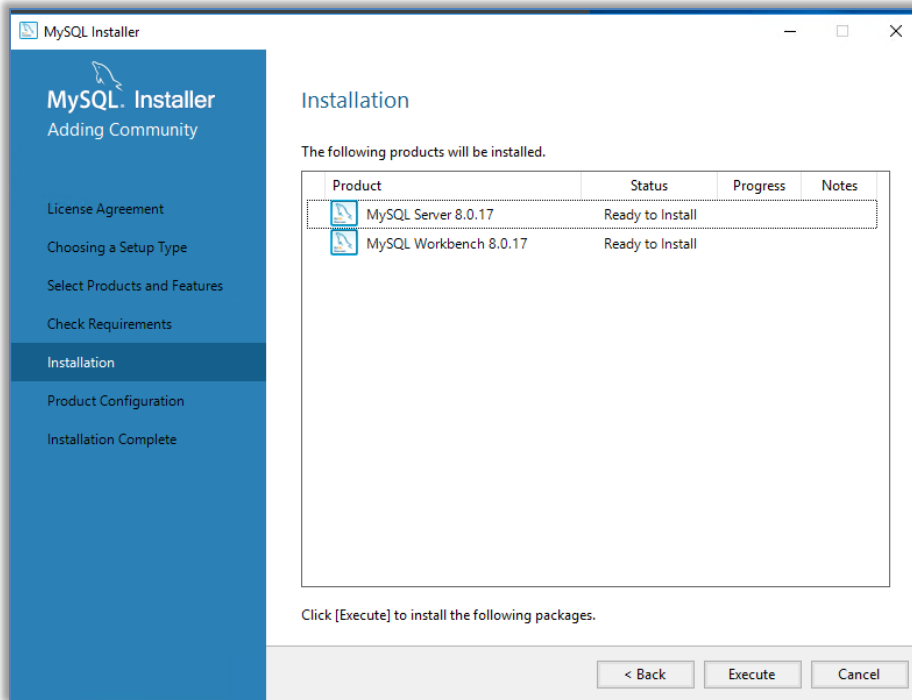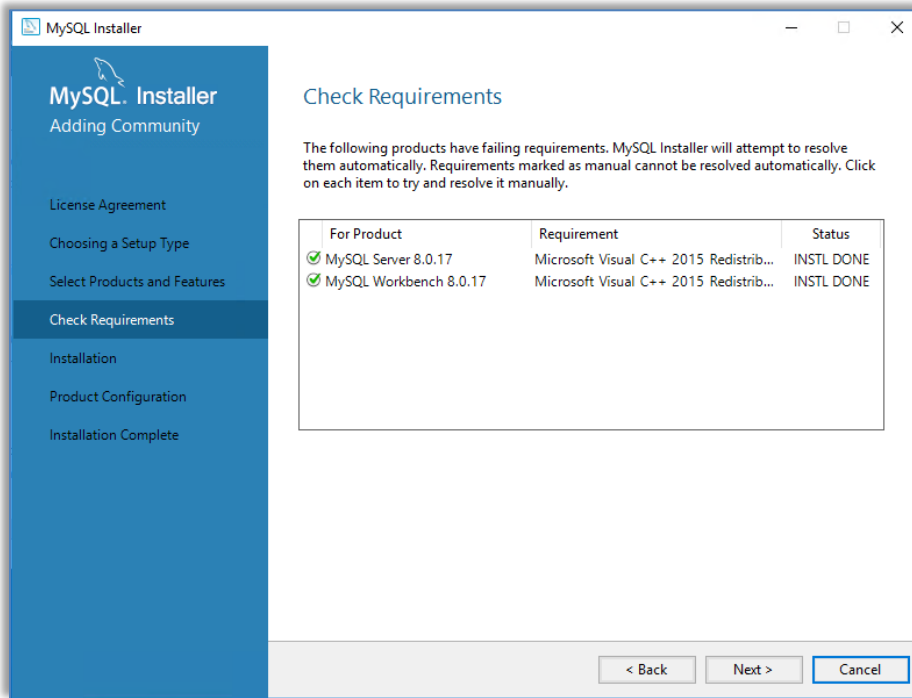
Installation Completed

- Once the installation is complete, the next step is the configure MySQL Server
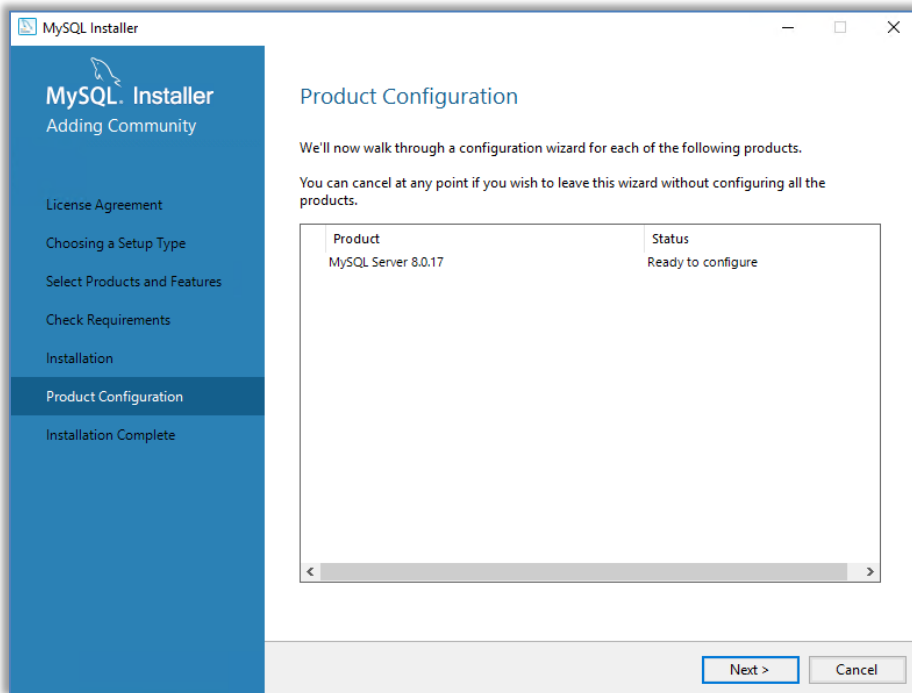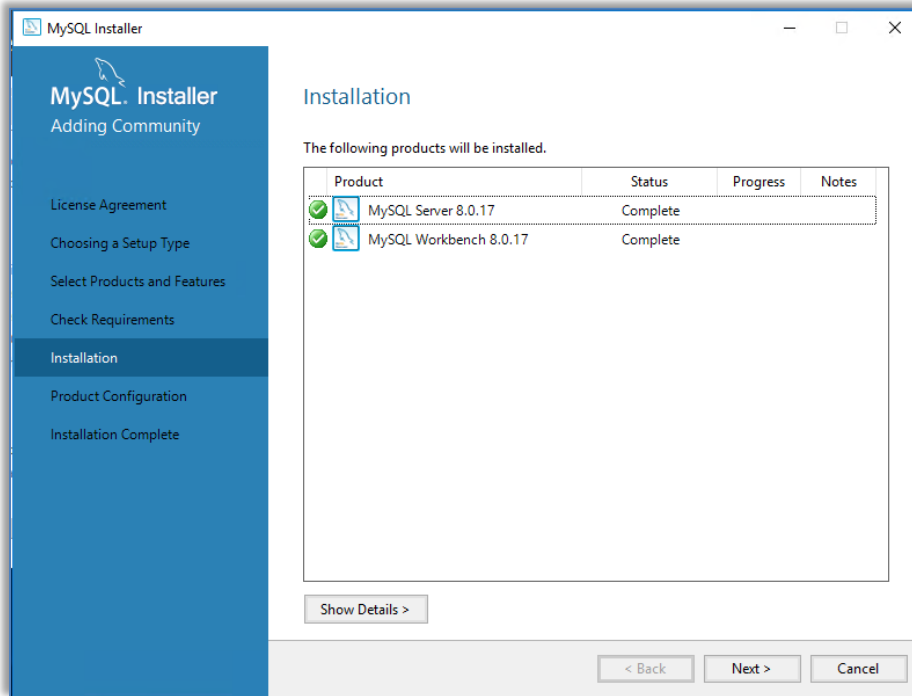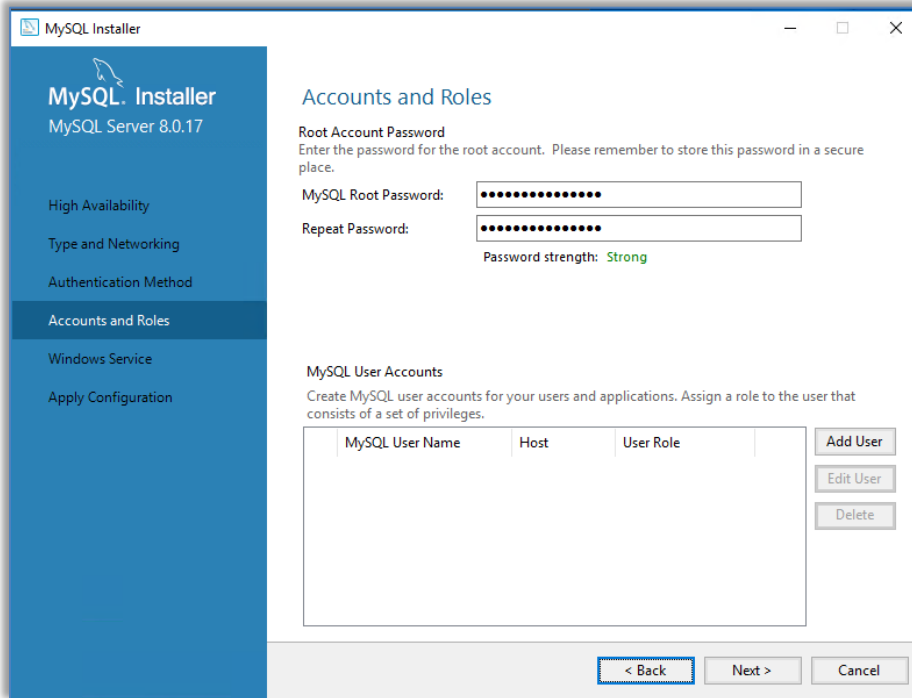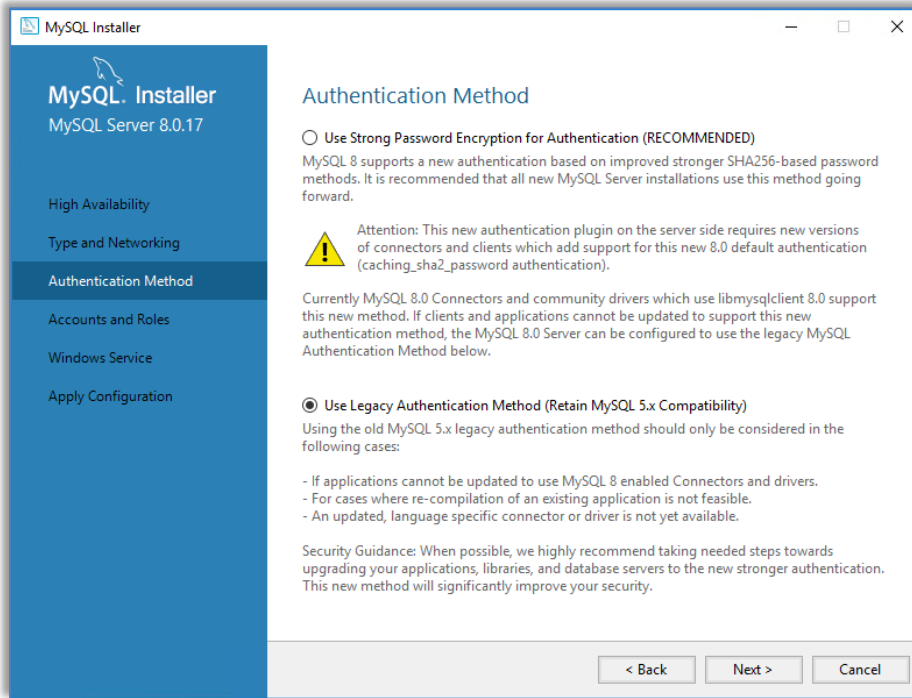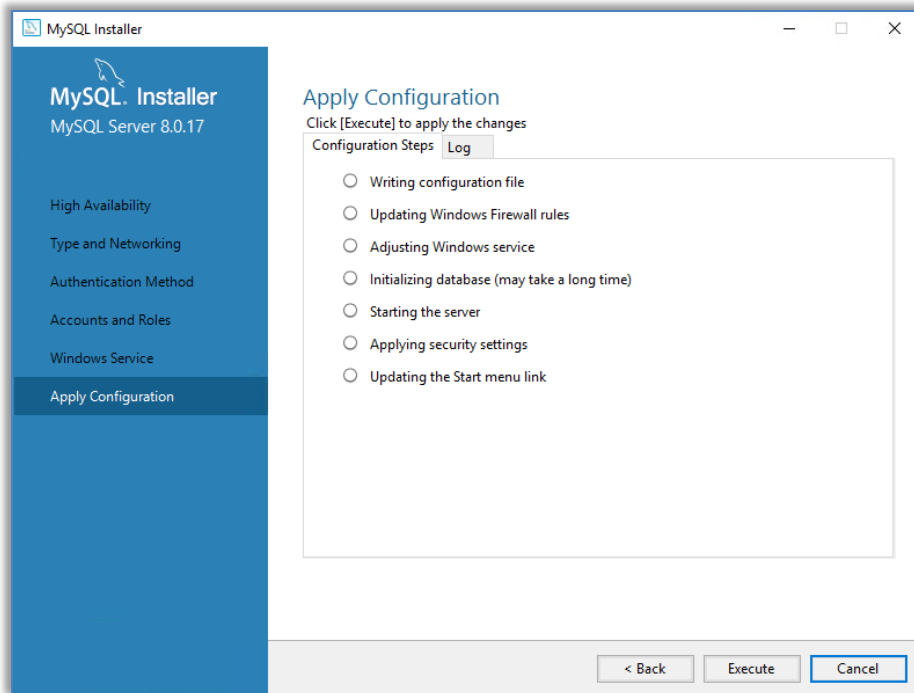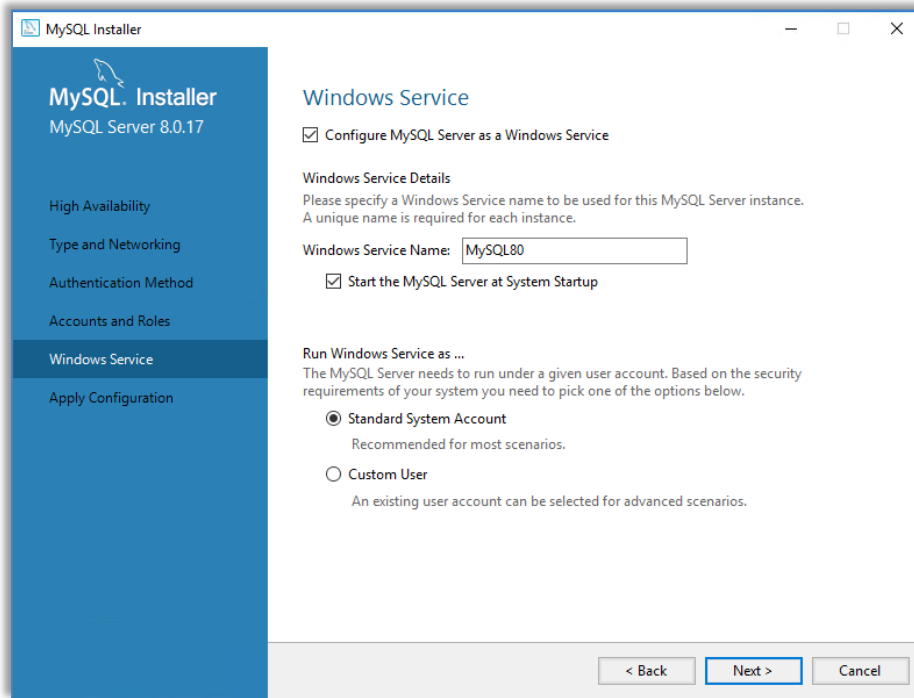
MySQL Server: Basic Configuration

