

# MetaXpress®

High-Content Image Acquisition and Analysis Software

Version 6.2

## Installation and Update Guide

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# Chapter 1: Introduction

# 1

The MetaXpress® High-Content Image Acquisition and Analysis Software is divided into two major parts:

- Acquisition involves configuring settings, acquiring images, and storing plate data in a database. For information about image acquisition, see the user guide for the ImageXpress Micro Widefield High Content Imaging System or the ImageXpress Micro Confocal High Content Imaging System. Both user guides are provided on the MetaXpress Software installation media and are available in the Molecular Devices knowledge base at [www.moleculardevices.com/support](http://www.moleculardevices.com/support).
- Analysis consists of selecting, measuring, assessing, and managing acquired images and plate data.

## Items Required to Complete the Software Installation

- The **MetaXpress® Imaging Software Suite Installer** flash drive contains the software components and product documentation.



- The **SafeNet Sentinel** MetaXpress Software USB hardware key (sometimes called a dongle) contains licensing information required to run the MetaXpress Software. This is either a single-license hardware key or a multi-license network key. You can install a multi-license network key on a server, so that multiple client computers can run the analysis software from a single hardware key.



Other hardware keys might be required depending on your installation configuration. All required hardware keys are provided in the package, or can be obtained from your Molecular Devices representative.



**Note:** The MetaXpress Software and related components must be installed on a 64-bit Windows operating system. For more information about supported operating systems, see the *Molecular Devices High-Content Computer and Server Specifications for Offline Analysis* guide located on the Knowledge Base.

## Software Components on the Flash Drive

- **MetaXpress® High-Content Image Acquisition and Analysis Software** is the primary tool for acquiring and analyzing images.
- **MetaXpress® PowerCore™ High-Content Distributed Image Analysis Software** is an optional component that accelerates image analysis by distributing image-processing tasks across multiple computer processes.
- **MDCStore™ High Content Data Management Solution** is a database schema that can be used with the Microsoft SQL Server or Oracle platforms. It supports multi-server and multi-user configurations.
- **MDCStore Tools™ Data Management Utility** is 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** is an optional service that imports and exports images to and from the MDCStore database. It can convert third-party images to a format that can be used with the MetaXpress Software and convert images from the MetaXpress Software to other image formats.
- **MDC File Server** is an optional network service used to create and manage file servers to store MetaXpress Software images outside the MDCStore database. For most situations, when the MDC File Server is not used, Molecular Devices recommends that the image storage locations are defined using UNC paths.
- **ImageXpress® System USB Driver** is the driver installation program required for the ImageXpress® Micro System.
- **Andor SDK 3** is the driver installation program required for an ImageXpress® Micro System that uses an Andor camera.
- **Microsoft SQL Server 2014 Express** is a small database server that is useful for demonstration or evaluation purposes. Its size is limited to 10 GB, making it impractical for production environments.

## Documentation Available on the Flash Drive

The MetaXpress Software Suite flash drive contains user guides and installation guides for the software and hardware supported by this release of the MetaXpress Software.

The following documents are available in the **Manuals** folder on the flash drive:

- *Molecular Devices High Content Screening Computer and Server Specifications for Offline Analysis*
- *Molecular Devices Complete Imaging Solution Network Requirements*
- *MDCStore™ High Content Data Management Solution Database Schema Installation and Upgrade Guide*
- *MDCStore Tools™ Data Management Utility User Guide*
- *MDCStore™ Xchange Data Conversion Service Quick Start Guide*
- *MetaXpress® PowerCore™ High-Content Distributed Image Analysis Software User Guide*
- *MetaXpress® PowerCore™ High-Content Distributed Image Analysis Software Release Notes*
- *MetaXpress® High-Content Image Acquisition and Analysis Software Installation and Update Guide*
- *MetaXpress® High-Content Image Acquisition and Analysis Software Analysis Guide*
- *ImageXpress® Micro Widefield High Content Imaging System User Guide*
- *ImageXpress® Micro Confocal High Content Imaging System User Guide*

In addition, the MetaXpress Software application help is available when running the software.

## Required Reading

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

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

These documents are available on the flash drive or in the knowledge base on the Molecular Devices support site: [www.moleculardevices.com/support](http://www.moleculardevices.com/support). Click **Visit the Knowledge Base**. Search for article number **20105**.

## Before You Install the Software Components

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

---

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

- Make sure that the windows user access level is set to low, and that you are logged in as a user with administrative privileges on the computer where you are installing the software.
- Make sure the C: drive has at least 1 GB of available space after all other requirements have been met to install the software.

To install all the required prerequisites and all the software on the flash drive, you need at least 4 GB of available space.

- Make sure that the appropriate database server software is installed:
  - For databases larger than 10 GB (most databases), Microsoft SQL Server 2012 or 2014, or Oracle 11g or 12c, must be installed and accessible. Microsoft SQL Server can be pre-installed on instrument workstations.



**Note:** Molecular Devices recommends installing the database on a separate server. See [Required Reading, see page 7](#).

---

These products are not available on the MetaXpress Software Suite flash drive. If you need assistance determining which product is most appropriate, contact your System Administrator or a Molecular Devices representative. You can read about IT and operating system requirements in the Molecular Devices knowledge base. See [Required Reading on page 7](#).

- For databases smaller than 10 GB (in general, databases that contain data from fewer than 10 plates), you can use Microsoft SQL Server 2014 Express, which is suitable for desktop operation. The 64-bit version of SQL Server 2014 Express is provided on the MetaXpress Software Suite flash drive.

While SQL Server 2014 Express can be useful for demonstration purposes, its small size makes it impractical for production environments. If SQL Server is already installed, then SQL Server 2014 Express cannot be installed.

- If the MetaXpress Software Suite installation window does not appear after you insert the flash drive, then browse to the flash drive folder on your computer, right-click the **autorun.exe** file, and click **Run as administrator**.

## Product Compatibility

When you install or upgrade the MetaXpress Software, all existing data sources are retained. Earlier versions of the MetaXpress Software are also retained unless the software is installed as an upgrade in the same directory. Earlier versions of the MetaXpress Software and version 6.2 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 6.2 of the MetaXpress Software requires version 2.3 of the MDCStore database. The MDCStore Tools Utility also requires version 2.3 of the MDCStore database. For details, refer to the *MDCStore™ High Content Data Management Solution Database Schema Installation and Upgrade Guide*.

The MDCStore Tools Utility is compatible with version 3.0 or newer of the MetaXpress Software.

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

## Obtaining Support

Molecular Devices is a leading worldwide manufacturer and distributor of analytical instrumentation, software, and reagents. We are committed to the quality of our products and to fully supporting our customers with the highest possible level of technical service.

Our support web site, [www.moleculardevices.com/support](http://www.moleculardevices.com/support), has a link to the Knowledge Base with technical notes, software upgrades, safety data sheets, and other resources. If you do not find the answers you are seeking, follow the links to the Technical Support Service Request Form to send an email message to a pool of technical support representatives.

You can contact your local representative or contact Molecular Devices Technical Support by telephone at 800-635-5577 (North America only) or +1 408-747-1700. In Europe call +44 (0) 118 944 8000.

To find regional support contact information, visit [www.moleculardevices.com/contact](http://www.moleculardevices.com/contact).

Molecular Devices provides a wide range of support:

- Documentation: Check the guides that are included on the installation media and the help that is available within the MetaXpress Software. Help for an active dialog can be accessed by pressing **F1** on your keyboard.
- Online knowledge base: The knowledge base has links to technical notes, software upgrades, newsletters, user guides, and other resources. Visit the Molecular Devices Support web page at [www.moleculardevices.com/support](http://www.moleculardevices.com/support) and follow the links to the knowledge base.
- MetaMorph Software forum: This forum has information on journal scripts and custom modules, and has links to videos and webinars that can help you troubleshoot problems and be more productive using the software. Visit the forum at [metamorph.moleculardevices.com/forum](http://metamorph.moleculardevices.com/forum).
- Technical Support:  
Online: Visit [www.moleculardevices.com/support](http://www.moleculardevices.com/support) and follow the links in the knowledge base to the Technical Support Request Form to send an email to a group of experienced Technical Support representatives.

- Please have the system ID number, system serial number, software version number, and the name of the system owner available when you call.

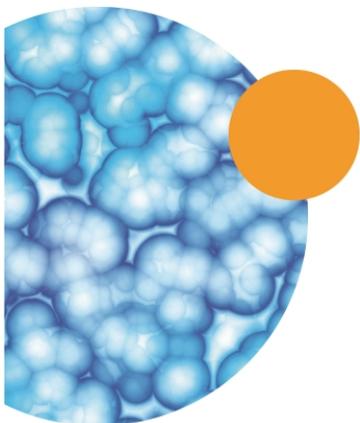
To find your system ID number:

- In the MetaXpress Software, click **Help > About MetaXpress**. The About dialog displays your system ID number.
- Newer systems have the serial number automatically displayed in the upper right corner of the computer desktop screen.
- For all systems, the serial number is also located on the back connector panel of your instrument.



**Figure 1-1: Serial Number location on the back of your ImageXpress instrument**

- Additional support resources include:
  - Web-based microscopy courses:  
<http://www.microscopyu.com>  
<http://www.ibiology.org/ibioeducation/taking-courses/ibiology-microscopy-short-course.html>
  - The Molecular Probes Handbook:  
<http://www.lifetechnologies.com/us/en/home/references/molecular-probes-the-handbook.html>  
This resource offers advice on fluorescent probes and can help you determine if there are better stains available for your analysis.
  - The following sites offer filter information:
    - <http://www.semrock.com>
    - <http://www.chroma.com>



# Chapter 2: Starting the MetaXpress Software Suite Installation and Configuration Utility



This chapter explains how to start the MetaXpress® High-Content Image Acquisition and Analysis Software Suite Installation and Configuration Utility.

Topics in this chapter:

- [Starting the Installation and Configuration Utility on page 13](#)
- [Determining the Installation Status of Components on page 15](#)
- [Installing the Individual Components on page 16](#)

## Starting the Installation and Configuration Utility



**Note:** The software you are about to install might be newer than shown in the following example screenshots. Install the newest version.

1. Insert the MetaXpress Software Suite flash drive into a USB port.

If a dialog with a security warning appears, click **Run**.

If the MetaXpress Software Suite installation window does not appear after a short time, then browse to the flash drive folder on your computer, right-click the **autorun.exe** file, and click **Run as administrator**.

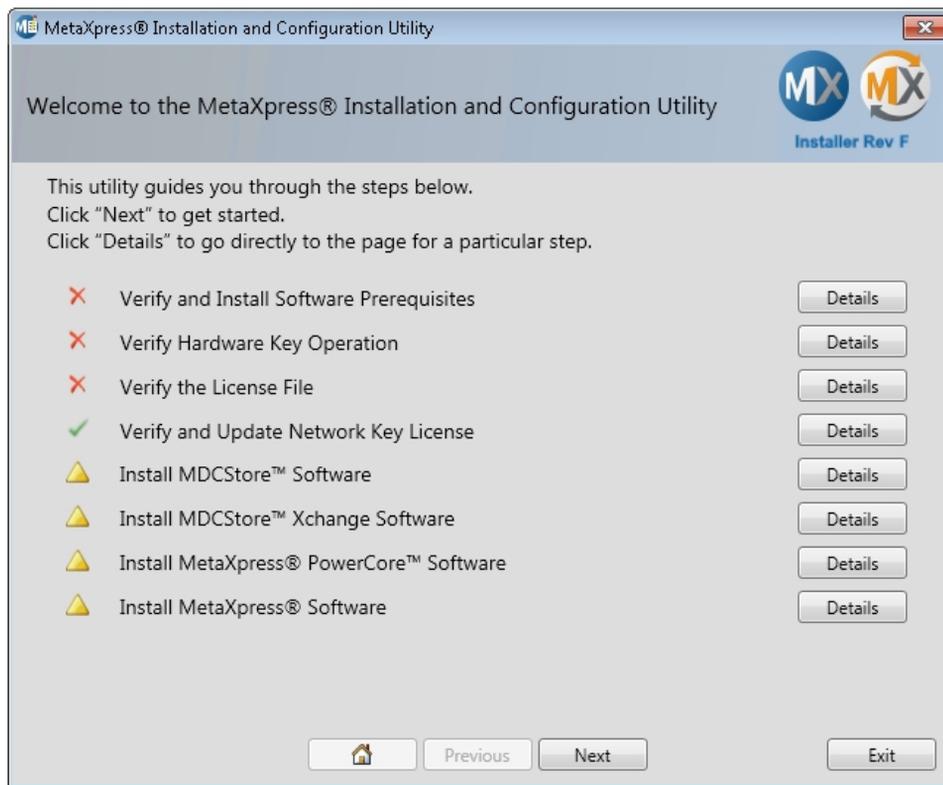


2. Click **Install and Configure MetaXpress**.

If a dialog with a security warning appears, click **Run**.

The installation utility checks your computer for installed prerequisite software, such as the Microsoft .NET framework. If the required prerequisite software is not installed, follow the instructions provided in each setup wizard to install the software.

After checking for prerequisites, the first page of the **MetaXpress Installation and Configuration Utility** appears summarizing the steps required for a complete installation of the MetaXpress Software Suite.



- The symbols on the left indicate the status of the components that might already be installed on your computer. See [Determining the Installation Status of Components on page 15](#).
  - The **Details** buttons on the right take you directly to the pages for installing individual components. See [Installing the Individual Components on page 16](#).
3. To continue to the next page of the utility, click **Next**. See [Installing and Verifying Prerequisites, Keys, and Licenses on page 17](#).

## Determining the Installation Status of Components

The **MetaXpress 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 the Individual Components

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 17](#).
- The **Install MDCStore Software** page helps you install the MDCStore database, MDCStore Tools Utility, and MDC File Server. See [Installing the MDCStore Database Components on page 27](#).
- 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 43](#).
- The **Install MetaXpress PowerCore Software** page helps you install the MetaXpress PowerCore Software for server and client installations. See [MetaXpress PowerCore Software on page 47](#).
- The **Install MetaXpress Software** page helps you install the MetaXpress Software and ImageXpress System USB driver. See [Installing the MetaXpress Software on page 51](#).

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

For a complete installation, Molecular Devices recommends that you follow the steps in the installation wizard in the order that they are presented. To advance from one page to the next, click **Next**.

# Chapter 3: 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. To determine what is required as you work your way through the first few pages of the installation and configuration utility, [Table 3-1](#) lists the specific prerequisites required for each component.

Topics in this chapter:

- [Installing Prerequisites on page 18](#)
- [Verifying the Hardware Key on page 21](#)
- [Installing and Verifying the MetaXpress Custom Module Editor License File on page 24](#)
- [Verifying and Updating a Network License on page 25](#)

## Installing Prerequisites

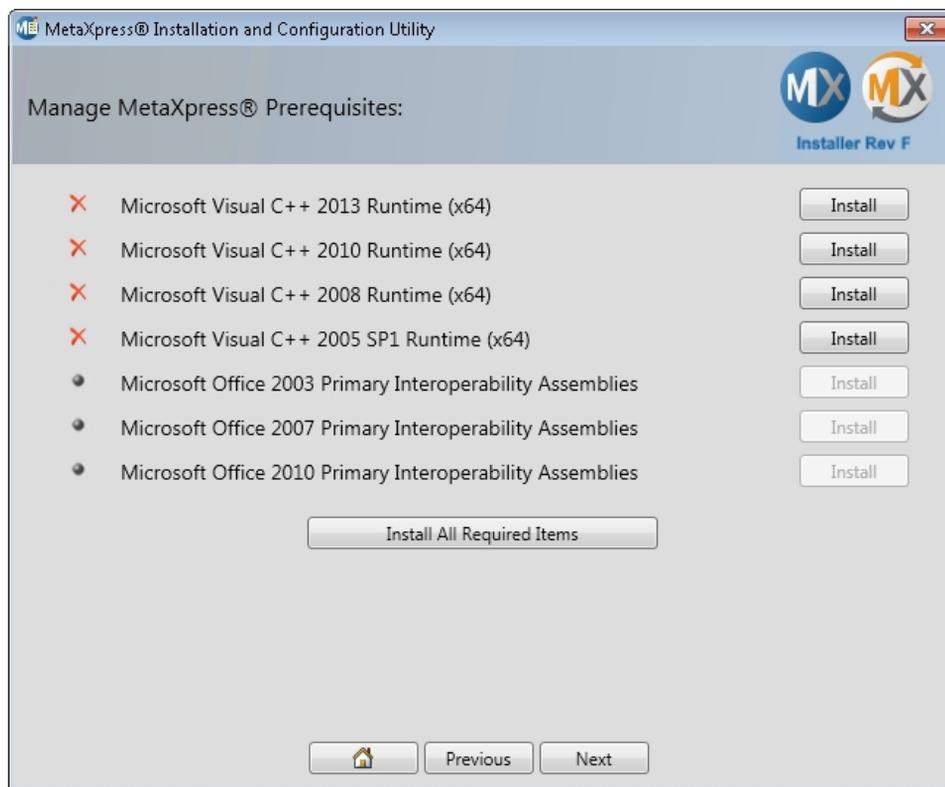
The prerequisites that are required depend on the component that you are installing. Molecular Devices recommends that you install all required items as described in this section. [Table 3-1](#) lists the specific prerequisites required for each component.

