

# **MetaXpress® High Content Image Acquisition & Analysis Software Suite**

Version 5.1

## **Installation and Update Guide**

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March 2013



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# Contents

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<b>Chapter 1: Introduction . . . . .</b>	<b>5</b>
Before You Begin . . . . .	6
Required Reading. . . . .	7
Product Compatibility . . . . .	8
<b>Chapter 2: Starting the MetaXpress Installation and Configuration Utility . . . . .</b>	<b>9</b>
Starting the Installation Utility. . . . .	9
Determining the Installation Status of Components . . . . .	11
Installing Individual Components . . . . .	12
<b>Chapter 3: Installing and Verifying Prerequisites, Keys, and Licenses . . . . .</b>	<b>13</b>
Installing Prerequisites . . . . .	15
Verifying the Hardware Key. . . . .	16
To verify the hardware key . . . . .	16
Installing and Verifying the MetaXpress Custom Module Editor License File . . . . .	19
To install and verify the license file. . . . .	19
Verifying and Updating a Network License. . . . .	21
To verify the network license. . . . .	21
<b>Chapter 4: Installing the MDCStore Database Components . . . . .</b>	<b>23</b>
Installing the MDCStore High Content Data Management Solution Database Schema . . . . .	24
Installing the MDCStore Database for SQL Server . . . . .	24
Installing the MDCStore Database for Oracle. . . . .	28
Updating an Existing MDCStore Database . . . . .	30
Installing the MDCStoreTools Data Management Utility. . . . .	34
Installing the MDC File Server . . . . .	36

<b>Chapter 5: Installing the MDCStore Xchange Data Conversion Service . . . . .</b>	<b>37</b>
Installing the MDCStore Xchange Server Software . . . . .	38
Installing the MDCStore Xchange Client Software . . . . .	39
<b>Chapter 6: Installing the MetaXpress Software . . . . .</b>	<b>41</b>
Copying Settings from an Earlier Version of the Software .	42
Installing the Software . . . . .	43
Installing Version 10 of the USB Driver on Instrument Workstations . . . . .	51
Installing the Latest Update of the Software . . . . .	53
<b>Chapter 7: Installing the MetaXpress Custom Module Editor . . . . .</b>	<b>61</b>
Installing the Custom Module Editor . . . . .	62
Updating the Custom Module Editor . . . . .	64
<b>Chapter 8: Installing the MetaXpress PowerCore Software . . . . .</b>	<b>69</b>
Installing the MetaXpress PowerCore Server Software . . .	70
Installing the MetaXpress PowerCore Client Software . . .	71
<b>Chapter 9: Setting Up the MetaXpress Software . . . . .</b>	<b>73</b>
Starting the MetaXpress Software . . . . .	73
Setting Up the Database . . . . .	74
Creating a Data Source . . . . .	74
Setting MDCStore Database Passwords . . . . .	76
Selecting the Camera Driver . . . . .	77
Configuring Objectives . . . . .	77
<b>Appendix A: Installing Microsoft SQL Server 2012 Express . . . . .</b>	<b>85</b>
Installing SQL Express . . . . .	86
Enabling Named Pipes and TCP/IP Connections . . . . .	97

# Introduction

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This guide provides instructions on how to install the MetaXpress® High Content Image Acquisition & Analysis Software Suite, also referred to as the MetaXpress Software Suite. The MetaXpress Software Suite contains the following components, all of which can be installed using the MetaXpress Software Installation flash drive:

**Table 1-1** MetaXpress Software Suite Components

Component	Description
MDCStore™ High Content Data Management Solution	A database schema that can be used with the Microsoft SQL Server or Oracle platforms. It supports multi-server and multi-user configurations.
MDCStoreTools™ Data Management Utility	A stand-alone tool for setting up and maintaining an MDCStore database schema, managing user accounts and data, and optimizing the supporting SQL and Oracle servers.
MDCStore™ Xchange Data Conversion Service	Imports and exports images to and from the MDCStore database. Can convert third party images to a format that can be used with the MetaXpress Software and vice versa.
MDC File Server	Allows a server to be used as a central storage location for high content screening data.
MetaXpress® High Content Image Acquisition & Analysis Software	The primary tool for acquiring and analyzing images.
ImageXpress® System USB Driver	Required for all ImageXpress Micro and ImageXpress Ultra Systems.
MetaXpress® Custom Module Editor	A dedicated workspace in the MetaXpress Software for creating custom analyses.
MetaXpress® PowerCore™ High Content Distributed Image Analysis Software	Accelerates image analysis by distributing image processing tasks across multiple computer processes.
Microsoft SQL Server 2012 Express	A small database that is useful for demonstration or evaluation purposes. Limited to 10 GB in size, it is impractical for production environments.

To complete the installation you will need the following:

- The MetaXpress Software Installation flash drive, which contains all of the software components.
- The MetaXpress Software USB hardware key (sometimes also referred to as a dongle), which contains licensing information. This is either a single-license hardware key or a multi-license network key for use on a server so that multiple client computers can run the analysis software without requiring a USB hardware key for each client computer.

## Before You Begin

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**CAUTION!** The regional settings on your computer should always be set to **English (United States)**. Do not change this setting even if you are located outside of the United States. The MetaXpress Software will not work correctly if this setting is changed to anything other than **English (United States)**. This setting is located in the Control Panel in **Regional and Language Options** (Windows XP) or in **Region and Language** (Windows 7).

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Perform the following tasks before installing any of the components that are on the MetaXpress Software Installation flash drive:

- Make sure you are logged in as Administrator on the computer on which you are installing the software.
- Make sure the C: drive has at least 1 GB of available space.
- For ImageXpress Ultra Systems, if you have been using version 3.0 or earlier of the MetaXpress Software, delete all files starting with "FS\_" in the C:\Documents and Settings\window login account\Local Settings\Temp folder. Earlier versions of the software did not delete these files, which are created when images are larger than 10 MB. Versions 3.1 and above of the software deletes these temporary files appropriately.

- Make sure the appropriate database server software is installed:
  - ♦ For databases larger than 10 GB (most databases), Microsoft SQL Server 2012 or Oracle 10g or 11g must be installed. Microsoft SQL Server 2012 is pre-installed on instrument workstations. These products are not available on the MetaXpress Software Installation flash drive. Please contact your System Administrator or MetaXpress Software representative if you need assistance determining which product is most appropriate. You can read about IT and operating system requirements in the Molecular Devices knowledge base at <http://www.moleculardevices.com/support.html>.
  - ♦ For databases smaller than 10 GB (in general, databases that contain data from fewer than 10 plates), you can use Microsoft SQL Server 2012 Express, which is suitable for desktop operation. Both the 32-bit and 64-bit versions of SQL Server 2012 Express are provided on the MetaXpress Software Installation flash drive.

While SQL Server 2012 Express can be useful for demonstration purposes, its small size makes it impractical for production environments. SQL Server 2012 Express cannot be installed if SQL Server 2012 is already installed.

## Required Reading

Before you install the MetaXpress Software and its related components, you should review the information in the following documents:

- *Molecular Devices High Content Screening Computer Specifications*
- *Molecular Devices Complete Solution HCS IT Requirements*

These documents are available in the Molecular Devices knowledge base at <http://www.moleculardevices.com/support.html>.

## Product Compatibility

When you install or upgrade the MetaXpress Software, all existing data sources will be retained. Earlier versions of the MetaXpress Software will also be retained unless the software is installed as an upgrade in the same directory. All earlier versions of the MetaXpress Software and version 5.1 of the MetaXpress Software can reside on a computer at the same time. However, only one copy of the software can be open at a time.

Version 5.1 of the MetaXpress Software requires version 2.3 of the MDCStore database. To use the MDCStoreTools Data Management Utility, you must upgrade the MDCStore database to version 2.3.

If you are installing the MDCStoreTools Data Management Utility for the first time (no earlier versions exist on the computer), you must log into the MDCStore database at least once before using the MDCStoreTools Data Management Utility.

The MDCStoreTools Data Management Utility is compatible with version 3.0 or above of the MetaXpress Software. If you have an earlier version of the MetaXpress Software and you attempt to install the MDCStoreTools Data Management Utility, a warning appears informing you that you must upgrade to version 3.0 or above of the MetaXpress Software.

To obtain the latest information about the MetaXpress Software and related products, visit the Molecular Devices Support web page at <http://www.moleculardevices.com/support.html>. The Support web page contains a large knowledge base of technical notes, frequently asked questions, newsletters, product manuals, and other resources.



# Starting the MetaXpress Installation and Configuration Utility

## 2

This chapter explains how to start the MetaXpress® Software Installation and Configuration Utility.

Topics in this chapter:

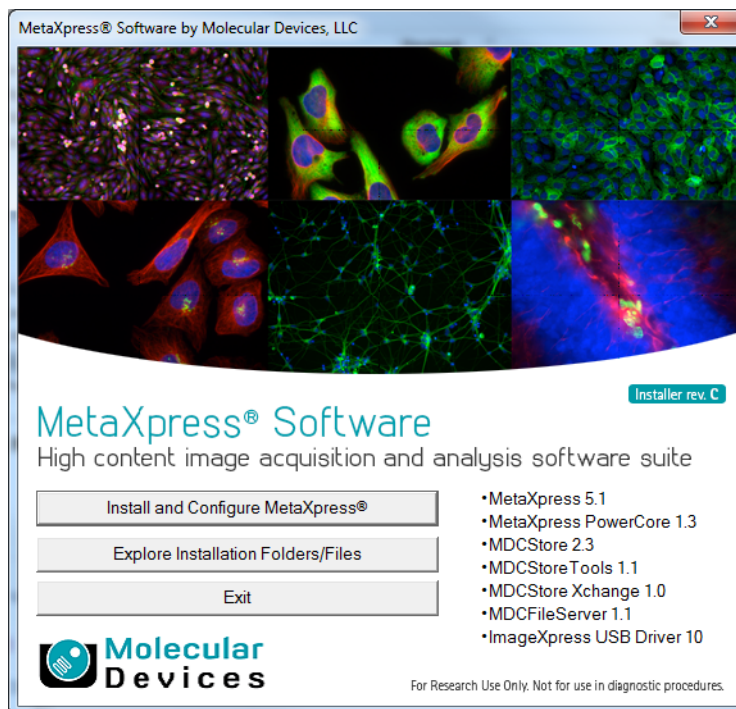
- Starting the Installation Utility on page 9
- Determining the Installation Status of Components on page 11
- Installing Individual Components on page 12

## Starting the Installation Utility

To start the installation and configuration utility:

1. Insert the MetaXpress Software Installation flash drive into a USB port.
2. If a dialog with a security warning appears, click **Run**.

The MetaXpress Software Suite installation window appears.

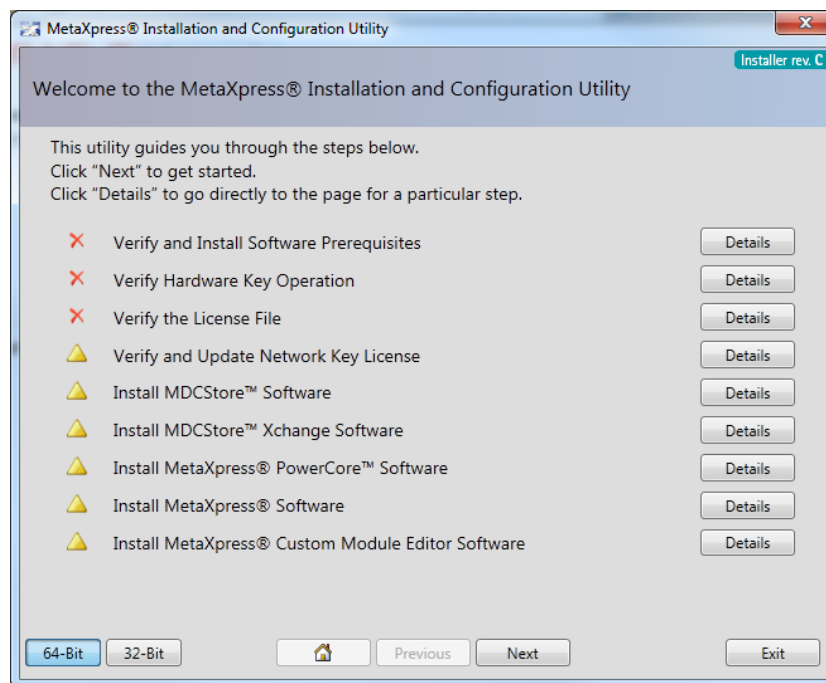




**Note:** If the installation window does not appear after a short time, then browse to the flash drive folder on your computer and double-click the **autorun.exe** file.

3. Click **Install and Configure MetaXpress**.
4. If a dialog with a security warning appears, click **Run**.  
The installation utility checks your computer for installed prerequisite software, such as the .NET framework.
5. If the required prerequisite software is not installed, follow the instructions provided in each setup wizard that appears to install the software.

After checking for prerequisites, the first page of the MetaXpress Installation and Configuration Utility appears.



The first page summarizes the steps required to fully install the MetaXpress Software Suite.





- ♦ The symbols on the left indicate the status of the components that might be already installed on your computer. See [Determining the Installation Status of Components](#) on page 11.

- ♦ The **Details** buttons on the right take you directly to the pages for installing individual components. See [Installing Individual Components on page 12](#).
- ♦ To continue to the next page of the utility, click **Next**. See [Installing and Verifying Prerequisites, Keys, and Licenses on page 13](#).

## Determining the Installation Status of Components

The MetaXpress Software Installation and Configuration Utility displays one of the following symbols to indicate the status of a prerequisite or component:

**Table 2-1** Component Status Icons

Symbol	Description
	The latest available version of the component is installed, or the prerequisite or requirement has been met.
	The component is not installed, or the prerequisite or requirement has not been met.
	The component or prerequisite is optional. For example, an earlier version of the component or prerequisite might exist on the computer, so upgrading to the latest version is optional.
	The component or prerequisite is not required for or applicable to your system or software configuration.

## Installing Individual Components

If you are installing the software on a 64-bit operating system, you can install either the 32-bit or 64-bit version of each component. Molecular Devices recommends that you use the 64-bit version if you have a 64-bit operating system. The version that will be installed is indicated next to the name of the component (for example, **MetaXpress 64-bit Version**). To install a different version, click **32-bit** or **64-bit** at the bottom of the installation and configuration utility pages. If you are installing the software on a 32-bit operating system, you can install only the 32-bit version of each component.

You can choose to have the utility guide you through the installation process starting with the first page or you can go directly to the page for installing the components that you need.

- The **Verify and Install Software Prerequisites, Verify Hardware Key Operation, Verify License File, and Verify and Update Network Key Licenses** pages help you make sure that your computer is ready to install the components of the MetaXpress Software Suite. See [Installing and Verifying Prerequisites, Keys, and Licenses on page 13](#).
- The **Install MDCStore Software** page helps you install the MDCStore database, MDCStoreTools utility, service, and MDC File server. See [Installing the MDCStore Database Components on page 23](#).
- The **Install MDCStore Xchange** page helps you install the MDCStore™ Xchange Data Conversion Service server and client software. See [Installing the MDCStore Xchange Data Conversion Service on page 37](#).
- The **Install MetaXpress Software** page helps you install the MetaXpress Software and ImageXpress System USB driver. See [Installing the MetaXpress Software on page 41](#).
- The **Install MetaXpress Custom Module Editor** page helps you install the MetaXpress Custom Module Editor. See [Installing the MetaXpress Custom Module Editor on page 61](#).
- The **Install MetaXpress PowerCore Software** page helps you install the MetaXpress PowerCore Software for server and client installations. See [Installing the MetaXpress PowerCore Software on page 69](#).

To go directly to the utility page where you can install an individual component, click its **Details** button.

# Installing and Verifying Prerequisites, Keys, and Licenses

## 3

The first few pages of the MetaXpress® Software Installation and Configuration Utility verify prerequisites, the MetaXpress Software hardware key, and the license file.

The prerequisites that are required depend on the component that you are installing. A MetaXpress Software hardware key or license file is required only when you are installing certain components. Refer to [Table 3-1](#) to determine what is required as you work your way through the first few pages of the installation and configuration utility.

**Table 3-1** Prerequisite Requirements

Component	Prerequisites Needed	Hardware Key	License File
MDCStore™ Database	Microsoft Visual C++ Runtime Libraries	Not required	Not required
MDCStoreTools™ Utility	Microsoft Visual C++ Runtime Libraries	Not required	Not required
MDC File Server	Microsoft Visual C++ Runtime Libraries	Not required	Not required
MDCStore™ Xchange Service	Microsoft Visual C++ Runtime Libraries	Required	Not required
MetaXpress® Software	<ul style="list-style-type: none"><li>• Microsoft Visual C++ Runtime Libraries</li><li>• SafeNet Sentinel System Driver</li><li>• SafeNet Sentinel Protection Server if using a network license key or if you plan to run the MetaXpress Software using a remote desktop connection</li></ul>	Required	Required*
ImageXpress® System USB Driver	None	Not required	Not required

**Table 3-1** Prerequisite Requirements (cont'd)

Component	Prerequisites Needed	Hardware Key	License File
MetaXpress® Custom Module Editor	<ul style="list-style-type: none"> <li>• Microsoft Visual C++ Runtime Libraries</li> <li>• Microsoft Office Primary Interoperability Assemblies</li> </ul>	Required	Required
MetaXpress® PowerCore™ Software	<ul style="list-style-type: none"> <li>• Microsoft Visual C++ Runtime Libraries</li> <li>• SafeNet Sentinel System Driver</li> <li>• SafeNet Sentinel Protection Server on server computer only</li> </ul>	Required for server computer only	Not required
Microsoft SQL Server 2012 Express	None	Not required	Not required

\*Required to run a custom module in the MetaXpress Software, but not required if your system is not licensed to use the Custom Module Editor.

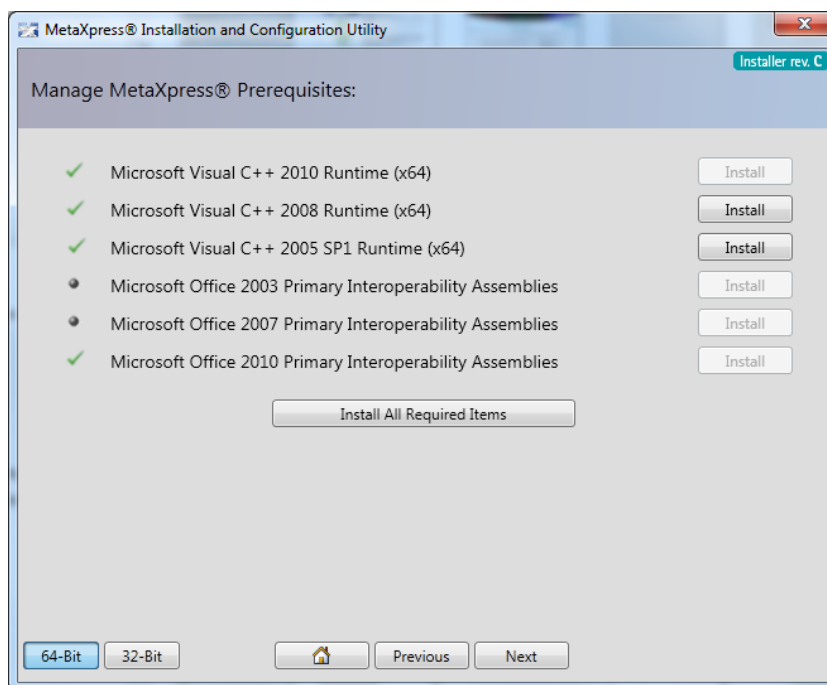
Topics in this chapter:

- [Installing Prerequisites on page 15](#)
- [Verifying the Hardware Key on page 16](#)
- [Installing and Verifying the MetaXpress Custom Module Editor License File on page 19](#)
- [Verifying and Updating a Network License on page 21](#)

## Installing Prerequisites

The prerequisites that are required depend on the component that you are installing. Molecular Devices recommends that you install all required items as described in this section. [Table 3-1 on page 13](#) lists the specific prerequisites required for each component.

1. On the **Manage MetaXpress Prerequisites** page, click **Install All Required Items**.



The progress of the installation of the prerequisites is displayed.

2. Follow the instructions in the prerequisite setup wizards to install the prerequisite components.

## Verifying the Hardware Key

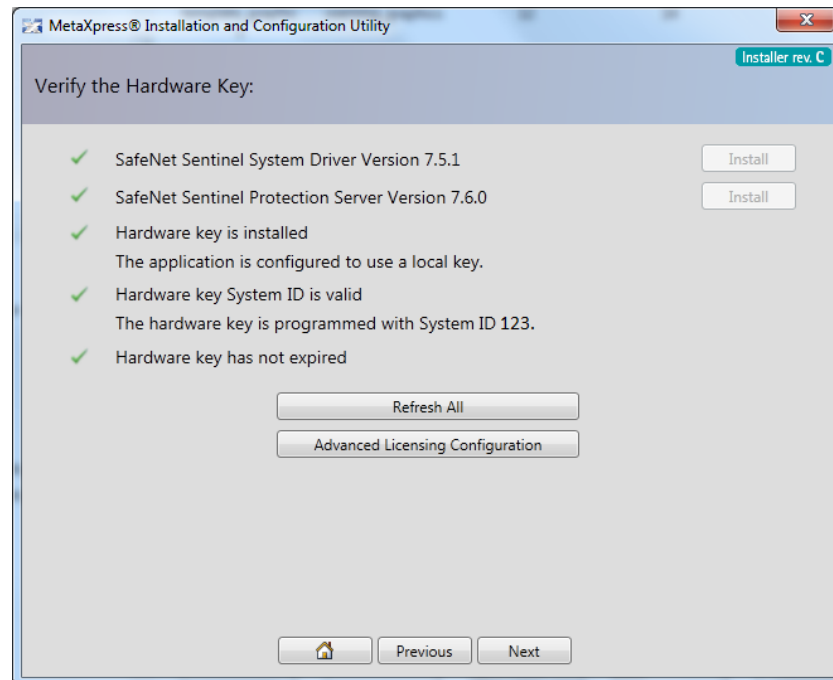
You must verify your MetaXpress Software hardware key if you are installing any of the following components:

- The MetaXpress Software
- The MetaXpress Custom Module Editor
- The MDCStore Xchange Data Conversion Service
- The MetaXpress PowerCore Server Software

Keep the hardware key inserted in a USB port when installing and using these components.