- Select Standalone MySQL Server / Classic MySQL Replication. Use the below settings:

  - Config type: Server Computer

  - TCP/IP port: 13300
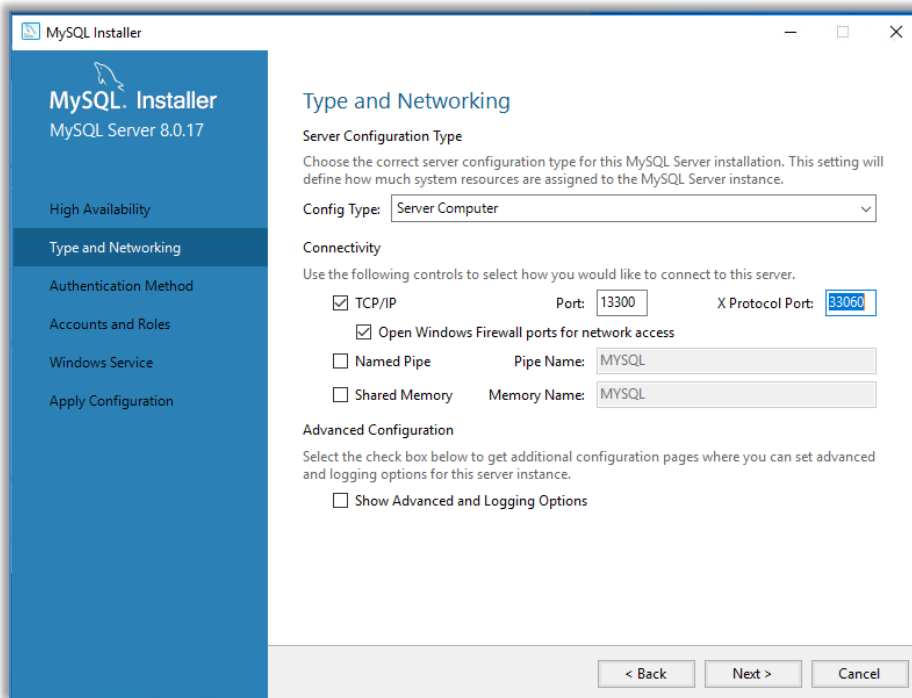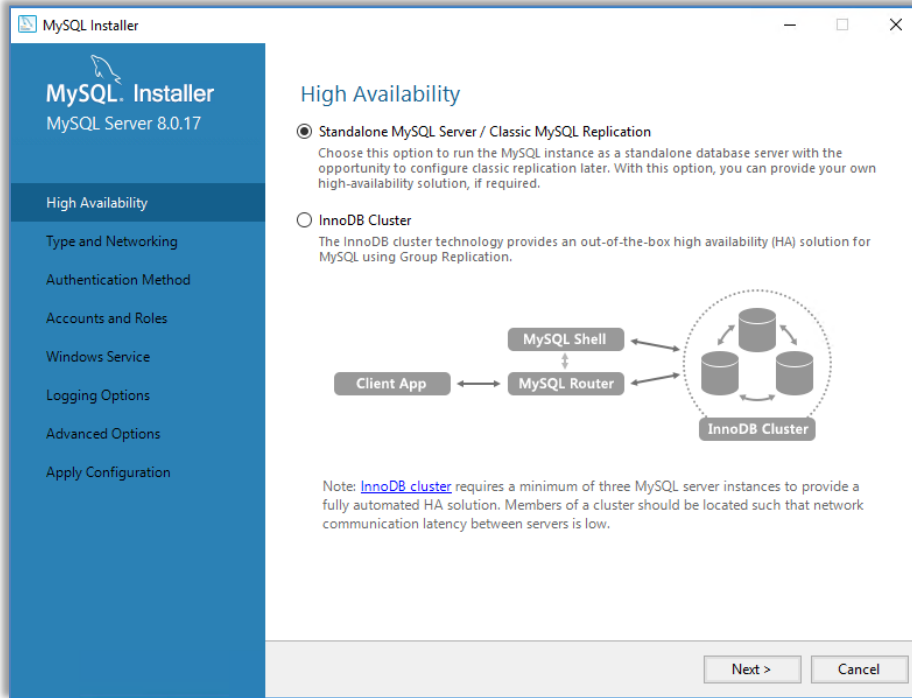
- Select Use Legacy Authentication Method. Click Next to continue

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

- 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

- At this point the basic configuration of MySQL is complete

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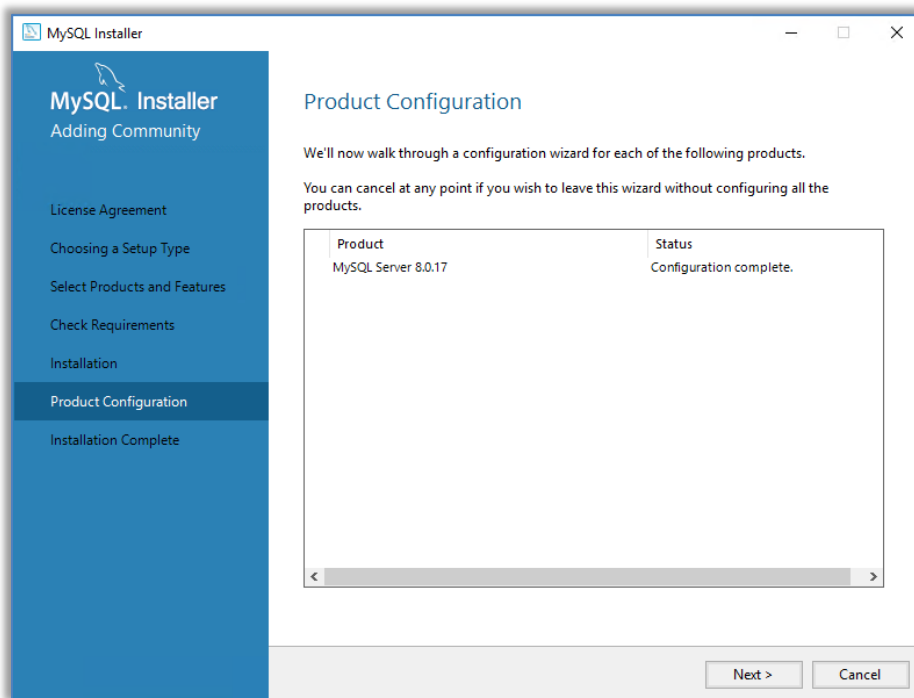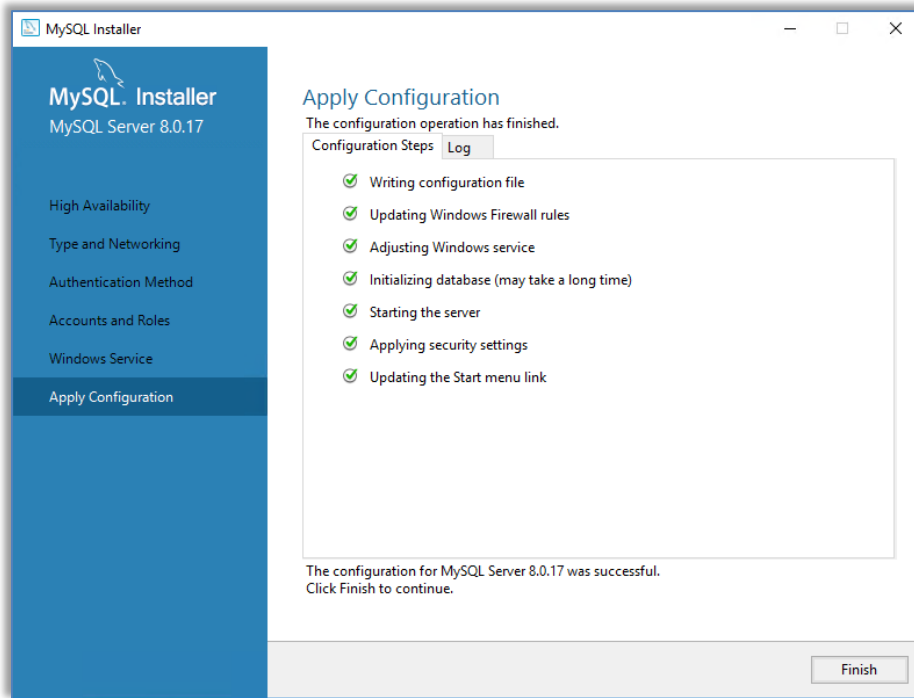
MySQL Workbench

- 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
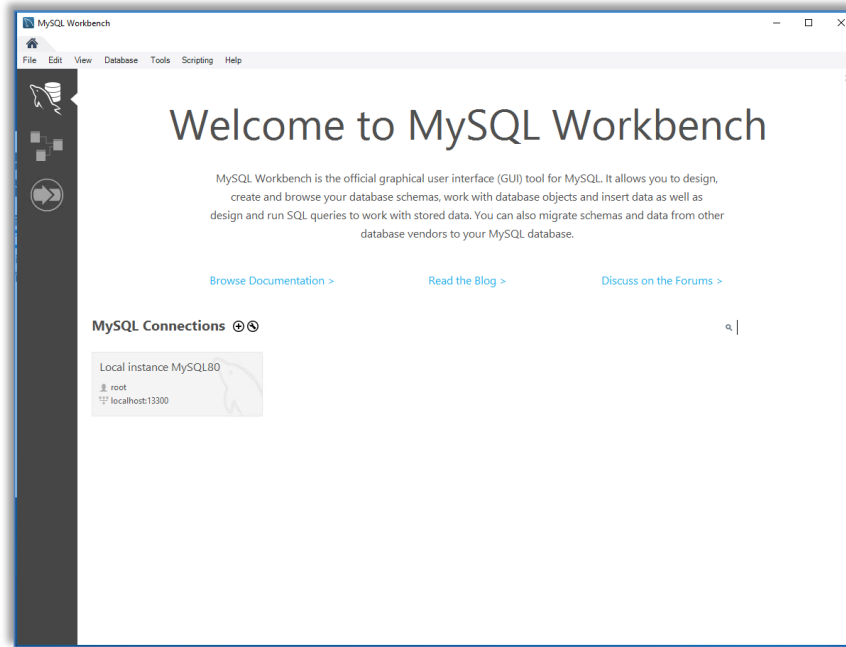
MySQL Database: Setup for VeSion

- Double click on the Local instance MySQL80 connection and log in as root

  o Use the password previously set up during MySQL Server installation and configuration
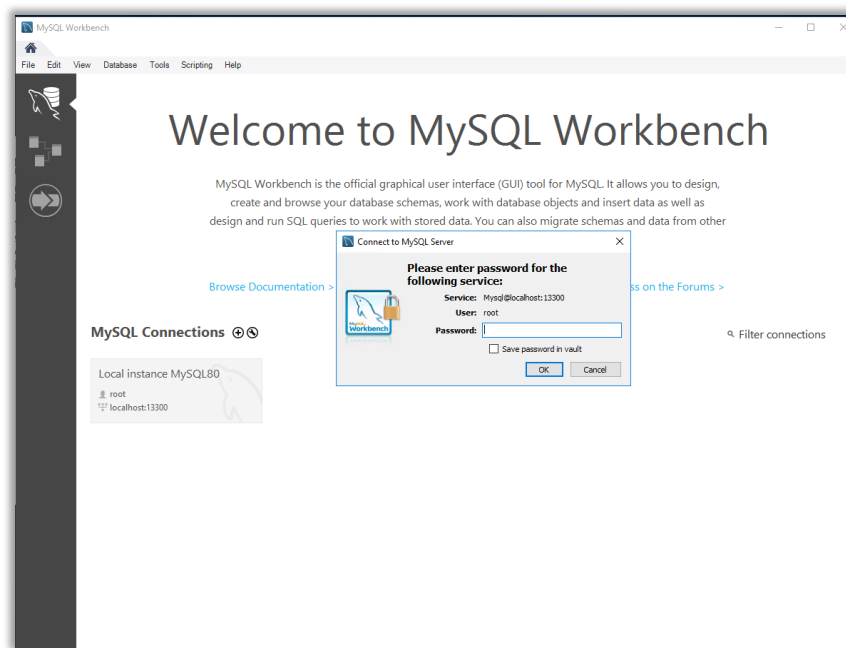
MySQL Database: Create Schema

- Select the Schemas tab near the bottom left, then

    o Click on the Create a New Schema icon on the tool bar

   o Type vesion as the name of the schema. Click Apply.
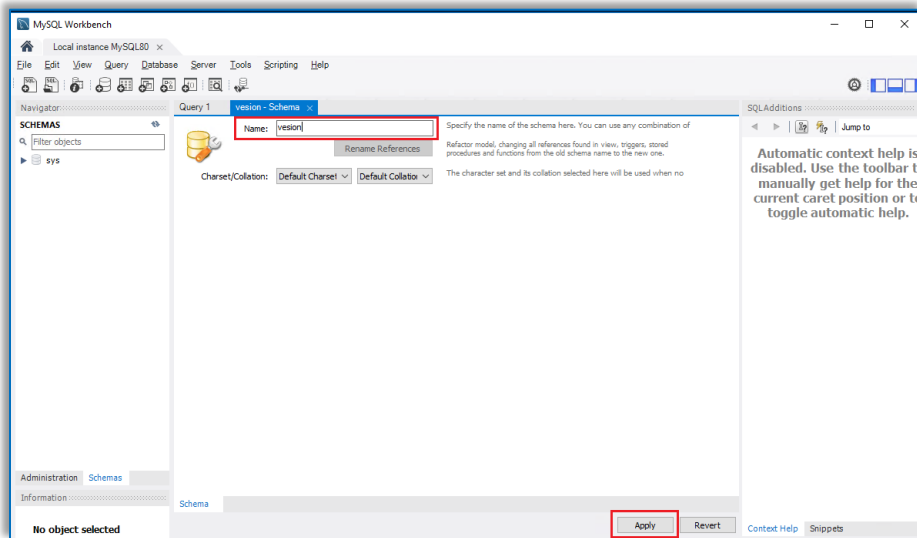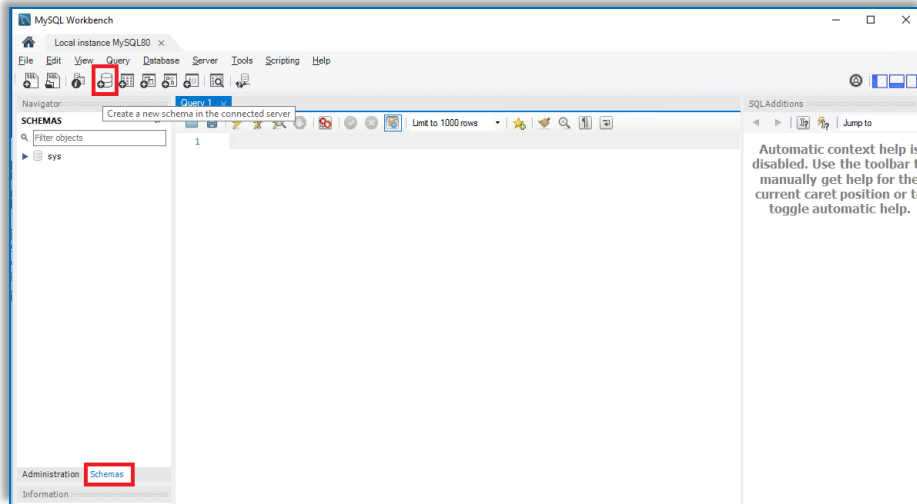
Create VeSion Schema