---

**CAUTION!** Molecular Devices advises that you do not skip any required installation that is displayed in the wizard. It is likely that an existing software version on your computer is incompatible with the current MetaXpress Software installation and needs updating.

---

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.

## Prerequisite Requirements

The following prerequisite software must be installed using the prerequisite setup wizard. The installer detects and installs the specific required software versions for your system.

**Table 3-1: Prerequisite Requirements**

| Component                       | Prerequisites Needed  | Hardware Key   | License File   |
|---------------------------------|---|--|--|
| MDCStore™ Database              | Microsoft Visual C++ Runtime Libraries  | Not required   | Not required   |
| MDCStore Tools™ 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® PowerCore™ Software | Microsoft Visual C++ Runtime Libraries<br>SafeNet Sentinel System Driver<br>SafeNet Sentinel Protection Server on server computer, or on computer hosting key, if different   | This key can be on any computer connected to the network | Not required   |
| MetaXpress® Software            | Microsoft Visual C++ Runtime Libraries<br>SafeNet Sentinel System Driver<br>SafeNet Sentinel Protection Server if using a network license key or if you plan to run the MetaXpress Software using a remote desktop connection | 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. |

**Table 3-1: Prerequisite Requirements (continued)**

| Component  | Prerequisites Needed   | Hardware Key | License File |
|--|--|--------------|--------------|
| MetaXpress® Custom Module Editor (installed with the MetaXpress® Software) | Microsoft Visual C++ Runtime Libraries<br>Microsoft Office Primary Interoperability Assemblies | Required     | Required     |
| ImageXpress® System USB Driver   | None   | Not required | Not required |
| Microsoft SQL Server 2014 Express  | None   | Not required | Not required |

## Verifying the Hardware Key

You must verify your hardware key when you install or update any of the following components:

- The MetaXpress Software
- The MDCStore Xchange Data Conversion Service
- The MetaXpress PowerCore Server Software

When installing and using these components, keep the hardware key inserted in a USB port.

If you are using a network key, verify that the hardware key can be accessed by the computer where you are installing the software. The driver for the license key must be installed on the computer that hosts the hardware key.

To verify the hardware key:

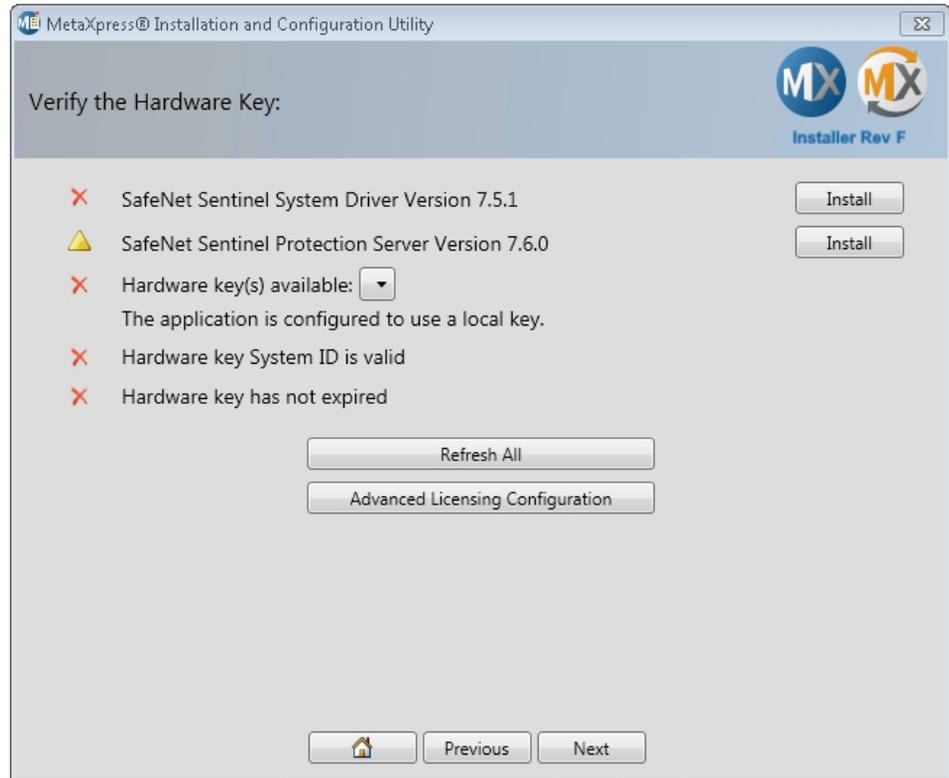


**Note:** The software you are about to install might be newer than shown in the following example screenshots. Install the newest version.

---

1. Insert the hardware key into a USB port on the computer that hosts the hardware key.  
If you are using a network key, verify that the hardware key is available to the computer where you are installing the software.

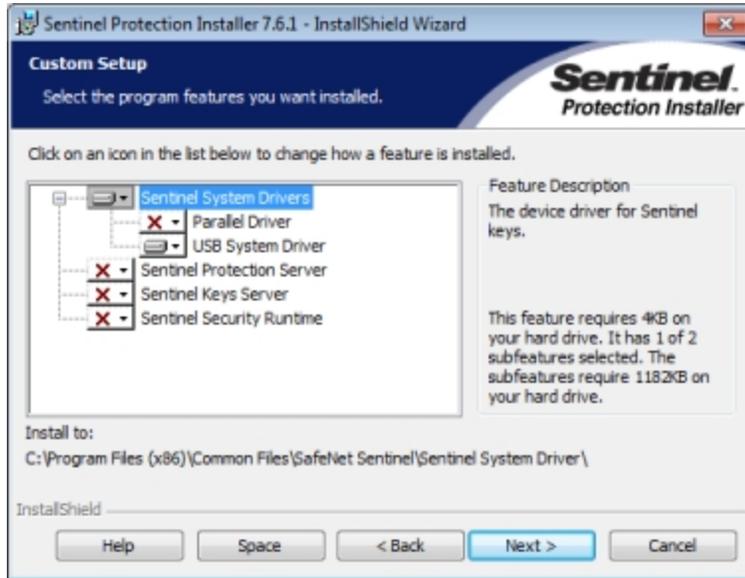
2. On the **Manage MetaXpress Prerequisites** page, click **Next** to continue to the **Verify the Hardware Key** page.



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

- 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 following figure, and then 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, install the SafeNet Sentinel Protection Server software.
8. If the hardware key is located on a server, then click **Advanced Licensing Configuration**, type the IP address or DNS name of the server, and then click **OK**.

The Verify the Hardware Key page shows that the hardware key is set up and can be read. Your System ID number must be displayed. If the page does not display all green check marks or if your hardware key is not inserted into a USB port, insert the hardware key and then click **Refresh All** to verify the hardware key.



**Note:** If the Verify the Hardware Key does not display all green check marks after installing the SafeNet Sentinel driver or server protection software, you might need to restart your computer. After the computer has restarted, 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.

9. When the **Verify the Hardware Key** page displays all green check marks, click **Next** to continue to the **Install and Verify the MetaXpress Custom Module License File** page and follow the instructions in the next section, if applicable.

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

If the Custom Module Editor is included in your software license, install the license file for this option.



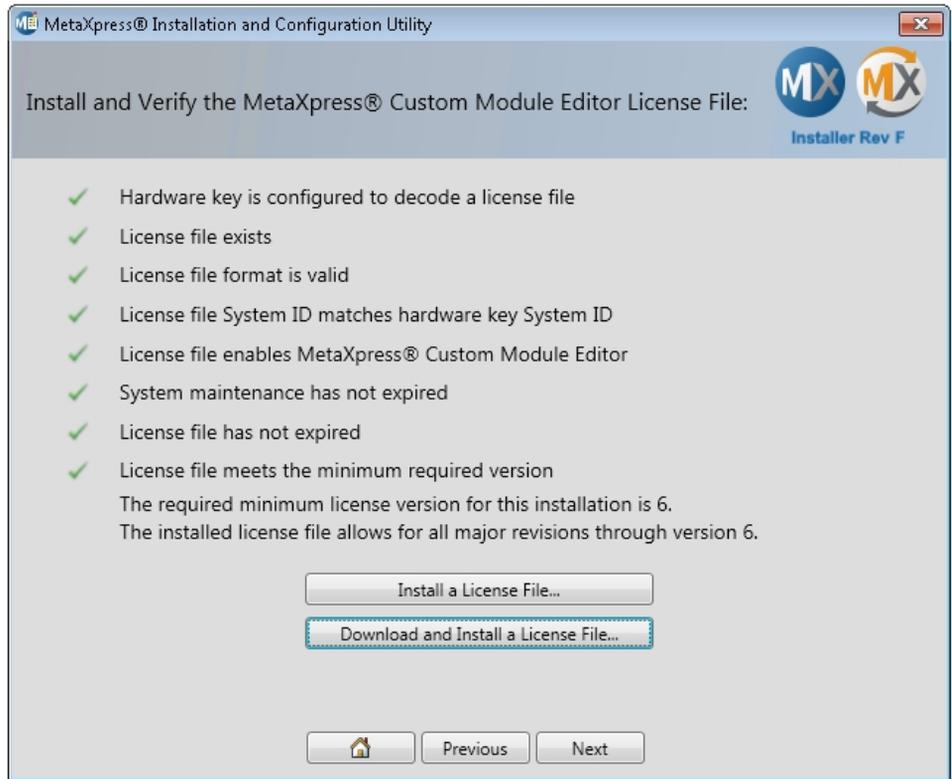
**Note:** If the Custom Module Editor is not included in your software license, skip this section.

---

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, select the appropriate license file, type your System ID (displayed in the previous step), click **Download** and save the file in a convenient location on your computer, and then transfer the downloaded file to a convenient location on the computer where you are installing the software. 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.



- When the **Install and Verify the MetaXpress Custom Module Editor License File** page displays all green check marks, click **Next** to continue to the **Verify and Update Network Key License** page, if applicable.

## 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.



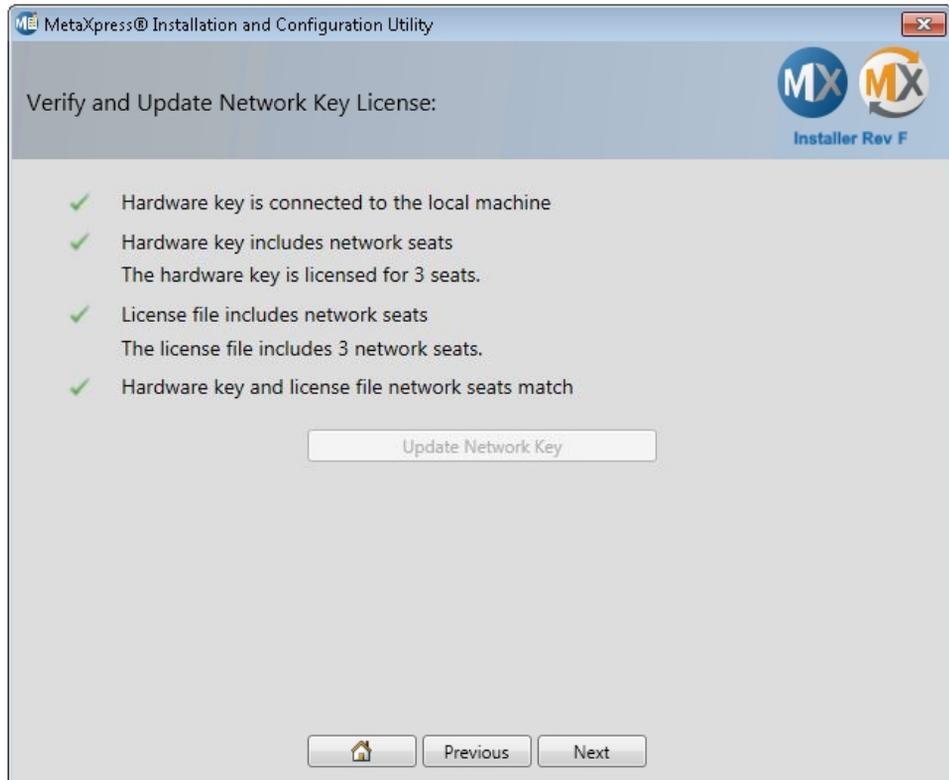
**Note:** If you are not using a network key, skip this section.

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 MDCStore Xchange Data Conversion Service
- The MetaXpress PowerCore Server Software

To verify the network license:

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



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

## Chapter 4: Installing the MDCStore Database Components

# 4

This chapter explains how to install the MDCStore™ High Content Data Management Solution version 2.3 database schema for use with Microsoft SQL Server or Oracle databases for 64-bit systems only. For 32-bit systems, see the *MDCStore High Content Data Management Solution Database Schema Installation Guide, Revision J*.

This chapter 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 called SQL Server.

Before installing the MDCStore database schema, the MDCStore Tools™ 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 17](#).

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



**Note:** When installing and setting up a database on Windows, make sure that you have logged in to Windows 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 during the installation.

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Topics in this chapter:

- [Installing the MDCStore High Content Data Management Solution Database Schema on page 28](#)
- [Installing the MDCStoreTools Data Management Utility on page 38](#)
- [Installing the MDC File Server \(optional\) on page 40](#)

## 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 documentation from Microsoft or Oracle.

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

### Installing the MDCStore Database for SQL Server

These instructions are for a new installation of the MDCStore database schema only. To update an existing installation of the MDCStore database schema, see [Updating an Existing MDCStore Database on page 35](#).



**Note:** If you have an Oracle database, do not use these instructions. See [Installing the MDCStore Database for Oracle on page 33](#).

To install Microsoft SQL Server 2014 Express, see [Installing SQL Express on page 83](#). You must have the MS SQL Server configured to use *Mixed Mode* authentication. Refer to the *MDCStore™ High Content Data Management Solution Database Schema Installation and Upgrade Guide*.

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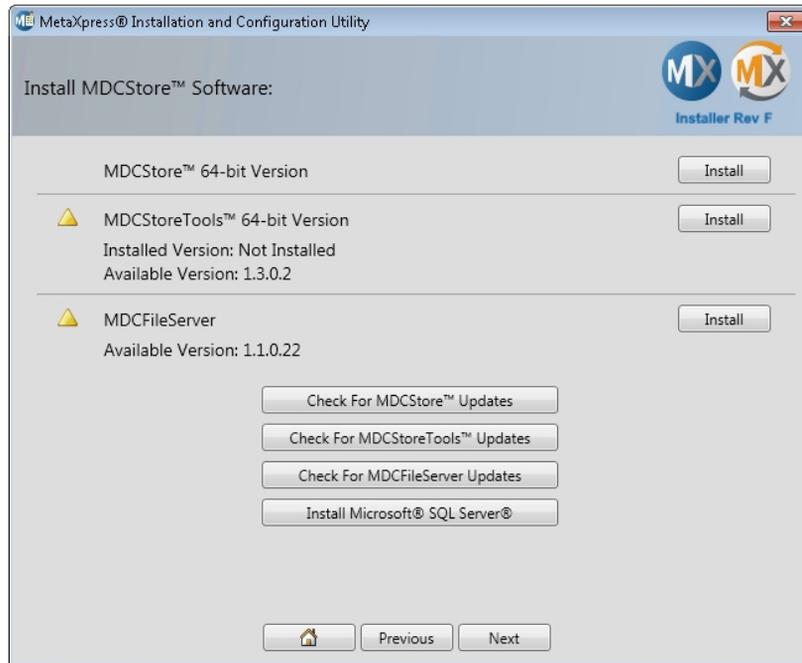
To install the MDCStore database for SQL Server:



**Note:** The software you are about to install might be newer than shown in the following example screenshots. Install the newest version.