### To verify the hardware key

1. Insert the MetaXpress Software hardware key into a USB port.
2. On the **Manage MetaXpress Prerequisites** page, click **Next** to continue to the **Verify the Hardware Key** page.

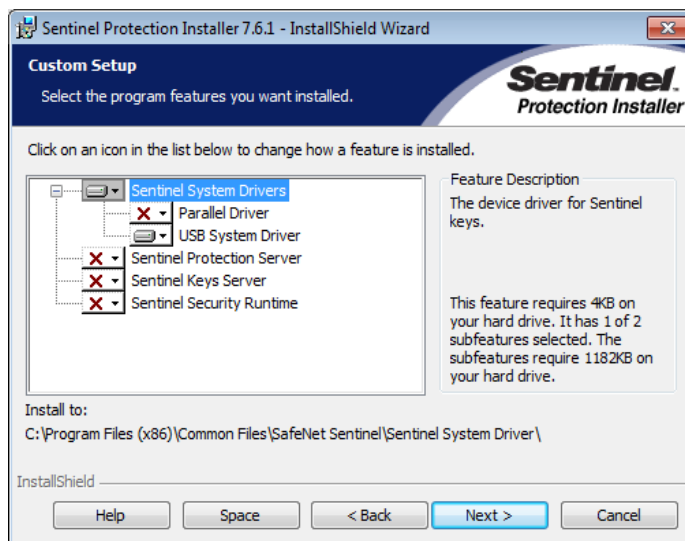


Before the installation and configuration utility can read and verify your hardware key, you must:

- ♦ Install the SafeNet Sentinel System Driver software.



- ♦ Also install the SafeNet Sentinel Protection Server software if you are installing the MetaXpress PowerCore server software or a MetaXpress component using a network key, or if you plan to access the MetaXpress Software using a remote desktop connection.
- 3. Click the SafeNet Sentinel System Driver **Install** button.
- 4. Follow the instructions provided in the Sentinel Installer; when the **Setup Type** page appears, select **Custom**.
- 5. Make sure that the selections for the **Custom Setup** page are as shown in the next figure and click **Next**.



- 6. On the **Ready to Install** page, click **Install** and continue to follow the instructions in the installer wizard to complete the installation.
- 7. If applicable, repeat Steps 3-6 to install the SafeNet Sentinel Protection Server software.

The Verify the Hardware Key page shows that the hardware key is set up and can be read. Your System ID number should be displayed instead of the "XXX" shown in Step 2. If the page does not display all green checkmarks or if your hardware key is not inserted into a USB port, insert it, and click **Refresh All** to verify the hardware key.



**Note:** If the Verify the Hardware Key does not display all green checkmarks after installing the SafeNet Sentinel driver or server protection software, you may need to restart your computer. After the computer has restarted, you need to restart the MetaXpress Software Installation and Configuration Utility. To restart the utility, browse to the flash drive folder on your computer and double-click the **autorun.exe** file. When the Installation Welcome window appears, click **Install and Configure MetaXpress**, navigate to the **Verify the Hardware Key** page, and continue to follow these instructions.

---

8. If the hardware key is located on a server, click **Advanced Licensing Configuration**, enter the address of the server and then select the license file.
9. When the **Verify the Hardware Key** page displays all green checkmarks, click **Next** to continue to the **Install and Verify the MetaXpress Custom Module License File** page and follow the instructions in the next section.

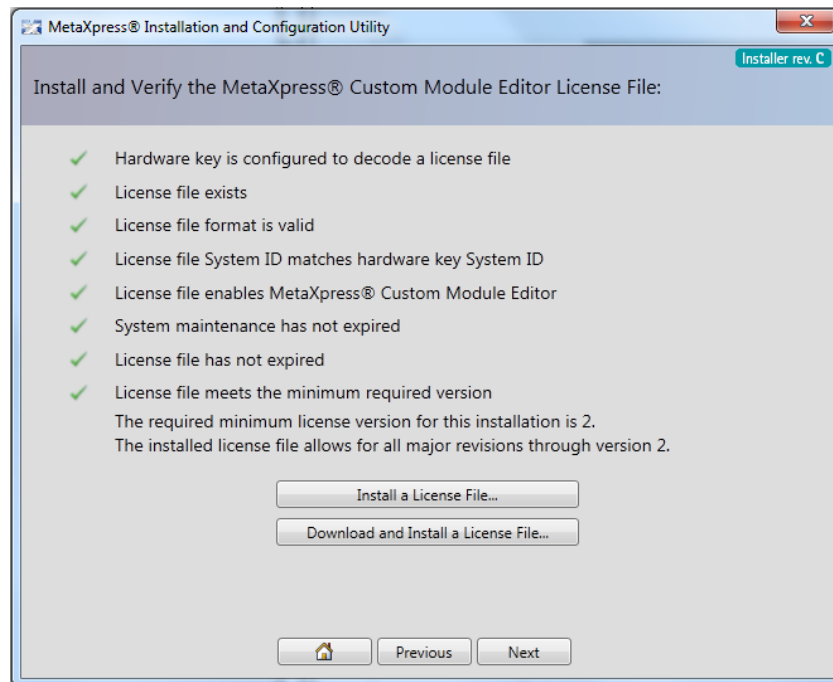
## Installing and Verifying the MetaXpress Custom Module Editor License File

After verifying the hardware key, keep it inserted in the USB port to verify your license if you are installing any of the following:

- The MetaXpress Software
- The MetaXpress Custom Module Editor

### To install and verify the license file

1. On the **Install and Verify the MetaXpress Custom Module Editor License File** page, verify your license using one of the following options:
  - ♦ If you are connected to the internet, click **Download and Install a License File**. The installation and configuration utility then communicates with the Molecular Devices server to verify your license.
  - ♦ If you are not connected to the internet, click **Install a License File** and browse to the location of your license file on the computer.
  - ♦ If you do not have a license file and you are not connected to the internet, use another computer that is connected to the internet to obtain a license file from the following web site: <http://www.meta.moleculardevices.com/authorizecme/>. On the web site, enter your System ID (displayed in the previous step), click **Download**, and store the file in a convenient location on your computer. Then, on the **Install and Verify the MetaXpress Custom Module Editor License File** page, click **Install a License File** and browse to the location of the license file.



2. When the **Install and Verify the MetaXpress Custom Module Editor License File** page displays all green checkmarks, click **Next** to continue to the **Verify and Update Network Key License** page.

## Verifying and Updating a Network License

A single network key, installed on a server computer, can be used to run software on multiple analysis computers instead of individual hardware keys.



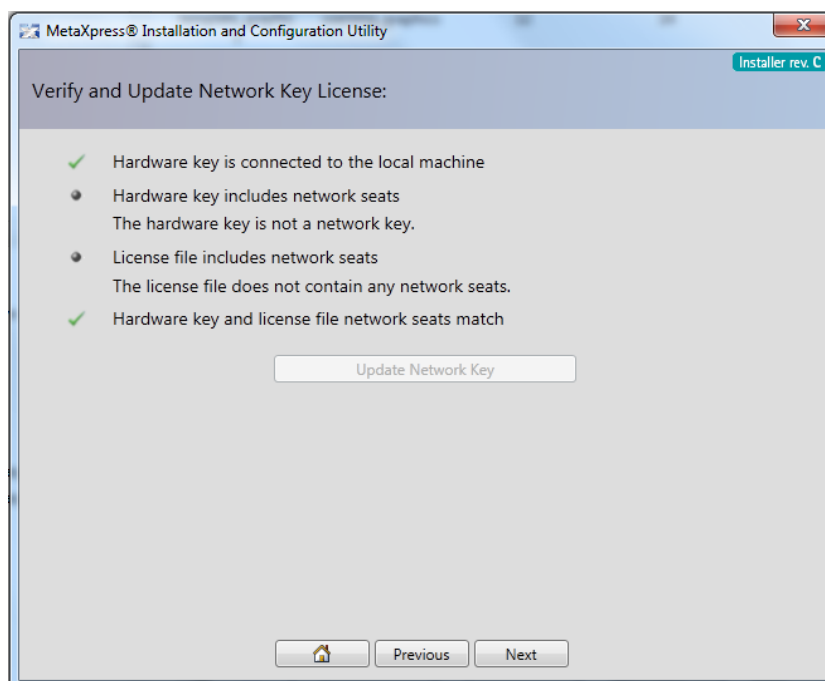
**Note:** If you are not using a network key, skip this section.

After verifying the MetaXpress Custom Module Editor license file, keep the hardware key inserted in the USB port to verify your network license if you are installing any of the following:

- The MetaXpress Software
- The MetaXpress Custom Module Editor

### To verify the network license

1. If the **Verify and Update Network Key License** page does not display all green checkmarks, click **Update Network Key**.



2. When the **Verify and Update Network Key License** page displays all green checkmarks, follow the instructions in the following chapters to install other MetaXpress Software components.

# Installing the MDCStore Database Components

---

## 4

This chapter explains how to install version 2.3 of the MDCStore™ High Content Data Management Solution Database Schema for use with Microsoft SQL Server or Oracle databases. It also explains how to update an existing MDCStore database schema from version 2.0, 2.1, or 2.2 to version 2.3. Throughout this chapter, the Microsoft SQL Server database software is referred to as SQL Server.

Before installing the MDCStore™ database schema, MDCStoreTools™ Data Management Utility, or the MDC File Server, you need to have already installed the Microsoft Visual C++ Runtime Libraries. These libraries can be installed using the MetaXpress Software Installation and Configuration Utility. See [Installing and Verifying Prerequisites, Keys, and Licenses](#) on page 13.

For information about creating a data source, as well as connecting to and configuring the MDCStore database, see the *MDCStore High Content Data Management Solution Database Schema Installation and Update Guide*, which is provided on the MetaXpress Software Installation flash drive and is available in the Molecular Devices knowledge base at <http://www.moleculardevices.com/support.html>.



**Note:** When installing and setting up a database on Windows 7, make sure that you have logged into Windows 7 with full administrator rights, and that you have full access to the folder where the database is to be installed. Molecular Devices recommends that you set the User Access Control (UAC) on the computer to the lowest security setting.

Topics in this chapter:

- [Installing the MDCStore High Content Data Management Solution Database Schema](#) on page 24
- [Installing the MDCStoreTools Data Management Utility](#) on page 34
- [Installing the MDC File Server](#) on page 36

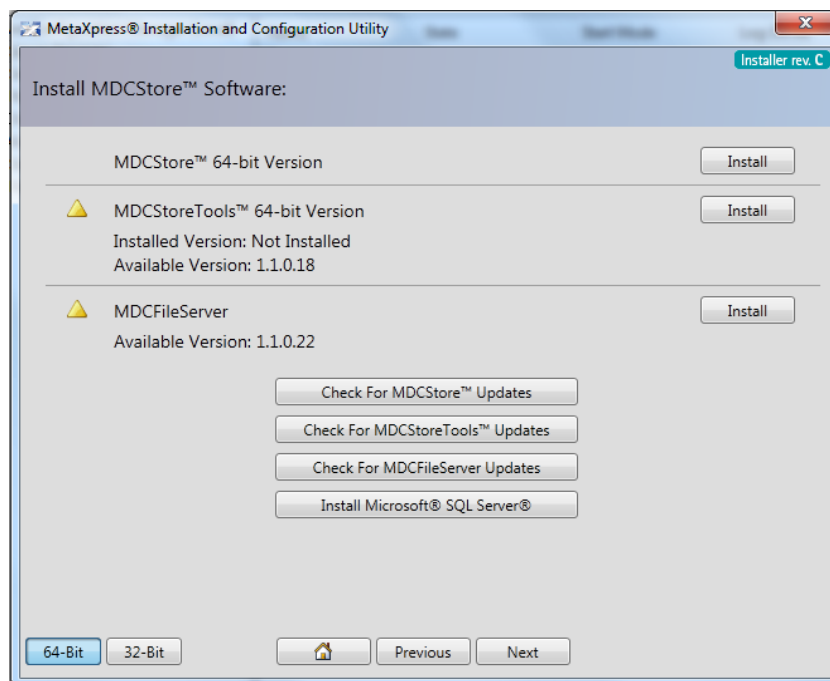
## Installing the MDCStore High Content Data Management Solution Database Schema

Before you install the MDCStore Data Manager database schema, you must set up a server and install the SQL Server or Oracle database software. Both the computer operating system and the database software must be installed with U.S. English as the language setting. For more information, see the vendor's documentation.

Molecular Devices recommends that you use a dedicated server for the MDCStore database. Using a server that hosts other databases or applications might decrease performance.

### Installing the MDCStore Database for SQL Server

1. Log in to the computer where you want to install the MDCStore Data Manager database schema.
2. Follow the instructions in [Starting the MetaXpress Installation and Configuration Utility on page 9](#) to start the MetaXpress Software Installation and Configuration Utility.
3. In the MetaXpress Installation and Configuration Utility, on the **Install MDCStore Software** page, click the MDCStore **Install** button.



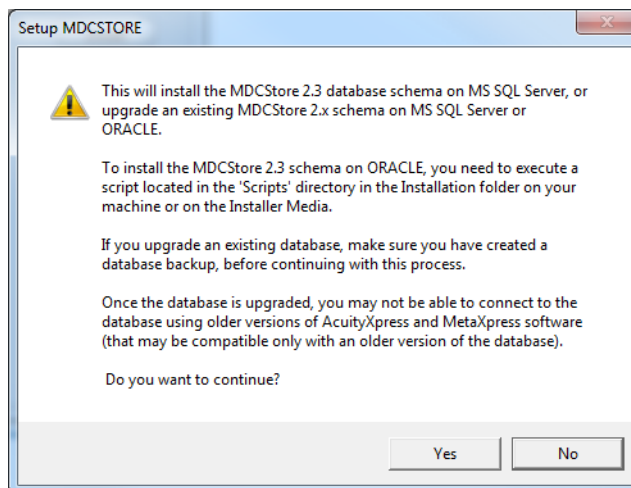




**Note:** The MetaXpress Installation and Configuration Utility cannot determine the status of the MDCStore database schema installation. Therefore, the Install MDCStore Software page does not display a status icon (such as a green checkmark) for the MDCStore database schema, even after it is installed successfully.

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The **Setup MDCSTORE** message appears.

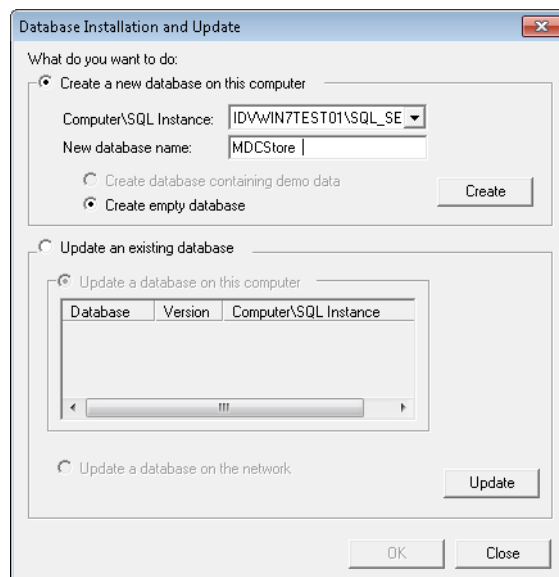


**Note:** The **Setup MDCSTORE** message might appear behind the MetaXpress Installation and Configuration Utility. To view the **Setup MDCSTORE** message, drag the MetaXpress Installation and Configuration Utility to the side.

---

4. Click **Yes**.

The **Database Installation and Update** dialog appears.



5. Select **Create a new database on this computer**, and then provide the information required to create the database:
- ◆ In the **Computer\SQL Instance** field, select the appropriate instance, such as COMPUTERNAME\SQLSERVER.
  - ◆ In the **New database name** field, type a name for the new database.
  - ◆ Click **Create**, and then specify a directory in which to install the database.
  - ◆ Click **Browse** to select the directory.



**Note:** Molecular Devices recommends installing the database on a computer with at least two separate partitions, storing the database on the second partition (usually a separate hard drive labeled as "D:") rather than the main partition with the operating system and software. Storing the data on the hard drive that doesn't have the operating system and main applications running increases performance and ensures that your data will be accessible even if the operating system located on the C drive is damaged or needs to be reinstalled. Molecular Devices does not recommend using external hard drives as these can be easily turned off and you will not have access to the data. Do not install on a mapped or network drive for the same reason.

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6. Click **OK** to continue.

When the installation is successful, the following message appears: **The database has been installed successfully.**

7. In the **Installation Complete** dialog, click **Close**, and then click **OK** in the dialog that confirms the creation of the data source.

The MDCStore database is installed.

By default, there is a single user account for the SQL Server MDCStore database: the **sa** (system administrator) account. If multiple users need to access the database, log in using the **sa** account to create and configure separate accounts for each user so that they do not need to use the **sa** login.

To create user accounts for the MDCStore database, use the MDCStoreTools Utility. See the *MDCStoreTools Data Management Utility User Guide*, which is provided on the MetaXpress Software Installation flash drive and is available in the Molecular Devices knowledge base at <http://www.moleculardevices.com/support.html>.



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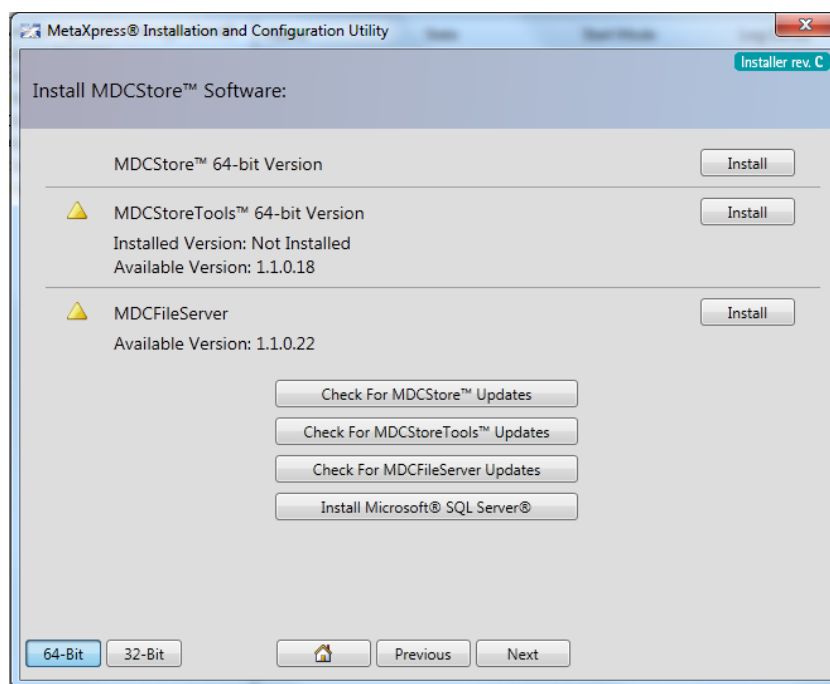
**Note:** The MDCStore database schema comes pre-installed on the instrument workstation. For versions 4.0 and above of the MetaXpress Software, the default User Login Name is **MolDev**, the default System Administrator Login Name is **sa**, and the default password for both is **moldev**. For versions of the software earlier than 4.0, the default User Login Name and password was **mdc**. You might need to log in using **mdc** if you had an earlier version of the software on your instrument workstation.

---

## Installing the MDCStore Database for Oracle

**CAUTION!** Oracle database names cannot contain spaces or special characters. The names **screening 1** and **screening#2** are not valid database names. The names **screening\_1** and **screening\_2** are valid database names. Limit the characters used for the database names to alphanumeric (0–9, a–z) and underscores (\_).

1. Log in to the computer where you want to install the MDCStore Data Manager database schema.
2. Follow the instructions in [Starting the MetaXpress Installation and Configuration Utility on page 9](#) to start the MetaXpress Software Installation and Configuration Utility.
3. In the MetaXpress Installation and Configuration Utility, on the **Install MDCStore Software** page, click the MDCStore **Install** button.

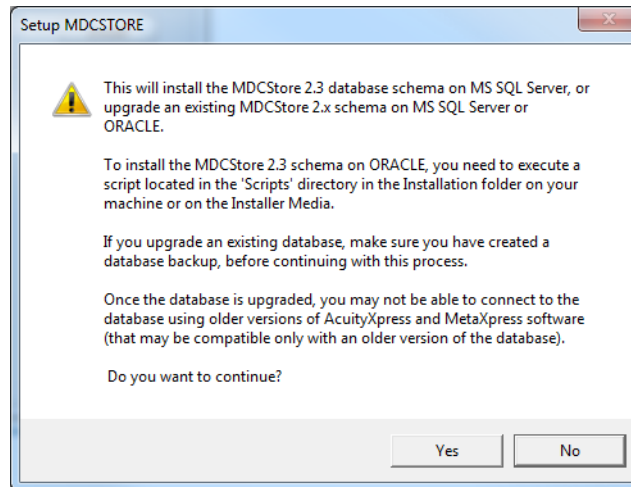




**Note:** The MetaXpress Installation and Configuration Utility cannot determine the status of the MDCStore database schema installation. Therefore, the Install MDCStore Software page does not display a status icon (such as a green checkmark) for the MDCStore database schema, even after it is installed successfully.

---

The **Setup MDCSTORE** message appears.



**Note:** The **Setup MDCSTORE** message might appear behind the MetaXpress Installation and Configuration Utility. To view the **Setup MDCSTORE** message, drag the MetaXpress Installation and Configuration Utility to the side.

---

You must run the installer to this point to access the Oracle installation scripts. After the **Setup MDCSTORE** message appears, however, do not continue using the installer.

1. In the **Setup MDCSTORE** message, click **No**.
2. Click **Close**.
3. Click **All Programs > MDCStore > MDCStore Database > Scripts**.
4. Confirm that the installation scripts have been installed.

By default, there is a single user account for the MDCStore database: the **SYSTEM** account. If multiple users need to access the database, log in using the **SYSTEM** account and create and configure separate accounts for each user so that they do not need to use the **SYSTEM** login.

To create user accounts for the MDCStore database, use the MDCStoreTools Utility. See the *MDCStoreTools Data Management Utility User Guide*, which is provided on the MetaXpress Software Installation flash drive and is available in the Molecular Devices knowledge base at <http://www.moleculardevices.com/support.html>.

For instructions on how to set up tablespaces, configure users, and configure the database client software, see the *MDCStore High Content Data Management Solution Database Schema Installation and Update Guide*, which is provided on the MetaXpress Software Installation flash drive and is available in the Molecular Devices knowledge base at <http://www.moleculardevices.com/support.html>.