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

- Check that the VeSion schema is listed in the SCHEMAS section
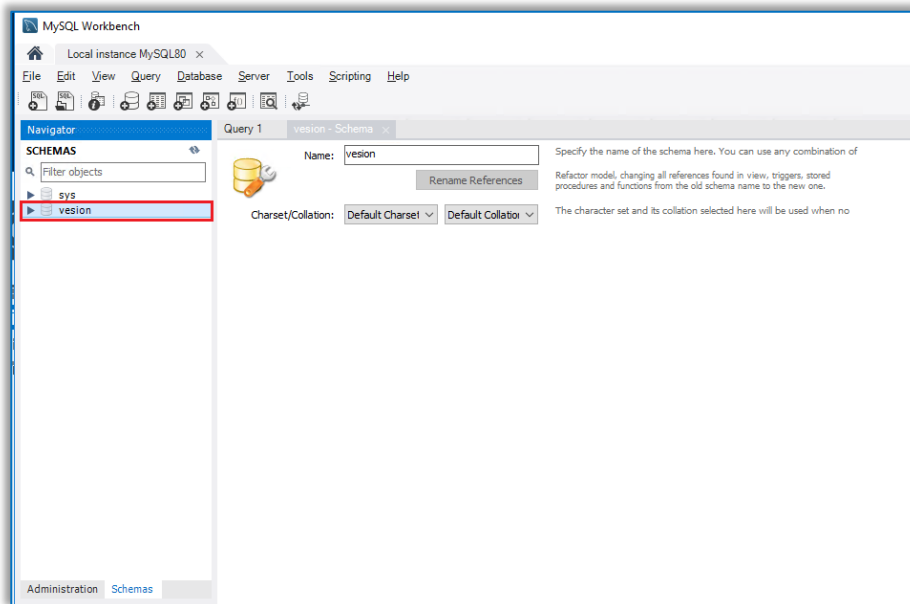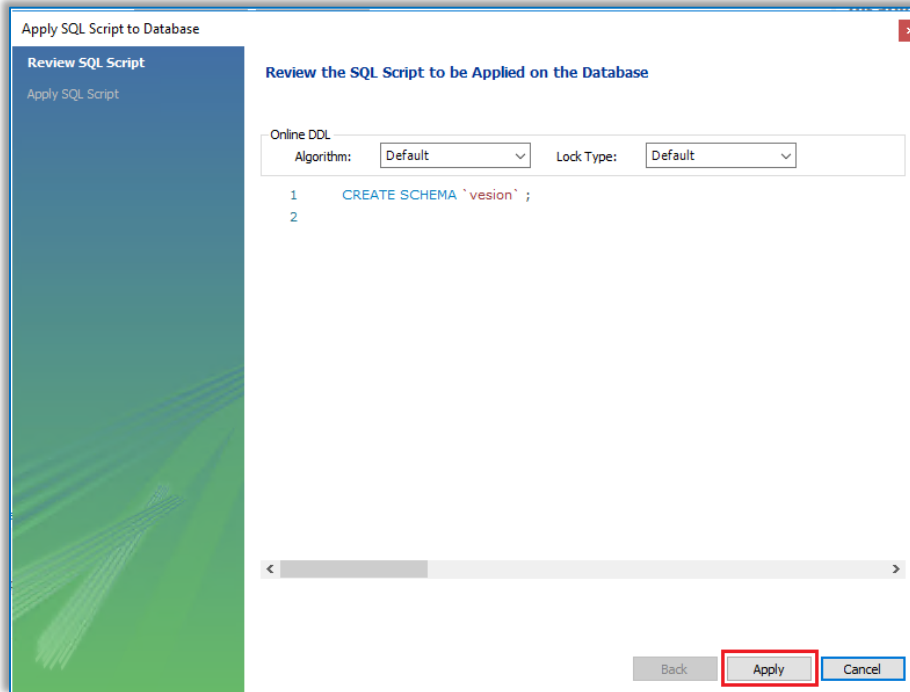
Add User for VeSion Server Login

- 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
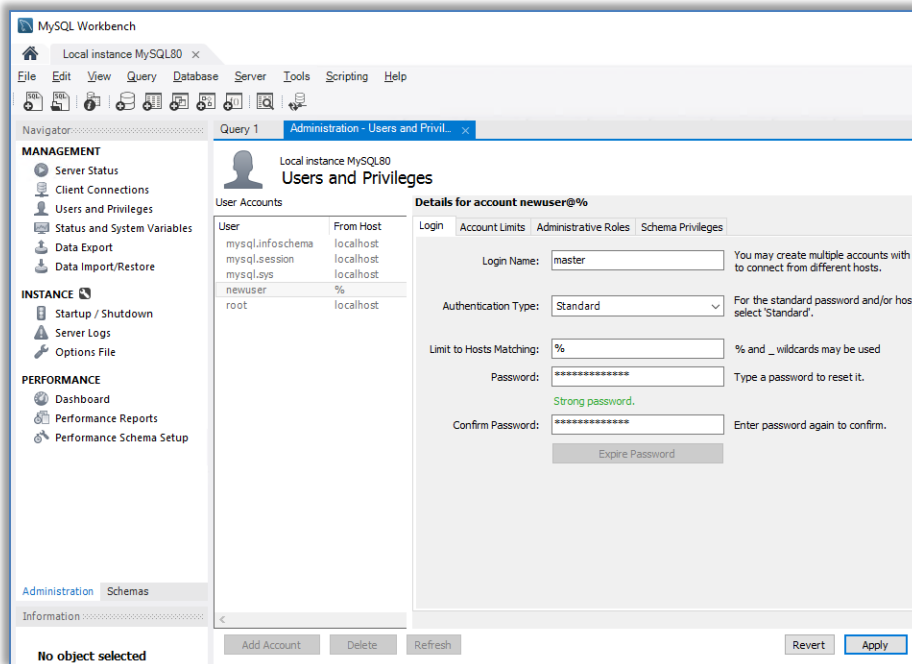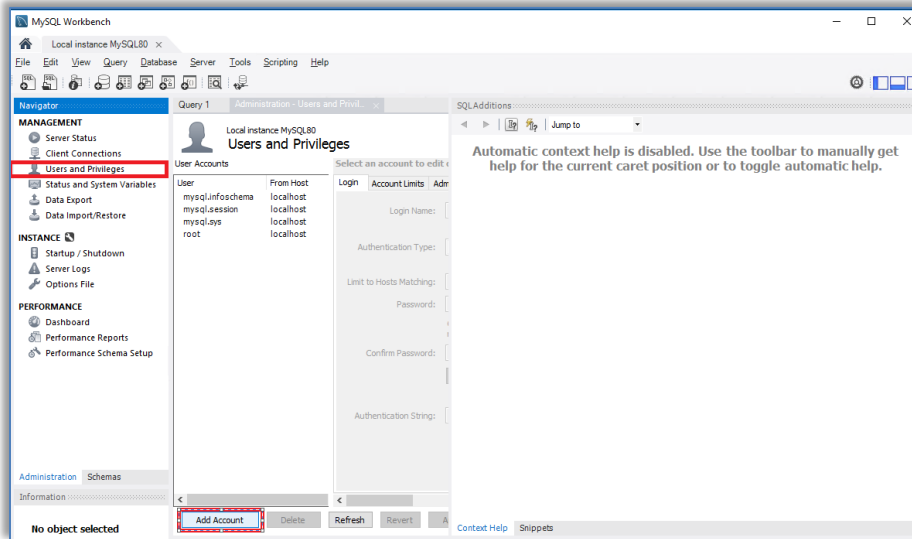
Assign Administrative Roles

- 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"
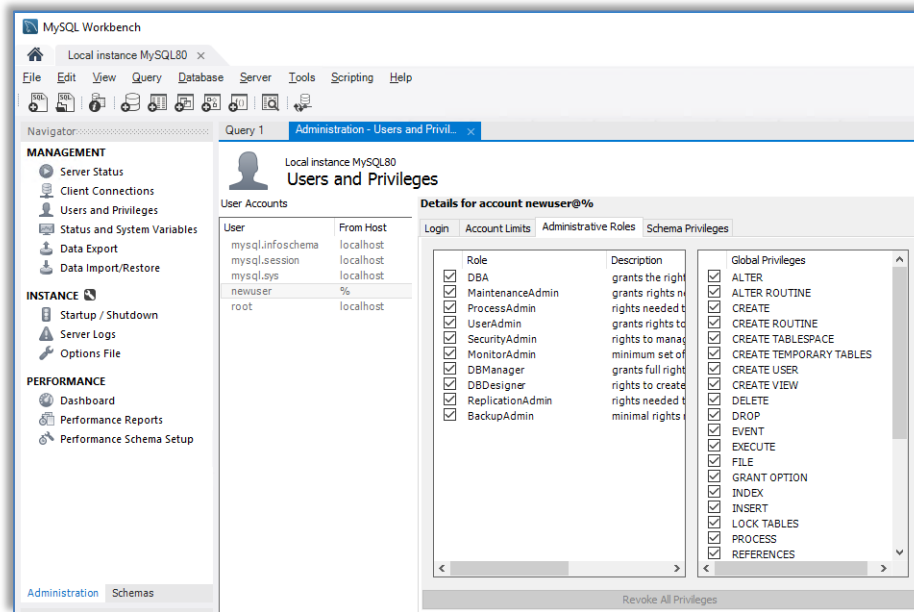

Schema Privileges

- 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
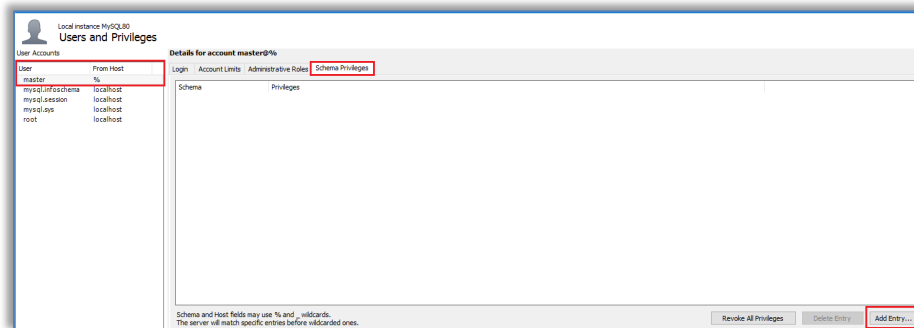
Assign VeSion Schema Privileges to "Master" User

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

- Click on Select "ALL" to allocate all applicable privileges
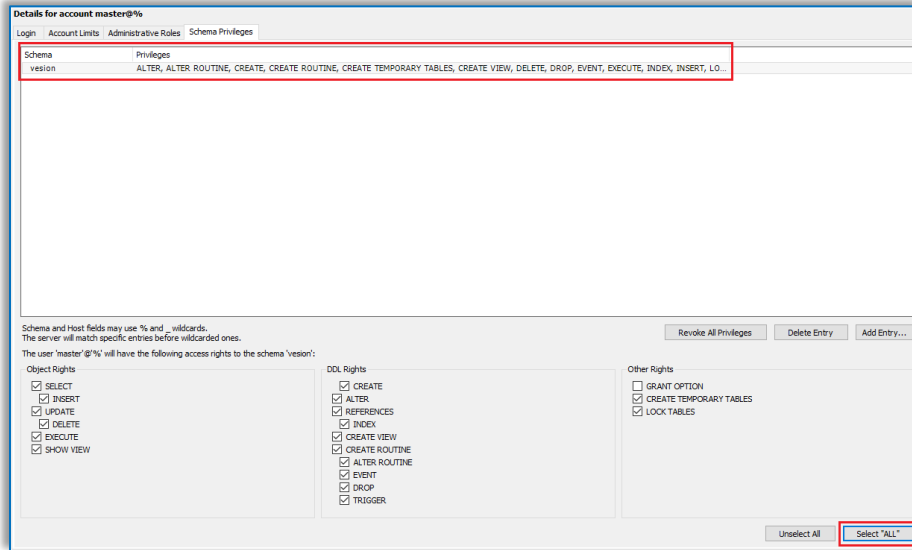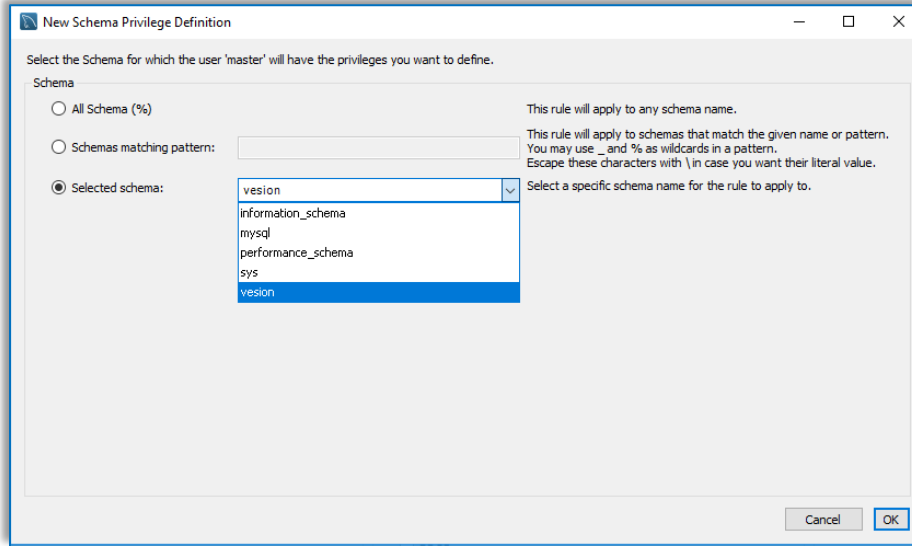
Set Up Variable Values