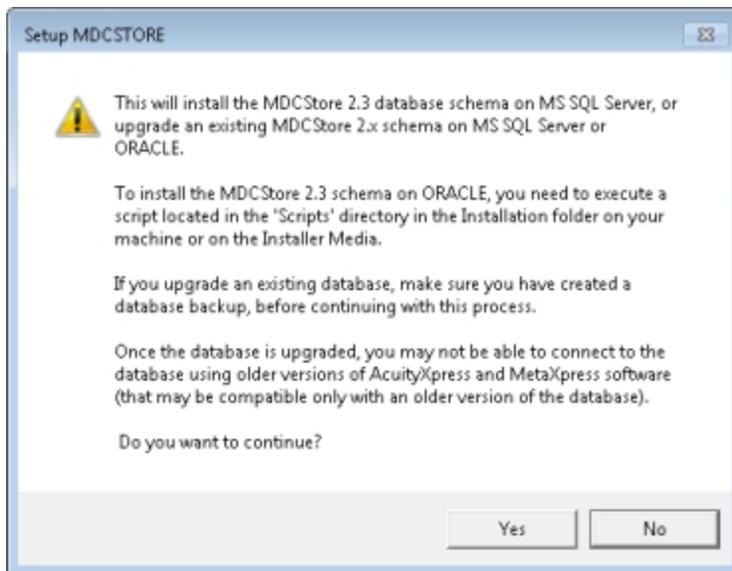
1. Log in to the computer where you want to install the MDCStore Data Manager database schema.
2. Follow the instructions in [Starting the Installation and Configuration Utility on page 13](#) to start the MetaXpress Software Installation and Configuration Utility.

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



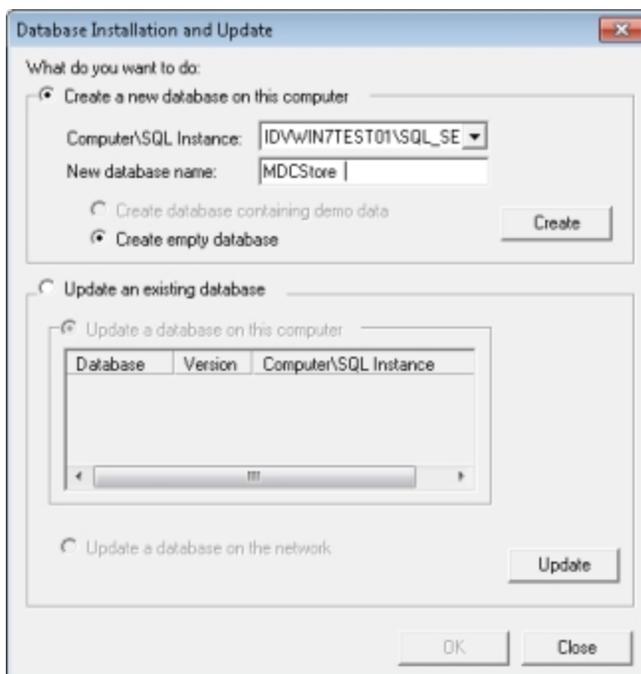
**Note:** The MetaXpress Installation and Configuration Utility cannot determine the status of the MDCStore database schema installation. Therefore, the Install MDCStore Software page does not display a status icon (such as a green check mark) for the MDCStore database schema, even after it is installed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

4. In the **Setup MDCSTORE** message, click **Yes**.



**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.

5. In the **Database Installation and Update** dialog, 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 COMPUTERTNAME\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 (generally 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 does not have the operating system and main applications running increases performance and ensures that your data is accessible even if the operating system found 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. For the same reason, do not install the database on a mapped or network drive.

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 MDCStore Tools Utility. See the *MDCStore Tools 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 [www.moleculardevices.com/support](http://www.moleculardevices.com/support).



**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.

- 
8. To continue, see [Setting Up the Database](#), see page 70.

## Installing the MDCStore Database for Oracle

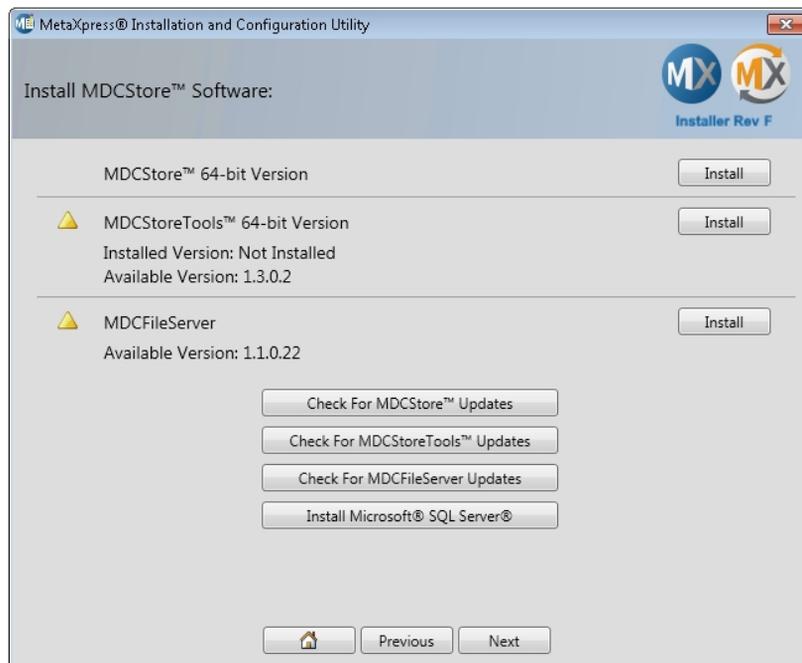
**CAUTION!** Oracle database names cannot contain spaces or special characters. The names **screening 1** and **screening#2** are not valid database names. The names **screening\_1** and **screening\_2** are valid database names. Limit the characters used for the database names to alphanumeric (0–9,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

To install the MDCStore database for Oracle:



**Note:** The software you are about to install might be newer than shown in the following example screenshots. Install the newest version.

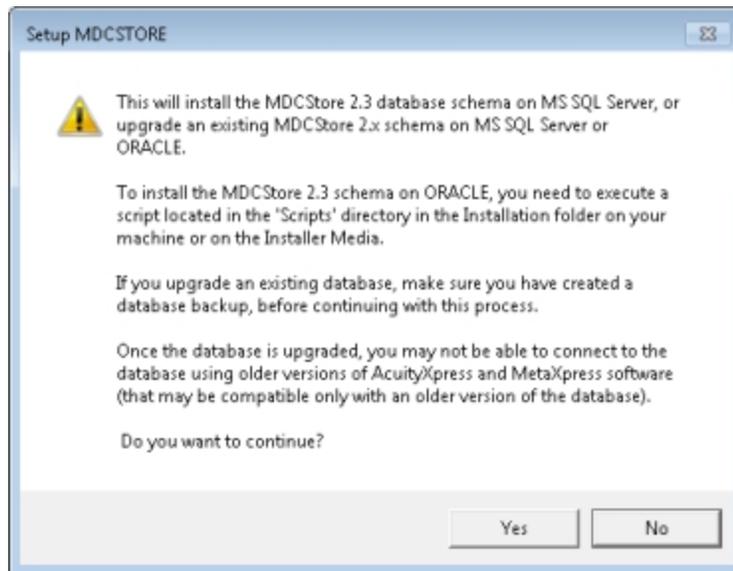
1. Log in to the computer where you want to install the MDCStore Data Manager database schema.
2. Follow the instructions in [Starting the Installation and Configuration Utility on page 13](#) to start the MetaXpress Software Installation and Configuration Utility.
3. In the MetaXpress Software and Configuration Utility, on the **Install MDCStore Software** page, click the MDCStore **Install**





**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 check mark) 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.

4. In the **Setup MDCSTORE** message, click **No**.
5. Click **Close**.
6. Click **All Programs > MDCStore > MDCStore Database > Scripts**.
7. Confirm that the installation scripts have been installed before continuing to set up the database. See [Setting Up the Database, see page 70](#)

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 MDCStore Tools Utility. See the *MDCStore Tools 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 [www.moleculardevices.com/support](http://www.moleculardevices.com/support).

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 [www.moleculardevices.com/support](http://www.moleculardevices.com/support).

## Updating an Existing MDCStore Database

Before you update the MDCStore database, verify that the current version is version 2.0 or newer. If you have an older version of the MDCStore 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. The manuals and software updates are on the Knowledge Base.

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

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**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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To update an existing MDCStore database:

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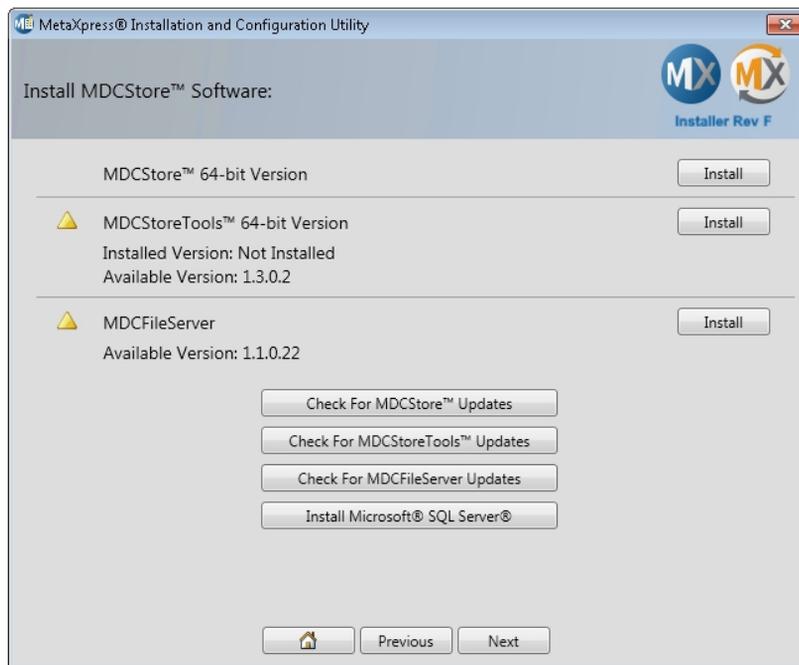


**Note:** The software you are about to install might be newer than shown in the following example screenshots. Install the newest version.

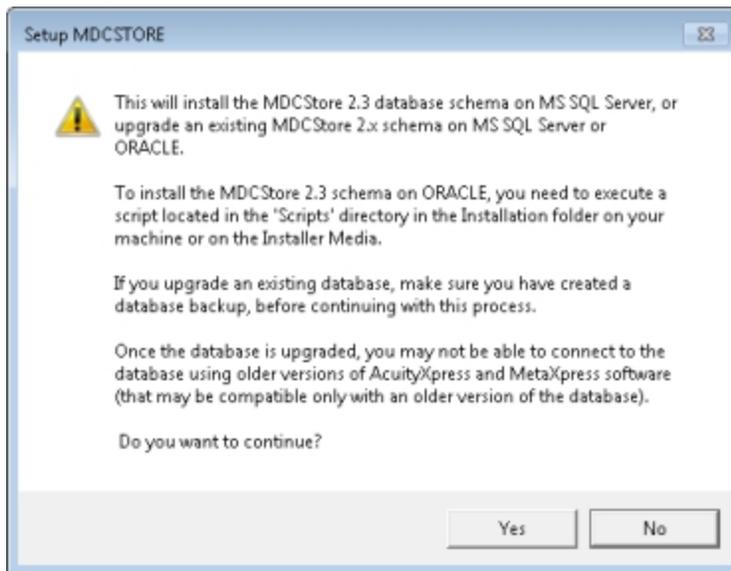
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1. Log in to the computer where you want to install the MDCStore Data Manager database schema.
  - For SQL, use *sa* as the **login** name.
  - For Oracle, use *system* as the **login** name.
2. Follow the instructions in [Starting the Installation and Configuration Utility on page 13](#) 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**



The **Setup MDCStore** message appears.

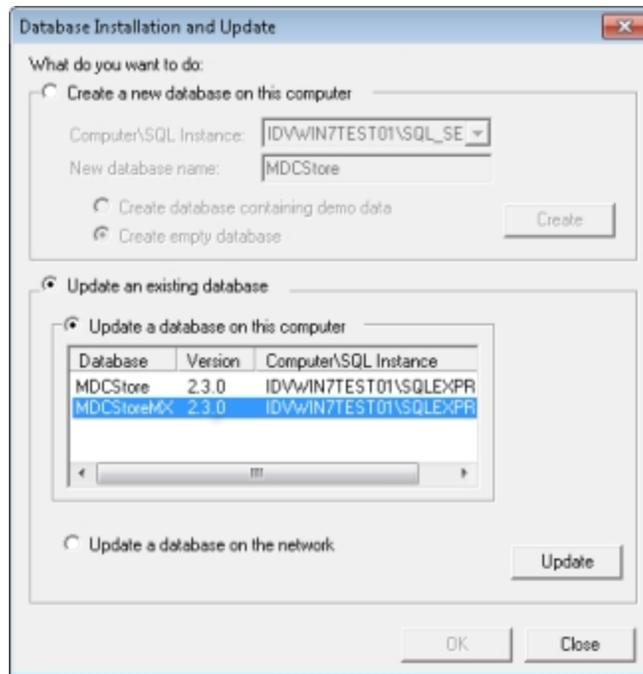




**Note:** The **Setup MDCStore** message might appear behind the MetaXpress Installation and Configuration Utility. To view the **Setup MDCStore** message, drag the MetaXpress Installation and Configuration Utility to the side.

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 in to, 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 server you are not logged in to, click **Update a database on the network**, and then click **Update**.

If you are logged in to the SQL server, but it is not in the list when you click **Update database on this computer**, then click **Update a database on the network**.

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

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**Note:** Version 6.2 of the MetaXpress Software requires version 2.3 of the MDCStore™ High Content Data Management Solution. To use the MDCStore Tools™ Data Management Utility, you must upgrade the MDCStore database to version 2.3.

The MDCStore Tools Data Management Utility is compatible with version 3.0 or newer of the MetaXpress Software. If you have a version of the MetaXpress Software older than 3.0 and you attempt to install the MDCStore Tools Data Management Utility, a warning appears informing you that you must upgrade to version 3.0 or newer of the MetaXpress Software.

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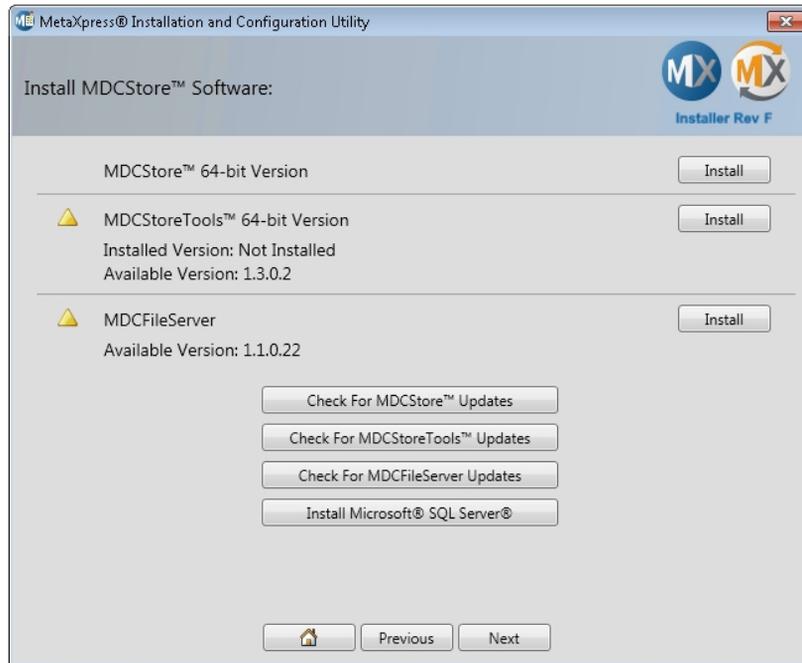
To install the MDCStore Tools Utility:



**Note:** The software you are about to install might be newer than shown in the following example screenshots. Install the newest version.