### Updating an Existing MDCStore Database

Before you update the MDCStore database, verify that the current version is version 2.0 or above. If you have an earlier version of the MDCStore Data Manager database schema, you must update to at least version 2.0 before you can update to version 2.3. For instructions, see the MDCStore 2.0 installation guide, which is included on the MetaXpress® Software and AcuityXpress™ Software version 2.0 CDs.

In addition, Molecular Devices highly recommends that you back up your database before you update the schema.

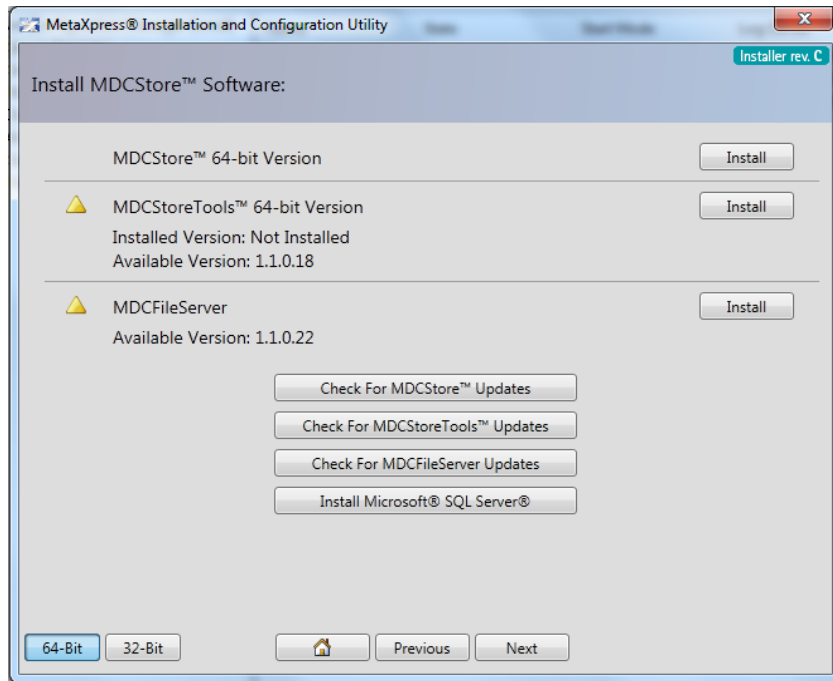
---

**CAUTION!** Molecular Devices is not responsible for damage to existing user data that could happen due to network problems, power failure, unexpected termination of the update process or customization of the existing MDCStore database. You should make a full backup of the database before beginning the update.

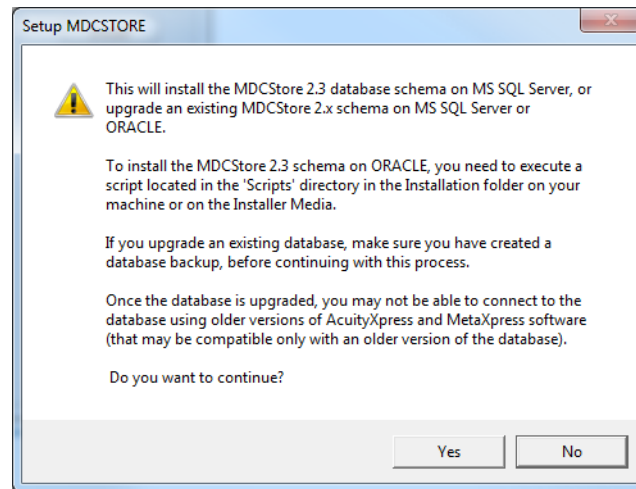
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1. Log in to the computer where you want to install the MDCStore Data Manager database schema.
  - ♦ For SQL, use **sa** as the login name.
  - ♦ For Oracle, use **system** as the login name.
2. Follow the instructions in [Starting the MetaXpress Installation and Configuration Utility on page 9](#) to start the MetaXpress Software Installation and Configuration Utility.

3. In the MetaXpress Installation and Configuration Utility, on the **Install MDCStore Software** page, click the MDCStore **Install** button.



The **Setup MDCSTORE** message appears.



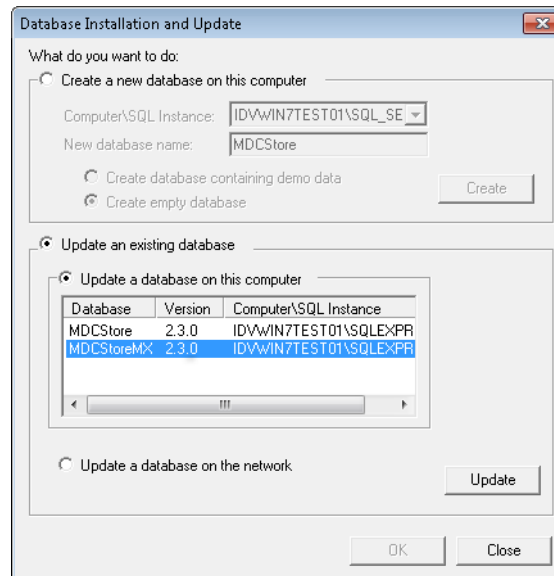
**Note:** The **Setup MDCSTORE** message might appear behind the MetaXpress Installation and Configuration Utility. To view the **Setup MDCSTORE** message, drag the MetaXpress Installation and Configuration Utility to the side.

---

4. Click **Yes**.



The **Database Installation and Update** dialog appears.



5. In the **Update an existing database** section, choose one of the following options:
  - ♦ To update the SQL Server database on the server you are logged into, select **Update database on this computer**, select the database you want to update, and then click **Update**.
  - ♦ To update an Oracle database, or to update the SQL Server database on a different server, click **Update a database on the network**, and then click **Update**.
6. Read the warning information, and then click **OK** to acknowledge that you are ready to update the database.
7. If you are updating the SQL Server database on the server itself, type the user name and password required to access the database, and then click **OK**.
8. If you are updating an Oracle database, or the SQL Server database on the network, select the data source you want to connect to, type the login name and password of an account with database administrator privileges (for example, **sa** or **system**), and then click **OK**.
9. For Oracle databases, select the database you want to update, and then click **OK**.

When the update is complete, a message appears stating that the database has been updated successfully.

## Installing the MDCStoreTools Data Management Utility



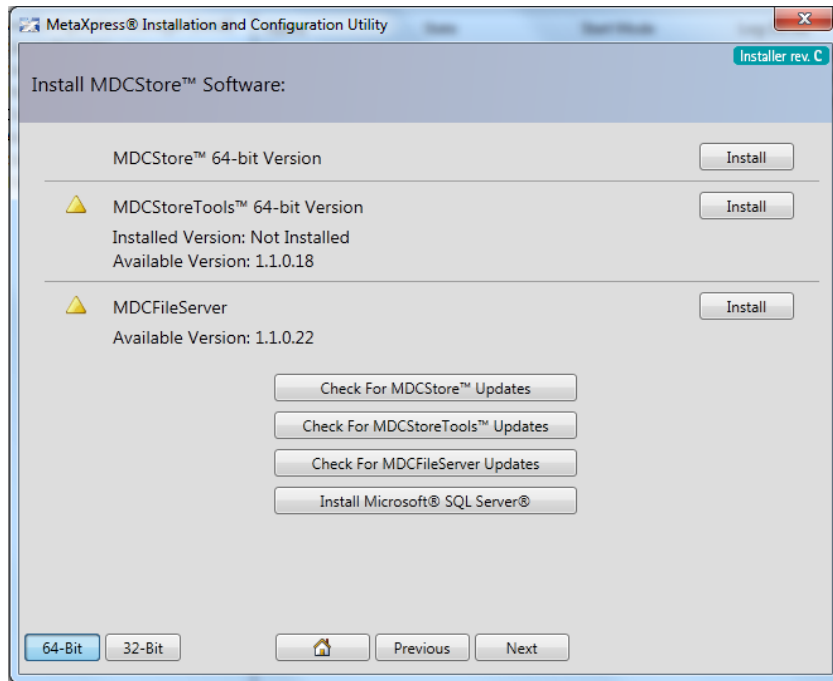
**Note:** The MDCStoreTools utility is compatible with version 3.0 or above of the MetaXpress Software. Before you use the MDCStoreTools utility for the first time, you must have started version 3.0 or above of the MetaXpress Software at least once. When you start the MetaXpress Software, it “activates” the MDCStore database (version 2.1 or above). Then, you can close the MetaXpress Software and start the MDCStoreTools utility as described in the *MDCStoreTools Data Management Utility User Guide*, which is provided on the MetaXpress Software Installation flash drive and is available in the Molecular Devices knowledge base at <http://www.moleculardevices.com/support.html>.

You need to perform this procedure only once. You do not need to start the MetaXpress Software every time you want to use the MDCStoreTools utility.

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1. Log in to the computer where you want to install the MDCStoreTools utility.
2. Follow the instructions in [Starting the MetaXpress Installation and Configuration Utility on page 9](#) to start the MetaXpress Software Installation and Configuration Utility.

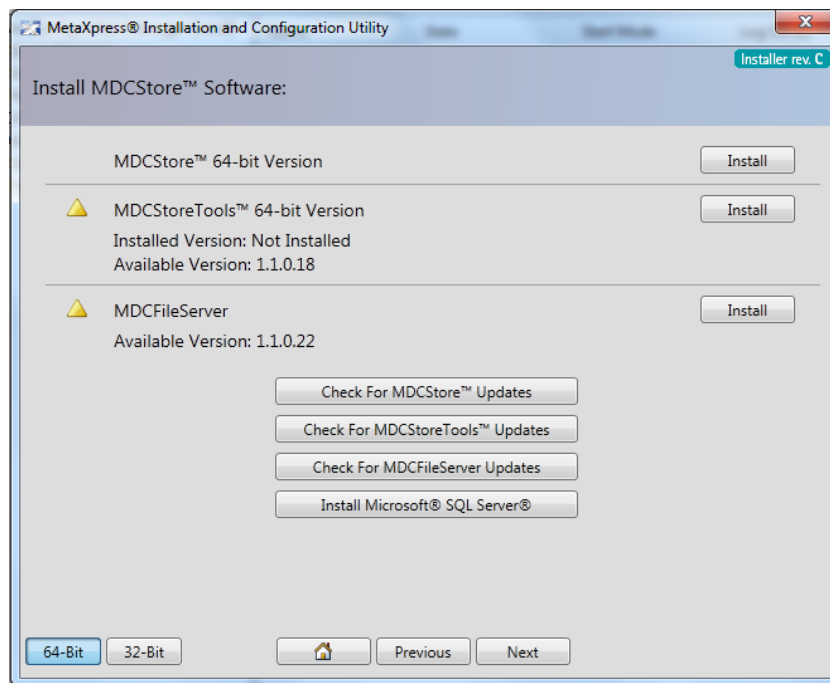
3. In the MetaXpress Installation and Configuration Utility, on the **Install MDCStore Software** page, click the MDCStoreTools **Install** button.



4. In the message that appears, click **Yes** to confirm that you want to continue with the installation.  
The system checks for prerequisites, such as Visual C++ Runtime Libraries.
5. If required components are missing, a warning appears, and you must click **Install** to install the components and continue.
6. Follow the on-screen instructions provided by the MDCStoreTools Setup Wizard.
7. When the installation is complete, click **Close** to exit the wizard.

## Installing the MDC File Server

1. Log in to the computer where you want to install the MDC File Server.
2. Follow the instructions in [Starting the MetaXpress Installation and Configuration Utility on page 9](#) to start the MetaXpress Software Installation and Configuration Utility.
3. In the MetaXpress Installation and Configuration Utility, on the **Install MDCStore Software** page, click the MDC File Server **Install** button.



4. In the confirmation message that appears, click **Yes**.
5. In the WinZip Self-Extractor dialog, click **Setup**.
6. Follow the on-screen instructions in the installation setup wizard.

The MDC File Server installer installs two files:

- The File Server Manager program (FileServerManager.exe) is installed in the following location:  
**C:\Program Files\Molecular Devices\MDC File Server**
- The file server (FileServer.exe) is installed in the following location: **C:\Windows\System32**

# Installing the MDCStore Xchange Data Conversion Service

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## 5

The MDCStore™ Xchange Data Conversion Service works together with the installed MDCStore™ High Content Data Management Solution data base to manage image and data conversions. This service uses your default web browser to convert images and data to and from a variety of formats.

The MDCStore Xchange Data Conversion Service supports the following web browsers:

- Microsoft Internet Explorer (version 9 or later)
- Mozilla FireFox
- Apple Safari
- Google Chrome

Before installing the MDCStore Xchange Data Conversion Service server or client software, you need to have already installed the Microsoft Visual C++ Runtime Libraries. These libraries can be installed using the MetaXpress Software Installation and Configuration Utility. See [Installing and Verifying Prerequisites, Keys, and Licenses on page 13](#).

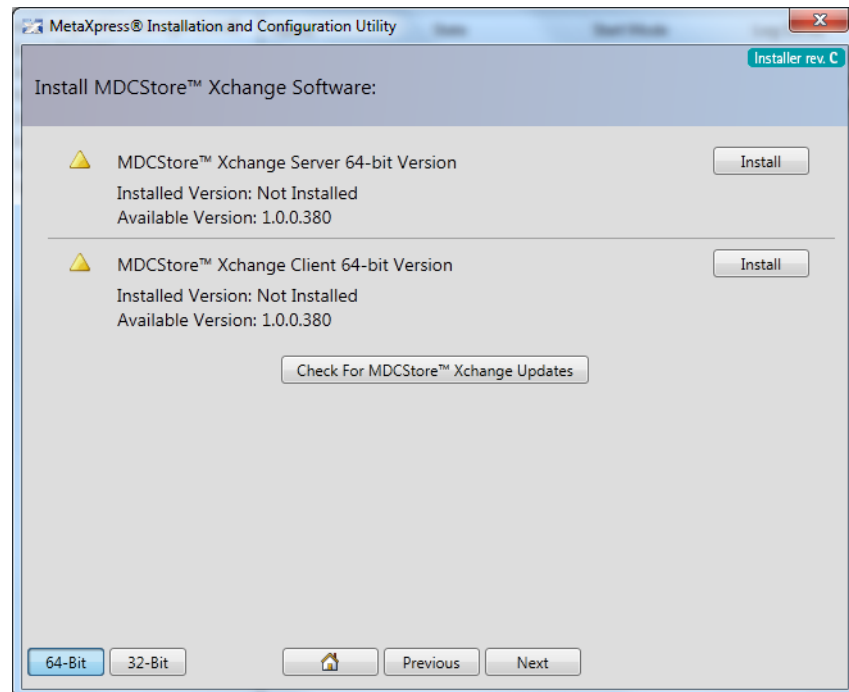
For information on licensing for the MDCStore Xchange Data Conversion Service, please visit the Molecular Devices knowledge base at <http://www.moleculardevices.com/support.html>.

Topics in this chapter:

- [Installing the MDCStore Xchange Server Software on page 38](#)
- [Installing the MDCStore Xchange Client Software on page 39](#)

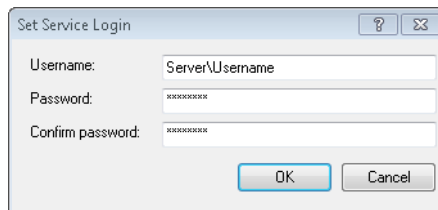
## Installing the MDCStore Xchange Server Software

1. Log in to the computer where you want to install the MDCStore Xchange Service server software.
2. Follow the instructions in [Starting the MetaXpress Installation and Configuration Utility on page 9](#) to start the MetaXpress Software Installation and Configuration Utility.
3. In the MetaXpress Installation and Configuration Utility, on the **Install MDCStore Xchange Software** page, click the MDCStore Xchange Server **Install** button.



4. In the MetaXpress PowerCore Server Installation Wizard, click **Next** and follow the instructions in the wizard to complete the installation.

During the installation the **Set Service Login** dialog appears.

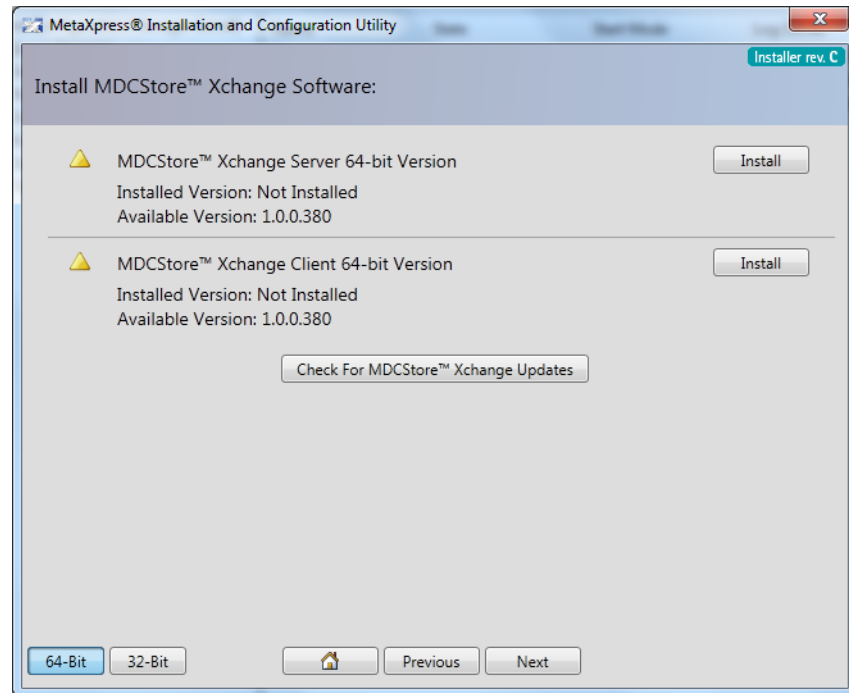
A screenshot of the 'Set Service Login' dialog box. The dialog has a title bar with a question mark icon and a close button. It contains three input fields: 'Username' with the text 'Server\Username', 'Password' with masked characters, and 'Confirm password' with masked characters. At the bottom right are 'OK' and 'Cancel' buttons.

5. Type your Windows user name and password in the fields.
6. After the installation completes, click **Close**.

## Installing the MDCStore Xchange Client Software

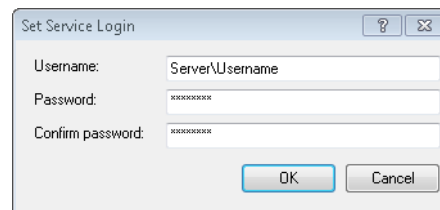
1. Log in to the computer where you want to install the MDCStore Xchange service client software.
2. Follow the instructions in [Starting the MetaXpress Installation and Configuration Utility on page 9](#) to start the MetaXpress Software Installation and Configuration Utility.

3. In the MetaXpress Installation and Configuration Utility, on the **Install MDCStore Xchange Software** page, click the MDCStore Xchange Client **Install** button.



4. In the MetaXpress PowerCore Client Installation Wizard, click **Next** and follow the instructions in the wizard to complete the installation.

During the installation the **Set Service Login** dialog appears.



5. Type your Windows user name and password in the fields.
6. After the installation completes, click **Close**.



## Installing the MetaXpress Software

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Molecular Devices recommends that you use the MetaXpress® Software Installation flash drive to fully install version 5.1 of the MetaXpress Software. Once you install version 5.1 of the software, you can then install updates as they are made available on the MetaXpress Updates web site.

If version 5.0 of the software is already installed on your instrument workstation or analysis computer, during the installation process the software provides a step where you can choose to do one of the following:

- install version 5.1 in the same folder as version 5.0 (this will overwrite version 5.0 with version 5.1)
- install version 5.1 in a different folder than version 5.0 (in this case, version 5.0 will be retained and you will be able to run either version of the software)



**Note:** Version 5.1 of the MetaXpress Software requires version 2.3 of the MDCStore™ High Content Data Management Solution. To use the MDCStoreTools™ Data Management Utility, you must upgrade the MDCStore database to version 2.3.

If you are installing the MDCStoreTools Data Management Utility for the first time (no earlier versions exist on the computer), you must log into the MDCStore database at least once before using the MDCStoreTools Data Management Utility.

The MDCStoreTools Data Management Utility is compatible with version 3.0 or above of the MetaXpress Software. If you have an earlier version of the MetaXpress Software and you attempt to install the MDCStoreTools Data Management Utility, a warning appears informing you that you must upgrade to version 3.0 or above of the MetaXpress Software.

Before installing the MetaXpress Software, you need to have already installed the Microsoft Visual C++ Runtime Libraries and the SafeNet Sentinel System Driver software, and, if applicable, the SafeNet Sentinel Protection Server software. These components can be installed using the MetaXpress Software Installation and Configuration Utility. See [Installing and Verifying Prerequisites, Keys, and Licenses on page 13](#).

Topics in this chapter:

- [Copying Settings from an Earlier Version of the Software on page 42](#)
- [Installing the Software on page 43](#)
- [Installing Version 10 of the USB Driver on Instrument Workstations on page 51](#)
- [Installing the Latest Update of the Software on page 53](#)

## Copying Settings from an Earlier Version of the Software

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**CAUTION!** Molecular Devices assumes no responsibility for any damage to existing user data that can occur due to network problems, power failure, unexpected termination during the update process, user customization of an existing MDCStore database, and so on. You must fully back up your existing database before beginning an installation or upgrade procedure.

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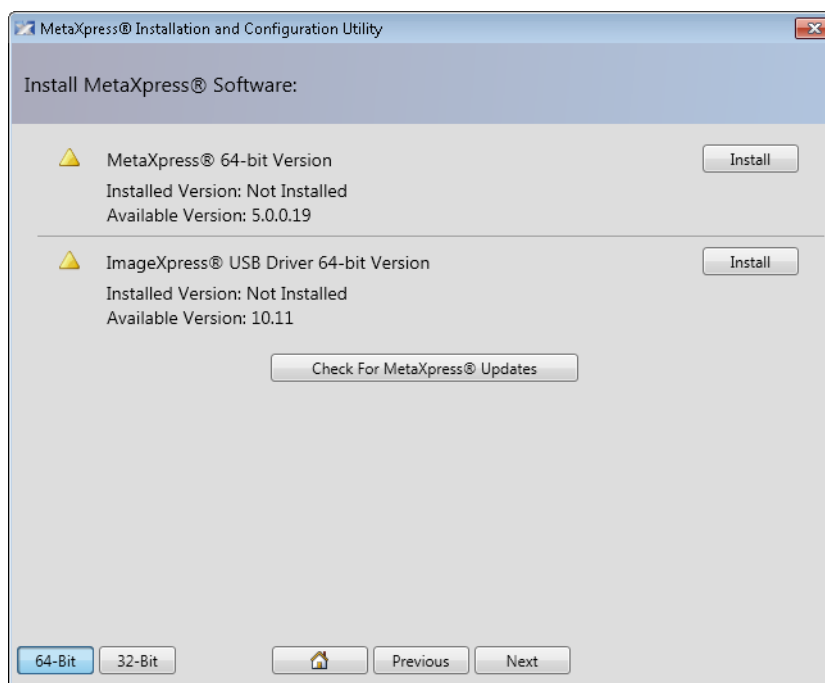
If you are upgrading from an earlier version of the MetaXpress Software to version 5.1 on a computer running Windows Vista or Windows 7, follow the steps below. These steps ensure that an option to copy settings from the earlier version of the software will be provided when you install version 5.1 of the software.