- 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 required features

- Once the configuration tool is launched, enter the password for user "master" and then Connect
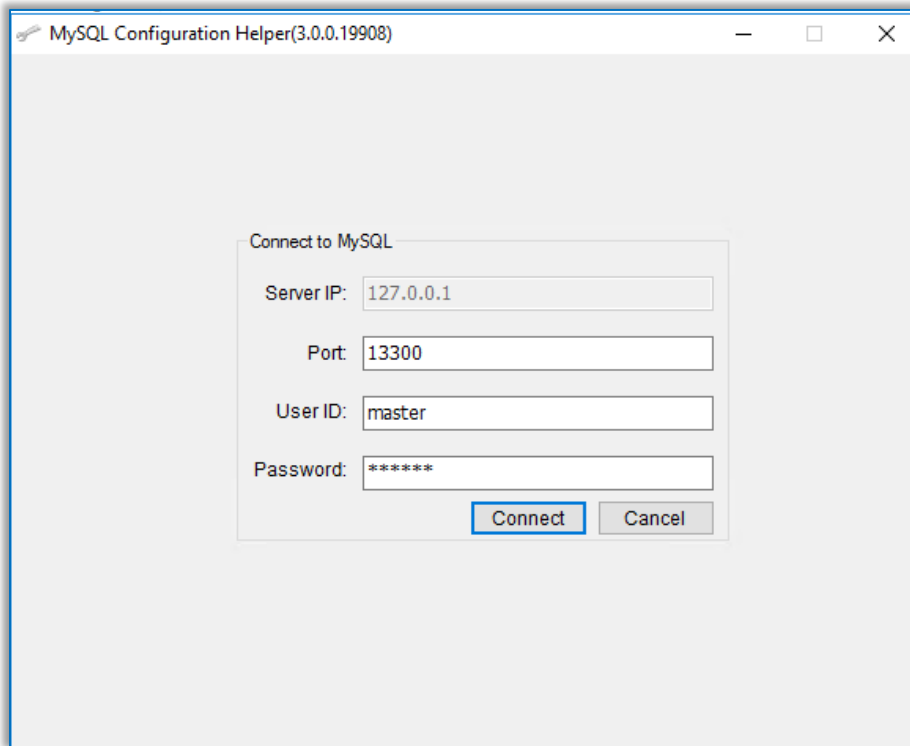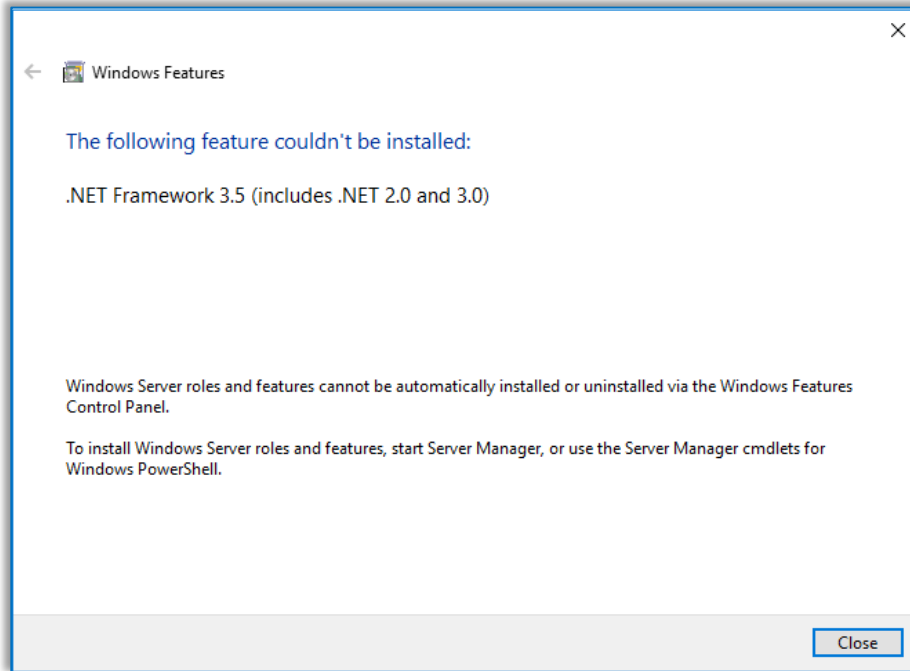
- Select Set All Automatically to run the configuration tool

- 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
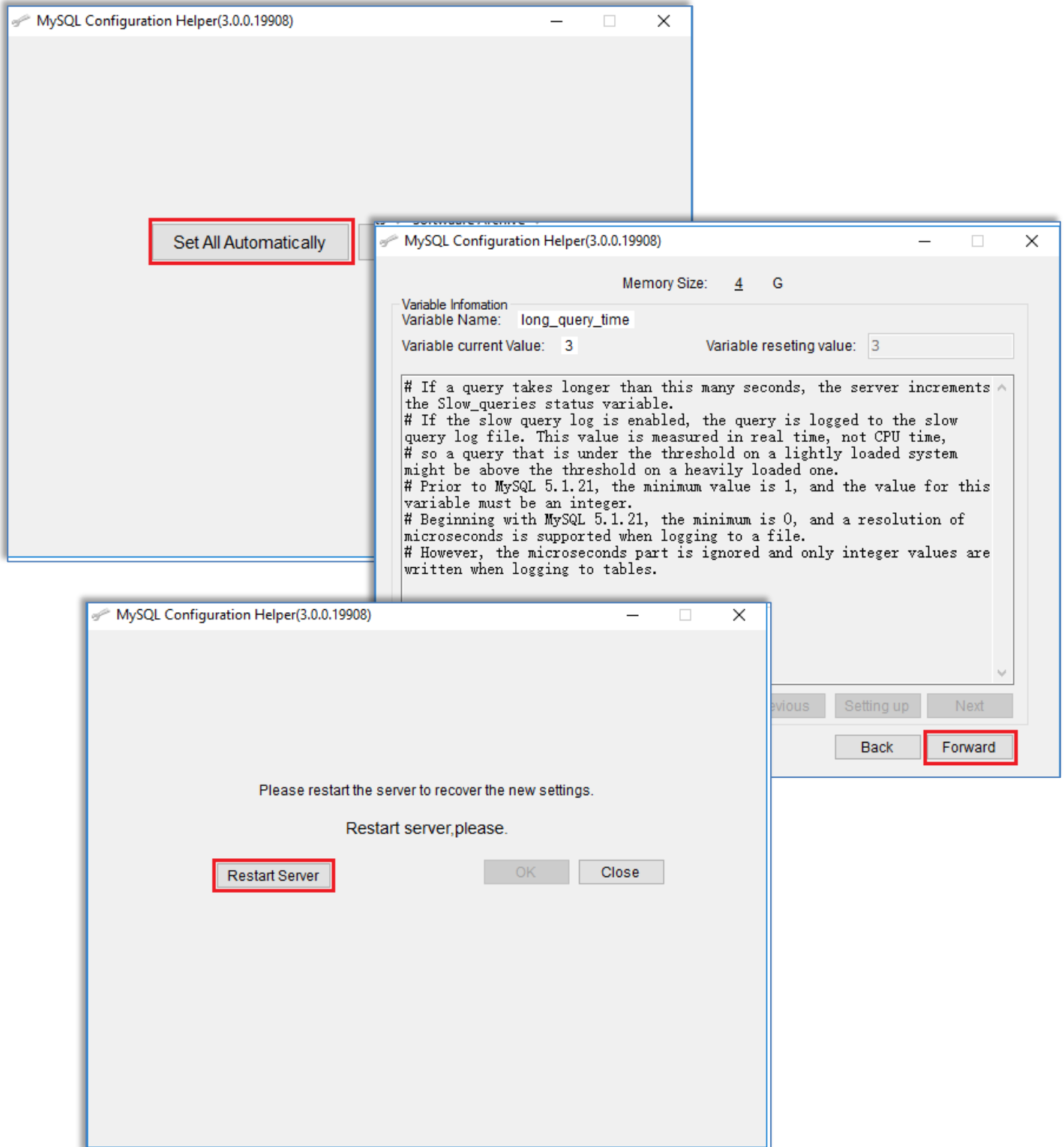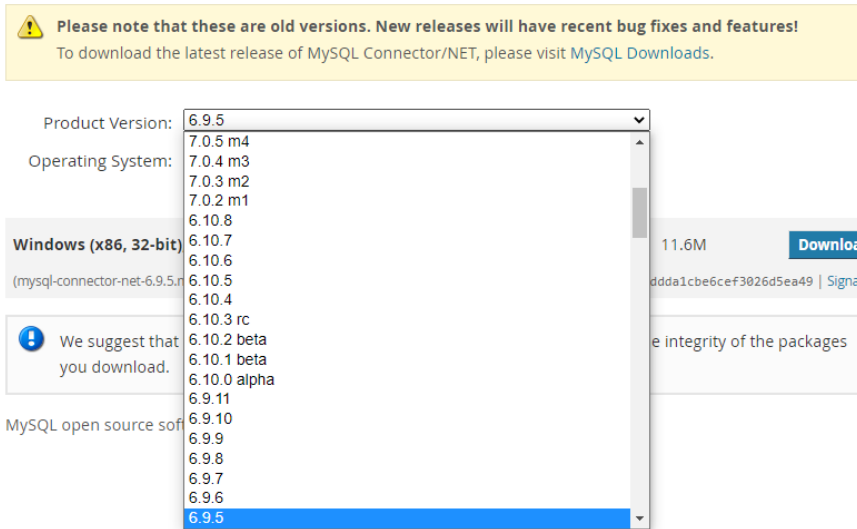
Installing MySQL Connector 6.9.5
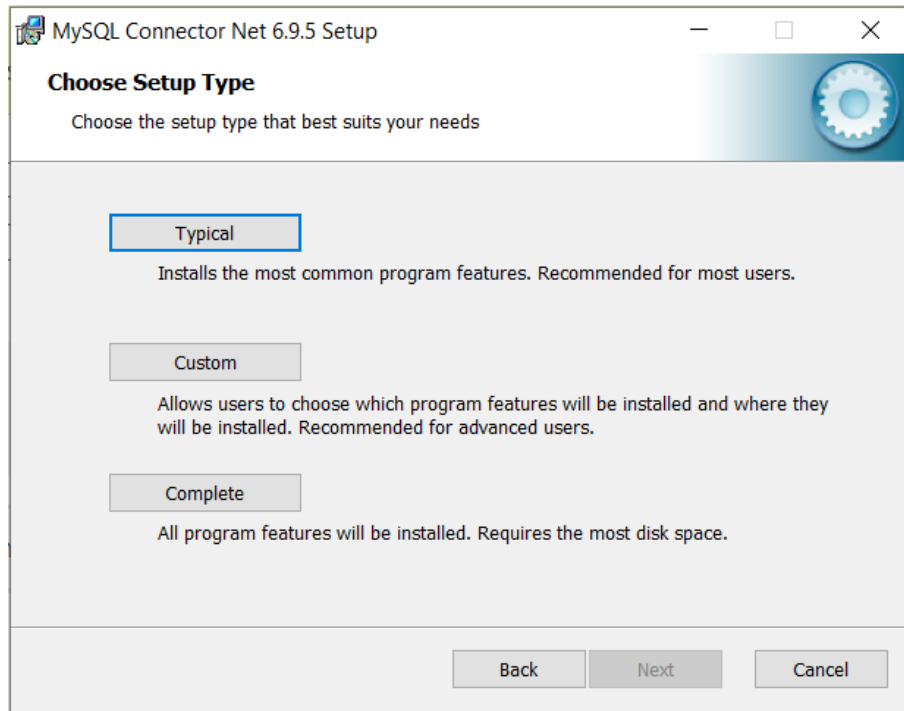
Download

- Download MySQL Connect 6.9.5 from

    o https://downloads.mysql.com/archives/c-net/

    o Select Product VerSion 6.9.5 from the dropdown and choose **Download**

- Select Typical and continue until the installation is completed

Installing PnuGPG

Step 4

Install GPG4win Application

- Unzip the gpg4win-vanilla-2.3.3.zip then double-click gpg4win-vanilla-2.3.3.exe to start the installation

- Set the Destination Folder to the appropriate installation drive, Drive D: in our example. Follow the on-screen instruction to complete the installation
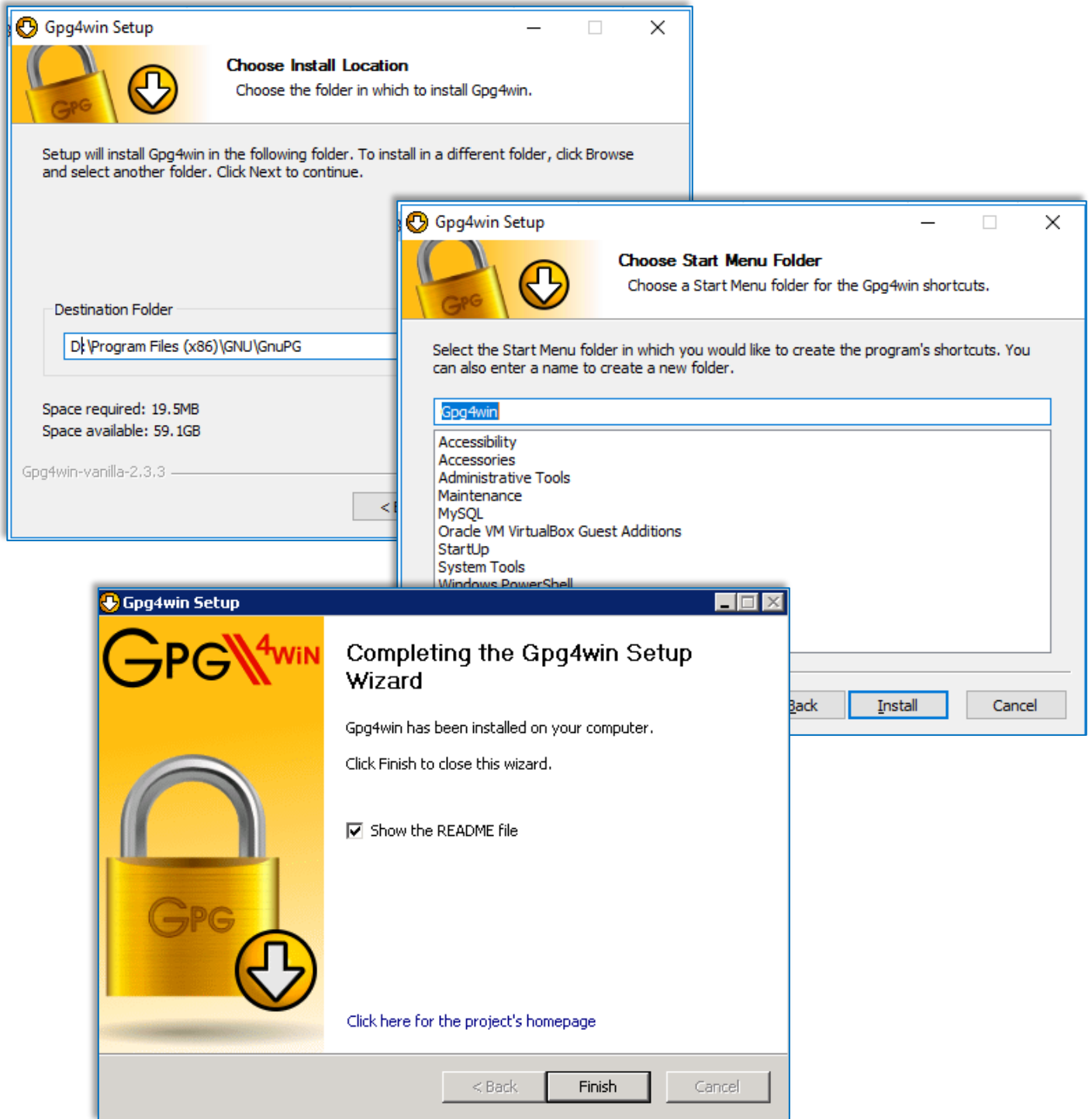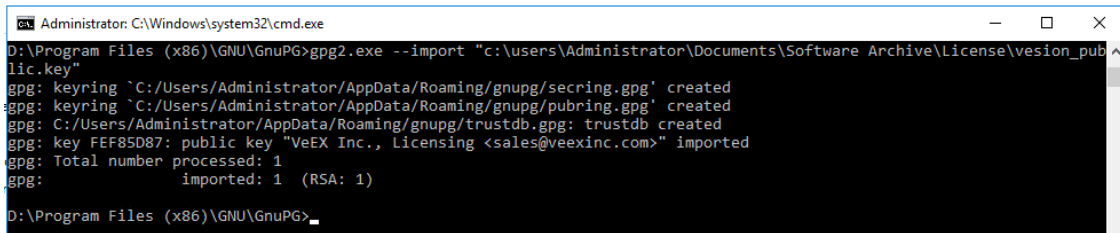
Import Public Key File