1. Log in to the computer where you want to install the MDCStore Tools Utility.
2. Follow the instructions in [Starting the Installation and Configuration Utility on page 13](#) 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 Tools **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 necessary 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 MDCStore Tools Setup Wizard.
7. When the installation is complete, click **Close** to exit the wizard.

## Installing the MDC File Server (optional)



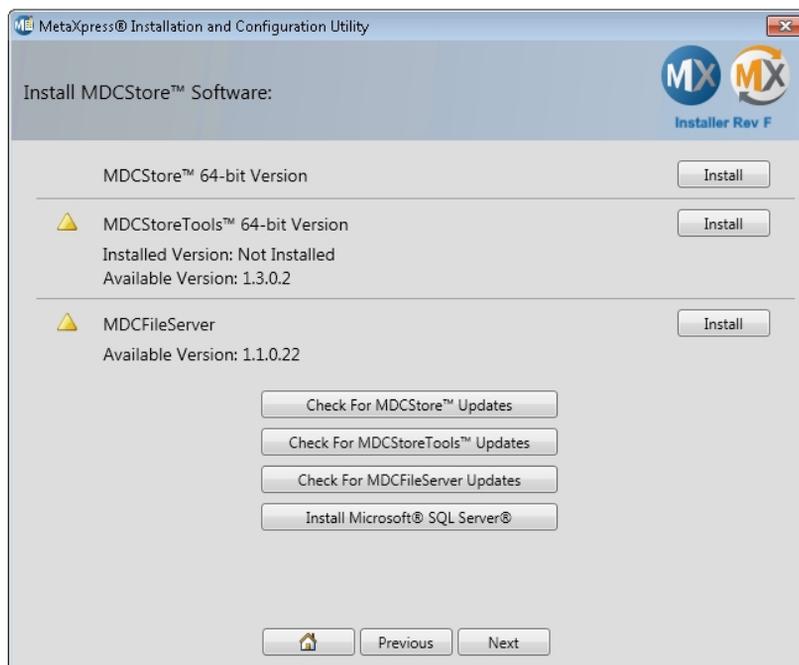
**Note:** Molecular Devices recommends using UNC paths because they are typically faster than the MDC file server application that directs the images to the final location. Refer to the *MDCStore Tools™ Data Management Utility User Guide*.

To install the optional MDC File Server:



**Note:** The software you are about to install might be newer than shown in the following example screenshots. Install the newest version.

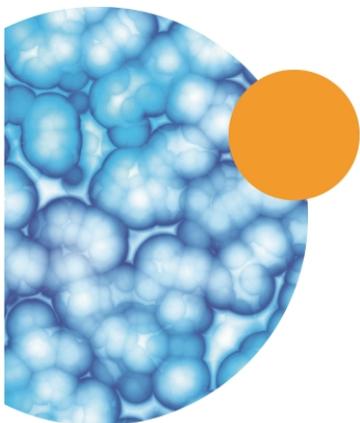
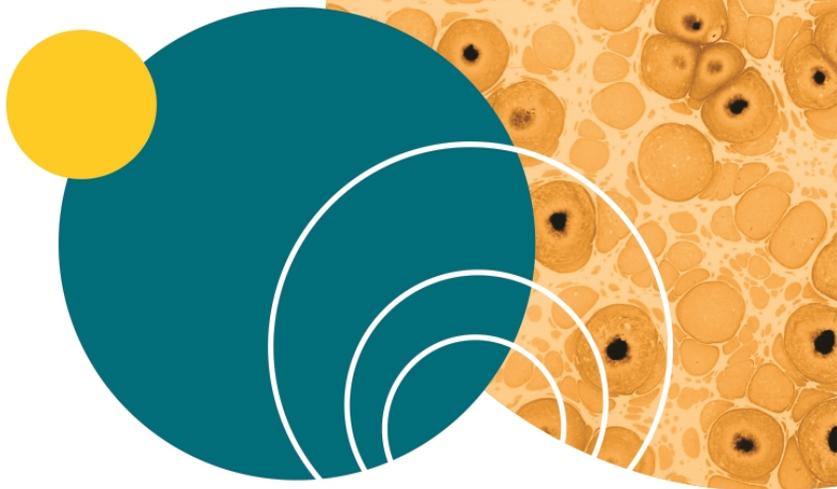
1. Log in to the computer where you want to install the MDC File Server.
2. Follow the instructions in [Starting the Installation and Configuration Utility on page 13](#) to start the MetaXpress Software Installation and Configuration Utility.
3. In the MetaXpress Installation and Configuration Utility, 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**



## Chapter 5: Installing the MDCStore Xchange Data Conversion Service

# 5



**Note:** If your license does not include the MDCStore™ Xchange Data Conversion Service software, then skip this section.

The MDCStore™ Xchange Data Conversion Service works together with the installed MDCStore™ High Content Data Management Solution database 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 newer)
- 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 17](#).

For information on licensing for the MDCStore Xchange Data Conversion Service, please visit the Molecular Devices knowledge base at [www.moleculardevices.com/support](http://www.moleculardevices.com/support).

If you are installing the MDCStore Xchange Software on a computer with multiple Windows users, then log in to Windows using the main administrator account and then install the software for all users. For more information contact Molecular Devices Technical Support. See [Obtaining Support on page 9](#).

Topics in this chapter:

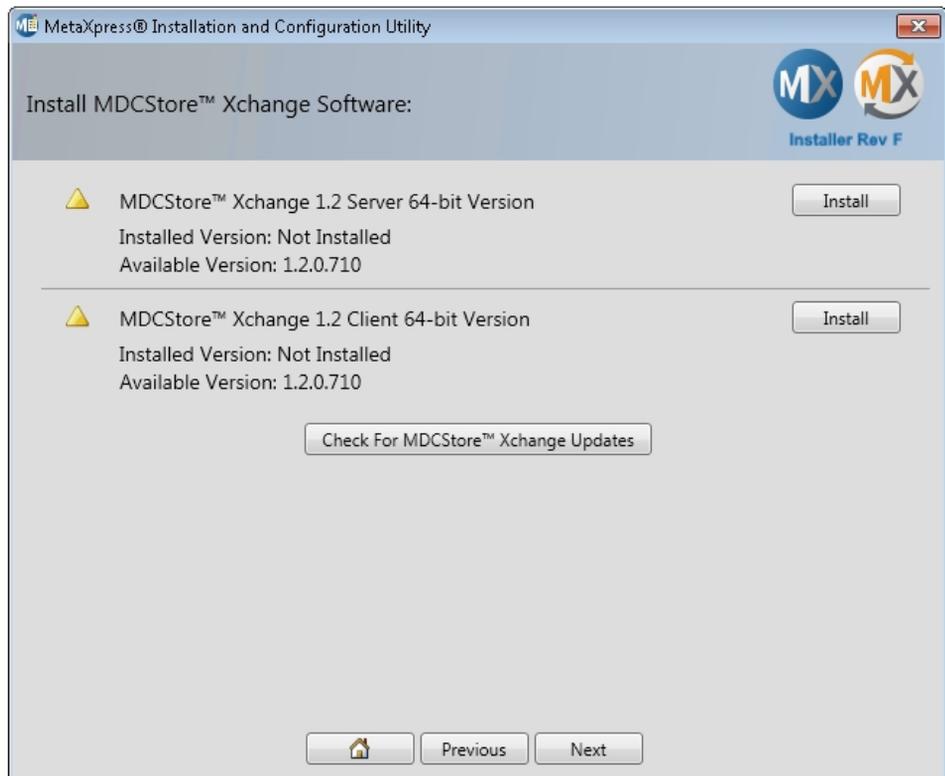
- [Installing the MDCStore Xchange Server Software on page 44](#)
- [Installing the MDCStore Xchange Client Software on page 45](#)

## Installing the MDCStore Xchange Server Software



**Note:** The software you are about to install might be newer than shown in the following example screenshots. Install the newest version.

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 Software Suite Installation and Configuration Utility on page 13](#) 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 Service **Install** button.



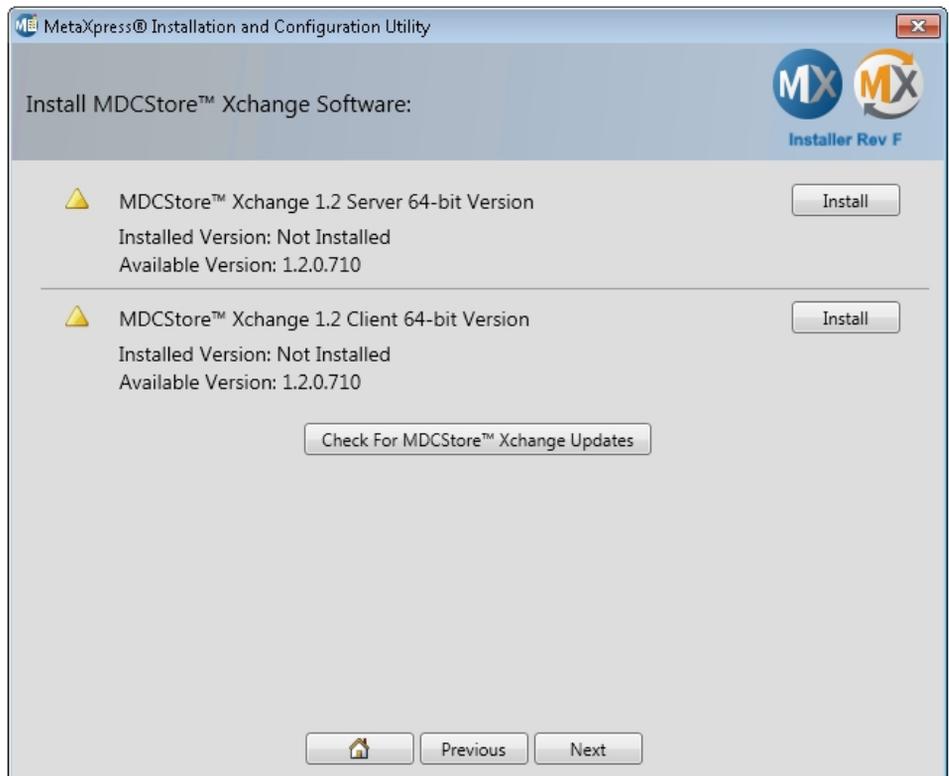
4. In the MDCStore Xchange Service Installation Wizard, click **Next** and follow the instructions in the wizard to complete the installation.
5. Type your Windows user name and password in the fields.
6. After the installation completes, click **Close**.

## Installing the MDCStore Xchange Client Software

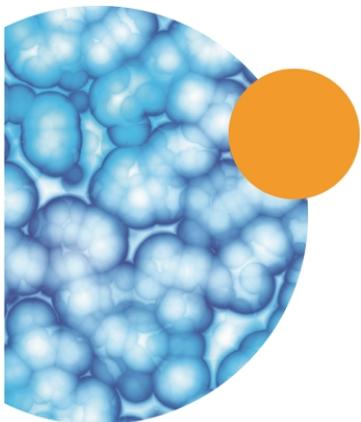


**Note:** The software you are about to install might be newer than shown in the following example screenshots. Install the newest version.

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 Software Suite Installation and Configuration Utility on page 13](#) 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 MDCStore Xchange Client Installation Wizard, click **Next** and follow the instructions in the wizard to complete the installation.
5. After the installation completes, click **Close**.



## Chapter 6: MetaXpress PowerCore Software

# 6



**Note:** If your license does not include the MetaXpress® PowerCore™ Software, then skip this section.

To use the optional MetaXpress® PowerCore™ High-Content Distributed Image Analysis Software, 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.

If your license does not include this software, then skip this section.

You can install and configure more than one computer as a MetaXpress PowerCore server as needed 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 17](#).



**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 read the user guide frequently as you install the MetaXpress PowerCore Software. This guide is provided on the MetaXpress Software Suite flash drive and is available in the Molecular Devices knowledge base at [www.moleculardevices.com/support](http://www.moleculardevices.com/support).

Topics in this chapter:

- [MetaXpress PowerCore Server Software on page 48](#)
- [MetaXpress PowerCore Client Software on page 49](#)

## MetaXpress PowerCore Server Software

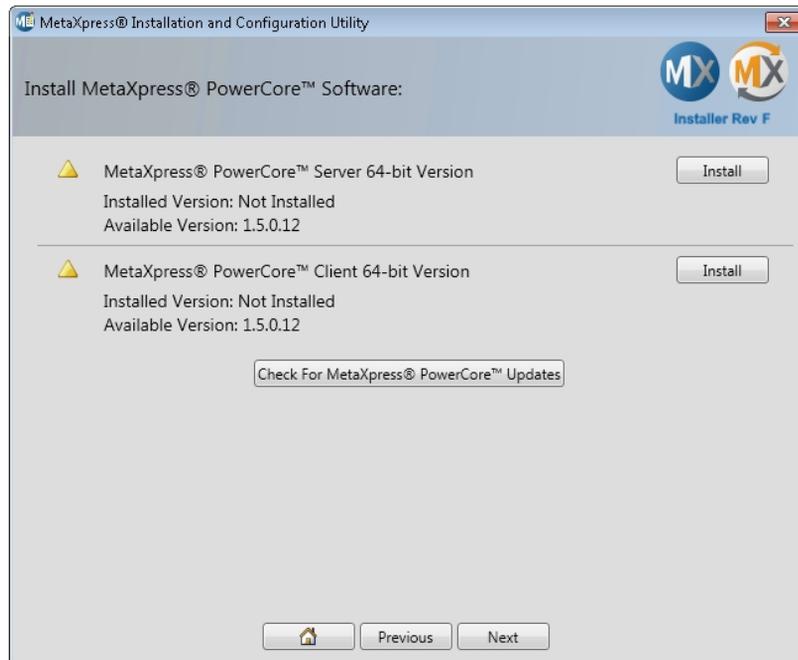


**Note:** The software you are about to install might be newer than shown in the following example screenshots. Install the newest version.

1. Log in as administrator on the computer where you want to install the MetaXpress PowerCore server software.

**CAUTION!** Remove any Sentinel USB keys attached to this computer, to prevent erasing the configuration of the key.

2. Follow the instructions in [Starting the Installation and Configuration Utility on page 13](#) 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.



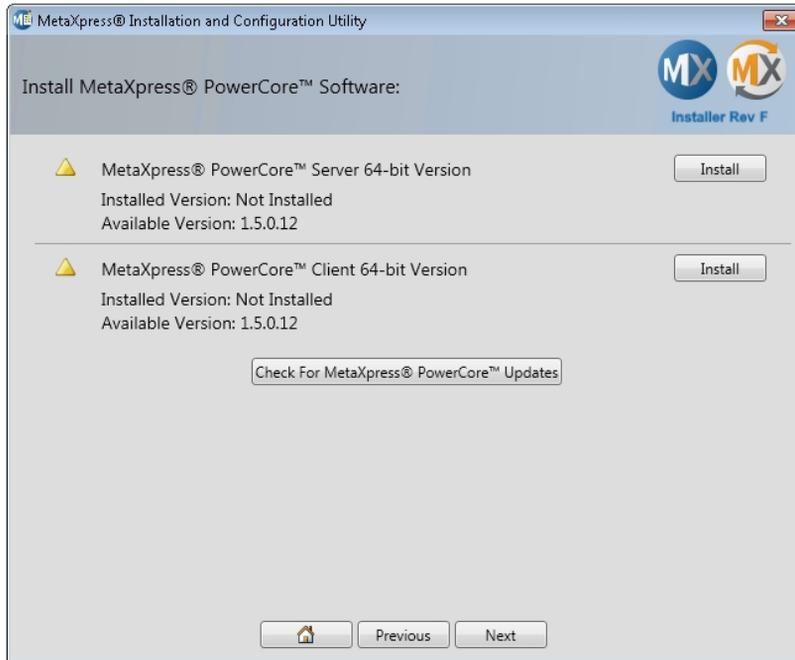
4. In the MetaXpress PowerCore Server Installation Wizard, click **Next** and follow the instructions in the wizard to complete the installation.