1. On the computer's desktop, right-click the icon of the version of the MetaXpress Software that you want to copy settings from and select **Run as Administrator**.
2. Start and then close the version of the MetaXpress Software that you selected in Step 1.

After you have completed the steps above, install version 5.1 of the MetaXpress Software as described in the next section.

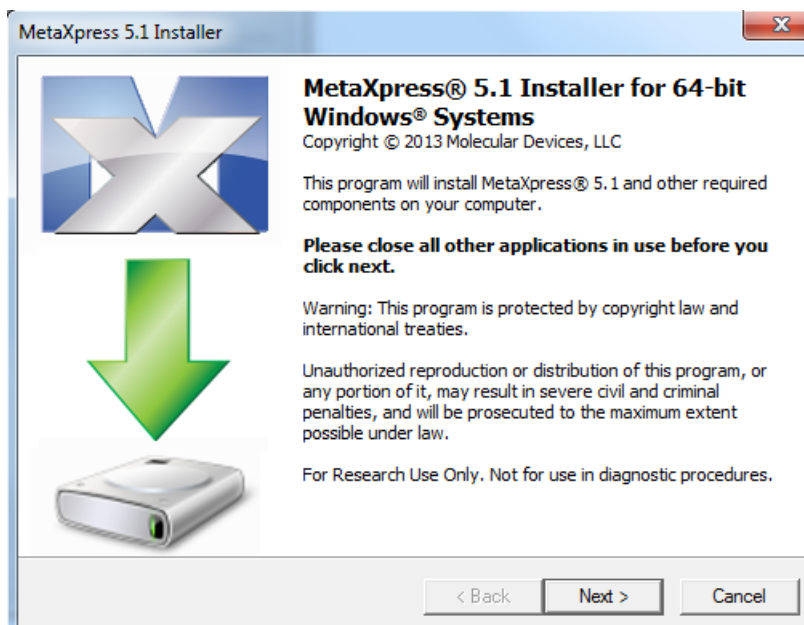
## Installing the Software

1. Follow the instructions in [Starting the MetaXpress Installation and Configuration Utility on page 9](#) to start the MetaXpress Software Installation and Configuration Utility.
2. In the MetaXpress Installation and Configuration Utility, on the **Install MetaXpress Software** page, click the MetaXpress **Install** button.



3. In the confirmation message that appears, click **Yes**.

The MetaXpress Software installation wizard appears.

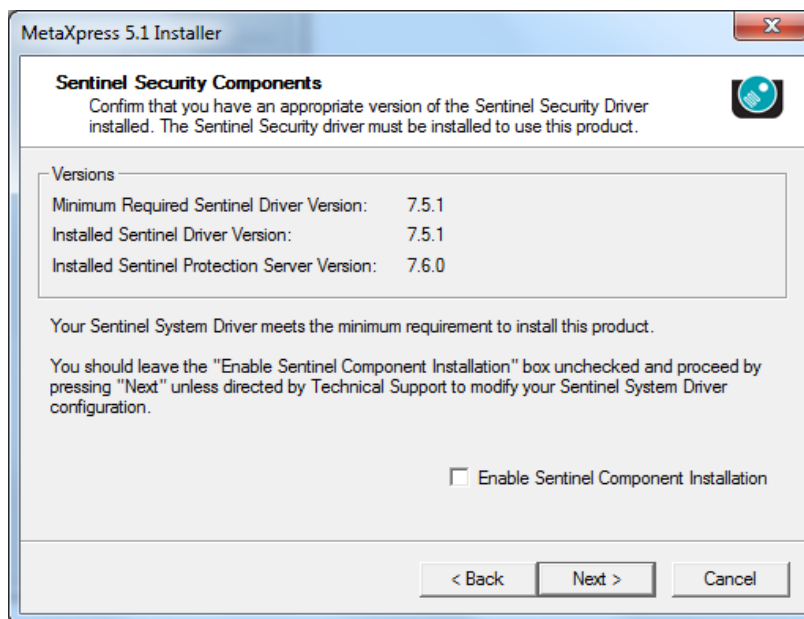


4. Click **Next**.

The software license agreement appears.

5. Select **I Accept all terms of the preceding License** and then click **Next**.

The Sentinel Security Components page of the installation wizard appears.



6. Click **Next**.
7. If the installation wizard does not detect an earlier version of the MetaXpress Software on the instrument workstation or analysis (offline) computer, skip to [Step 10](#). If an earlier version of the software is detected, select **Copy the settings from this folder into a new destination folder** and then click **OK**.



**Note:** The installation wizard uses the settings from the copy of the MetaXpress Software that was most recently open. If you want to install the MetaXpress Software using the settings from a different copy of the software, close the installation wizard, open the other copy of the MetaXpress Software and then close it, and then start the installation again from the beginning.

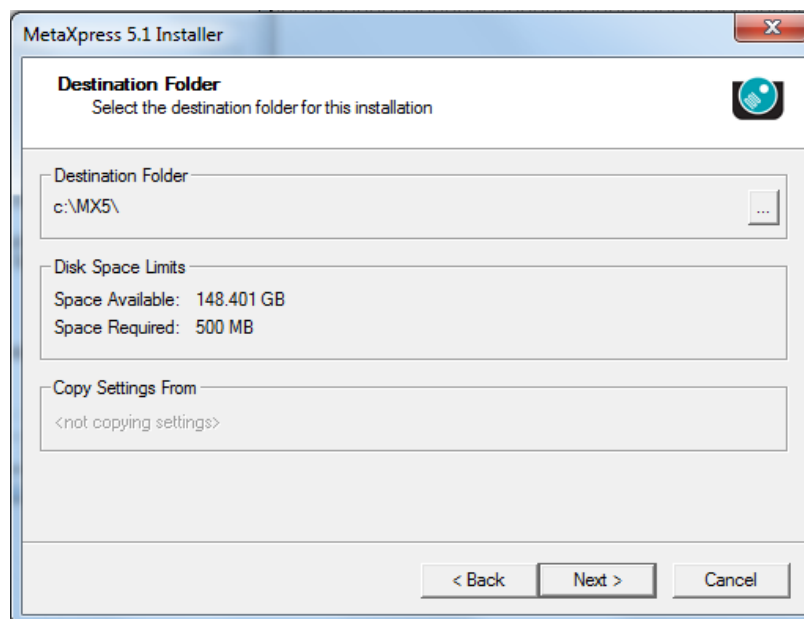


**Note:** On a computer running Microsoft Windows Vista or Windows 7, if the User Access Control (UAC) is enabled (accessible in Control Panel > User Accounts) and two different versions of the MetaXpress Software are installed side by side (for example, versions 4.0 and 5.0), in order to switch between the versions you must run each version as Administrator (right-click on the application icon and select "Run as Administrator").

The Browse for Folder dialog appears.

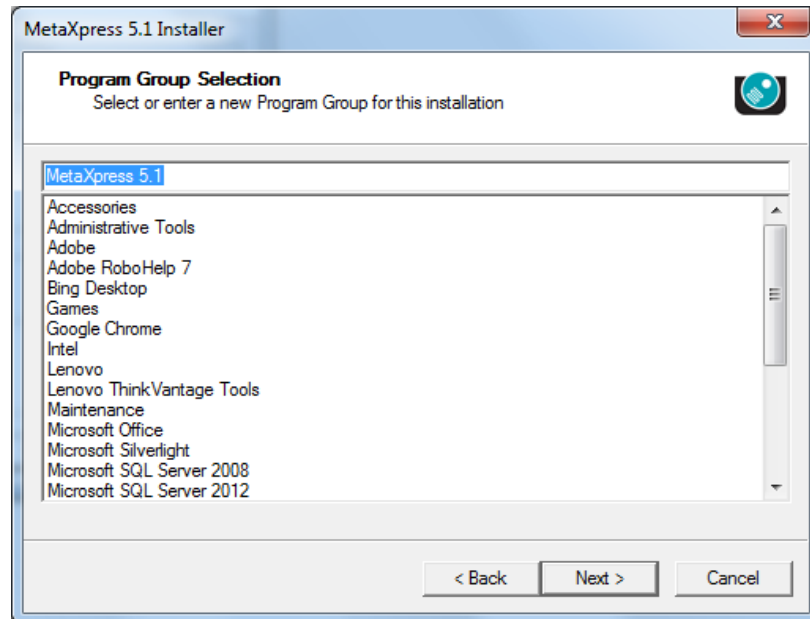
8. Create a folder for the new copy of the MetaXpress Software, and click **OK**.

The Destination Folder page of the installation wizard appears.



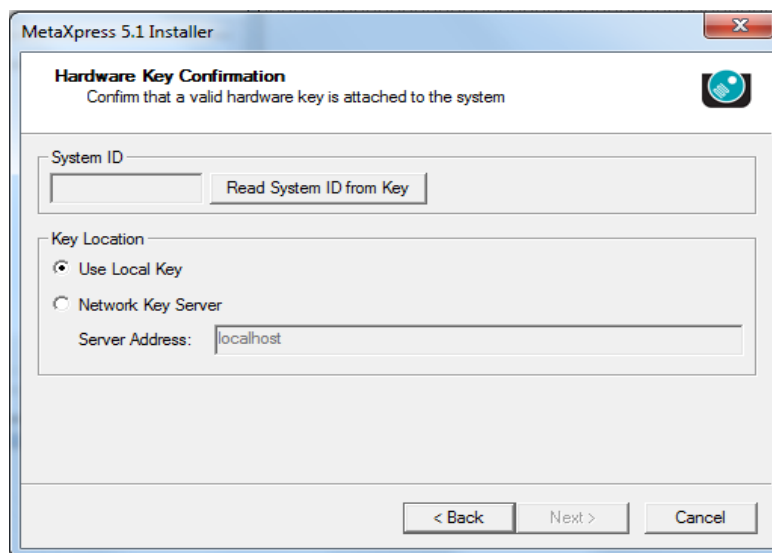
9. Make sure the C: drive has enough space available as indicated in the Disk Space Limits section of the dialog, change the destination folder if needed, and then select **Next**.

The Program Group Selection page of the installation wizard appears.



- 10.** Change the name of the program group if needed, and click **Next**.

The Hardware Key Confirmation page of the installation wizard appears.



11. If you are using a MetaXpress Software hardware key to install the software on an instrument workstation or on an analysis (offline) computer, make sure the hardware key is inserted into a USB port, select **Use Local Key** and then click **Read System ID from Key**.

The installation wizard displays your System ID in the System ID field.

12. If you are using a network key to install the software on an analysis (offline) computer, select **Network Key Server**, type the server address (the static IP address or the full computer name) where the network key is installed, and then click **Read System ID from Key**.

The installation wizard displays your System ID in the System ID field.



**Note:** If the software does not detect the hardware key, you will not be able to click the Next button to go to the next page of the installation wizard. If this occurs, make sure the key is connected, that the network key server is installed, and that the appropriate firewall settings are applied.

13. Click **Next**.



The User Information and Codes page of the installation wizard appears.

The screenshot shows the 'MetaXpress 5.1 Installer' window. The title bar says 'MetaXpress 5.1 Installer'. The main heading is 'User Information and Codes' with a subtext 'Enter the required user information and codes to proceed with this install'. There is a small icon in the top right corner. The form is divided into two sections: 'Registered Owner Information' and 'Codes'. The 'Registered Owner Information' section has two text boxes labeled 'Name:' and 'Affiliation:'. The 'Codes' section has two text boxes labeled 'Registration Code:' and 'Authorization Code:'. Below these are three buttons: 'Using the Internet', 'From a Disk', and 'Manually'. A note at the bottom of the 'Codes' section states: 'Note: Registration Codes and Authorization Codes are case sensitive.' At the bottom of the window are three buttons: '< Back', 'Next >', and 'Cancel'.

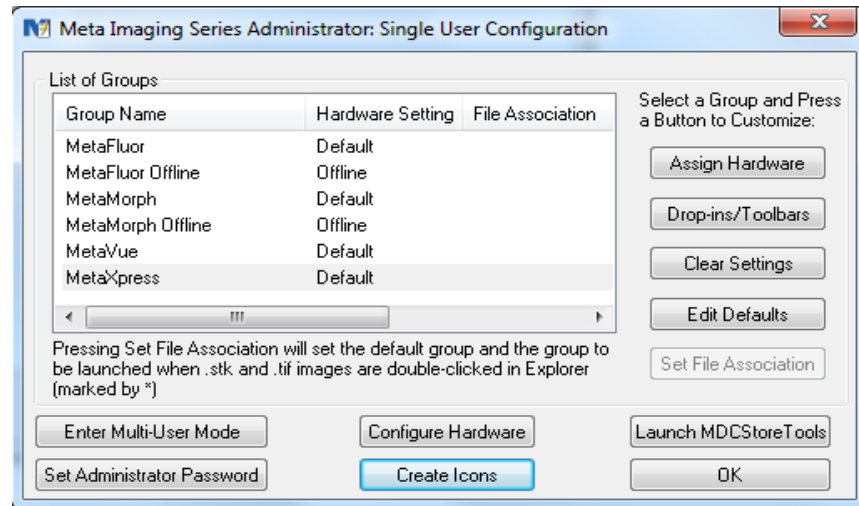
**14.** Enter the codes using one of the following methods:

- ♦ If the instrument workstation or computer is connected to the internet, click **Using the Internet**. The installation wizard retrieves the codes and displays them in the appropriate fields.
- ♦ If the codes are on a disk, insert the disk and click **From a Disk**. The installation wizard copies the codes from the disk to the appropriate fields.
- ♦ If the instrument workstation or computer is not connected to the internet, click **Manually** and type the registration and authorization codes in the appropriate fields. You can find the codes on the letter that accompanied your order. Or, you can go to [www.meta.moleculardevices.com/authorize/](http://www.meta.moleculardevices.com/authorize/) to find the codes (you must provide your System ID on the web page).

**15.** Click **Next**.

**16.** Click **Install**.

The installation wizard installs version 5.1 of the MetaXpress Software and then opens the Meta Imaging Series Administrator.



17. To create a folder on the desktop, click **Create Icons**.
18. Click **OK**.
19. The Installation Complete page of the installation wizard appears.
20. Click **Finish**.

## Installing Version 10 of the USB Driver on Instrument Workstations

You must update the USB driver on all instrument workstations to version 10. If you do not update the driver, the ImageXpress® Micro and ImageXpress® Ultra Systems will not operate properly. Version 10 of the USB driver is compatible with earlier versions of the MetaXpress Software.



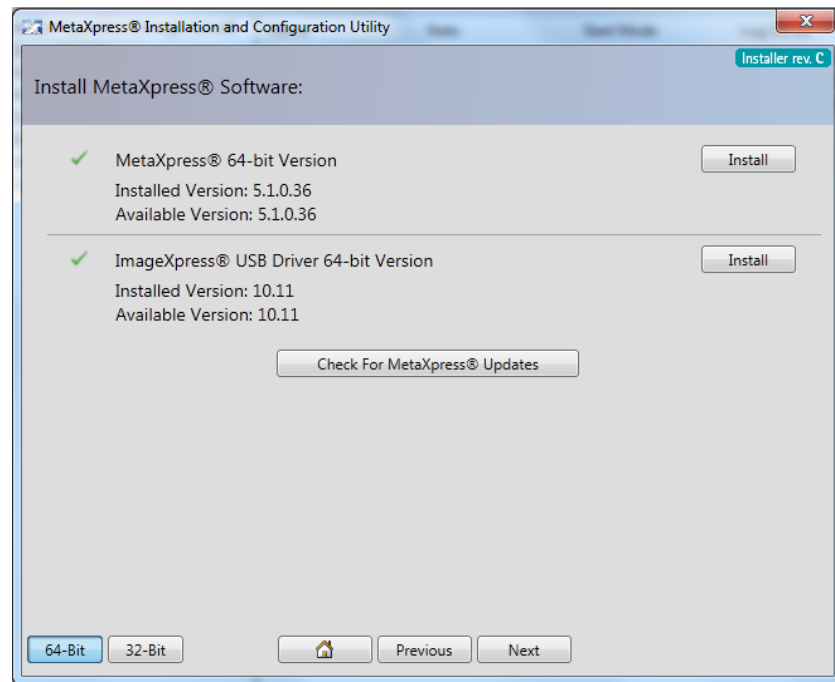
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**Note:** You do not need to install the driver on computers that are not used for acquisition.

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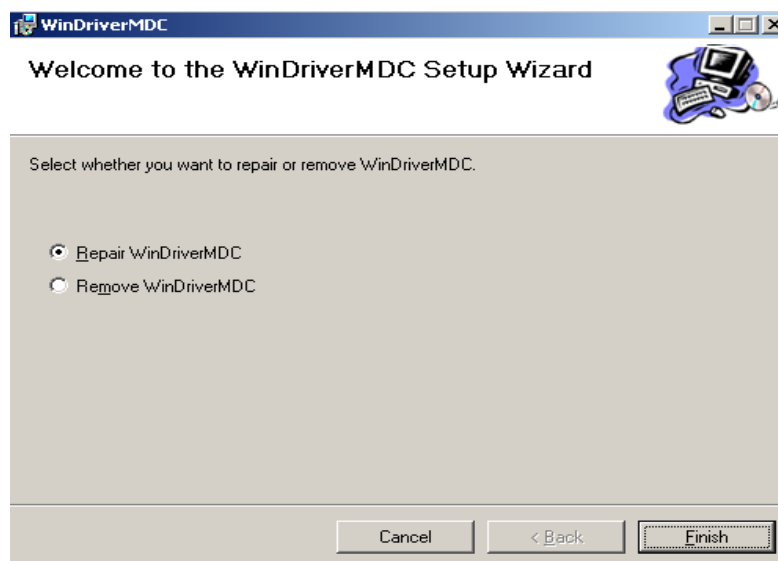
### To install version 10 of the USB driver

1. Make sure you are logged in as Administrator on the instrument workstation.
2. Follow the instructions in [Starting the MetaXpress Installation and Configuration Utility on page 9](#) to start the MetaXpress Software Installation and Configuration Utility.
3. In the MetaXpress Installation and Configuration Utility, on the **Install MetaXpress Software** page, click the ImageXpress USB Driver **Install** button.



4. In the confirmation message that appears, click **Yes**.  
The WinZip Self-Extractor dialog appears.
5. Click **Setup**.

The following page appears.



6. If the installation wizard detected an earlier version of the driver on the computer, select **Repair WinDriverMDC**.
7. Click **Finish**.
8. When the Installation Complete page appears, click **Close**.

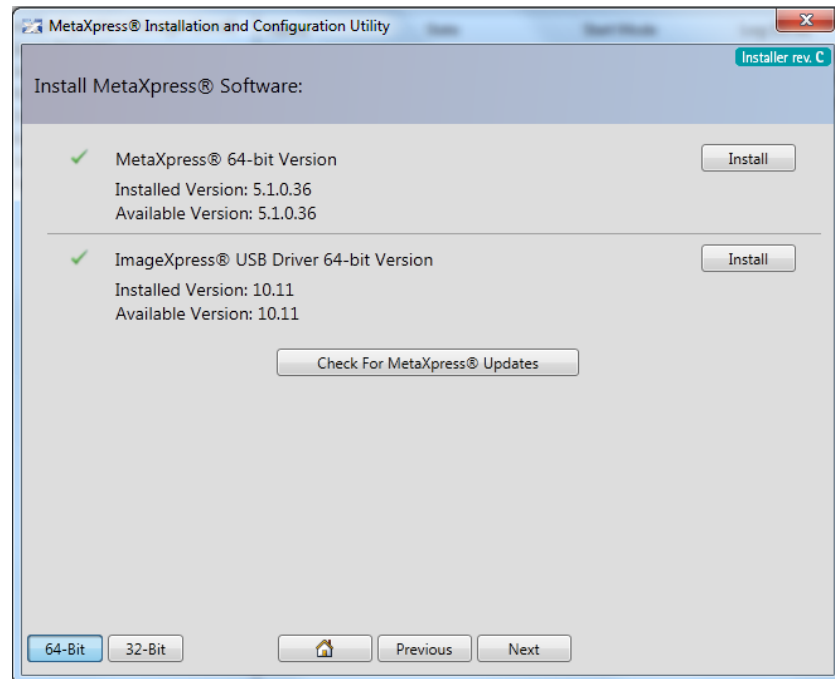
## Installing the Latest Update of the Software

Molecular Devices recommends that you always use the latest available version of the MetaXpress Software. Periodically check the Molecular Devices web site for updates as described in this section.

If you are unable to download the update, please send an e-mail to Technical Support using the form available in the Molecular Devices knowledge base at <http://www.moleculardevices.com/support.html> or call 1-800-635-5577 (toll free in the US) or 1-408-747-1700 and request that the latest update be sent to you. You will be asked for your System ID and the version of the software that you are requesting.