- Copy the provided vesion_public.key file to \Documents\Software Archive\License folder

- Launch Command Prompt (cmd). Change directory to the GnuPG installation folder and enter the below command to import the public key to the system

```
D:\Program Files (x86)\GNU\GnuPG>gpg2.exe --import
"c:\users\Administrator\Documents\Software
Archive\License\vesion_public.key"
```
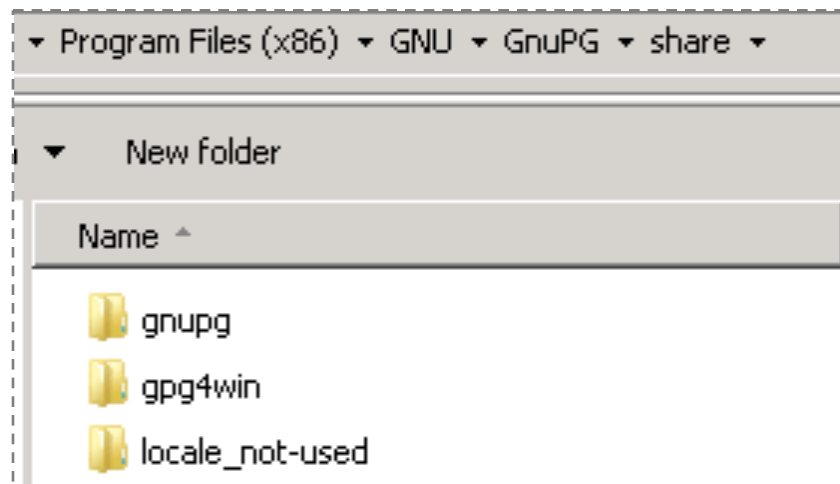
- Below is the expected output of the command for a successful public key import

Running on Windows OS: Non-English Version

- If the VeSion system is running on a non-English language version, then it is required to remove the locale folder in the GnuPG installation

 o This can be done by renaming the folder from locale to locale_not-used

- If this is not done, the VeSion System will always display the license expiration page when logging in, even when having a valid license

Installing VeSion Server

Step 5

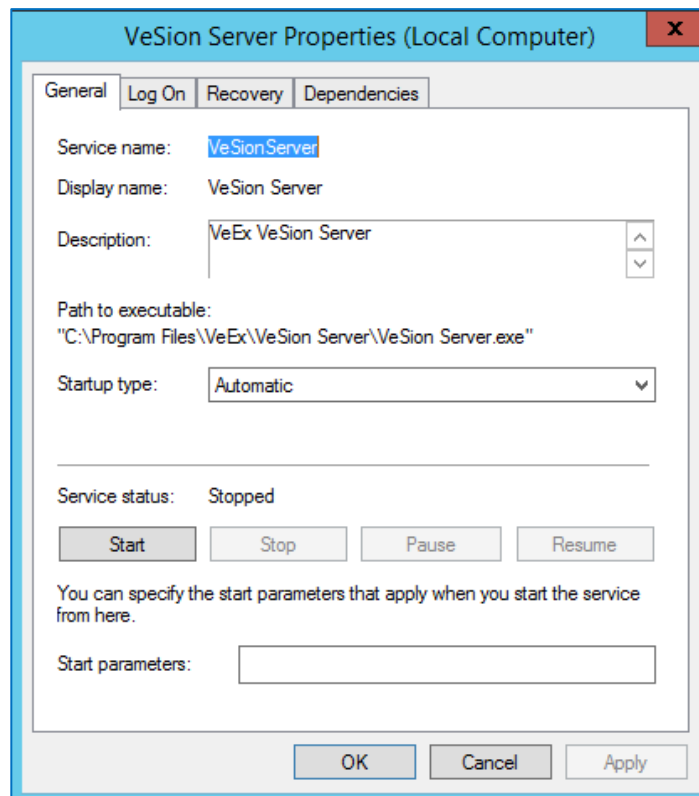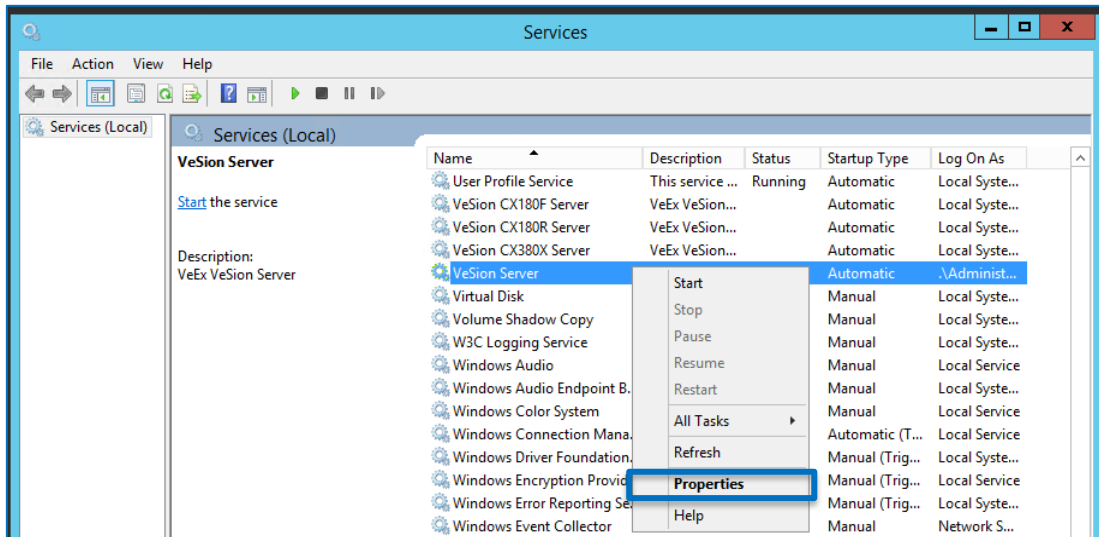## Install VeSion Server Application

- Run setup.exe to install the VeSion Server application to the target hard drive
    - The VeSion Server is a 64-bit application and will install in the \Program Files\VeEx\VeSion 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
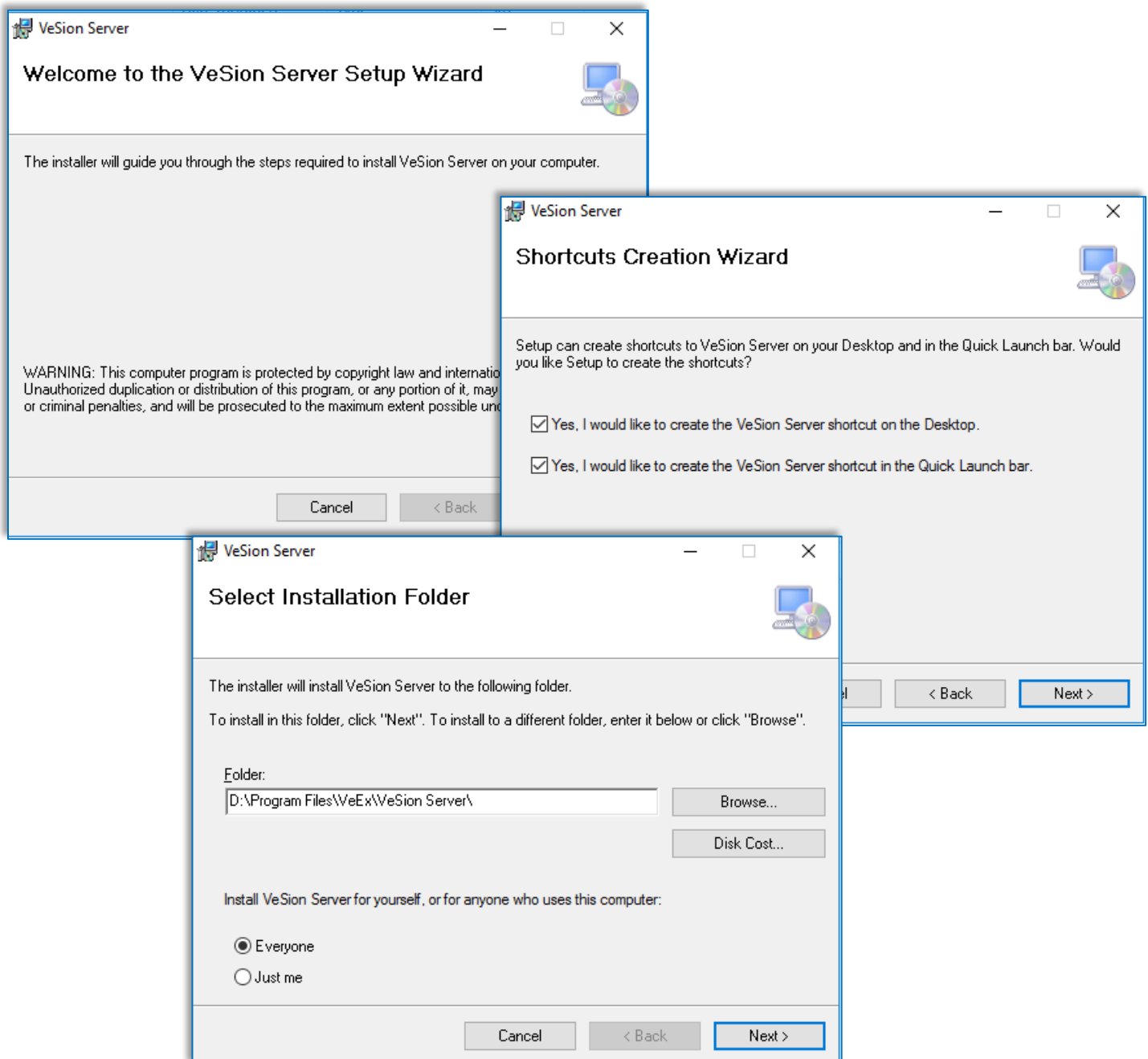
Configure Login for VeSion Server Services

- After the VeSion Server application has been installed, open Windows Services

- Navigate to and double click on VeSion Server service, then open Properties

Configure VeSion Server Application

- Open the Log On tab

- Select This account

    o Enter the credentials of the user account with the administrator rights

    o The Administrator account was used in this example

- Click Apply

- Click OK to exit
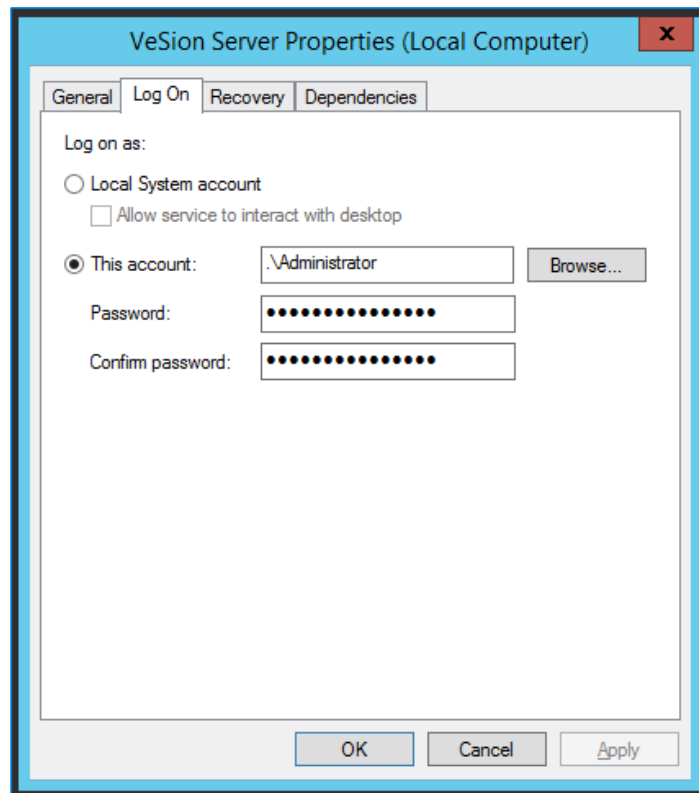
- Launch VeSion Server Administrator and select the Configuration tab

- Update the settings in the Server Setting sub-tab:

    o DB User Name: master

    o DB Password: as previously configured

    o Mark the checkbox corresponding to the VeSion

        • sub-systems that the VeSion system is supposed to use and is licensed for

- o To set the PGP Path, clock Select GPG and navigate

    - to the GnuPG installation folder and select gpg2.exe

- o Click Save to save settings
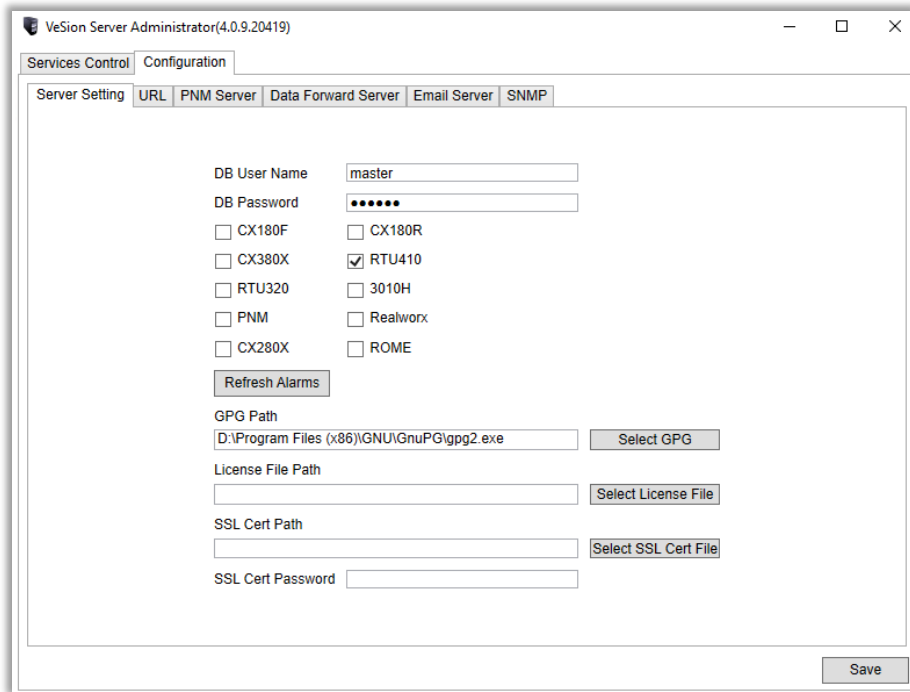
- Run 'SET GLOBAL log_bin_trust_function_creators = 1;' in Workbench
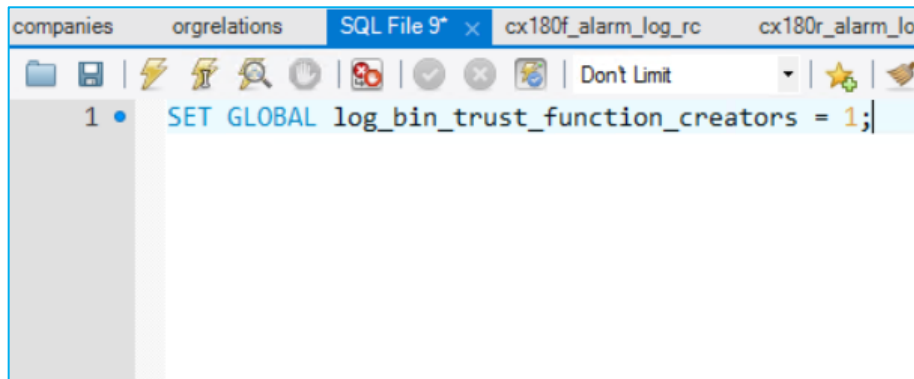
Database Creation/Update