## MetaXpress PowerCore Client Software

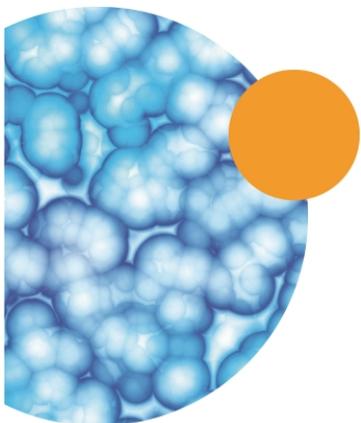
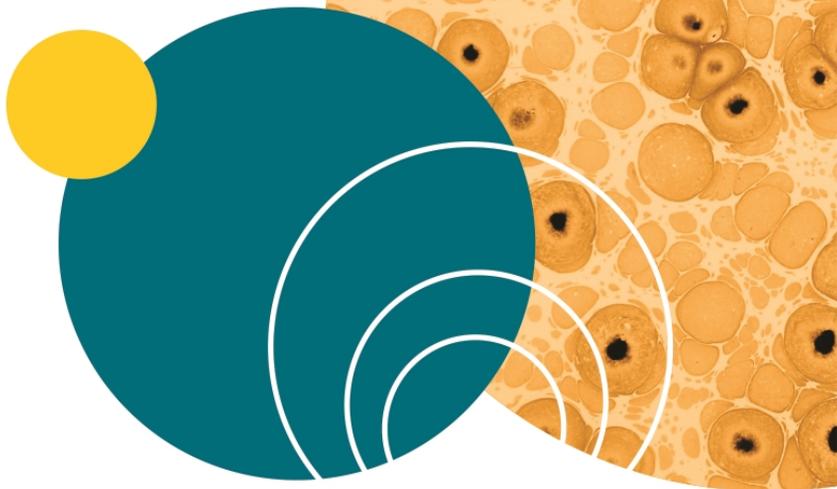


**Note:** The software you are about to install might be newer than shown in the following example screenshots. Install the newest version.

1. Log in as administrator on the computer where you want to install the MetaXpress PowerCore client software.
2. Follow the instructions in [Starting the Installation and Configuration Utility on page 13](#) 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.



# Chapter 7: Installing the MetaXpress Software

# 7

Molecular Devices recommends that you use the MetaXpress® Software Suite flash drive to install version 6.2 of the MetaXpress Software completely. After you install version 6.2 of the software, you can then install updates as they are made available on the MetaXpress Updates web site.

If version 5.x of the software is already installed on your instrument workstation or analysis computer, then during the installation process the software provides a step where you can choose to do one of the following:

- Install version 6.2 in the same folder as version 5.x (this overwrites version 5.x with version 6.2).
- Install version 6.2 in a different folder than version 5.x (in this case, version 5.x is retained and you are able to run either version of the software).



**Note:** Version 6.2 of the MetaXpress Software requires version 2.3 of the MDCStore™ High Content Data Management Solution.

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 the Newest Update of the Software on page 64](#).

Topics in this chapter:

- [Copying Settings from an Earlier Version of the Software on page 51](#)
- [Installing the MetaXpress Software on page 52](#)
- [Installing Version 10 of the USB Driver on Instrument Workstations on page 61](#)
- [Installing the Andor SDK 3 Driver on the Instrument Workstations on page 63](#)
- [Installing the Newest Update of the Software on page 64](#)

## Copying Settings from an Earlier Version of the Software

**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.

If you are upgrading from an older version of the MetaXpress Software to version 6.2 on a computer running Windows 7 or Windows 8, do the following steps. These steps ensure that an option to copy settings from the earlier version of the software is provided when you install version 6.2 of the software.

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

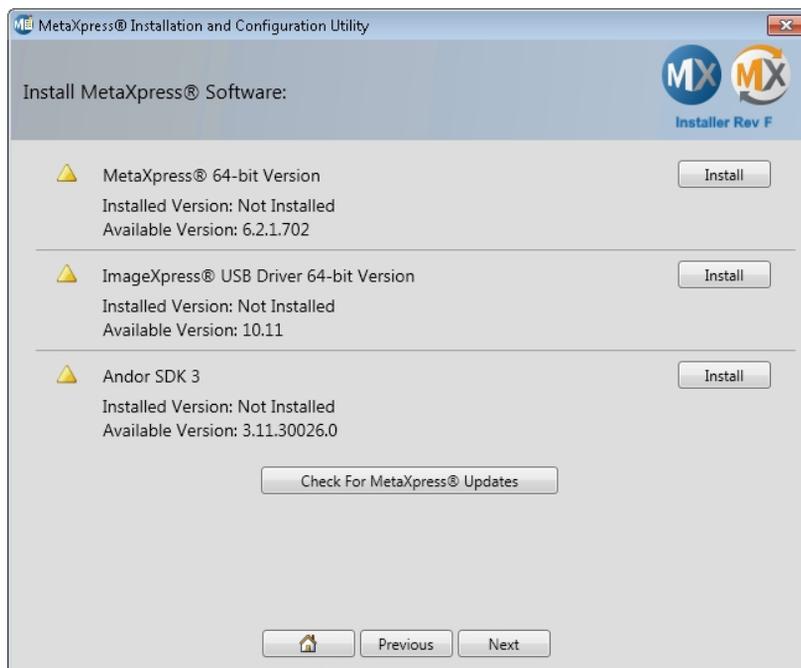
After you have completed the steps above, install version 6.2 of the MetaXpress Software as described in the next section.

## Installing the MetaXpress Software

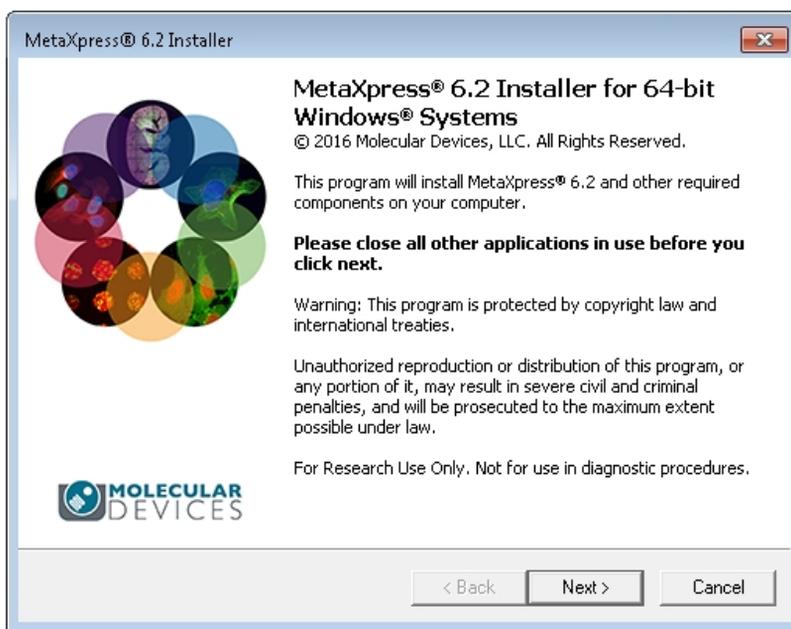


**Note:** The software you are about to install might be newer than shown in the following example screenshots. Install the newest version.

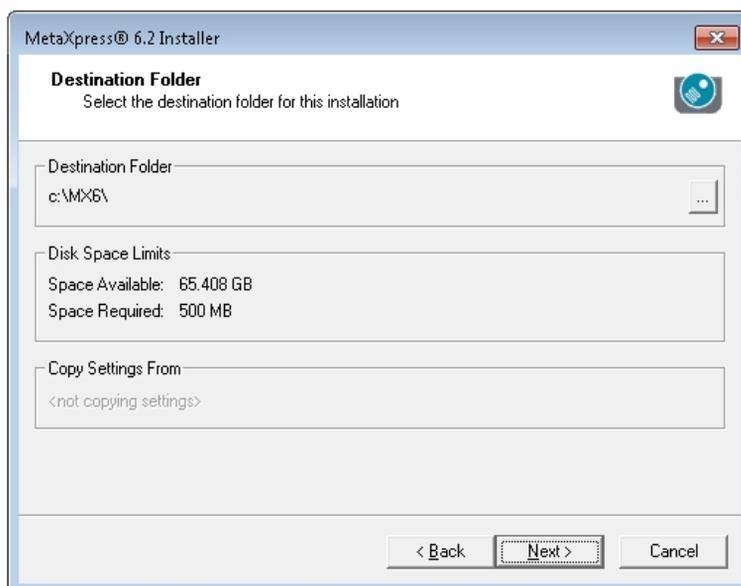
1. Follow the instructions in [Starting the Installation and Configuration Utility on page 13](#) to start the MetaXpress Software Installation and Configuration Utility.
2. In the MetaXpress Installation and Configuration Utility, on the **Install MetaXpress Software** page, click the MetaXpress **Install** button.



3. In the MetaXpress Software installation wizard, click **Next**.



4. For the software license agreement, select **I Accept all terms of the preceding License** and then click **Next**.
5. In the Sentinel Security Components page, click **Next**.



6. If an earlier version of the software is detected and this is an instrument workstation, select **Copy the settings from this folder into a new destination folder** and then click **OK**.

If the wizard does not detect an earlier version of the MetaXpress Software on an analysis (offline) computer skip to Step 9.

If an earlier version of the software is not detected on an instrument workstation, open the existing copy of MetaXpress Software and exit, and then rerun the installer. If the earlier version of the MetaXpress Software is still undetected, on an instrument workstation, contact Technical Support.



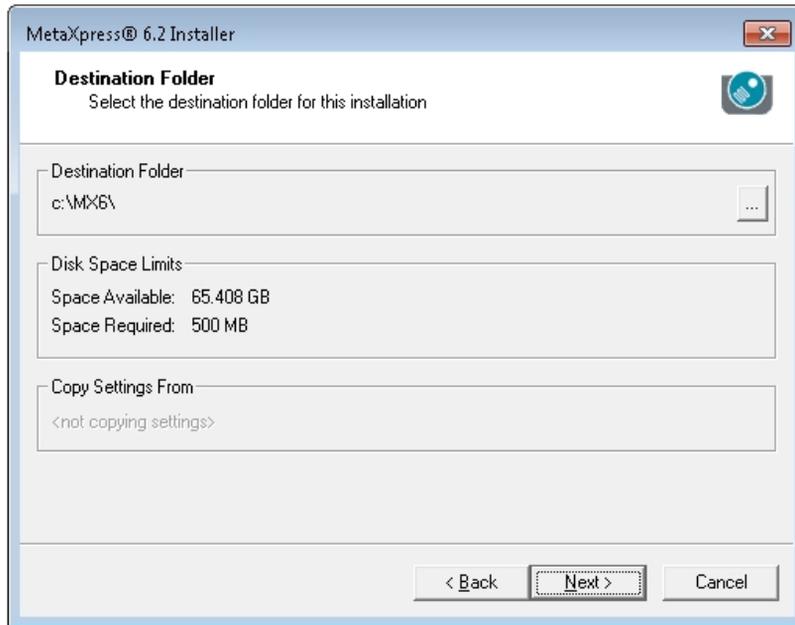
**Note:** The installation wizard uses the settings from the copy of the MetaXpress Software that was most recently open. If you want to install the MetaXpress Software using the settings from a different copy of the software, close the installation wizard, open the other copy of the MetaXpress Software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



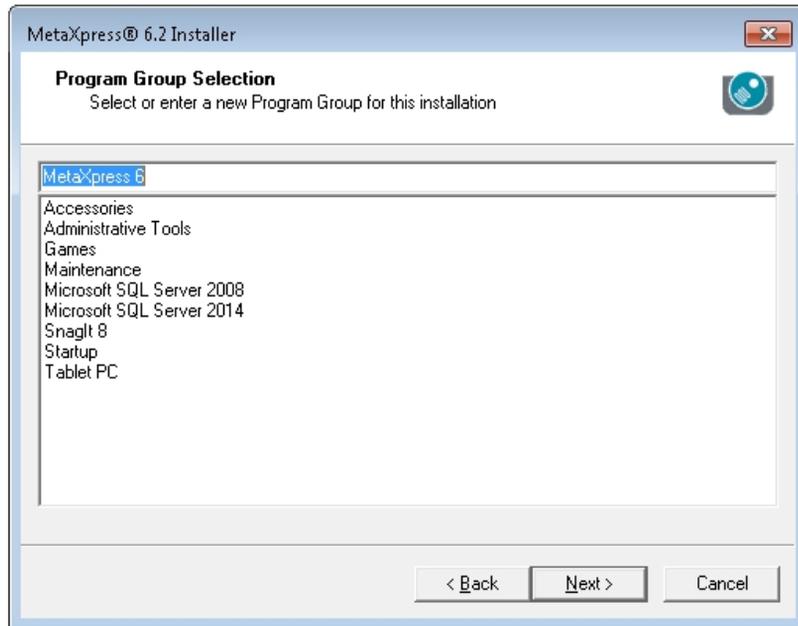
**Note:** If the User Access Control (UAC) is enabled (accessible in **Control Panel > User Accounts**) and two different versions of the MetaXpress Software are installed side by side (for example, versions 5.0 and 6.2), then you must run each version as Administrator (right-click on the application icon and select Run as administrator).

- 
7. In the **Browse for Folder** dialog, create a folder for the new copy of the MetaXpress Software, and click **OK**.

8. In the **Destination Folder** page, 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**.

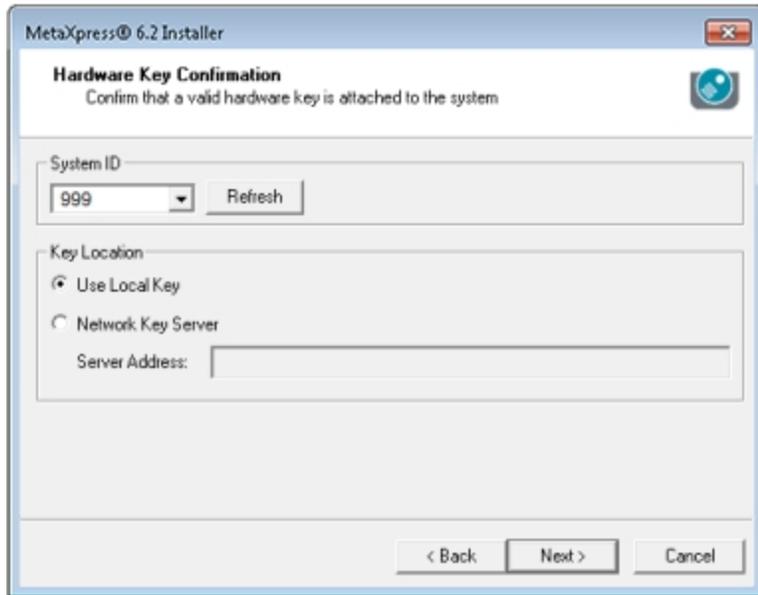


9. In the **Program Group Selection** page, change the name of the program group if needed, and click **Next**.



10. Make sure that the hardware key is inserted into a USB port when installing MetaXpress Software on an instrument workstation or on an analysis (offline) computer.

11. In the **Hardware Key Confirmation** page, depending on the **Key Location**, do one of the following:
  - Select **Use Local Key**.



- Select **Network Key Server**, and type the server address (the static IP address or the full computer name) where the network key is installed.
12. Click **Refresh**. The installation wizard displays your System ID in the System ID field. If you have more than one hardware key available, select the correct key for your MetaXpress Software license.



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

---

13. Click **Next**.

14. In the **User Information and Codes** page, type your **Registered Owner Information**.

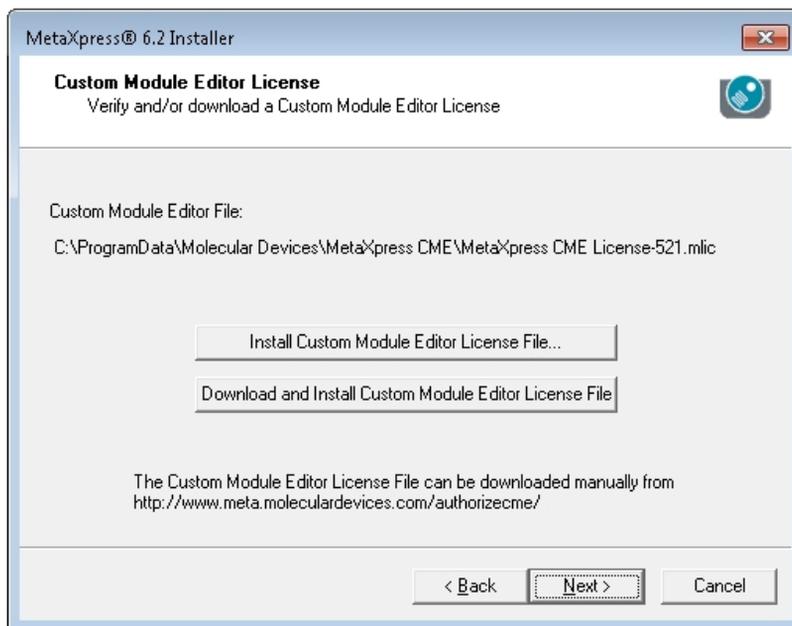
The screenshot shows a window titled "MetaXpress@ 6.2 Installer" with a close button in the top right corner. The main heading is "User Information and Codes" with a sub-heading "Enter the required user information and codes to proceed with this install". There is a small globe icon in the top right of the dialog. The form is divided into two sections: "Registered Owner Information" and "Codes". In the "Registered Owner Information" section, the "Name:" field contains "Molecular Devices" and the "Affiliation:" field is empty. In the "Codes" section, the "Registration Code:" and "Authorization Code:" fields are empty. Below these fields 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 dialog are three buttons: "< Back", "Next >", and "Cancel".