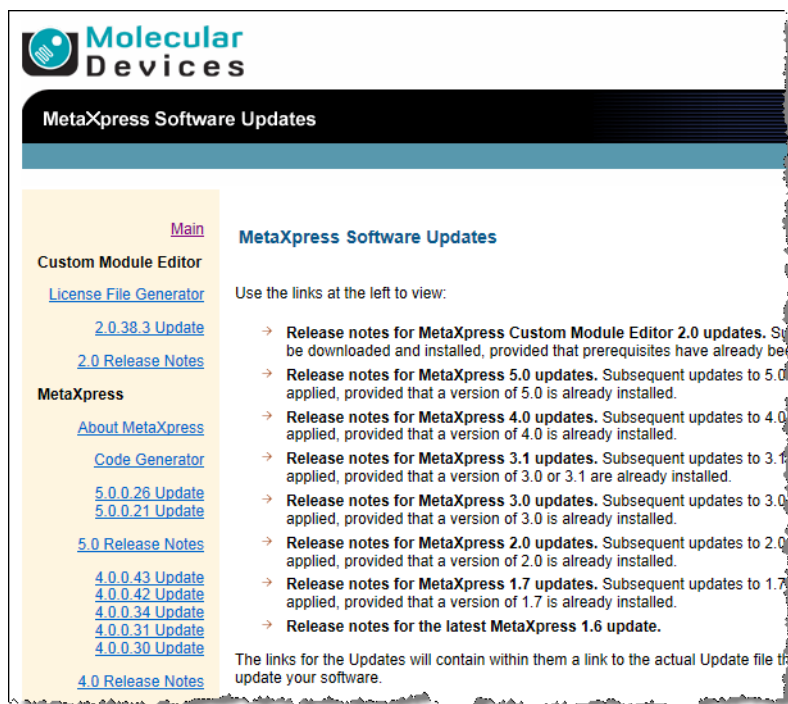
### To install an update of the MetaXpress Software

1. Follow the instructions in [Starting the MetaXpress Installation and Configuration Utility on page 9](#) to start the MetaXpress Software Installation and Configuration Utility.
2. In the MetaXpress Installation and Configuration Utility, on the **Install MetaXpress Software** page, click **Check for MetaXpress Updates**.



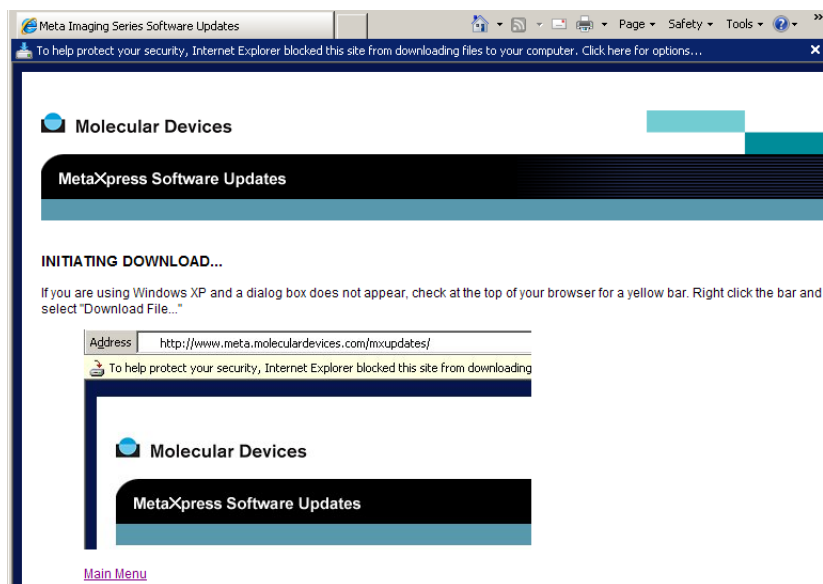
3. On the MetaXpress Software Updates web page, enter your System ID and click **Log In**. Your System ID is on your MetaXpress Software hardware key and in the letter that accompanied your order.  
The web page that appears lists the available updates for the MetaXpress Software.
4. Select the latest update.

The Update page for the update that you selected appears. For example:



5. Click on the link for the correct version to download the update file.
6. When the license agreement appears, click **I ACCEPT THE TERMS IN THIS AGREEMENT.**

A yellow bar appears indicating that the site is blocked from downloading.



7. Click the yellow bar and, in the menu that appears, select **Download File**.

The File Download dialog appears.

8. Click **Save**, choose a location on your hard drive for the update file in the **Save As** dialog, and then click **Save** again.



**Note:** You can save the update file to a USB flash drive or DVD, which is especially useful if you are updating the MetaXpress Software on more than one instrument workstation or computer.

**CAUTION!** Do not attempt to unzip the update file. The Meta Imaging Series® Updater unzips the file during the update process.

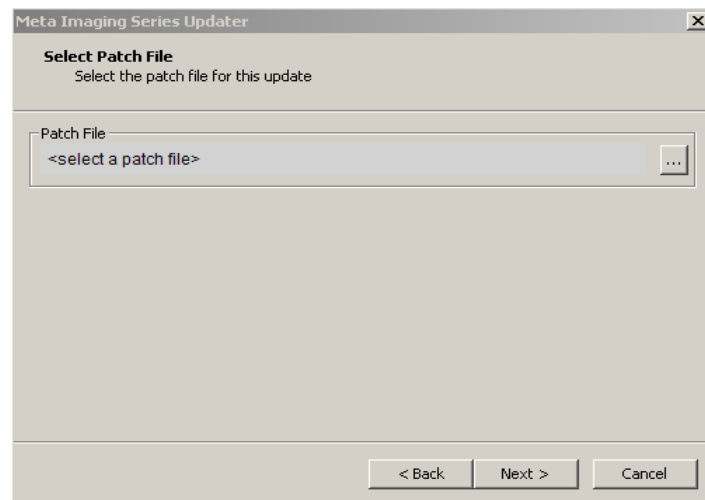
9. From the Windows **Start** menu, select **Programs>Meta Imaging Series>Meta Imaging Series Updater**.

The first page of the Meta Imaging Series Updater appears.

10. Click **Next**.

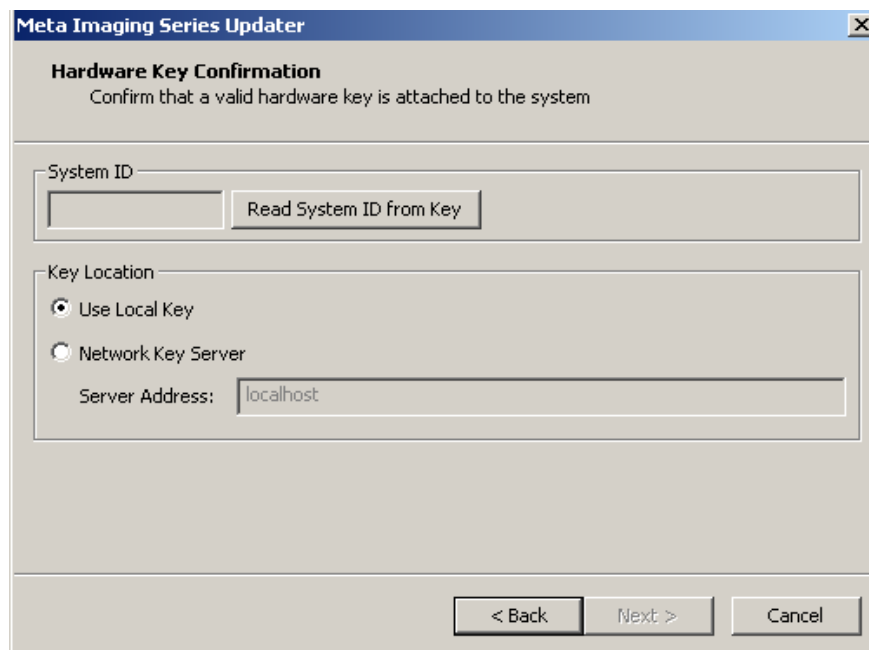


The Select Patch File page appears.



- 11.** Select the ellipsis (...) button.  
The Open dialog appears.
- 12.** Navigate to the update file, select it, and then click **Open**.  
The Select Patch File page appears, displaying the path name of the update file that you selected.
- 13.** Click **Next**.

The Hardware Key Confirmation page of the Meta Imaging Series Updater appears.



The screenshot shows a window titled "Meta Imaging Series Updater" with a close button in the top right corner. The main heading is "Hardware Key Confirmation" with a subtitle "Confirm that a valid hardware key is attached to the system". Below this, there are two sections. The first section is labeled "System ID" and contains a text input field and a button labeled "Read System ID from Key". The second section is labeled "Key Location" and contains two radio buttons: "Use Local Key" (which is selected) and "Network Key Server". Below the radio buttons is a text input field labeled "Server Address:" with the value "localhost" entered. At the bottom of the window, there are three buttons: "< Back", "Next >", and "Cancel".

- 14.** If you are using a network key, skip to Step 14. If you are using a MetaXpress Software hardware key to update the software on an instrument workstation or on an analysis (offline) computer, make sure the hardware key is inserted into a USB port, select **Use Local Key** and then click **Read System ID from Key**.

The Updater displays your System ID in the System ID field.

- 15.** If you are using a network key to update the software on an analysis (offline) computer, select **Network Key Server**, type the server address (the static IP address or the full computer name) where the network key is installed, and then click **Read System ID from Key**.

The Updater displays your System ID in the System ID field.



**Note:** If the software does not detect the hardware key, you will not be able to click the Next button to go to the next page of the Updater. If this occurs, make sure the key is connected, that the network key server is installed, and that the appropriate firewall settings are applied.

---

**16. Click Next.**

The User Information and Codes page of the Meta Imaging Series Updater appears.

The screenshot shows a window titled "Meta Imaging Series Updater" with a close button in the top right corner. The main heading is "User Information and Codes" with a subtitle "Enter the required user information and codes to proceed with this install". The window is divided into two main sections. The first section, "Registered Owner Information", contains two text input fields labeled "Name:" and "Affiliation:". The second section, "Codes", contains two text input fields labeled "Registration Code:" and "Authorization Code:". Below these fields are three buttons: "Retrieve Codes:", "Using the Internet", "From a Disk", and "Manually". A note at the bottom of the "Codes" section states: "Note: Registration Codes and Authorization Codes are case sensitive." At the bottom of the window are three buttons: "< Back", "Next >", and "Cancel".

**17. Enter the codes using one of the following methods:**

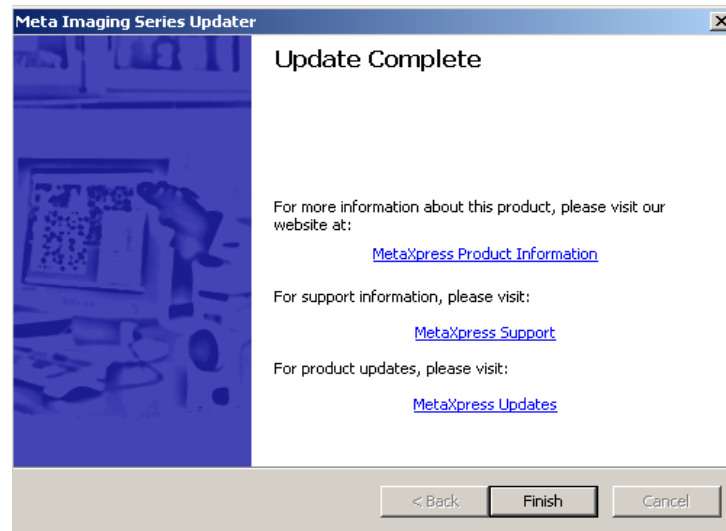
- ♦ If the instrument workstation or computer is connected to the internet, click **Using the Internet**. The Updater retrieves the codes and displays them in the appropriate fields.
- ♦ If the codes are on a disk, insert the disk and click **From a Disk**. The Updater copies the codes from the disk to the appropriate fields.
- ♦ If the instrument workstation or computer is not connected to the internet, click **Manually** and type the registration and authorization codes in the appropriate fields. You can find the codes on the letter that accompanied the order. Or, you can go to [www.meta.moleculardevices.com/authorize/](http://www.meta.moleculardevices.com/authorize/) to find the codes (you will be asked to enter your System ID).

**18. Click Next.**

The Ready to Proceed page of the Meta Imaging Series Updater appears.

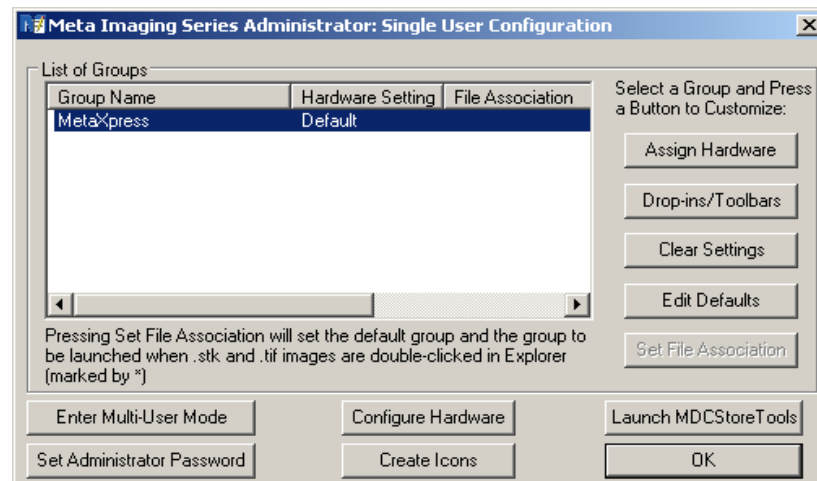
**19. Click Update.**

When the installation is complete, the following page appears:



**20. Click Finish.**

The Meta Imaging Series Updater opens the Meta Imaging Series Administrator.



**21. Click OK.**

# Installing the MetaXpress Custom Module Editor

---

## 7

Although the MetaXpress® Custom Module Editor is integrated into the MetaXpress Software, you install it as a separate component. Then, in the MetaXpress Software, you can open the Custom Module Editor using the Create Custom Module button on the Run Analysis tab in the Review Plate Data dialog.

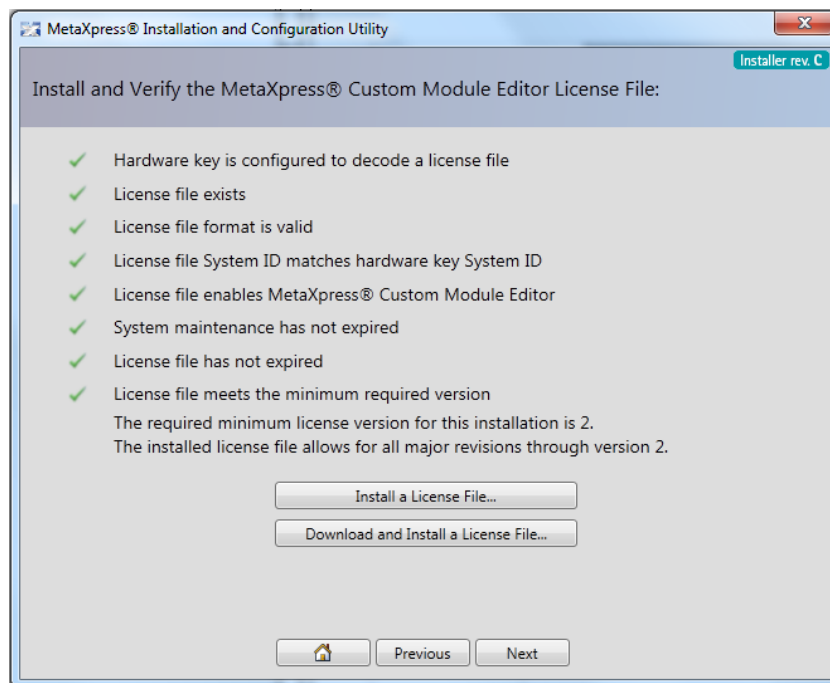
Before installing the MetaXpress Custom Module Editor, you need to have already installed the Microsoft Visual C++ Runtime Libraries and the Microsoft Office Primary Interoperability Assemblies. These libraries and assemblies can be installed using the MetaXpress Software Installation and Configuration Utility. See [Installing and Verifying Prerequisites, Keys, and Licenses](#) on page 13.

Topics in this chapter:

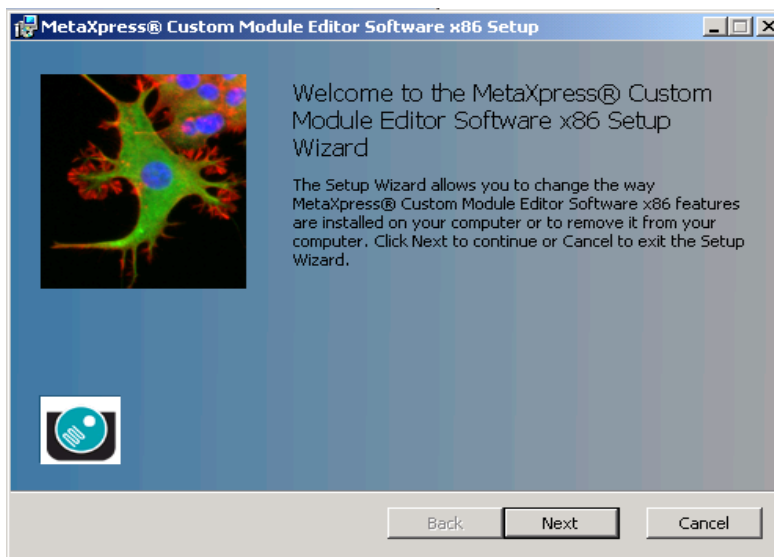
- [Installing the Custom Module Editor](#) on page 62
- [Updating the Custom Module Editor](#) on page 64

## Installing the Custom Module Editor

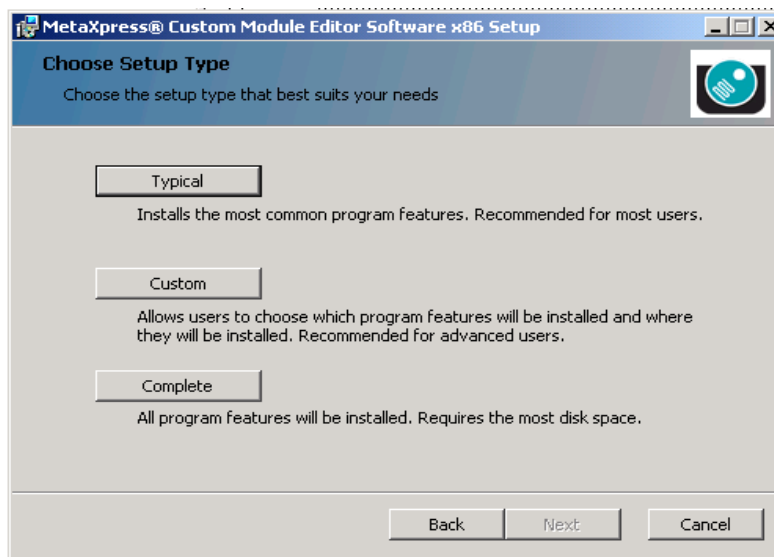
1. Make sure you are logged in as Administrator on the instrument workstation or computer.
2. Follow the instructions in [Starting the MetaXpress Installation and Configuration Utility on page 9](#) to start the MetaXpress Software Installation and Configuration Utility.
3. In the MetaXpress Installation and Configuration Utility, on the **Install MetaXpress Custom Module Editor Software** page, click the MetaXpress Custom Module Editor **Install** button.



The MetaXpress Custom Module Editor Setup Wizard calculates the computer space requirements, which may take a couple of minutes, and then the Welcome page appears.



4. Click **Next**.
5. Accept the terms in the license agreement and click **Next**. The Choose Setup Type page appears.



6. Unless you have been instructed by Technical Support to select another option, click **Typical**.
7. On the **Ready to install MetaXpress Custom Module Editor Software** page, click **Install**.  
The setup wizard installs the MetaXpress Custom Module Editor Software.
8. When the setup wizard informs you that the installation is complete, click **Finish**.

## Updating the Custom Module Editor

Molecular Devices recommends that you always use the latest available version of the MetaXpress Custom Module Editor. Periodically check the Molecular Devices web site for updates as described in this section.

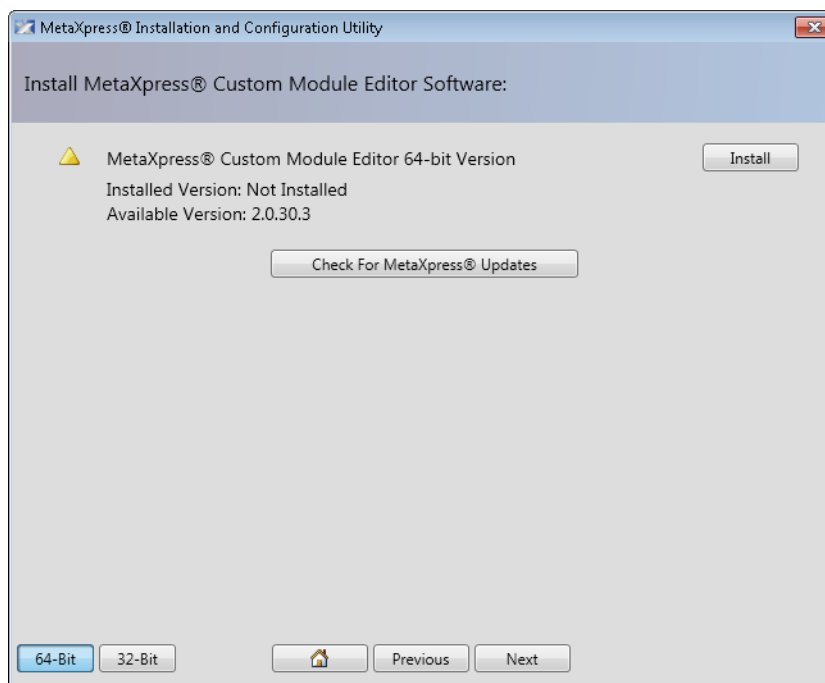
If you are unable to download the update, please send an e-mail to Technical Support using the form available in the Molecular Devices knowledge base at <http://www.moleculardevices.com/support.html> or call 1-800-635-5577 (toll free in the US) or 1-408-747-1700 and request that the latest update be sent to you. You will be asked for your System ID and the version of the software that you are requesting.

### To update the Custom Module Editor

1. Make sure you are logged in as Administrator on the instrument workstation or computer.
2. Follow the instructions in [Starting the MetaXpress Installation and Configuration Utility on page 9](#) to start the MetaXpress Software Installation and Configuration Utility.