- Starting with version 4.1.5 and onwards, VeSion Server Administrator will include a "Create/Update" database function for the user to upgrade or initialize the vesion database

- DB Host: The host IP of the MySQL Server

- Once database information are configured, click "**Create/Update**" to initiate the database modification

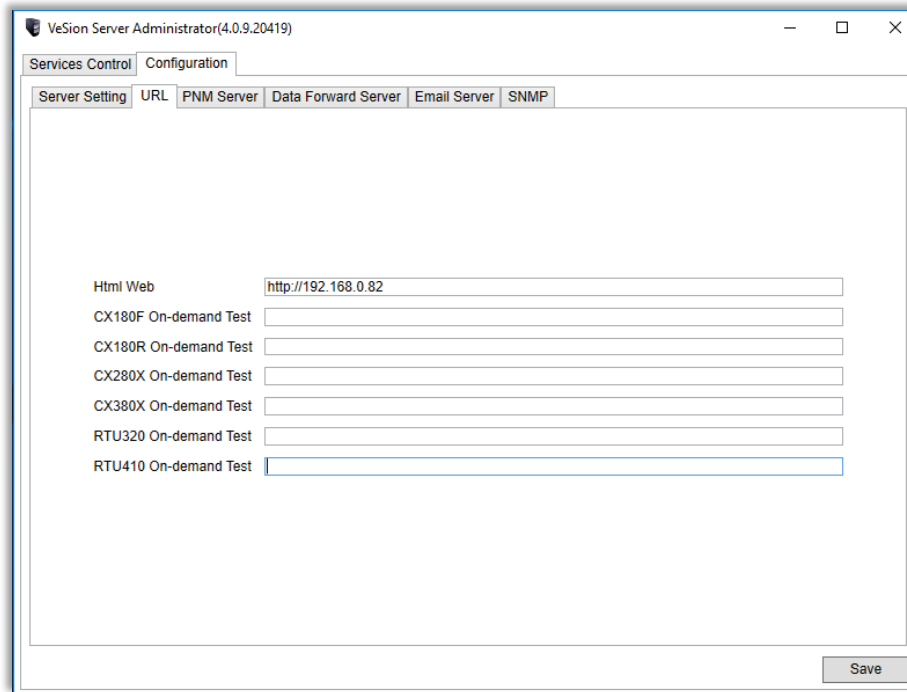- NOTE: vesion schema **must** be created in MySQL or this step will result in an error
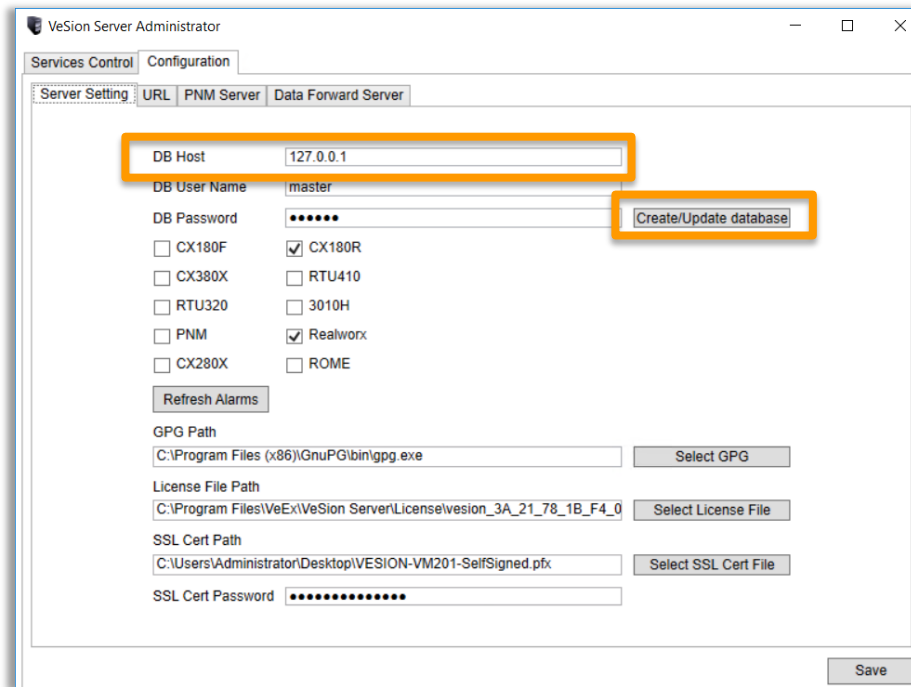
- Run 'SET GLOBAL log_bin_trust_function_creators = 0;' in Workbench
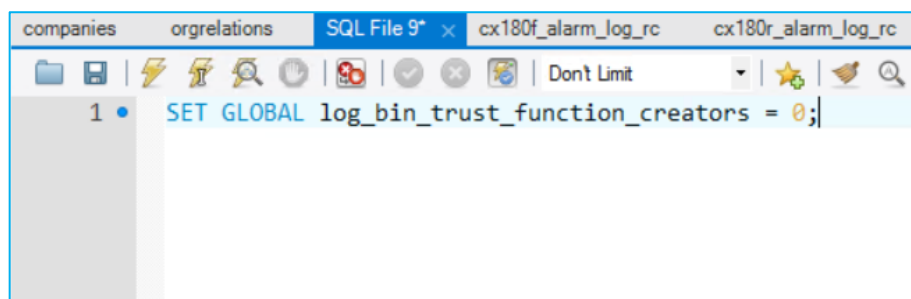
URL

- Go to the URL tab

    o Enter the VeSion Web HTML5 URL

    o The other on-demand test links are used to provide a link to the alarmed port in the SNMP alarm trap to facilitate a Network Operator Center tester to verify the issue


Email Server

- Navigate to the Email Server tab to set up email account for email notifications

- When finished with all the settings, click the Check button to run an email check
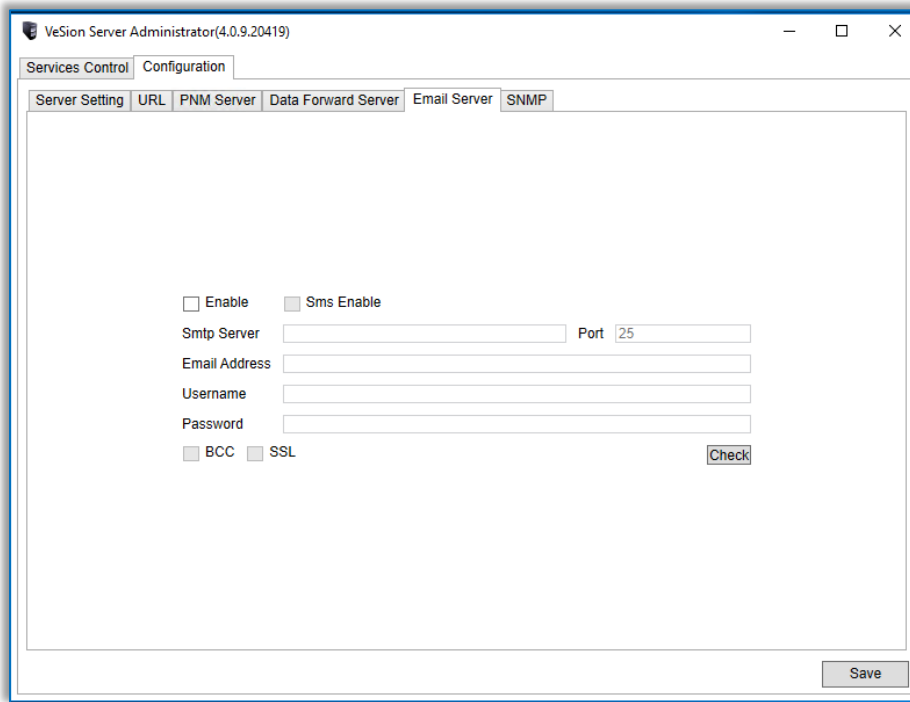
SNMP Server

- Navigate to the SNMP tab to configure the IP address and the UDP port of the SNMP trap collector server
- The SNMP Server settings on the VeSion Server Administrator are for sending system alarm traps
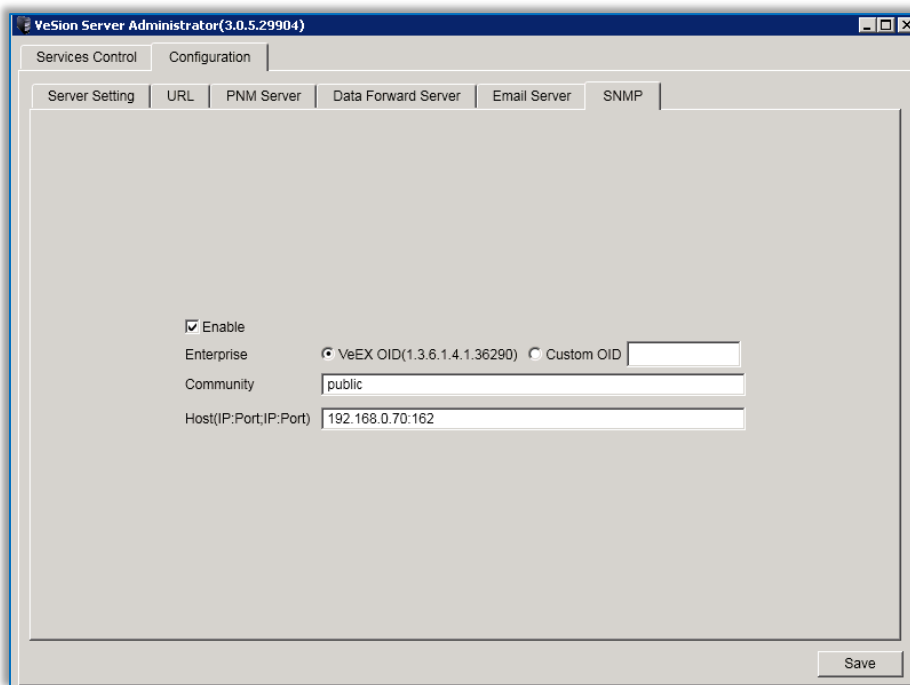
Starting VeSion Server

Ethernet Port

- Before starting VeSion Server service, make sure the Ethernet port, with the MAC address the VeSion Server is licensed for, is in port linkup state
- The MAC address of the Ethernet port should be provided to VeEX in order to obtain a license file for the VeSion system
    - o The MAC address of the Ethernet port is found in the 'Network Connection > Details window
    - o When there are multiple Ethernet ports in the server, make sure to provide the one that will be used for connecting the server to the network
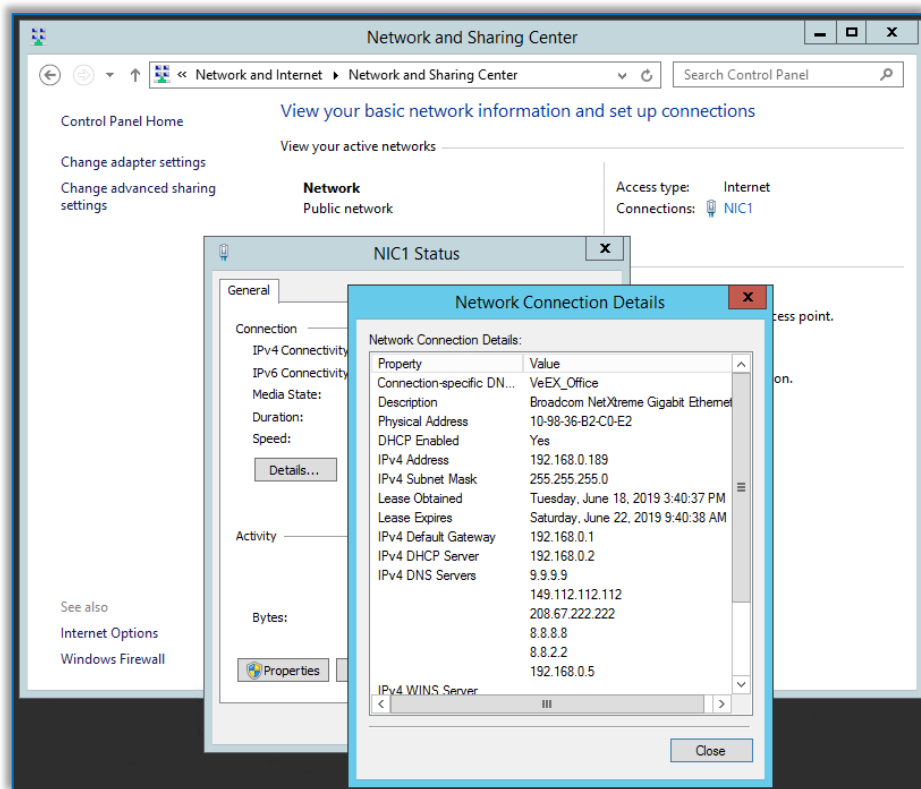
Services Control