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

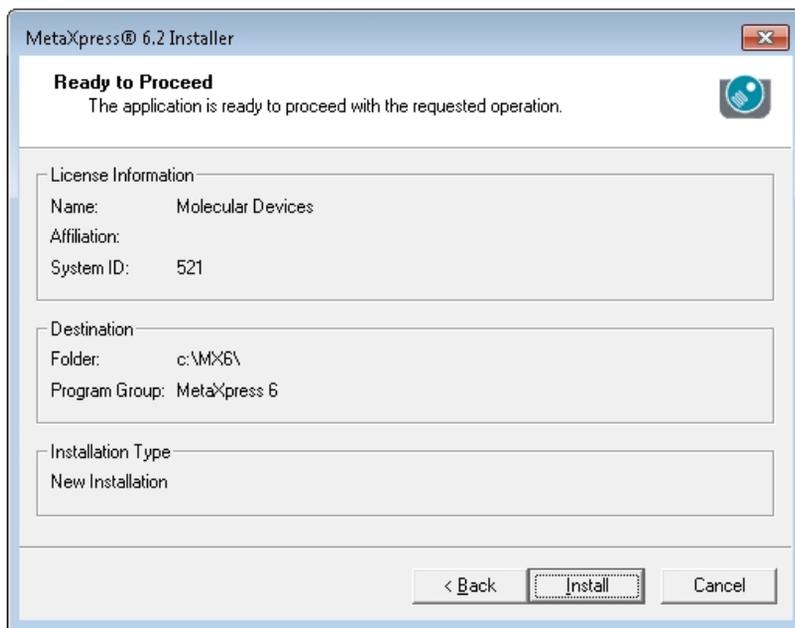
17. If you have already downloaded and installed your **Custom Module Editor License** file, or if the Custom Module Editor is not included in your software license, then skip this step. Otherwise, in the **Custom Module Editor** page, verify your license using one of the following options:

- 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, select the appropriate license file (CME 6.0), type your System ID (displayed in the previous step as Authorization Code), click **Download** and save the file in a convenient location on your computer, and then transfer the file to a convenient location on the computer where you are installing the software. 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.

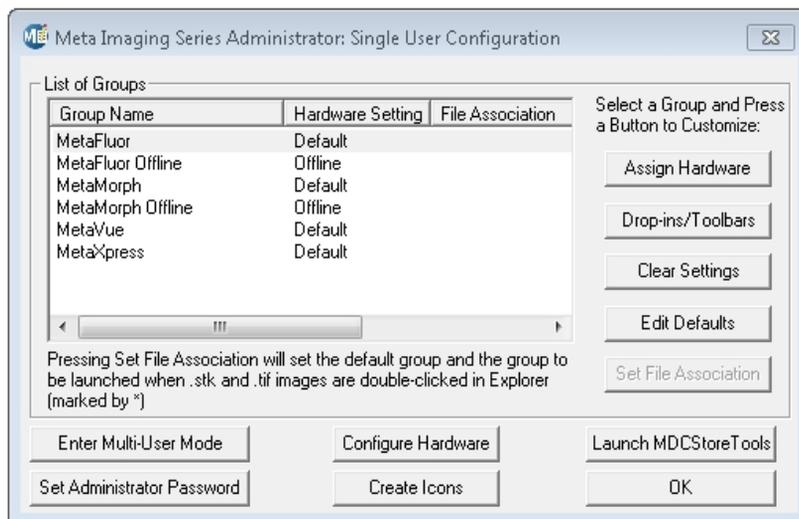


18. Click **Next**.



19. When the **Ready to Proceed** page is displayed, click **Install**.

The installation wizard installs version 6.2 of the MetaXpress Software and then opens the **Meta Imaging Series Administrator**.



20. If you have made any changes to the groups, to create a folder shortcut on the desktop, click **Create Icons**.

21. Click **OK** to close the **Meta Imaging Series Administrator**.
22. In the **Installation Complete** page, click **Finish**.  
After installing the MetaXpress Software from the USB flash drive, Molecular Devices recommends that you install the latest update. See [Installing the Newest Update of the Software on page 64](#).
23. Continue to install the USB driver on all instrument workstations to version 10. See [Installing Version 10 of the USB Driver on Instrument Workstations on page 61](#).

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

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



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

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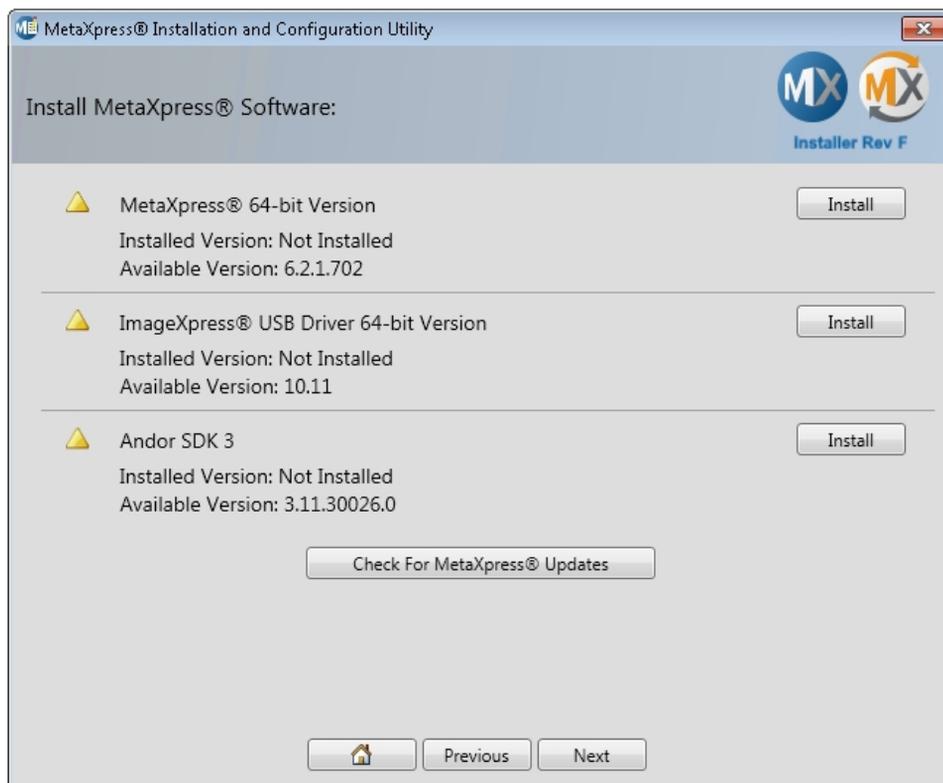
To install version 10 of the USB driver:



**Note:** The software you are about to install might be newer than shown in the following example screenshots. Install the newest version.

---

1. Make sure you are logged in as Administrator on the instrument workstation.
2. Follow the instructions in [Starting the Installation and Configuration Utility on page 13](#) 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**.
5. A command window appears for installing the driver. Respond in the affirmative to any messages that appear during the installation.
6. When the command window closes, the driver installation is complete.
7. If an Andor camera is installed on the instrument, you must next update the Andor SDK3 driver See [Installing the Andor SDK 3 Driver on the Instrument Workstations on page 63](#).

## Installing the Andor SDK 3 Driver on the Instrument Workstations

If an Andor camera is installed on the instrument, then you must update the camera driver on the workstation to the version of the driver included with the installation suite. If you do not update the driver, the ImageXpress Micro System will not operate properly.

To determine if you need to update the camera driver, look at the information provided on the **Install MetaXpress Software** page on your computer screen under **Andor SDK 3**.

- If the version number listed after **Installed Version** is less than the version number listed after **Available Version**, then you need to update the camera driver. Continue with this procedure.
- If **Not Installed** is listed after **Installed Version**, then your instrument does not use an Andor camera, or your computer is not connected to the instrument.

---

**CAUTION!** After updating the Andor SDK3 driver, the MetaXpress Software Version 5 no longer recognizes the camera. If you need to use MetaXpress Software Version 5, contact Molecular Devices technical support.

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**Note:** You do not need to install the driver on computers that are not used for acquisition, or for instruments that do not use an Andor camera.

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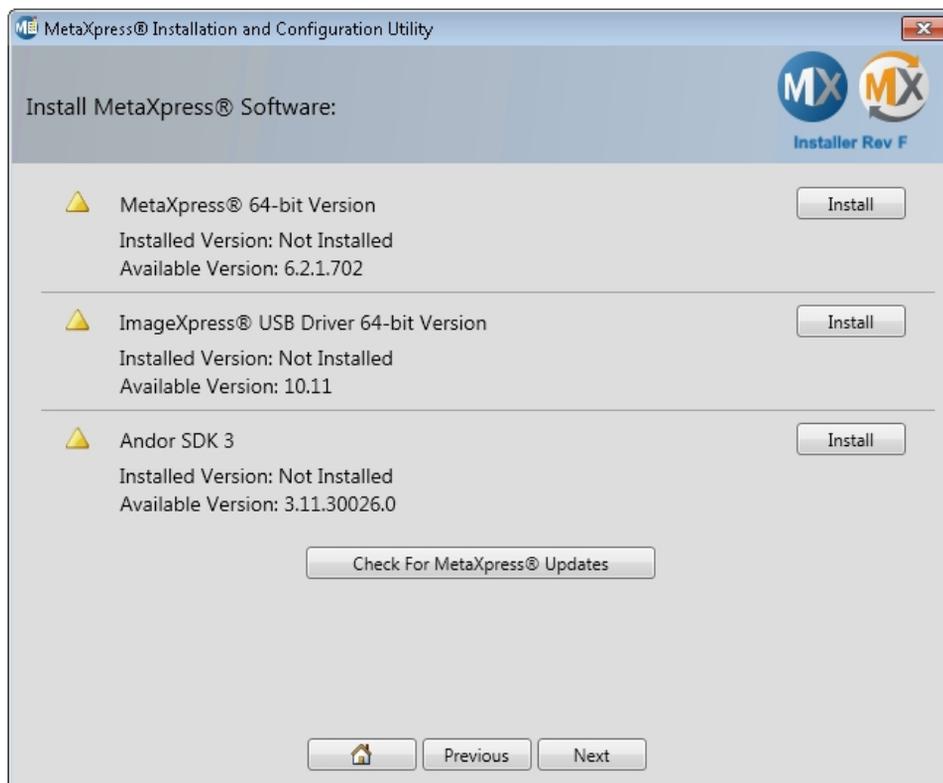
To update the camera driver:



**Note:** The software you are about to install might be newer than shown in the following example screenshots. Install the newest version.

1. Make sure you are logged in as Administrator on the instrument workstation.
2. Follow the instructions in [Starting the Installation and Configuration Utility on page 13](#) 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 Andor SDK 3 **Install** button.



4. When the **Setup Andor SDK3** wizard dialog is displayed, click **Next** to begin.
5. Select **I accept the agreement** and click **Next**.
6. Leave the default destination folder setting, and click **Next**.
7. Click **Install**.
8. Depending on your installation needs, select either to restart the computer now or later, and click **Finish** to complete the installation.

## Installing the Newest 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. See [To download an update of the MetaXpress Software on page 65](#).

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

After downloading the update, start the **Meta Imaging Series Updater** to install the update. See [To install an update of the MetaXpress Software on page 66](#).

## To download an update of the MetaXpress Software

1. Follow the instructions in [Starting the Installation and Configuration Utility on page 13](#) 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. In the MetaXpress Software Updates web page, type 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.
5. Click 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**.

If an information bar appears indicating that the site is blocked from downloading, then click the bar and select **Download File**.

7. In the **File Download** dialog, click **Save**, choose a location on your hard drive for the update file in the **Save As** dialog, and then click **Save** again.

---

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

---



**Tip:** 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.

---

## To install an update of the MetaXpress Software

1. Click **Start > All Programs > Meta Imaging Series** and then right-click **Meta Imaging Series Updater** and select **Run as administrator** to make sure that you are running the updater as an administrator.
2. In the first page of the Meta Imaging Series Updater, click **Next**.
3. In the **Select Patch File** dialog, click **Browse (...)**.
4. In the **Open** dialog, navigate to the update file, select it, and then click **Open**.  
The **Select Patch File** dialog shows the path name of the update file that you selected.
5. Click **Next**.
6. 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 that the hardware key is inserted into a USB port.
7. In the **Hardware Key Confirmation** dialog, select **Use Local Key**.
8. Select **Network Key Server**, and type the server address (the static IP address or the full computer name) where the network key is installed.
9. Click **Refresh**. The updater shows your *System ID* in the **System ID** field.  
If you have more than one hardware key available, select the correct key for your MetaXpress Software license.



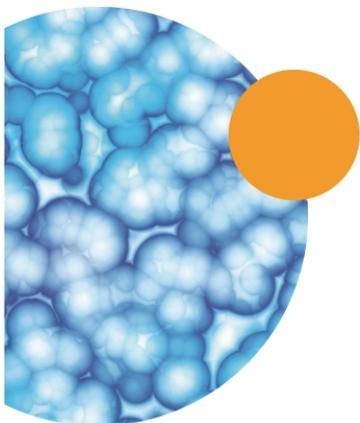
**Note:** If the software does not detect the hardware key, you cannot click **Next** to go to the next page of the Updater. If this happens, verify that the key is connected, that the network key server is installed, and that the appropriate firewall settings are applied.

---

10. Click **Next**.
11. In the **User Information and Codes** dialog, type your **Registered Owner Information**.

12. 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 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.
13. Click **Next**.
14. For MetaXpress Software Version 6.1 and newer, and only if the Custom Module Editor license has been enabled on your license key, do the following, otherwise, skip to step 15.
  - Depending on your license, do one of the following:
    - Select the **Download and install Custom Module Editor** option to download the file to your computer.
    - Select the **Install Custom Module Editor License File** option to browse to the *.mlc* file for your license key.

In the **Meta Imaging Series Updater** dialog, the **Ready to Proceed** screen is displayed.
15. In the **Ready to Proceed** dialog, click **Update**.
16. When the installation is complete, click **Finish**.
17. In the **Meta Imaging Series Administrator** dialog, click **OK**.



# Chapter 8: Setting Up the MetaXpress Software



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

- [Starting the MetaXpress Software on page 69](#)
- [Setting Up the Database on page 70](#)
- [Selecting the Camera Driver on page 73](#)
- [Configuring Objectives on page 73](#)

## Starting the MetaXpress Software

1. Right-click the MetaXpress icon in the MetaXpress program group on the desktop and select **Run as administrator**.
2. In the **Welcome to MetaXpress** login dialog, type your login credentials.



- If you do not have a data source set up, see [Creating a Data Source on page 70](#).
- If you do not have a login credential defined, see [Setting MDCStore Database Passwords on page 72](#).
3. Click **OK**.

## 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. 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 older version of the MetaXpress Software, you might 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 6.2 of the MetaXpress Software.

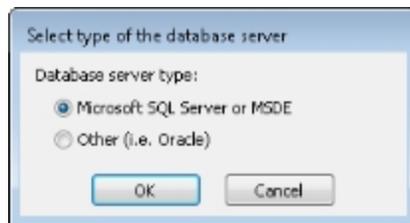


**Note:** If the User Access Control (UAC) is enabled (accessible in **Control Panel > User Accounts**), you must log in as Administrator before attempting to create a data source.