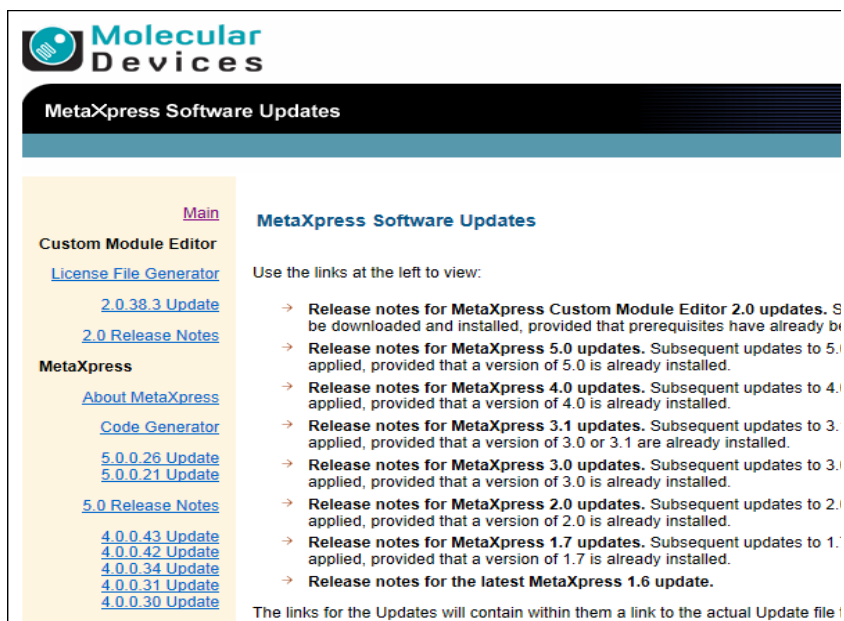


3. In the MetaXpress Installation and Configuration Utility, on the **Install MetaXpress Custom Module Editor Software** page, click **Check for MetaXpress Updates**.



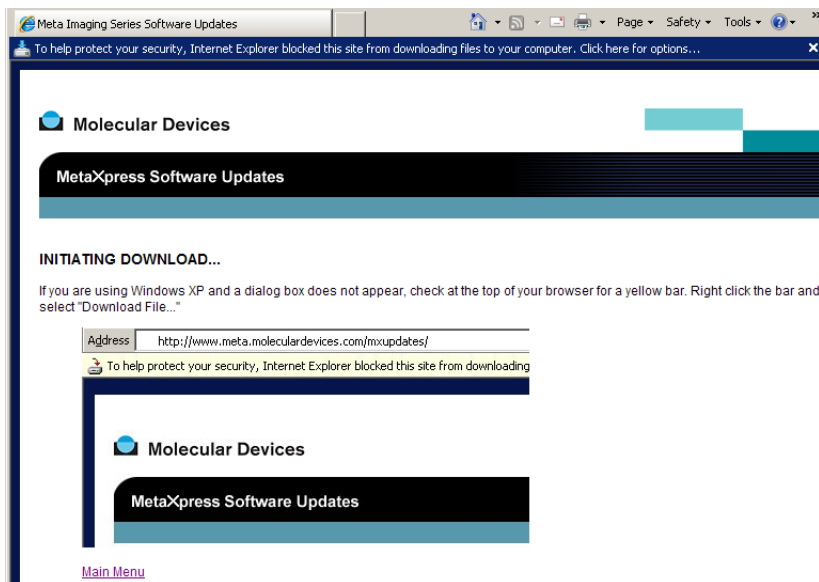
4. On the MetaXpress Software Updates web page, enter your System ID and click **Log In**. Your System ID is on your MetaXpress Software hardware key and in the letter that accompanied your order.  
The web page that appears lists the available updates for the MetaXpress Custom Module Editor.
5. Select the latest update.

The Update page for the update that you selected appears. For example:



6. Click on the link for the correct version to download the update file.
7. When the license agreement appears, click **I ACCEPT THE TERMS IN THIS AGREEMENT.**

A yellow bar appears indicating that the site is blocked from downloading.



8. Click the yellow bar and, in the menu that appears, select **Download File**.

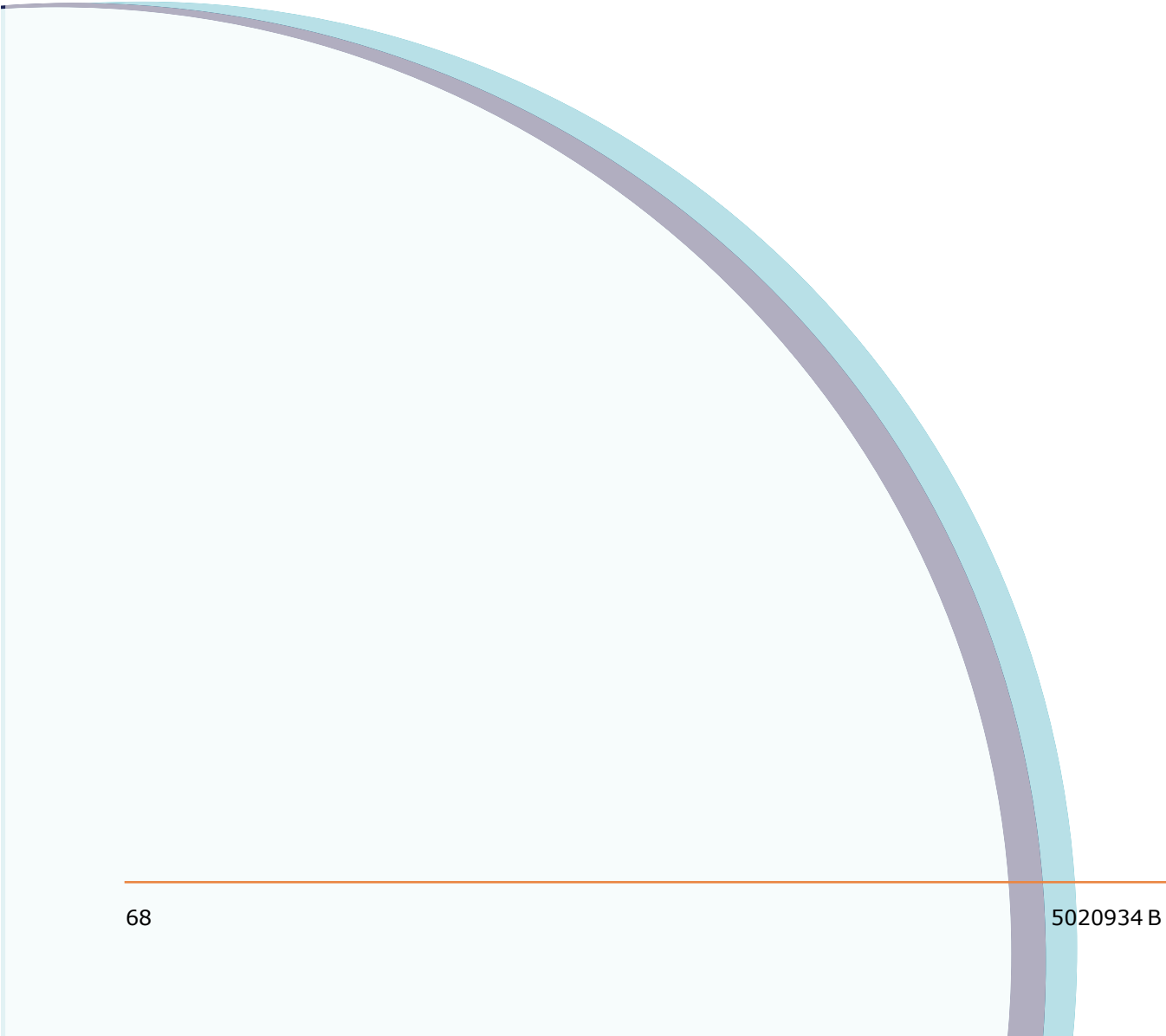
The File Download dialog appears.

9. Click **Save**, choose a location on your hard drive for the update file in the **Save As** dialog and then click **Save** again.



**Note:** You can save the update file to a USB flash drive or DVD, which is especially useful if you are updating the software on more than one instrument workstation or computer.

10. Browse to the location where you saved the update (.msi) file and then double-click the file.  
The MetaXpress Custom Module Editor Setup wizard appears.
11. Follow the on-screen instructions in the wizard to update the MetaXpress Custom Module Editor.



# Installing the MetaXpress PowerCore Software

## 8

To use the MetaXpress® PowerCore™ High Content Distributed Image Analysis Software, you must install MetaXpress PowerCore server and client software as described in this chapter. The MetaXpress PowerCore server connects to the MDCStore™ database to retrieve analysis jobs, it divides those jobs into work units, and it distributes the work units to MetaXpress PowerCore clients for processing.

You can install and configure more than one computer as a MetaXpress PowerCore server to increase your analysis capability or to accommodate test and production needs. MetaXpress PowerCore servers can share a single hardware key for licensing, and you specify the number of processes available to each server. However, the combined number of analysis processes running simultaneously on MetaXpress PowerCore clients cannot exceed the number of simultaneous processes allowed by the license.

Before installing the MetaXpress PowerCore Software, you need to have already installed the Microsoft Visual C++ Runtime Libraries. The server software requires the SafeNet Sentinel System Driver software. These components can be installed using the MetaXpress Software Installation and Configuration Utility. See [Installing and Verifying Prerequisites, Keys, and Licenses](#) on page 13.



**Note:** To use this version of the MetaXpress PowerCore Server Software, you must update the SafeNet Sentinel Driver to the latest version. Older SafeNet drivers will not work with the new license key.

For information about registering the software and configuring the server and client installations, see the *MetaXpress PowerCore High Content Distributed Image Analysis Software Installation and User Guide*. During installation and configuration, you need to know settings such as the port number you want to use for MetaXpress PowerCore server-client communication. These settings and other configuration information are described in the user guide. You might need to refer to the user guide frequently as you install the MetaXpress PowerCore software. This guide is provided on the MetaXpress Software Installation flash drive and is available in the Molecular Devices knowledge base at <http://www.moleculardevices.com/support.html>.

Topics in this chapter:

- [Installing the MetaXpress PowerCore Server Software on page 70](#)
- [Installing the MetaXpress PowerCore Client Software on page 71](#)

## Installing the MetaXpress PowerCore Server Software

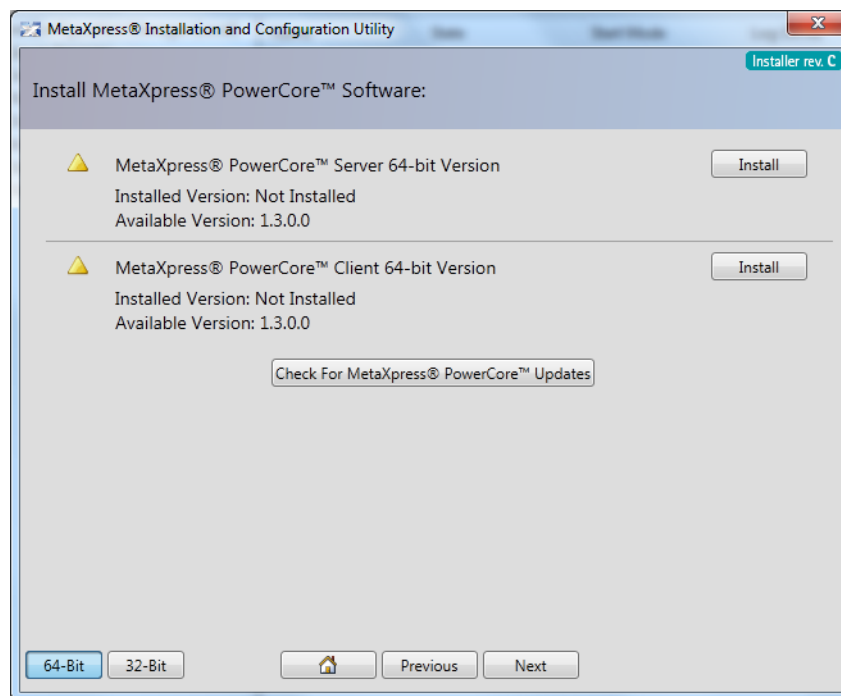
1. Log in as administrator on the computer where you want to install the MetaXpress PowerCore server software.  
Remove any Sentinel USB keys attached to this computer, to prevent the configuration of the key from getting erased.



**Note:** Only one Sentinel USB key from a Molecular Devices product can be on a computer at any given time, due to conflicts with the Sentinel USB driver.

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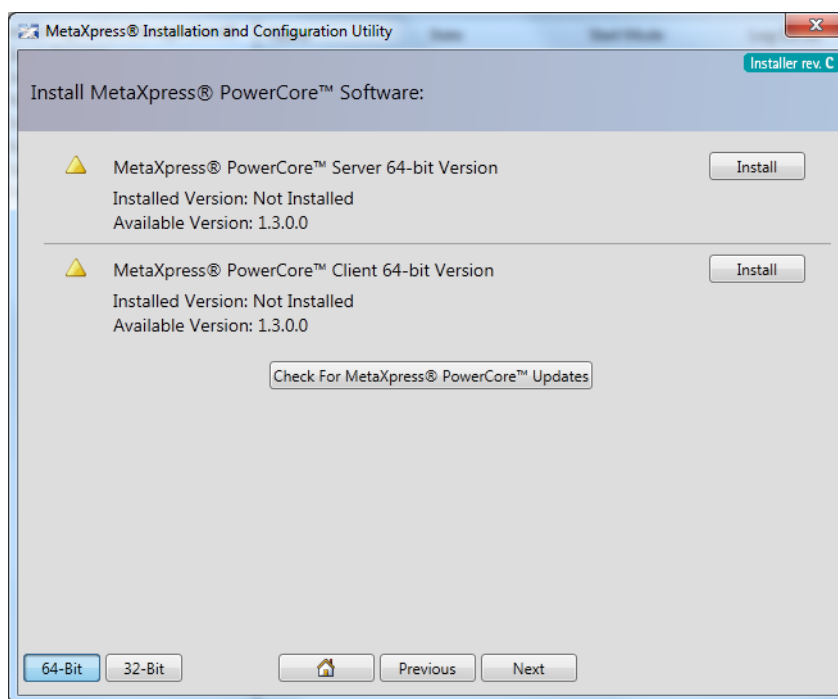
2. Follow the instructions in [Starting the MetaXpress Installation and Configuration Utility on page 9](#) to start the MetaXpress Software Installation and Configuration Utility.
3. In the MetaXpress Installation and Configuration Utility, on the **Install MetaXpress PowerCore Software** page, click the MetaXpress PowerCore Server **Install** button.



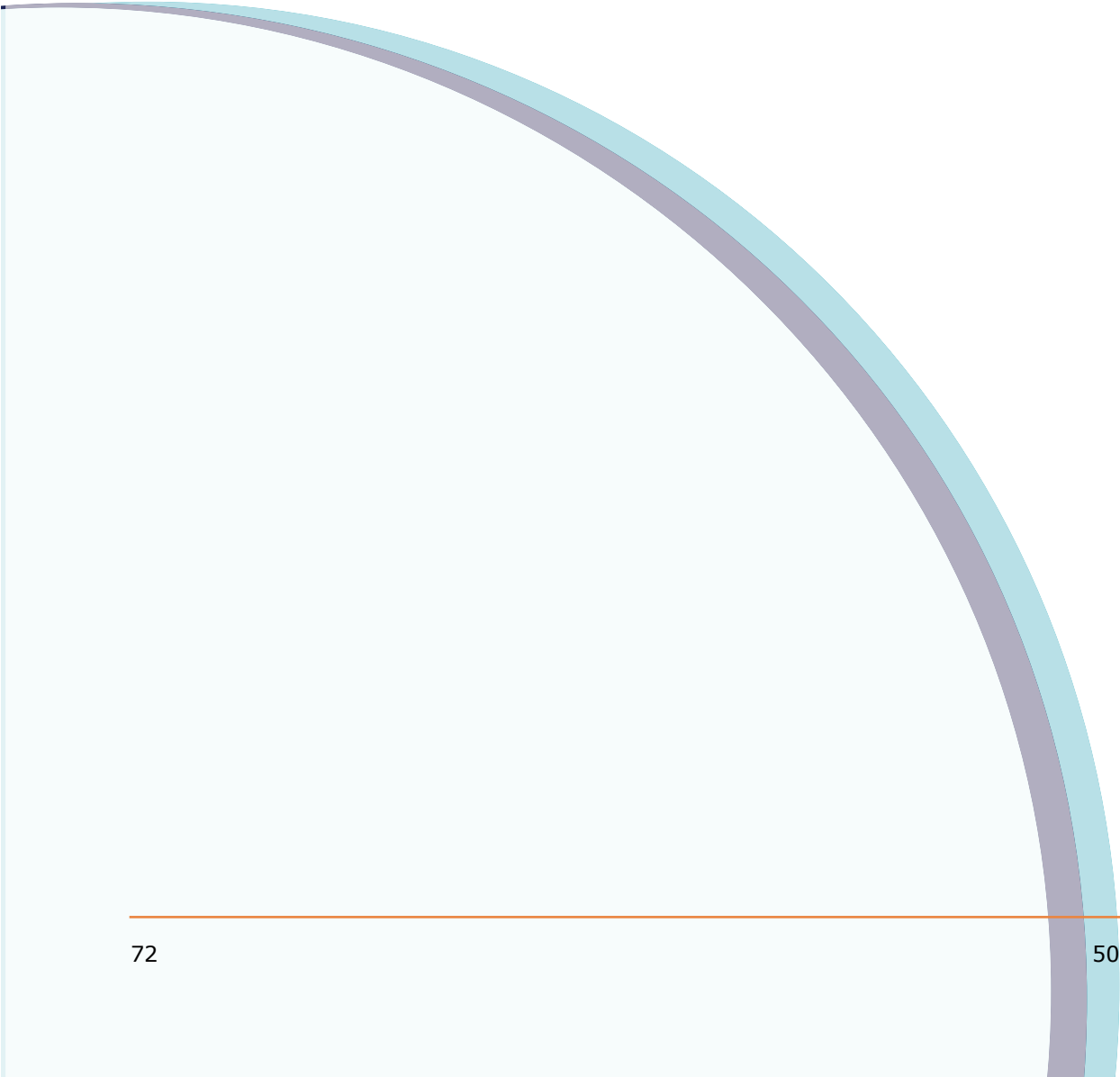
4. In the MetaXpress PowerCore Server Installation Wizard, click **Next** and follow the instructions in the wizard to complete the installation.

## Installing the MetaXpress PowerCore Client Software

1. Log in to the computer where you want to install the MetaXpress PowerCore client software.
2. Follow the instructions in [Starting the MetaXpress Installation and Configuration Utility on page 9](#) to start the MetaXpress Software Installation and Configuration Utility.
3. In the MetaXpress Installation and Configuration Utility, on the **Install MetaXpress PowerCore Software** page, click the MetaXpress PowerCore Client **Install** button.



4. In the MetaXpress PowerCore Client Installation Wizard, click **Next** and follow the instructions in the wizard to complete the installation.





## Setting Up the MetaXpress Software

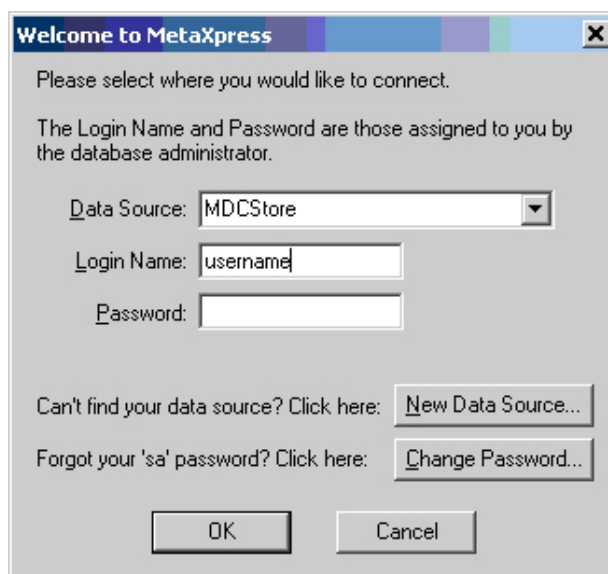
---

After you have installed the MetaXpress® Software, you must set it up as described in the following sections:

- Starting the MetaXpress Software on page 73
- Setting Up the Database on page 74
- Selecting the Camera Driver on page 77
- Configuring Objectives on page 77

### Starting the MetaXpress Software

1. Double-click the MetaXpress icon in the MetaXpress program group on the desktop.
2. The **Welcome to MetaXpress** login dialog appears.



## Setting Up the Database

### Creating a Data Source

A data source is an alias to a database that includes information about the database type and the database driver to use. The MetaXpress Software includes a data source wizard that helps you create a data source to an MDCStore database. Note that you can have more than one data source (that is, you can link to more than one MDCStore database). You need administrator-level privileges on the client to establish the connection.

If you had an earlier version of MetaXpress Software, you may already have a data source defined. A data source is tied to a particular instance of an MDCStore database; the version of that instance determines which version of MetaXpress Software the data source is compatible with. Be sure to upgrade the MDCStore database to which a data source is tied so that it will work with version 5.1 of the MetaXpress Software.



---

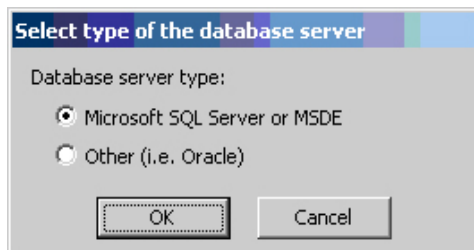
**Note:** On a computer running Microsoft Windows Vista or Windows 7, if the User Access Control (UAC) is enabled (accessible in **Control Panel > User Accounts**), you must log in as Administrator before attempting to create a data source.

---

### To create a data source

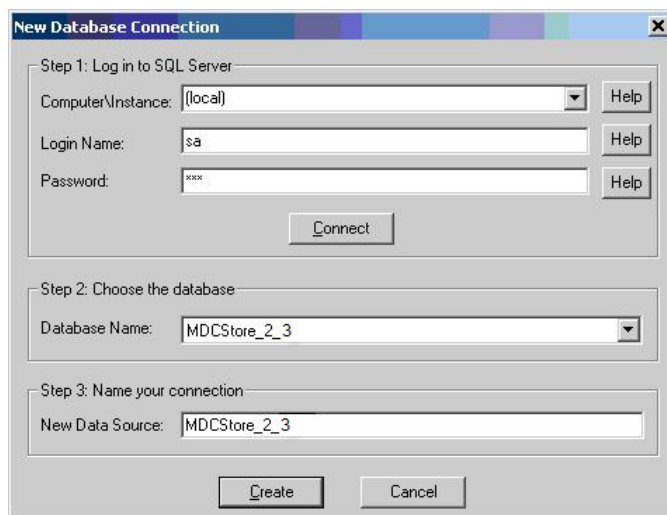
1. Start the MetaXpress Software as described in the previous section.
2. In the **Welcome to MetaXpress** login dialog, click **New Data Source**.

The **Select type of database server** dialog appears.