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

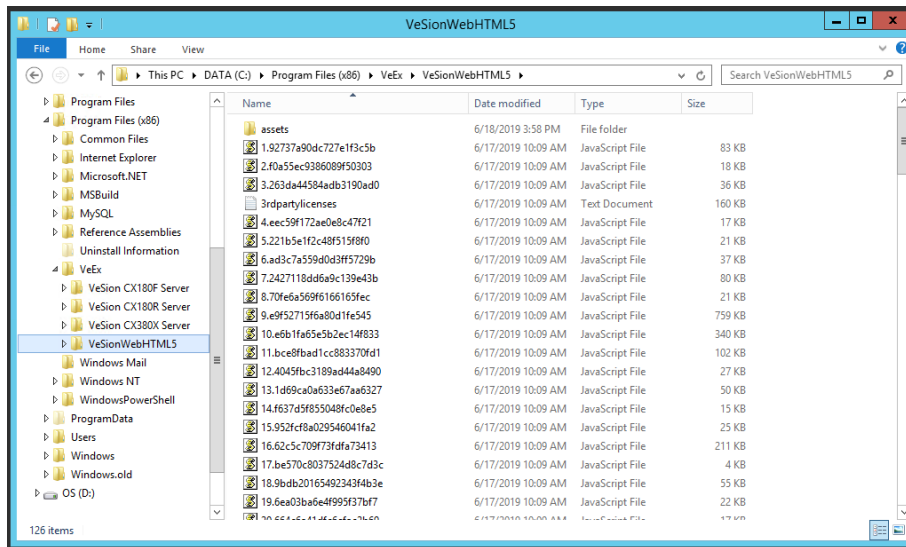- Click Start Service button to start the VeSion Server service
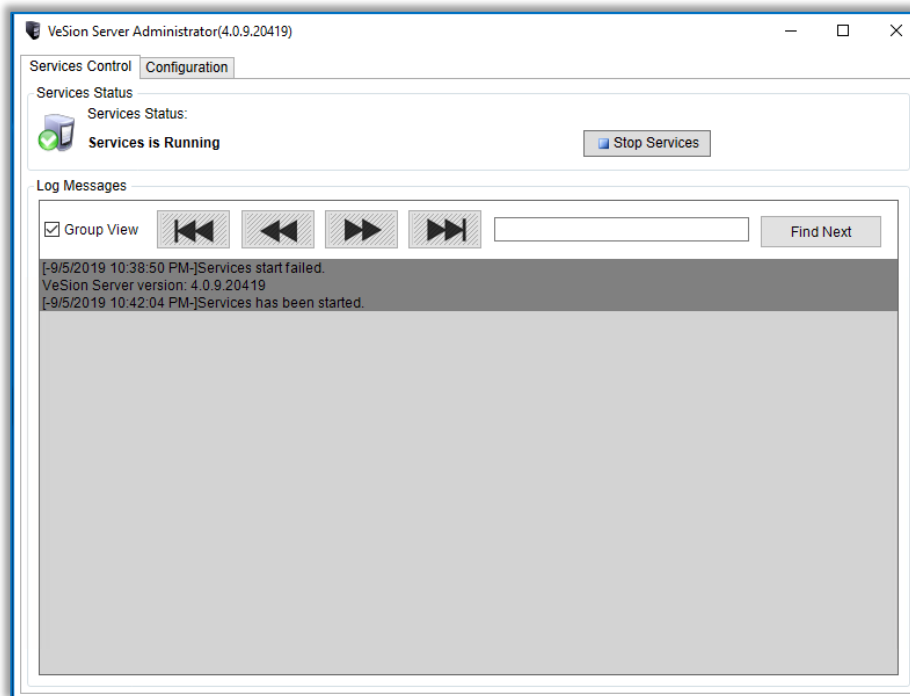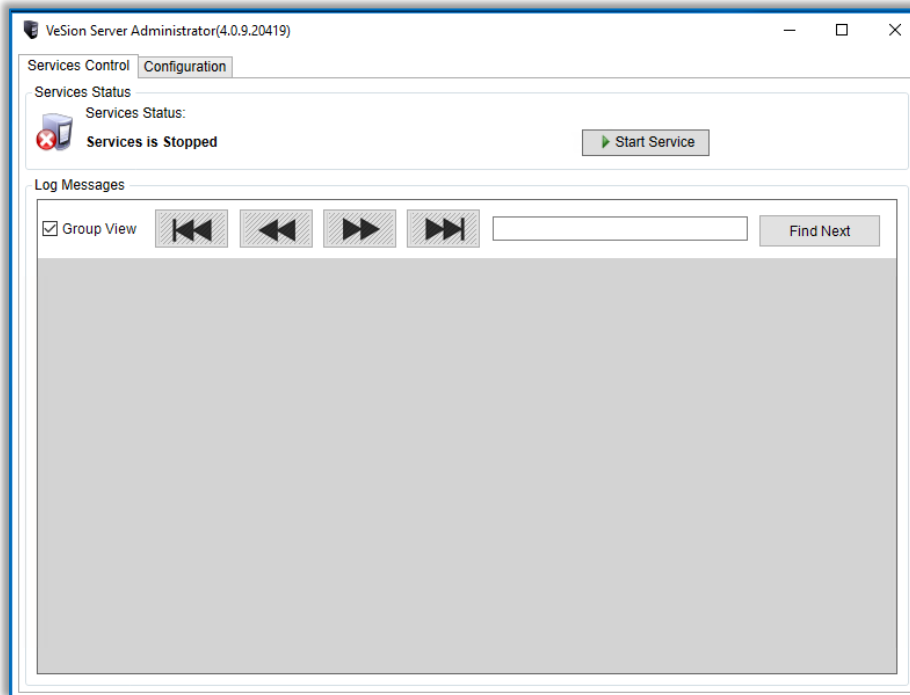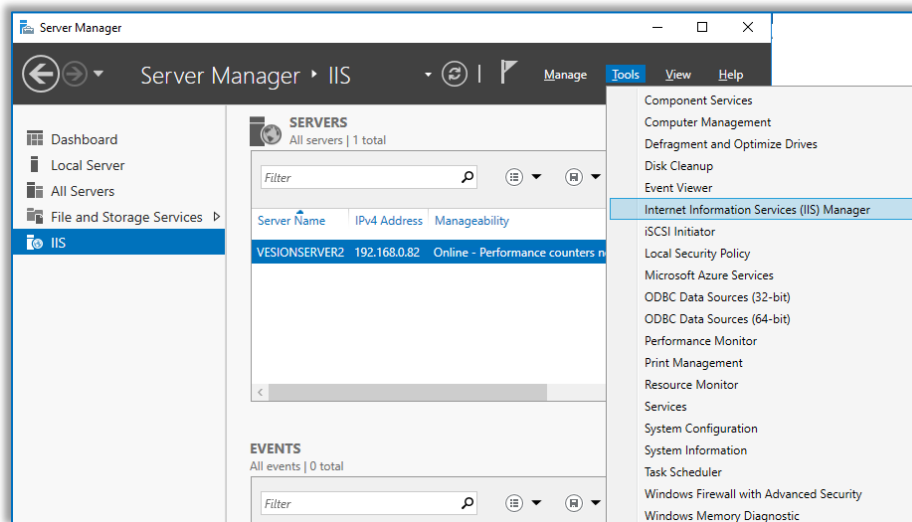
Installing VeSion Web HTML5

Step 6

VeSion Web HTML5 Installation

- Create a VeSionWebHTML5 folder under the Drive:\Program Files\VeEx\

- Unzip the VeSionWebHTML5 software

- Copy all the files to the \Program Files\VeEx\VeSionWebHTML5 folder
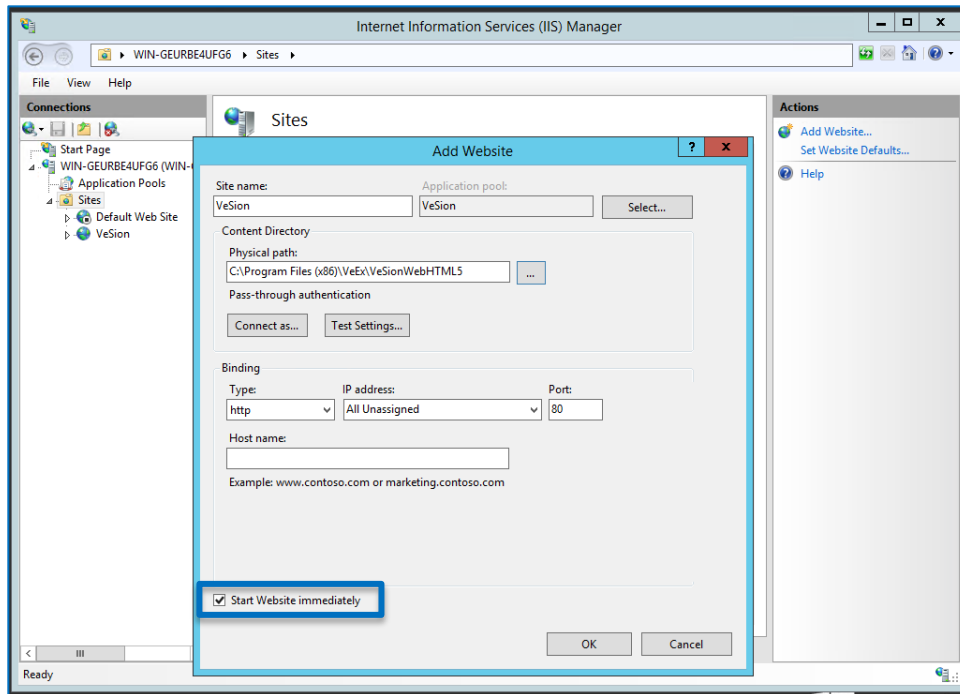

Setting Up VeSion Website

- Open Internet Information Services (IIS) Manager on the Server Manager
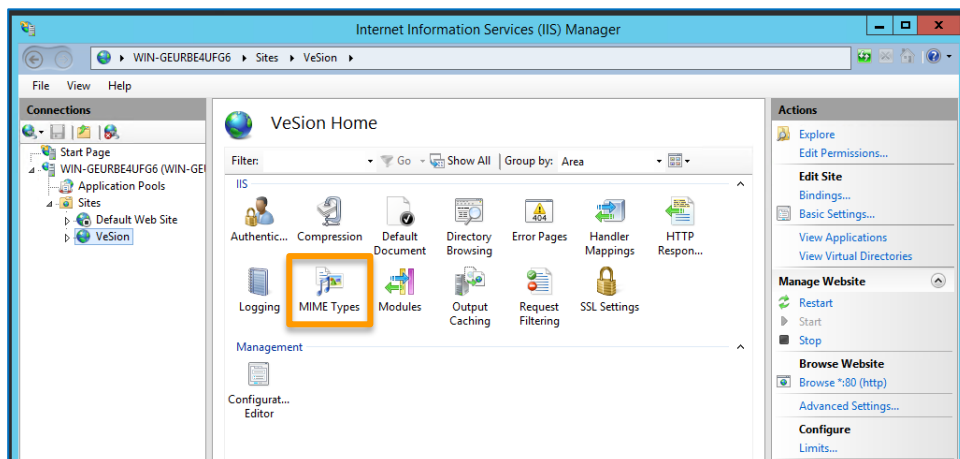
- Right click on Sites and then select Add Web Site

- In the Add Web Site window

  o Enter VeSion as the Site Name

  o Set Physical path to Drive:\Program Files\VeEx\VeSionWebHTML5

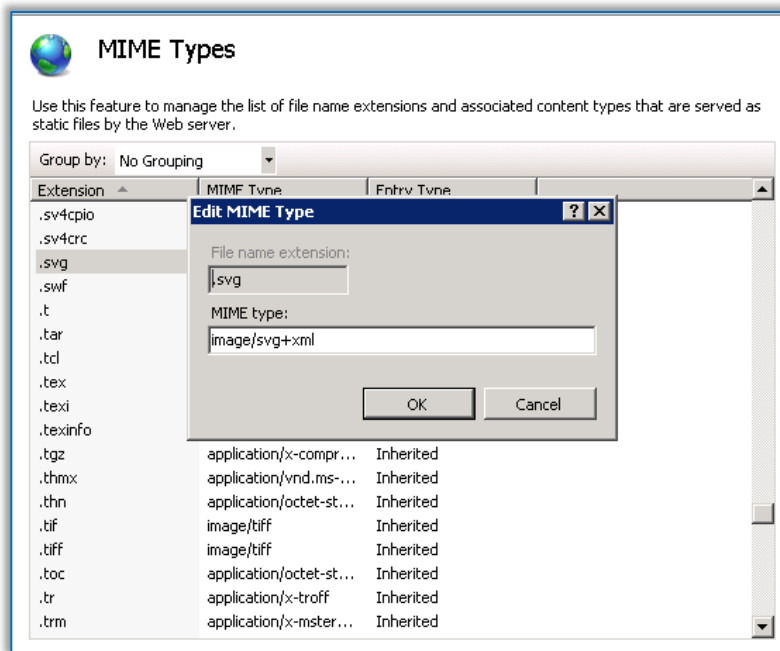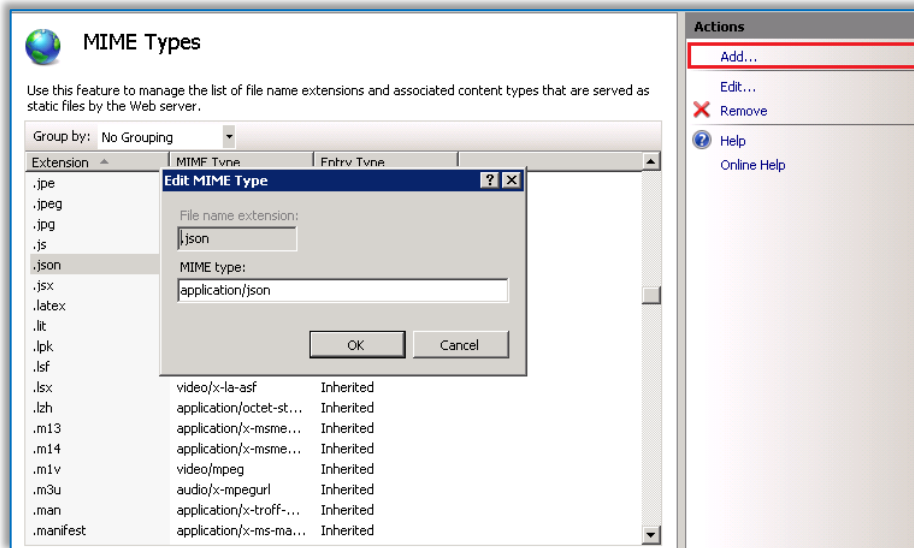 o Enable 'Start Website immediately'

- Press OK

MIME Types

- Select VeSion in the Sites list

- Double-click MIME Types

- Click on Add in the Actions pane at the right

- Add or modify the below 2 MIME types

  o Filename extension: .json
    MIME type: application/json

  o Filename extension: .svg
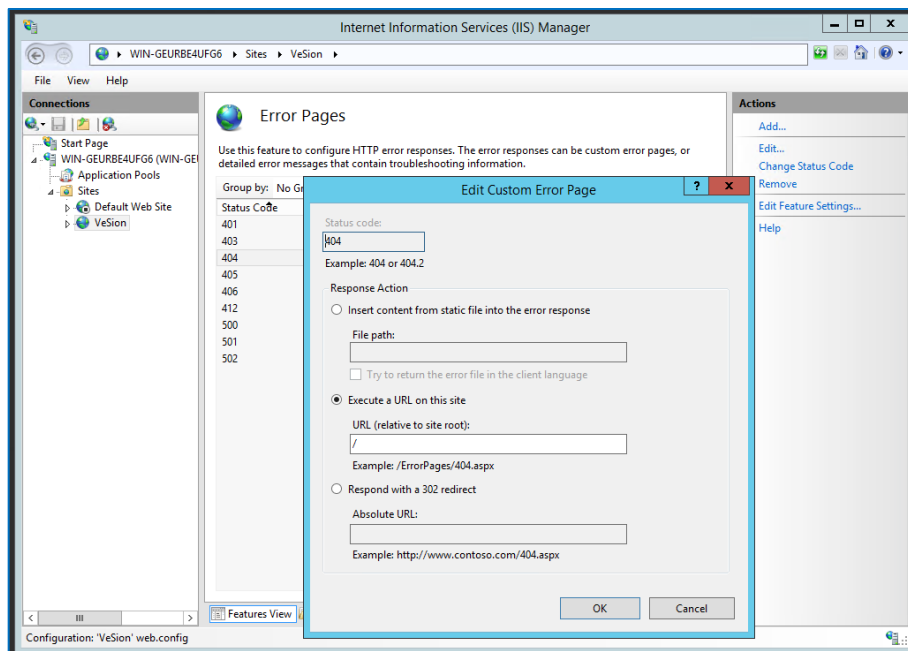   MIME type: image/svg+xml