To create a data source:

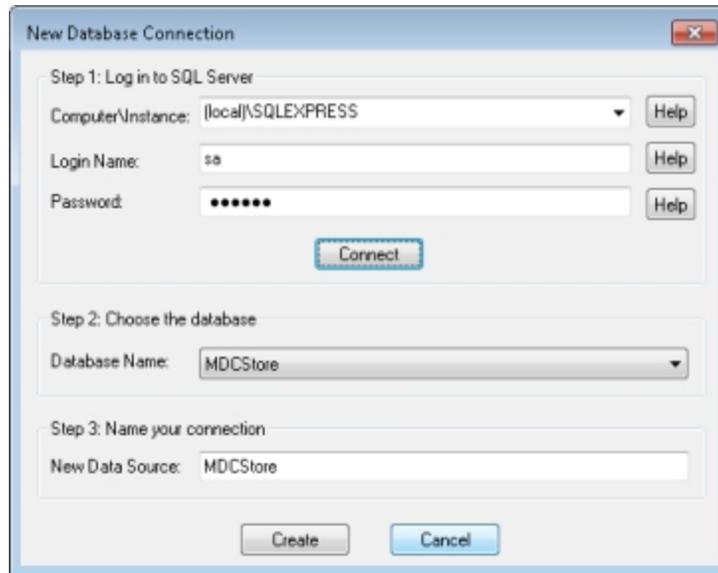
1. Right-click the MetaXpress icon in the MetaXpress program group on the desktop and select **Run as administrator**
2. In the **Welcome to MetaXpress** login dialog, click **New Data Source**.

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



3. In the **Select type of database server** dialog, select **Microsoft SQL Server or MSDE** or **Other**, and click **OK**. In this example, Microsoft SQL Server is selected.

- In the **New Database Connection** dialog, from the **Computer\Instance** drop-down list, select a computer name.



All computers running SQL Server that are accessible on your network are listed. Some of them might not host MDCStore databases.



**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.

- Type your login name and password for the SQL Server installation to which you are attempting to connect, and click **Connect**.
- From the Database Name drop-down list, select the MDCStore database on the SQL Server installation.
- In the **New Data Source** field, type in a data source name.  
This name is an alias for the new connection, so you can type any data source name.
- Click **Create** to create the data source.
- Click **OK** in the confirmation dialog.  
The **Welcome to MetaXpress** login dialog appears, listing the new data source name.
- 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 must 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 newer 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 older versions, the default User Login Name and password was **mdc**. You might need to log in using **mdc** if you had an older version of the software on your instrument workstation or analysis computer. If needed, you can change the password by clicking **Change Password**.

2. In the **Change Application Role Password** dialog, type a new password for the **Everyone** role in both the **New Password** and **Confirm New Password** fields.

---

**CAUTION!** Do not use special characters in the password.

---

3. Click **OK** and then click **OK** in the confirmation dialog.
4. In the **Change Application Role Password** dialog, type a new password for the **Administrators** role in both the **New Password** and **Confirm New Password** fields.
5. Click **OK** and then click **OK** in the confirmation dialog.

## Setting Up the Hardware Configuration

### Selecting the Camera Driver

Follow these procedures everytime you upgrade MetaXpress Software on your instrument computer.

To upgrade to version 6.2 of the MetaXpress Software from an older version:

1. For ImageXpress Micro Systems , re-select the camera driver as described in [Configuring the Hardware on page 74](#).
2. Using a text editor, open the devices.ini file (found in C:\MX6\Hardware\profile name\ ) and make sure that the file has been updated with the folder location C:\MX6\Hardware\.

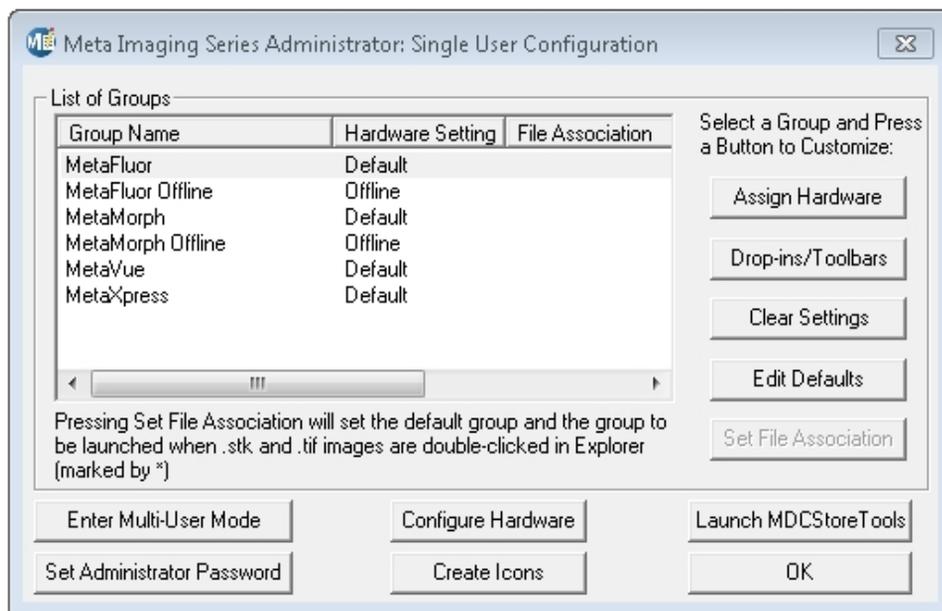
### Configuring Objectives

If you are upgrading from MetaXpress Software version 3.0 or older to version 6.2, then configure the objectives as described in [Configuring the Hardware on page 74](#).

You do not need to configure the objectives if you previously configured the objectives for version 3.1 or newer.

## Configuring the Hardware

1. Click **Start > All Programs > Meta Imaging Series**, and then right-click **Meta Imaging Series Administrator** and select **Run as administrator**.



2. In the **Meta Imaging Series Administrator**, from the **List of Groups**, select the **Group Name** for version 6.2 of the MetaXpress Software.
3. Click **Configure Hardware**.
4. In the **Configure Hardware** dialog, in the **Hardware Settings** section, select the appropriate hardware configuration (for example, **IXM**), and then click **Configure Acquisition**.
5. In the **Configure Acquisition** dialog, make sure that the correct camera driver is in the **Installed Drivers** section.
  - For ImageXpress Micro systems, make sure that **Photometrics** is listed in the **Installed Drivers** section.
  - For ImageXpress Micro XL systems, make sure that **PCO.SDK** or **AndorSdk3** is listed in the **Installed Drivers** section, depending on your system configuration.
  - For ImageXpress Micro XLS and Confocal systems, make sure that **AndorSdk3** is listed in the **Installed Drivers** section.
6. Click **OK**.

- In the **Configure Hardware** dialog, in the **Hardware Settings** section, select the appropriate hardware configuration (for example, **IXM**), and then click **Configure Devices**.



**Note:** If multiple hardware configurations exist (for example, multiple objective configurations or filter cube configurations), then repeat these steps for each configuration.

- In the **User Settings** for the hardware configuration dialog, in the **Claimed Devices** section, select the objective (for example, **ImageXpress Micro Objective**), and then click **Settings**.
- In the **Objective Settings** dialog, use to 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, be sure to type 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 largest number.

The following table details the Nikon objectives that are compatible with the ImageXpress Micro System. It also provides microplate compatibility information for the objectives used in the system.

**Table 8-1: Nikon Objectives Compatible with the ImageXpress Micro System and Settings**

| Objective Magnification and Type | Molecular Devices Part Number | Phase Contrast | Numerical Aperture (NA) | Working Distance | Plate Compatibility  |
|----------------------------------|-------------------------------|----------------|-------------------------|------------------|--|
| 1x Plan Achromat                 | 6500-0119                     | No             | 0.04                    | 3.2 mm           | Thin bottom (0.17 mm) <sup>1</sup> ,<br>Thin bottom (0.17 mm) No Skirt,<br>Thick bottom (0.25 mm to 1 mm) <sup>1</sup> |

**Table 8-1: Nikon Objectives Compatible with the ImageXpress Micro System and Settings (continued)**

| Objective Magnification and Type | Molecular Devices Part Number | Phase Contrast | Numerical Aperture (NA) | Working Distance | Plate Compatibility   |
|----------------------------------|-------------------------------|----------------|-------------------------|------------------|---|
| 2x Plan Apo Lambda               | 1-6300-0451                   | No             | 0.10                    | 8.5 mm           | Thin bottom (0.17 mm),<br>Thin bottom (0.17 mm) No Skirt,<br>Thick bottom (0.25 mm to 1 mm) |
| 4x S Fluor                       | 1-6300-0189                   | No             | 0.20                    | 15.5 mm          | Thin bottom (0.17 mm),<br>Thin bottom (0.17 mm) No Skirt,<br>Thick bottom (0.25 mm to 1 mm) |
| 4x Plan Apo Lambda               | 1-6300-0121                   | No             | 0.20                    | 20 mm            | Thin bottom (0.17 mm),<br>Thin bottom (0.17 mm) No Skirt,<br>Thick bottom (0.25 mm to 1 mm) |
| 4x Plan Fluor DL                 | 1-6300-0292                   | Yes, PhL       | 0.13                    | 16.2 mm          | Thin bottom (0.17 mm),<br>Thin bottom (0.17 mm) No Skirt,<br>Thick bottom (0.25 mm to 1 mm) |

**Table 8-1: Nikon Objectives Compatible with the ImageXpress Micro System and Settings (continued)**

| Objective Magnification and Type | Molecular Devices Part Number | Phase Contrast | Numerical Aperture (NA) | Working Distance | Plate Compatibility  |
|----------------------------------|-------------------------------|----------------|-------------------------|------------------|--|
| 10x Plan Fluor                   | 1-6300-0190                   | No             | 0.30                    | 16.0 mm          | Thin bottom (0.17 mm),<br>Thin bottom (0.17 mm) No Skirt,<br>Thick bottom (0.25 mm to 1 mm)              |
| 10x S Fluor                      | 1-6300-0122                   | No             | 0.50                    | 1.2 mm           | Thin bottom (0.17 mm),<br>Thin bottom (0.17 mm) No Skirt,<br>Thick bottom (0.25 mm to 1 mm) <sup>2</sup> |
| 10x Plan Apo Lambda              | 6500-0120                     | No             | 0.45                    | 4.0 mm           | Thin bottom (0.17 mm),<br>Thin bottom (0.17 mm) No Skirt,<br>Thick bottom (0.25 mm to 1 mm)              |
| 10x Plan Fluor DLL               | 1-6300-0294                   | Yes, Ph1       | 0.30                    | 16.0 mm          | Thin bottom (0.17 mm),<br>Thin bottom (0.17 mm) No Skirt,<br>Thick bottom (0.25 mm to 1 mm)              |

**Table 8-1: Nikon Objectives Compatible with the ImageXpress Micro System and Settings (continued)**

| Objective Magnification and Type          | Molecular Devices Part Number | Phase Contrast | Numerical Aperture (NA) | Working Distance | Plate Compatibility   |
|---|-------------------------------|----------------|-------------------------|------------------|---|
| 10x Plan Fluor DL                         | 1-6300-0293                   | Yes, Ph1       | 0.30                    | 15.2 mm          | Thin bottom (0.17 mm),<br>Thin bottom (0.17 mm) No Skirt,<br>Thick bottom (0.25 mm to 1 mm)                             |
| 20x Super Plan Fluor ELWD cc 0 mm to 2 mm | 6500-0108                     | No             | 0.45                    | 8.1 mm to 7.0 mm | Thin bottom (0.17 mm) <sup>3</sup> ,<br>Thin bottom (0.17 mm) No Skirt <sup>3</sup> ,<br>Thick bottom (0.25 mm to 1 mm) |
| 20x S Fluor                               | 1-6300-0411                   | No             | 0.75                    | 1.0 mm           | Thin bottom (0.17 mm) <sup>1</sup><br>Thin bottom (0.17 mm) No Skirt  |
| 20x Plan Apo Lambda                       | 1-6300-0196                   | No             | 0.75                    | 1.0 mm           | Thin bottom (0.17 mm) <sup>1</sup><br>Thin bottom (0.17 mm) No Skirt  |
| 20x Plan Fluor DLL                        | 1-6300-0295                   | Yes, Ph1       | 0.50                    | 2.1 mm           | Thin bottom (0.17 mm),<br>Thin bottom (0.17 mm) No Skirt,<br>Thick bottom (0.25 mm to 1 mm) <sup>2</sup>                |

**Table 8-1: Nikon Objectives Compatible with the ImageXpress Micro System and Settings (continued)**

| Objective Magnification and Type             | Molecular Devices Part Number | Phase Contrast | Numerical Aperture (NA) | Working Distance   | Plate Compatibility   |
|--|-------------------------------|----------------|-------------------------|--------------------|---|
| 20x Super Plan Fluor ELWD DM cc 0 mm to 2 mm | 6500-0111                     | Yes, Ph1       | 0.45                    | 8.1 mm to 7.0 mm   | Thin bottom (0.17 mm) <sup>3</sup> ,<br>Thin bottom (0.17 mm) No Skirt,<br>Thick bottom (0.25 mm to 1 mm) |
| 40x Super Plan Fluor ELWD cc 0 mm to 2 mm    | 6500-0109                     | No             | 0.60                    | 3.7 mm to 2.7 mm   | Thin bottom (0.17 mm) <sup>3</sup> ,<br>Thin bottom (0.17 mm) No Skirt,<br>Thick bottom (0.25 mm to 1 mm) |
| 40x Plan Apo Lambda cc 0.11 mm to 0.23 mm    | 1-6300-0412                   | No             | 0.95                    | 0.25 mm to 0.16 mm | Thin bottom (0.17 mm) <sup>1</sup> ,<br>Thin bottom (0.17 mm) No Skirt                                    |
| 40x S Fluor cc 0.11 mm to 0.23 mm            | 1-6300-0197                   | No             | 0.90                    | 0.3 mm             | Thin bottom (0.17 mm) <sup>1</sup> ,<br>Thin bottom (0.17 mm) No Skirt                                    |
| 40x Plan Fluor Oil                           | 1-6300-0416                   | No             | 1.30                    | 0.2 mm             | Thin bottom (0.17 mm) <sup>1</sup> ,<br>Thin bottom (0.17 mm) No Skirt                                    |
| 40x Plan Fluor DLL                           | 1-6300-0297                   | Yes, Ph2       | 0.75                    | 0.66 mm            | Thin bottom (0.17 mm) <sup>1</sup> ,<br>Thin bottom (0.17 mm) No Skirt                                    |

**Table 8-1: Nikon Objectives Compatible with the ImageXpress Micro System and Settings (continued)**

| Objective Magnification and Type                 | Molecular Devices Part Number | Phase Contrast | Numerical Aperture (NA) | Working Distance      | Plate Compatibility  |
|--|-------------------------------|----------------|-------------------------|-----------------------|--|
| 40x Super Plan Fluor ELWD<br>ADM cc 0 mm to 2 mm | 6500-0112                     | Yes, Ph2       | 0.60                    | 3.7 mm to<br>2.7 mm   | Thin bottom<br>(0.17 mm) <sup>3</sup> ,<br>Thin bottom<br>(0.17 mm) No<br>Skirt <sup>3</sup><br>Thick bottom<br>(0.25 mm to<br>1 mm) |
| 60x Super Plan Fluor ELWD<br>cc 0.1 mm to 1.3 mm | 6500-0110                     | No             | 0.70                    | 1.8 mm to<br>2.62 mm  | Thin bottom<br>(0.17 mm) <sup>3</sup> ,<br>Thin bottom<br>(0.17 mm) No<br>Skirt <sup>3</sup><br>Thick bottom<br>(0.25 mm to<br>1 mm) |
| 60x Plan Apo Lambda                              | TBD                           | No             | 0.95                    | 0.11 mm to<br>0.21 mm | Thin bottom<br>(0.17 mm) <sup>1</sup> ,<br>Thin bottom<br>(0.17 mm) No Skirt   |
| 60x Plan Fluor                                   | 1-6300-0414                   | No             | 0.85                    | 0.3 mm                | Thin bottom<br>(0.17 mm) <sup>1</sup> ,<br>Thin bottom<br>(0.17 mm) No Skirt   |
| 60x Plan Apo Oil                                 | 1.6300-0417                   | No             | 1.40                    | 0.13 mm               | Thin bottom<br>(0.17 mm) <sup>1</sup> ,<br>Thin bottom<br>(0.17 mm) No Skirt   |

**Table 8-1: Nikon Objectives Compatible with the ImageXpress Micro System and Settings (continued)**

| Objective Magnification and Type            | Molecular Devices Part Number | Phase Contrast | Numerical Aperture (NA) | Working Distance  | Plate Compatibility   |
|---|-------------------------------|----------------|-------------------------|-------------------|---|
| 60x Plan Fluor ELWD ADL cc 0.1 mm to 1.3 mm | 6500-0113                     | Yes, Ph2       | 0.70                    | 1.8 mm to 2.62 mm | Thin bottom (0.17 mm) <sup>3</sup> ,<br>Thin bottom (0.17 mm) No Skirt <sup>3</sup> ,<br>Thick bottom (0.25 mm to 1 mm) |
| 100x Plan Fluor Oil                         | 1-6300-0418                   | No             | 1.30                    | 0.2 mm            | Thin bottom (0.17 mm) <sup>1</sup> ,<br>Thin bottom (0.17 mm) No Skirt  |
| 100x CFI L Plan EPI cc 0 mm to 0.7 mm       | 1-6300-0419                   | No             | 0.85                    | 1.2 mm to 0.85 mm | Thin bottom (0.17 mm),<br>Thin bottom (0.17 mm) No Skirt,<br>Thick bottom (0.25 mm to 1 mm)                             |

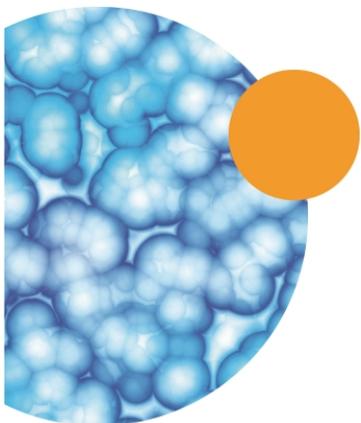
<sup>1</sup>Potential interference with microplate skirt when imaging edge wells.