3. Select **Microsoft SQL Server or MSDE** or **Other**, and click **OK**. In this example, we select Microsoft SQL Server.

The **New Database Connection** dialog appears.



**Note:** Multiple instances of SQL and Oracle server databases can be installed on a single computer but you can view only one type of database at a time.

4. Select a computer name from the list in the **Computer\Instance** field. All computers running SQL Server that are accessible on your network are listed. Some of them may not be MDCStore databases.
5. Type your login name and password on the SQL Server installation to which you are attempting to connect, and click **Connect**.
6. In the **Database Name** list, select the MDCStore database on the SQL Server installation.
7. In the **New Data Source** field, type in a data source name. This name is an alias for the new connection, so you may enter any data source name.
8. Click **Create** to create the data source.
9. Click **OK** in the confirmation dialog.

The **Welcome to MetaXpress** login dialog appears, listing the new data source name.

10. Click **OK** to start the MetaXpress Software.



---

**Tip!** To remove old data sources from the Data Source list in the MetaXpress login dialog, use the Windows ODBC Data Sources management dialog, available from **Start > Settings > Control Panel > Administrative Tools > Data Sources (ODBC) > System DSN**.

---

## Setting MDCStore Database Passwords

The first time you connect to an MDCStore database, you must change the passwords on two application-specific roles. Application-specific roles provide additional security to ordinary database accounts. For example, when a database implements application-specific roles, users cannot access the database through other software, such as the SQL Query Analyzer; they must access the database through the application.

The database administrator should set the passwords for the two application-specific roles. These passwords are set only once and are not required when using the MetaXpress Software.

### To set passwords for an MDCStore database

1. Log in to the new MDCStore database using the MetaXpress Software.



---

**Note:** For versions 4.0 and above of the MetaXpress Software, the default User Login Name is **MolDev**, the default System Administrator Login Name is **sa**, and the default password for both is **moldev**. For earlier versions, the default User Login Name and password was **mdc**. You may need to log in using **mdc** if you had an earlier version of the software on your instrument workstation or analysis computer. If needed, you can change the password by clicking **Change Password**.

---

2. Enter a new password for the **Everyone** role in both the **New Password** and **Confirm New Password** fields.
3. Click **OK**.
4. Click **OK** in the confirmation dialog.
5. Enter a new password for the **Administrator** role in both the **New Password** and **Confirm New Password** fields.
6. Click **OK**.
7. Click **OK** in the confirmation dialog.

## Selecting the Camera Driver

If you are upgrading to version 5.1 of the MetaXpress Software from an earlier version, follow these steps:

1. For ImageXpress Micro systems, re-select the camera driver.
2. Using a text editor, open the devices.ini file (located in C:\MX5\Hardware\profile name\) and make sure that the file has been updated with the folder location C:\MX5\Hardware\.

## Configuring Objectives

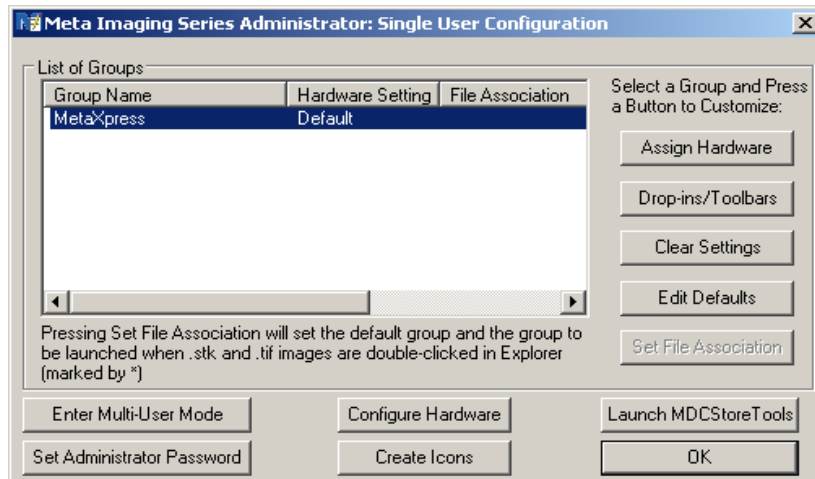
You must configure the objectives as described in this section if you are:

- upgrading from version 3.0 or 3.1 to version 5.1 of the MetaXpress Software and you did not configure the objectives for version 3.0 or 3.1 (if you are upgrading from version 4.0, you were required to configure the objectives for version 4.0 so you do not need to do so for version 5.0 or 5.1)
- upgrading from version 2.0 or earlier to version 5.1 of the MetaXpress Software

### To configure the objectives

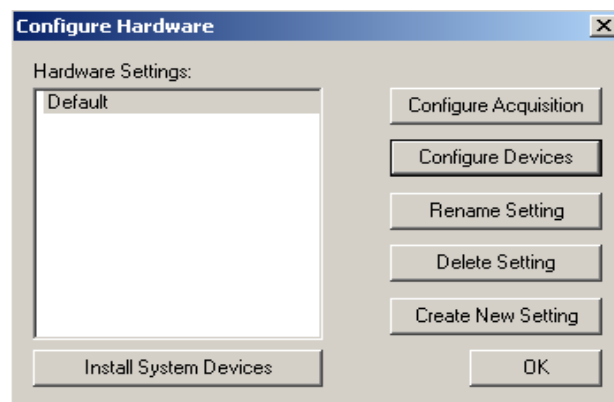
1. From the Windows **Start** menu, select **Programs>Meta Imaging Series>Meta Imaging Series Administrator**.

The Meta Imaging Series Administrator appears.



2. In the List of Groups, select the Group Name for version 5.1 of the MetaXpress Software, and then click **Configure Hardware**.

The Configure Hardware dialog appears.



3. In the Hardware Settings section, select the appropriate hardware configuration (for example, "IXM" or "IXU"), and then click **Configure Acquisition**.



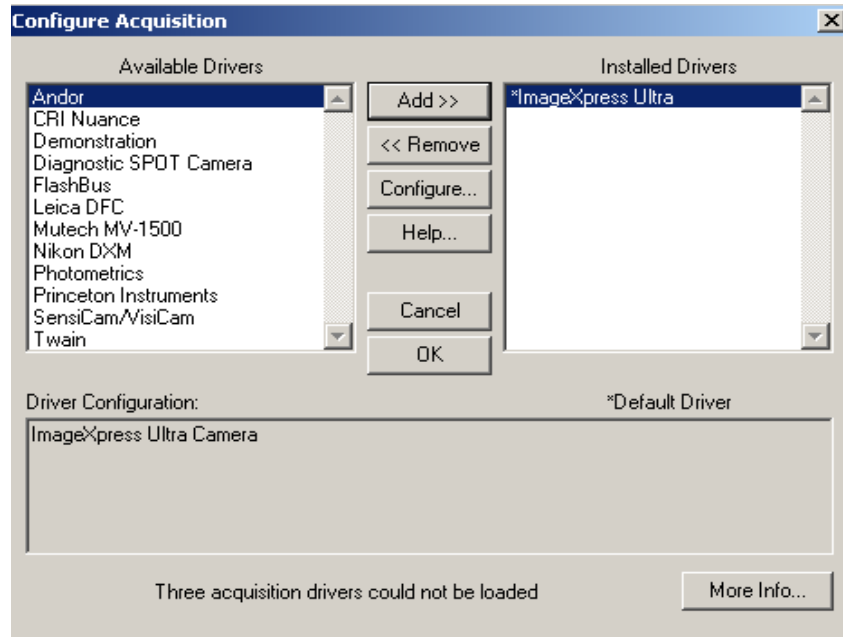
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**Note:** If multiple hardware configurations exist (for example, multiple objective configurations or filter cube configurations), perform Steps 3-11 for each configuration.

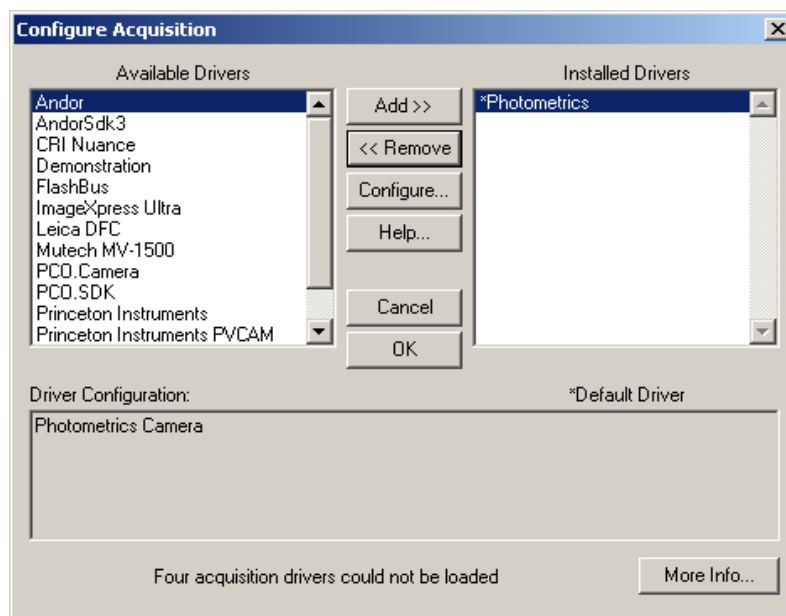
---

The Configure Acquisition dialog appears.

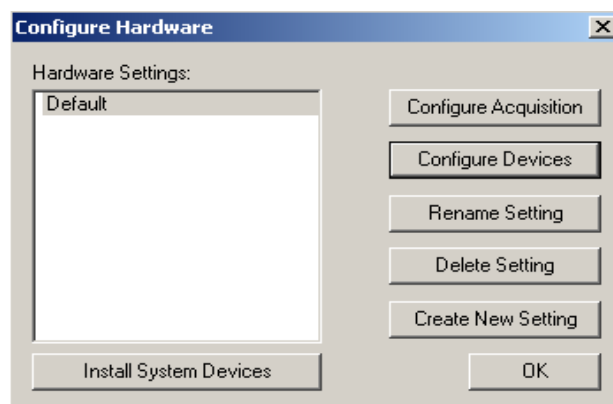
4. For ImageXpress Ultra systems, ensure that "ImageXpress Ultra" is listed in the Installed Drivers section of the dialog.



5. For ImageXpress Micro systems, ensure that "Photometrics" is listed in the Installed Drivers section of the dialog. For ImageXpress Micro XL systems, ensure that "PCO.Camera" is listed in the Installed Drivers section of the dialog.



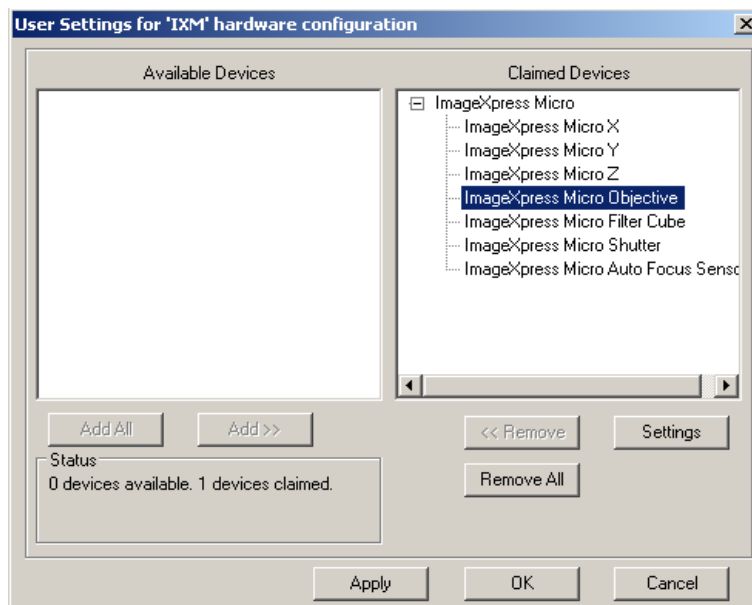
6. Click **OK**.  
The Configure Hardware dialog appears.



7. In the Hardware Settings section, select the appropriate hardware configuration (for example, "IXU" or "IXM"), and then click **Configure Devices**.



The User Settings for the hardware configuration dialog appears. For example:



8. In the Claimed Devices section, select the objective (for example, "ImageXpress Micro Objective" or "ImageXpress Ultra Objective"), and then click **Settings**.

The settings for the objective appear. For example:

ImageXpress Ultra Objective Settings

Objective Labels		Refraction Medium / Index		Num. Aperture	Working Distance
Objective #1	10x Plan	Air	1	0.3	16 mm
Objective #2	20x ELWD	Air	1	0.75	1 mm
Objective #3	40x ELWD	Air	1	0.6	2.7 mm
Objective #4	4x Plan	Air	1	0.2	16.2 mm

Objective Parameters

Param Group #1	Param Group #2	Param Group #3
Position 1 Z Offset	50	
Position 2 Z Offset	0	
Position 3 Z Offset	25	
Position 4 Z Offset	0	

Normalize Offsets

OK Cancel

Using the following table, verify the numerical aperture and the working distance of each objective. Also, verify that the type of media is correct; if you are using oil or water, be sure to enter an appropriate refraction index.

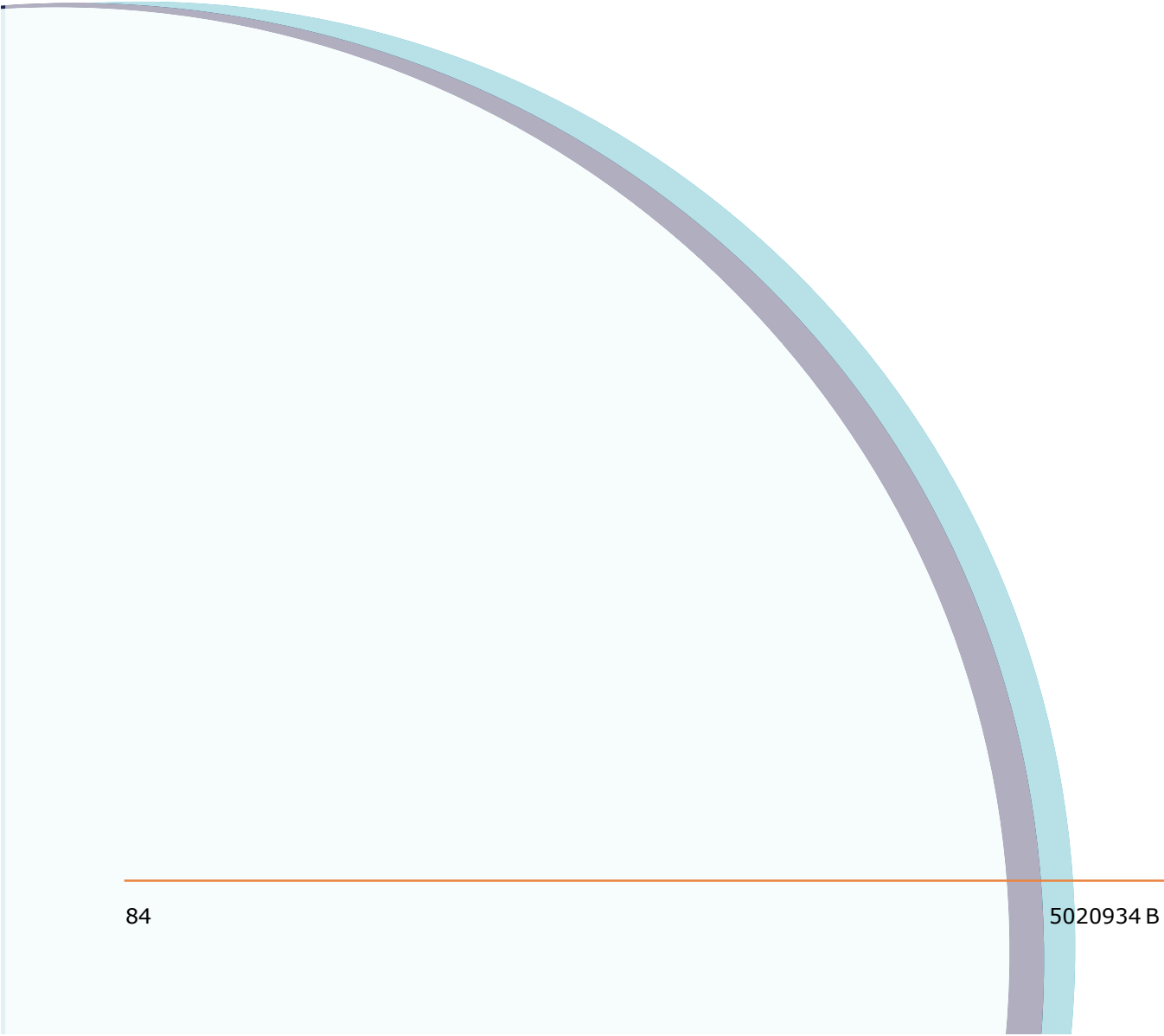


**Note:** If the working distance of an objective is a range of numbers (for example, the 20x ELWD objective), use the smallest number.

<b>Objective Magnification and Type</b>	<b>Numerical Aperture</b>	<b>Working Distance (mm)</b>
1x Plan Achromat	0.04	3.2
4x S Fluor*	0.20	15.5
4x Plan Apo**	0.20	15.7
4x Plan Fluor DL	0.13	16.2
10x Plan Fluor*	0.30	16
10x S Fluor**	0.50	1.2
10x Plan Fluor DLL	0.30	16
10x Plan Fluor DL	0.30	15.2
20x Plan Fluor ELWD cc 0-2mm*	0.45	8.1 - 7.0
20x S Fluor**	0.75	1
20x Plan Apo	0.75	1
20x Plan Fluor DLL	0.50	2.1
20x Plan Fluor ELWD DM cc 0-2mm	0.45	8.1 - 7.0
40x Plan Fluor ELWD cc 0-2mm*	0.60	3.7 - 2.7
40x Plan Apo cc 0.11 - 0.23 mm**	0.95	0.14
40x S Fluor cc 0.11 - 0.23 mm**	0.90	0.3
40x Plan Fluor Oil	1.30	0.2
40x Plan Fluor DLL	0.75	0.72
40x Plan Fluor ELWD DM cc 0-2 mm	0.60	3.7 - 2.7
60x Plan Fluor ELWD cc 0.5 - 1.5 mm*	0.70	2.1 - 1.5
60x Plan Fluor**	0.85	0.3
60x Plan Apo Oil	1.4	0.21
60x Plan Fluor ELWD DLL cc 0.5 - 1.5 mm	0.70	2.1 - 1.5
100x Plan Fluor**	0.90	0.3
100x Plan Fluor Oil	1.30	0.2

\* Recommended basic configuration

\*\* Common objectives



# Installing Microsoft SQL Server 2012 Express

---

## A

This appendix explains how to install Microsoft SQL Server 2012 Express, which is referred to as SQL Express throughout this appendix. SQL Express is useful for demonstration or evaluation purposes. However, the SQL Express database is limited to 10 GB in size, so it is impractical for production environments.

Microsoft SQL Server 2012 Express is included on the MetaXpress Software Installation flash drive and can be installed using the following procedures.



---

**Note:** SQL Express cannot be installed if either SQL Server 2005 or SQL Server 2012 is already installed.

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Topics in the appendix:

- [Installing SQL Express on page 86](#)
- [Enabling Named Pipes and TCP/IP Connections on page 97](#)

## Installing SQL Express

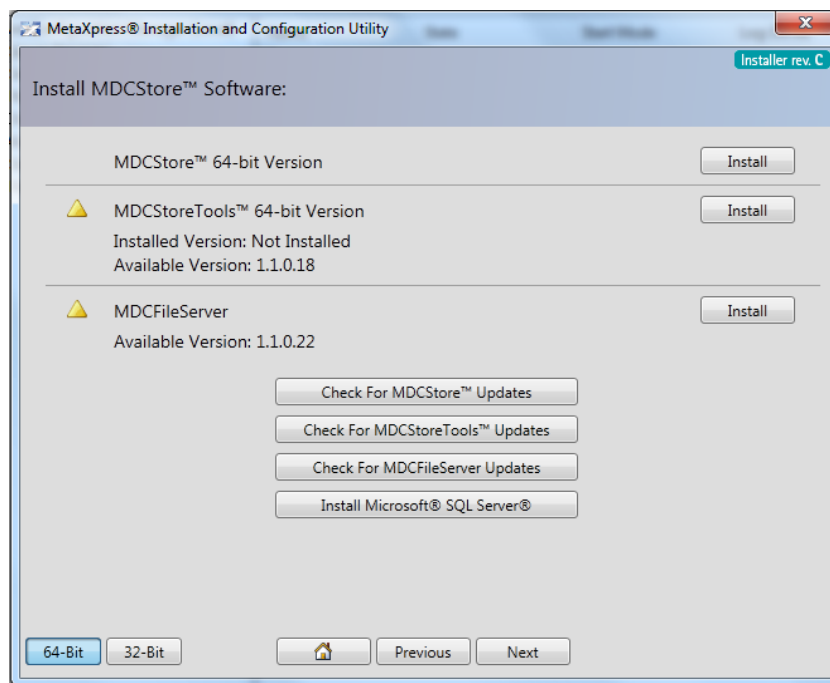


**Note:** When installing and setting up a database on Windows 7, make sure that you have logged into Windows 7 with full administrator rights, and that you have full access to the folder where the database is to be installed. Molecular Devices recommends that you set the User Access Control (UAC) on the computer to the lowest security setting.

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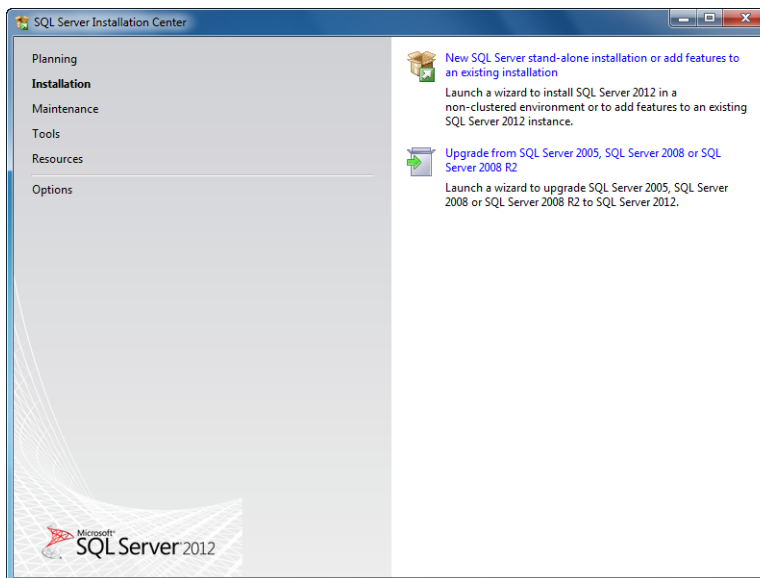
To install SQL Express

1. Log in to the computer where you want to install the MetaXpress Data Manager database schema.
2. Follow the instructions in [Starting the MetaXpress Installation and Configuration Utility on page 9](#) to start the MetaXpress Software Installation and Configuration Utility.
3. In the MetaXpress Installation and Configuration Utility, on the **Install MDCStore Software** page, click **Install Microsoft SQL Server**.