Error Pages

- Double click on Error Pages
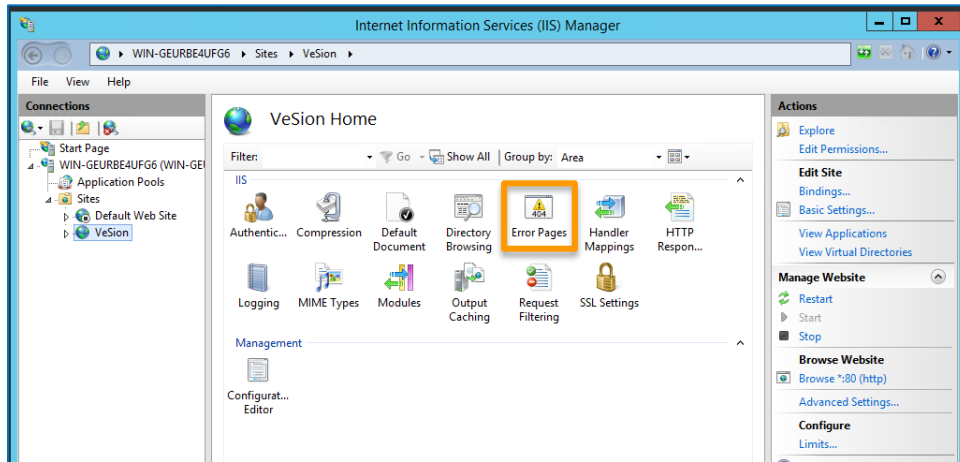
- This setting is to support the user account password reset email function

  o Double click Status Code 404 to edit the setting

  o Select Execute a URL on this site and enter " / "

HTTP Response Headers

- Double click on HTTP Response Headers
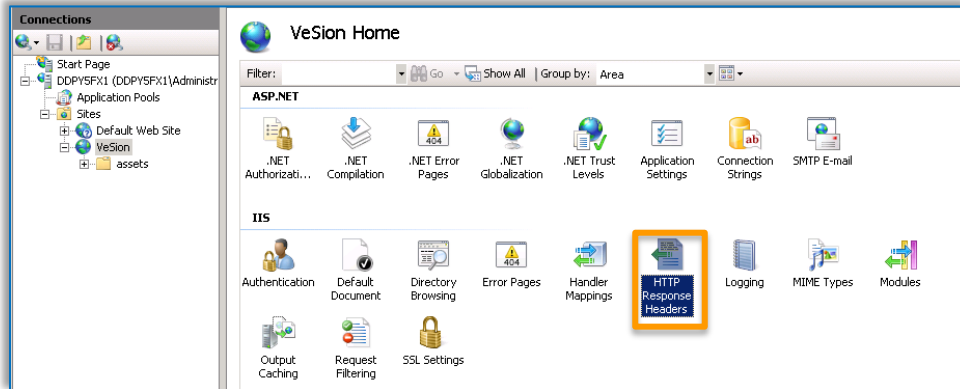
Web Content Expiration

- In the left Actions pane, click on Set Common Headers to bring up the Set Common HTTP Response Headers setting window

- Enable Expire Web contents: Immediately

- Restart VeSion website

Logging In Using Web Browser

- Use a high-score HTML5 compatible web-browser
  - Chrome is recommended
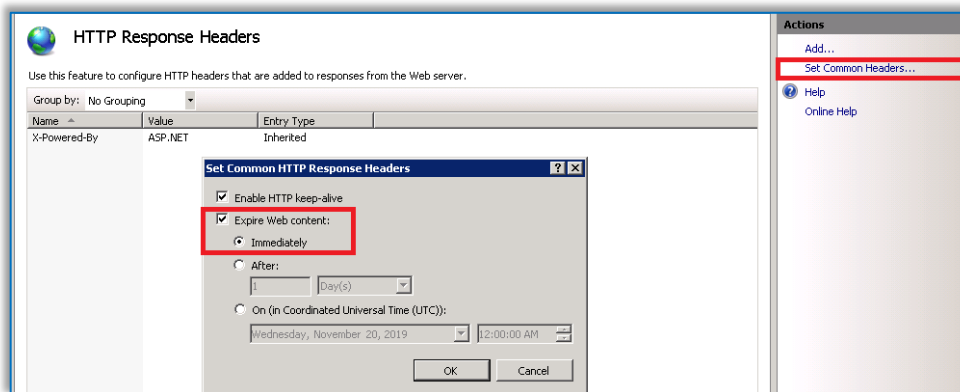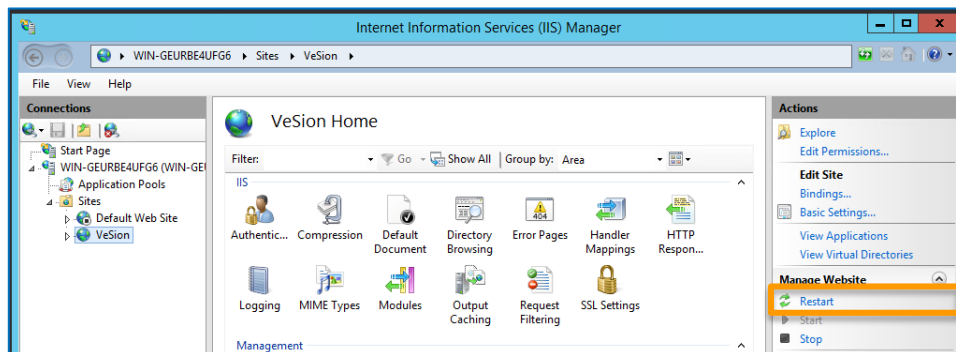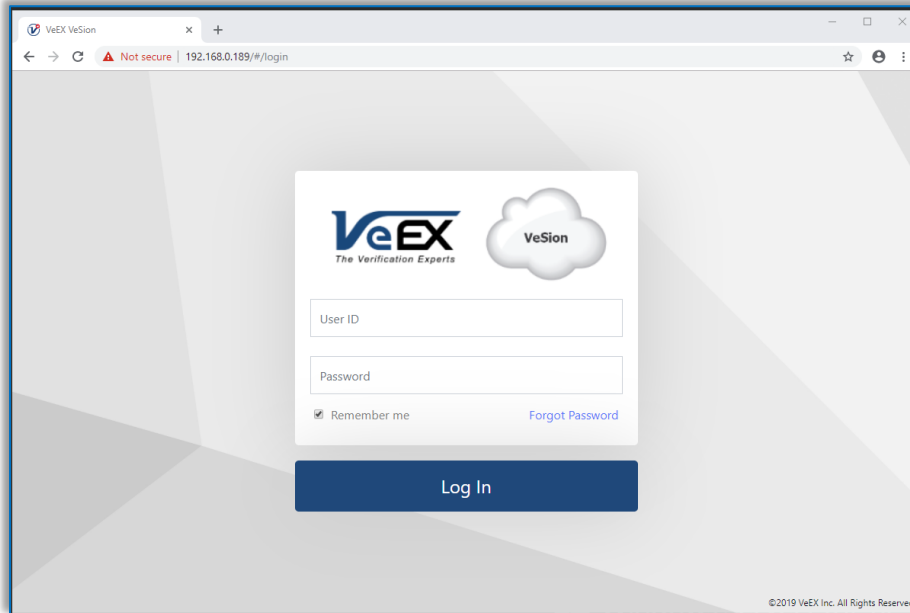- Enter the IP address of the VeSion server
  - If the VeSion login web page is displayed this indicates that the VeSion website is active
- Log in with the default user account
  - User ID: master
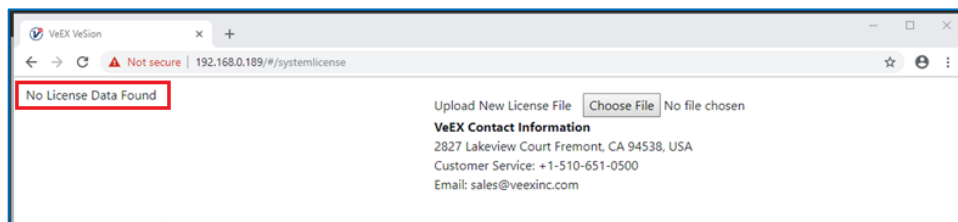 - Password: master

# VeSion System License Upload

Step 7

Uploading System License

- When logging in the VeSion system via web interface for the first time, after the installation is done, it will display the 'No License Data Found' message

- Make sure the Ethernet port with the MAC address the VeSion Server is licensed for is in port linkup state
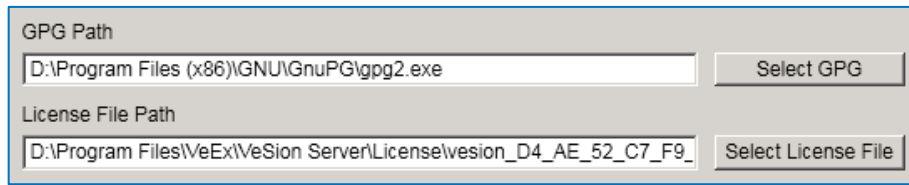
- Click Choose File to upload the license file,

  o Licenses have the following file name format vesion_XX_XX_XX_XX_XX_XX.txt.asc, where XX_XX_XX_XX_XX_XX is the MAC address of the Ethernet port licensed

- Click on the Open button

- Once the license is uploaded, the system will auto log out the user

- Log in to the system again
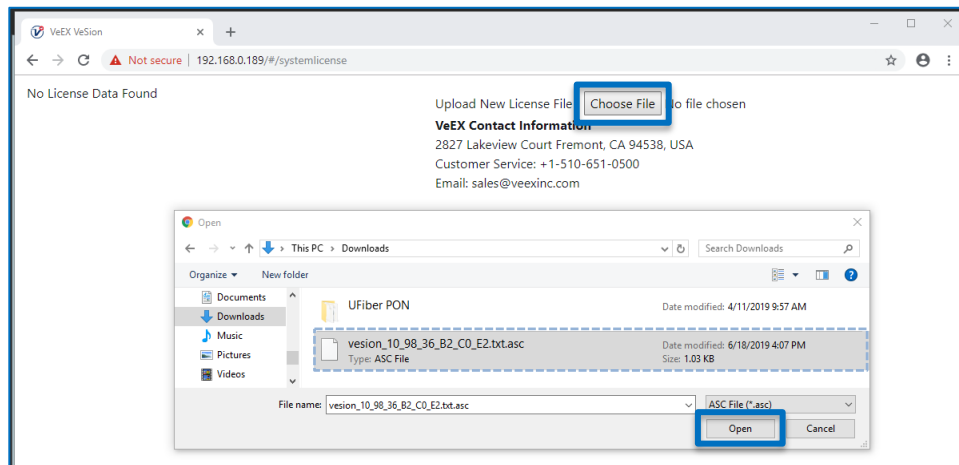
- After uploading the license file successfully and logging in again, the web browser should display the Main Menu
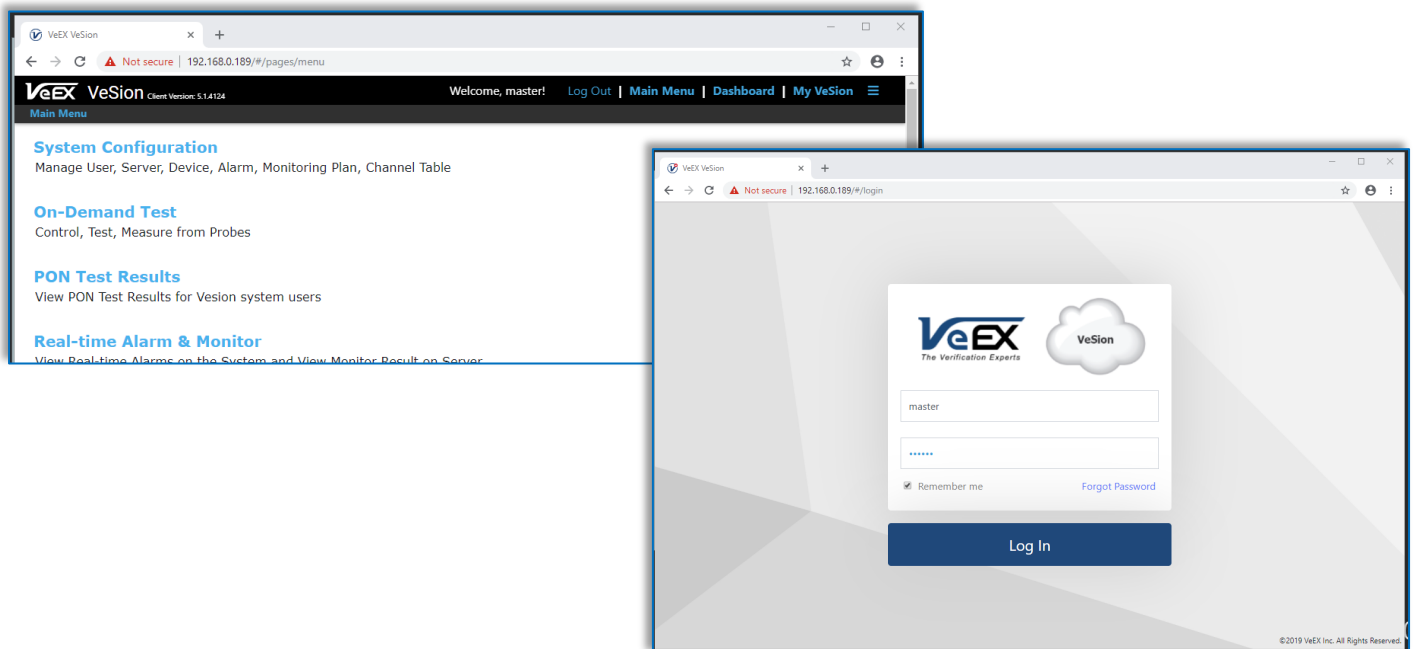
- Going back to the VeSion Server Administrator > Configuration > Server Setting tab, the License File Path is now populated with the license uploaded

- A License folder containing the license file has been created under the VeSion Server installation folder

Notes

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About VeEX Inc.

Founded in 2006 by test and measurement industry veterans and strategically headquartered in the heart of Silicon Valley, VeEX Inc. provides innovative Test and Measurement solutions for next generation networks, services and communication equipment.

With a blend of advanced technologies and vast technical expertise, VeEX has developed products that diligently address all stages of network deployment, maintenance, and field service turn-up and integrate service verification features across DSL, fiber optics, CATV/DOCSIS, mobile 4G/5G backhaul and fronthaul (CPRI/OBSAI), next-generation transport network, fiber channel, carrier and metro Ethernet technologies, WLAN, and synchronization.

The VeEX team brings simplicity to verifying tomorrow's networks.