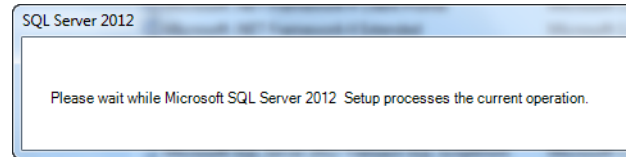
4. On the **Install Microsoft SQL Server Express** page, click **Install**.

The system extracts the installation files to your local hard drive and the **SQL Server Installation Center** dialog appears.



5. Click **New SQL Server stand-alone installation or add features to an existing installation**.

The **SQL Server 2012** message appears informing you that you must wait until Microsoft SQL Server 2012 processes the current operation.



---

**Note:** The **SQL Server 2012** message might appear behind the **SQL Server Installation Center** dialog. To view the **SQL Server 2012** message, minimize the **SQL Server Installation Center** dialog or drag it to the side.

---

After Microsoft SQL Server 2012 processes the current operation, the **SQL Server 2012** message closes and the **License Terms** dialog appears.

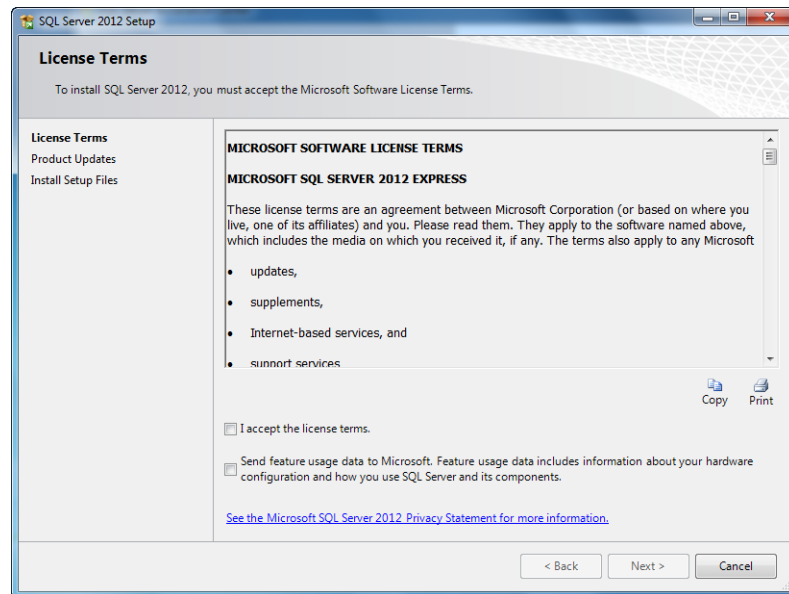


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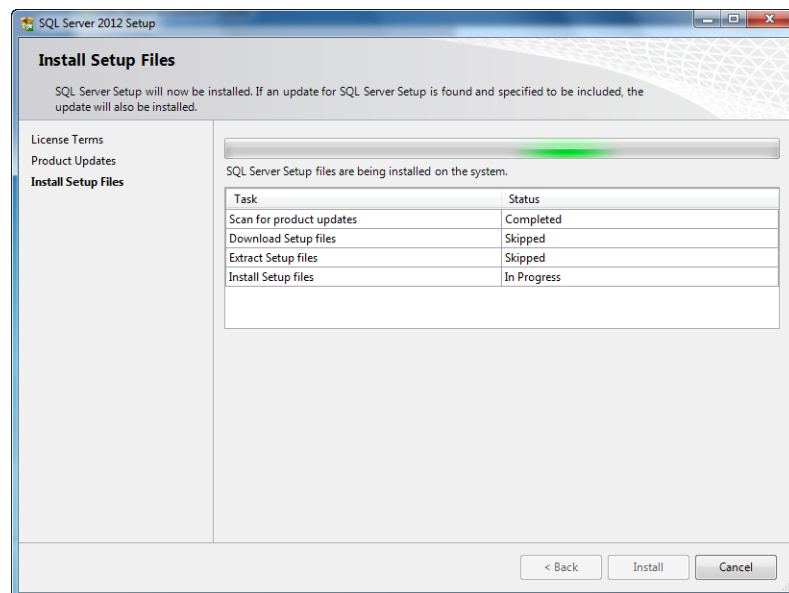
**Note:** If the computer is not connected to the Internet, then a message might open, indicating that product updates could not be downloaded. Click **Next** to open the **License Terms** dialog.

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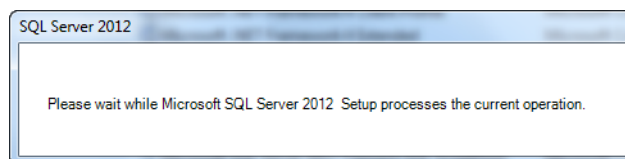




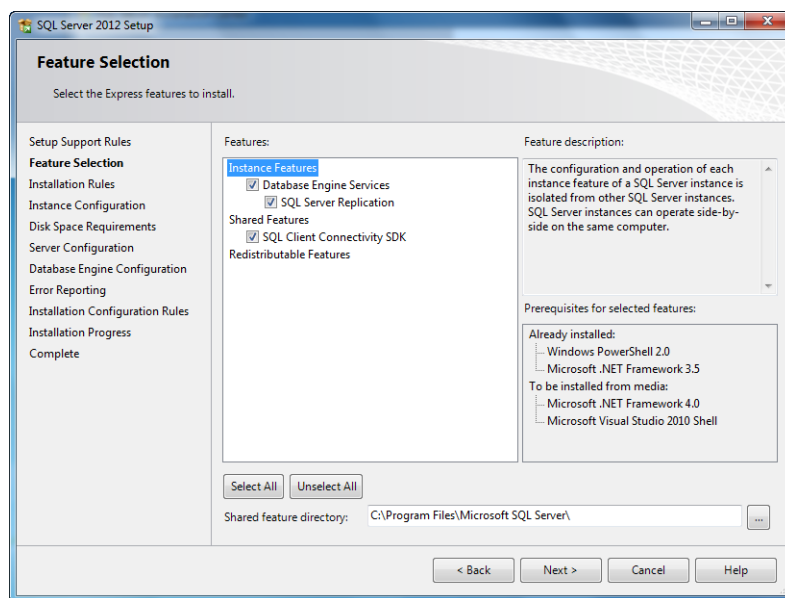
6. In the **License Terms** dialog, read the License agreement, click **I accept the license terms**, and then click **Next**.
7. The **Install Setup Files** dialog appears.



The **SQL Server 2012** message appears on top of the dialog informing you that you must wait until Microsoft SQL Server 2012 processes the current operation.



After the Install Setup files are successfully installed, the **SQL Server 2012** message and the **Install Setup Files** dialog close, and the **Feature Selection** dialog appears.



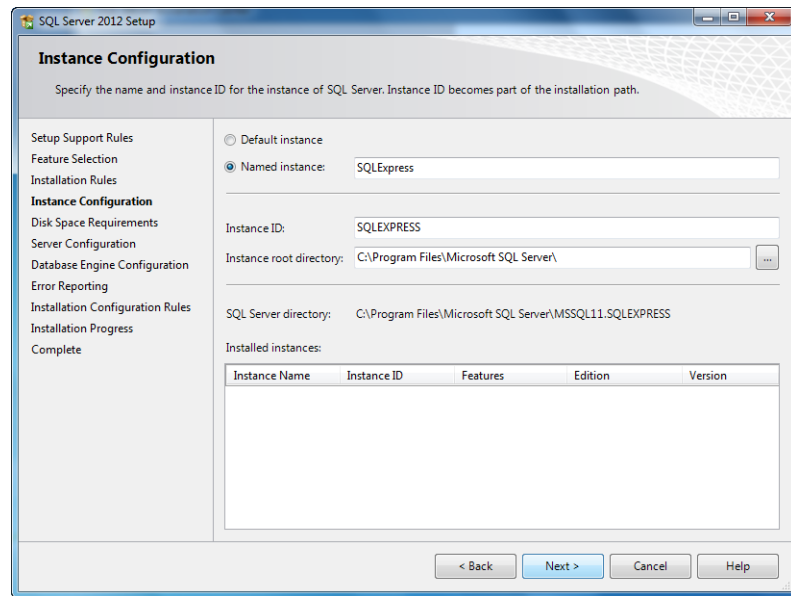
The **Feature Selection** dialog lists the features that are to be installed as well as the default shared feature installation directory.



**Note:** By default, all features are selected and they are installed on your local hard drive.

8. In the **Feature Selection** dialog, leave the selections unchanged and click **Next**.

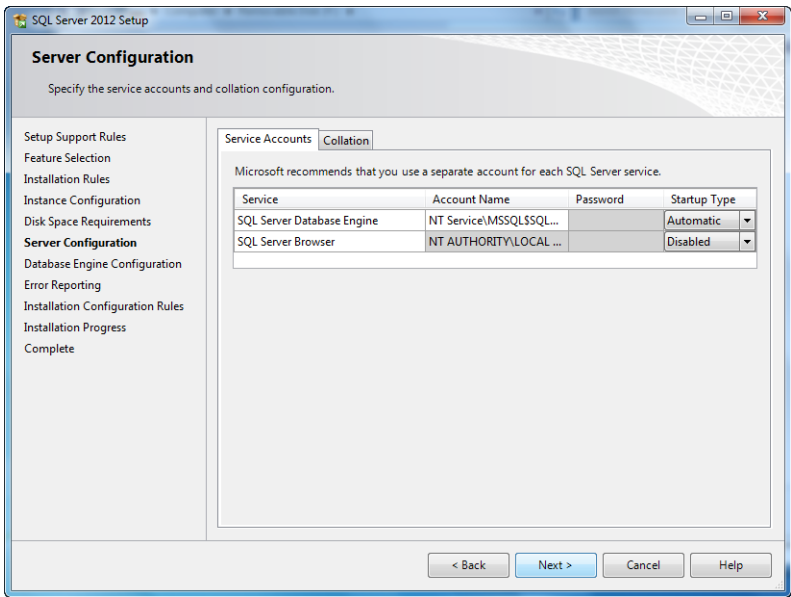
The **Instance Configuration** dialog appears.



The **Instance Configuration** page displays the default name, SQLExpress, for the Named instance and the default instance ID (SQLEXPRESS). It also displays the SQL Server installation directory.

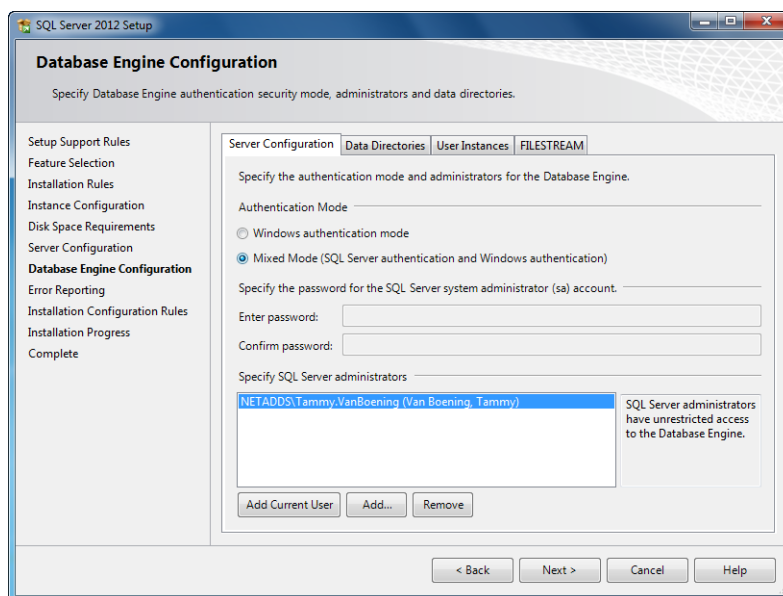
9. Click **Next**.

The **Server Configuration** dialog appears.



**10.** In the **Startup Type** list for the SQL Server Browser, select **Automatic**, and then click **Next**.

The **Database Engine Configuration** dialog appears.

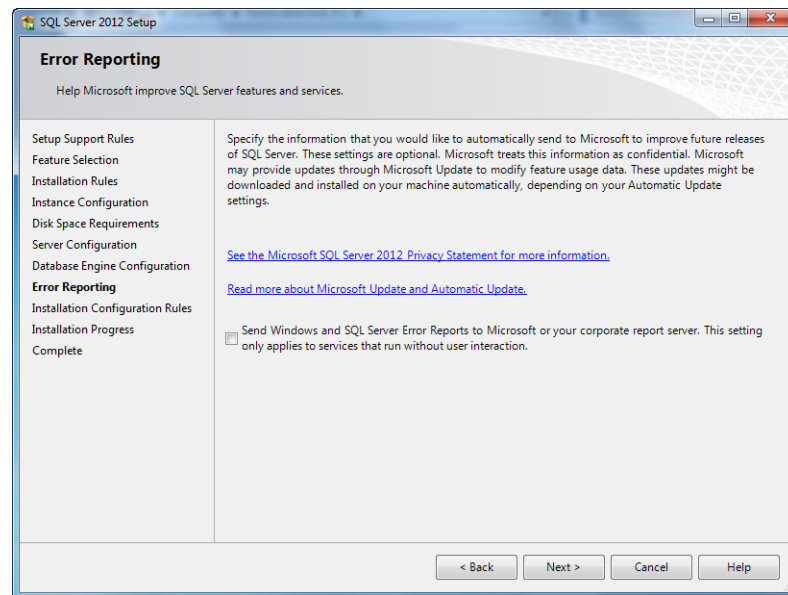


- 11.** For the **Authentication Mode**, select **Mixed Mode**.
- 12.** In the **Enter password** field, type the password for the SQL Server system administrator (sa) account.
- 13.** In the **Confirm password** field, type the password for the SQL Server system administrator (sa) account again.



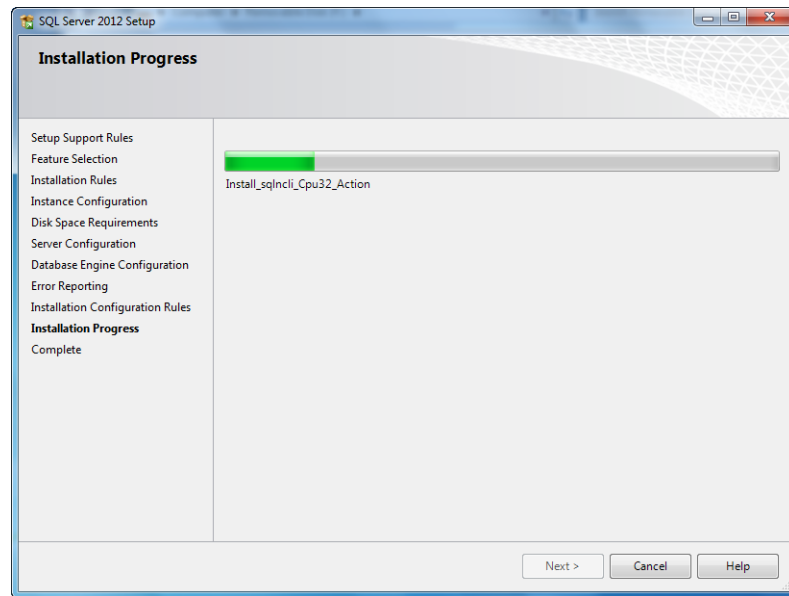
**Note:** The password must meet the Windows login requirements for your organization. You must type your password in the **Confirm Password** field exactly as you typed it in the **Enter Password** field, or the password is rejected. Record this password in a secure location as you will need it to access the SQL Server database.

- 14.** Ensure that a valid Administrator account is added to the list of SQL Server administrators. If needed, click **Add Current User** or **Add** to add the account.
- 15.** Click **Next**.



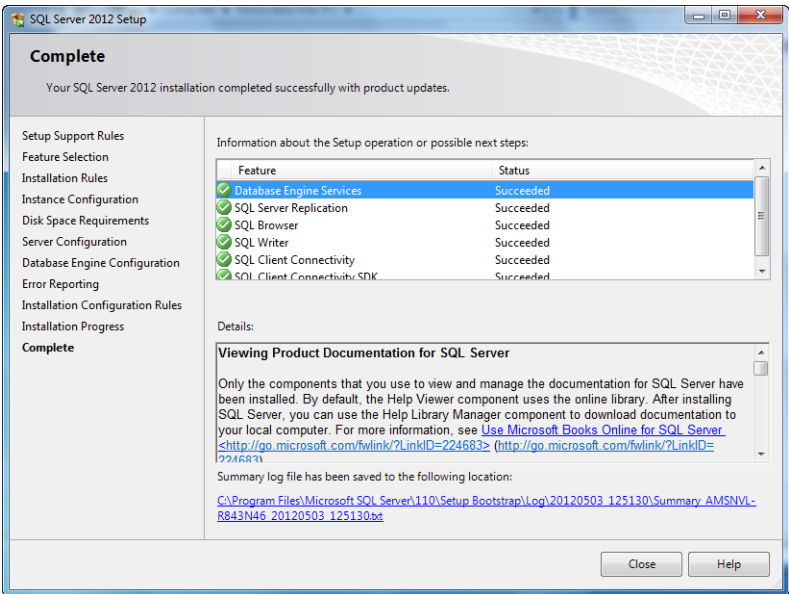
**16.** In the **Error Reporting** dialog, click **Next**.

The **Installation Progress** dialog appears.



The **Installation Progress** dialog displays the progress of the SQL Server installation.

After the installation is completed, the **Complete** dialog appears.



The **Complete** dialog lists all the SQL Server features that were installed and the status of their installations.



**Note:** If any of the features have a status other than **Successful**, contact review the feedback in the Summary log and resolve the issues accordingly.

**17. Click Close.**

The **Complete** dialog closes.

You must now enable named pipes and TCP/IP connections so that remote users can connect to this instance of SQL Server Express. See [Enabling Named Pipes and TCP/IP Connections on page 97](#).

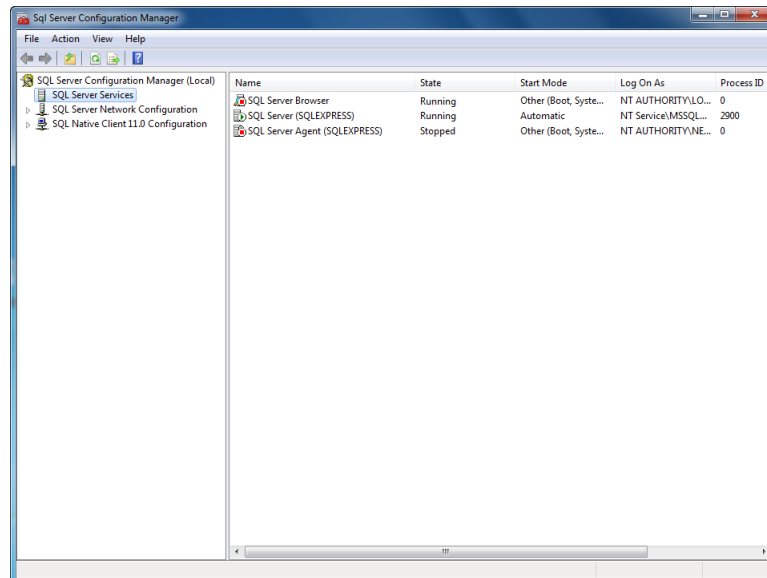


## Enabling Named Pipes and TCP/IP Connections

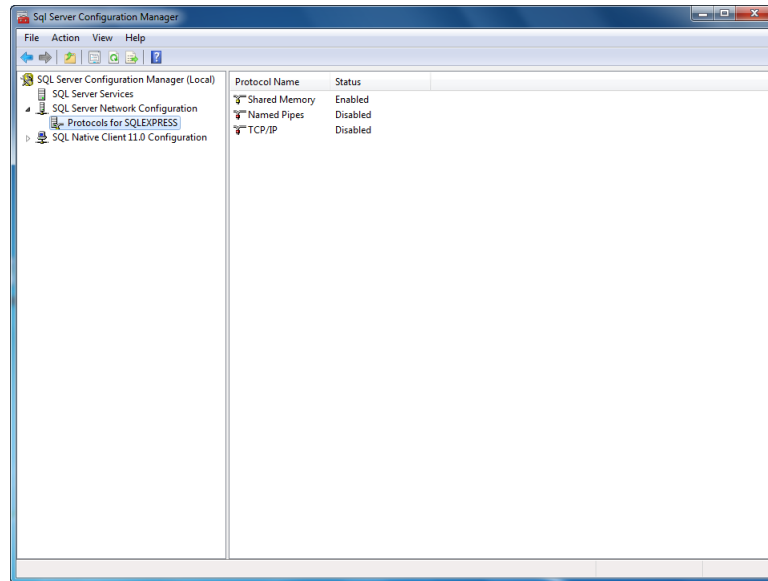
1. Click **Start > All Programs > Microsoft SQL Server 2012 > Configuration Tools > SQL Server Configuration Manager**.



**Note:** You will also see a listing for Microsoft SQL Server 2008. These are support files that are needed for SQL Server Express 2012.



2. In the left pane of the **Sql Server Configuration Manager**, expand **SQL Server Network Configuration**, and then select **Protocols for SQLEXPRESS**.



3. In the right pane of the **Sql Server Configuration Manager**, right-click **Named Pipes**, and then click **Enable**.
4. In the right pane of the **Sql Server Configuration Manager**, right-click **TCP/IP**, and then click **Enable**.
5. Close the **SQL Server Installation Center** dialog.



**Note:** If you have Windows Firewall running on your server computer, then you must add the Microsoft SQL Server service (**sqlsvr.exe**) and the Microsoft SQL Browser service (**sqlbrowser.exe**) to the firewall Exceptions list so that remote connections to the database are possible. For assistance, contact your system administrator.