<sup>2</sup>Image degradation above microplate thickness 0.3 mm.

<sup>3</sup>20x and 40x ELWD image through cover slips, but other objectives give better resolution and shorter exposures.



**Note:** When used with thin-bottom microplates, the short working distance of 20X S Fluor, 20X Plan Apo, 40X S Fluor, 40X Plan Apo, 40X Plan Fluor Oil, 60X Plan Fluor, 60X Plan Apo, 100X Plan Fluor, and 100X Plan Apo objectives can cause interference with a microplate skirt when imaging edge wells. Molecular Devices recommends to either omit the edge wells or to use a microplate with a low skirt.



# Chapter A: Installing Microsoft SQL Server 2014 Express



This appendix explains how to install Microsoft SQL Server 2014 Express. SQL Express is useful for demonstration or evaluation purposes. However, the SQL Express database size is limited to 10 GB, so it is impractical for production environments.

Microsoft SQL Server 2014 Express is included on the MetaXpress Software Suite flash drive and can be installed using the following procedures.



**Note:** Molecular Devices recommends that you do not install SQL Express if either SQL Server 2005, SQL Server 2012, or SQL Server 2014 is already installed.

Topics in the appendix:

- [Installing SQL Express on page 83](#)
- [Enabling Named Pipes and TCP/IP Connections on page 90](#)

## Installing SQL Express

Make sure that you have an active Internet connection on the computer where you are installing the database. During the installation, the program downloads and installs required prerequisites and program updates.



**Note:** When installing and setting up a database on Windows 7, make sure that you have logged in to 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.

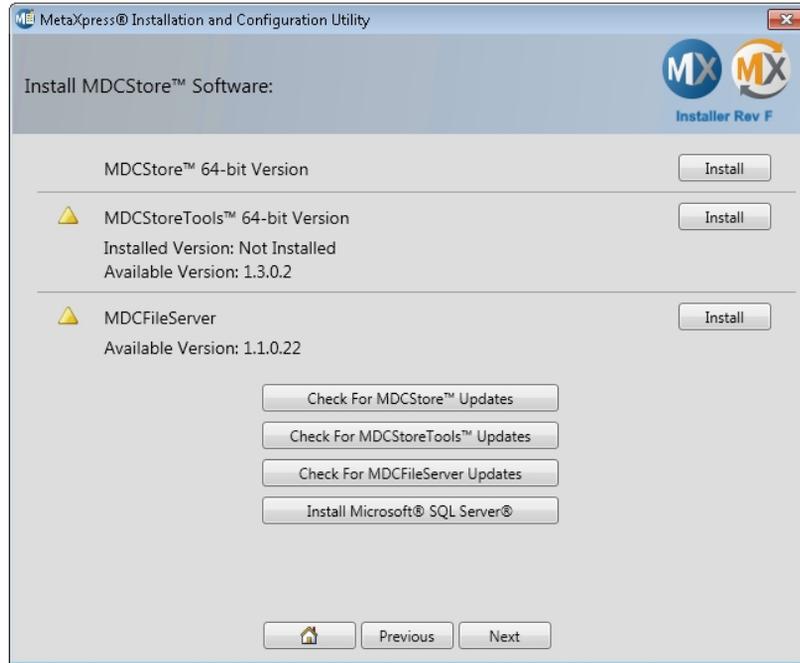
To install SQL Express:



**Note:** The software you are about to install might be newer than shown in the following example screenshots. Install the newest version.

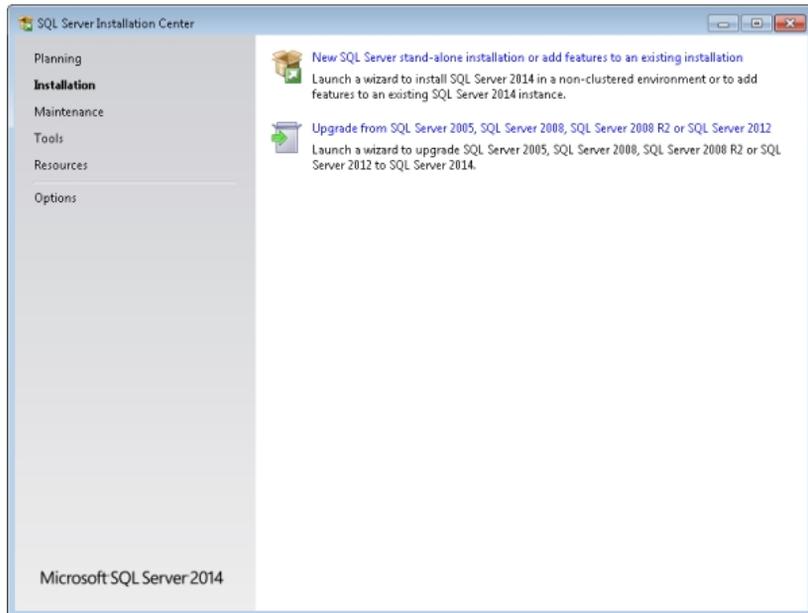
1. Log in to the computer where you want to install the MDCStore database schema.
2. Follow the instructions in [Starting the Installation and Configuration Utility on page 13](#) to start the MetaXpress Software Installation and Configuration Utility.

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 2014 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 2014** message appears informing you that you must wait until Microsoft SQL Server 2014 processes the current operation.

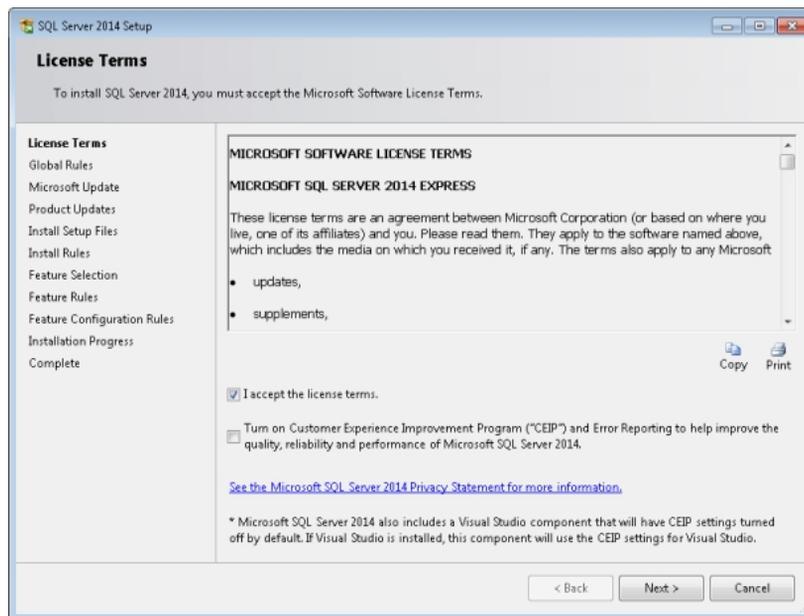


**Note:** The **SQL Server 2014** message might appear behind the **SQL Server Installation Center** dialog. To view the **SQL Server 2014** message, minimize the **SQL Server Installation Center** dialog or drag it to the side.

After Microsoft SQL Server 2014 processes the current operation, the **SQL Server 2014** message closes and the **License Terms** dialog appears.



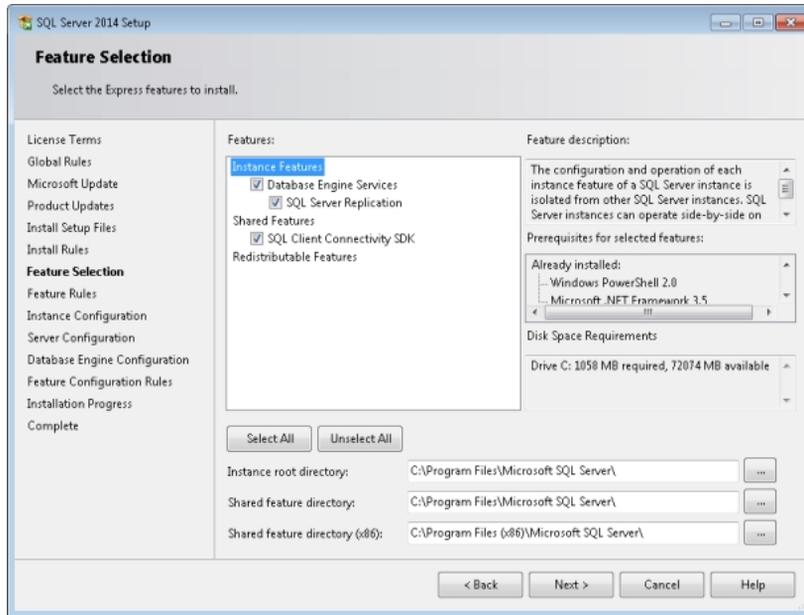
**Note:** If the computer is not connected to the Internet, then a message might open, indicating that product updates could not be downloaded. Click **Next** to open the **License Terms** dialog.



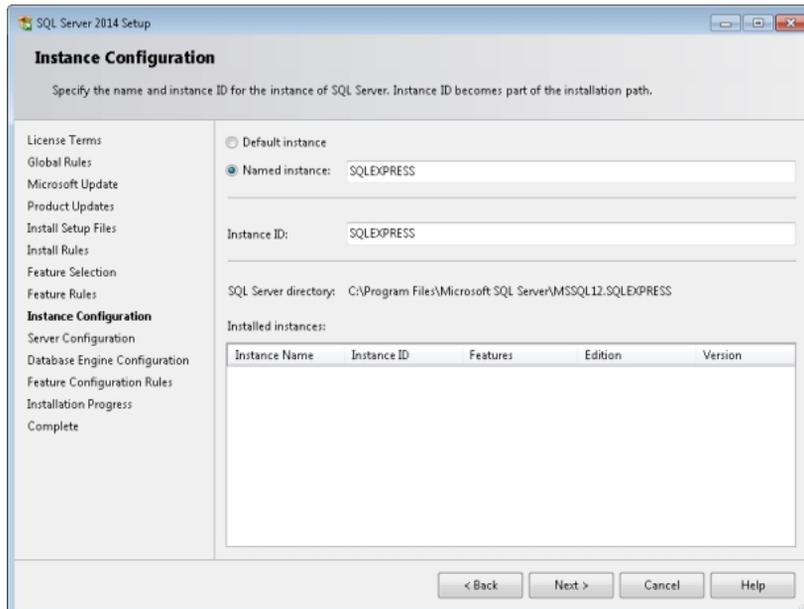
6. In the **License Terms** dialog, read the License agreement, click **I accept the license terms**, and then click **Next**.
7. Follow the on-screen instructions to complete the installation.

The following steps in this procedure give information about the selections needed for some of the installation dialogs to help you complete a successful installation.

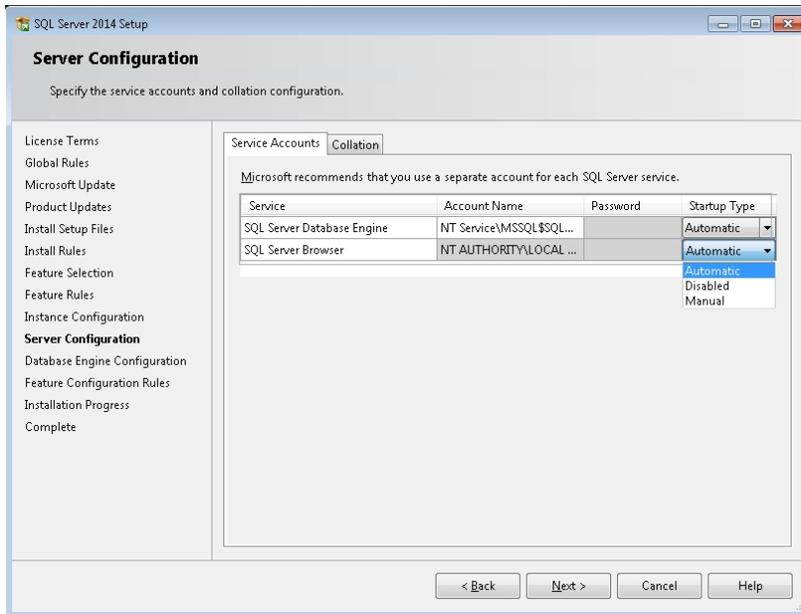
8. In the **Feature Selection** dialog, leave all the features selected and click **Next**.



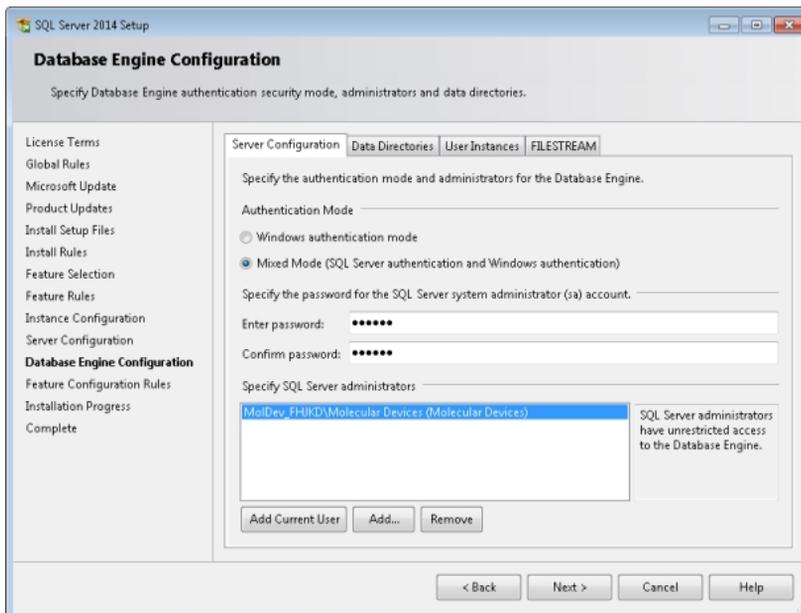
9. In the **Instance Configuration** dialog, take note of the **Named instance** (SQLEXPRESS), the **Instance ID** (SQLEXPRESS), and the path of the **SQL Server directory** (C:\Program Files\Microsoft SQL Server\MSSQL12.SQLEXPRESS). Then, click **Next**.



- In the **Server Configuration** dialog, in the **Startup Type** list for the **SQL Server Browser**, select **Automatic**, and then click **Next**.



- In the **Database Engine Configuration** dialog, for the **Authentication Mode**, select **Mixed Mode**.



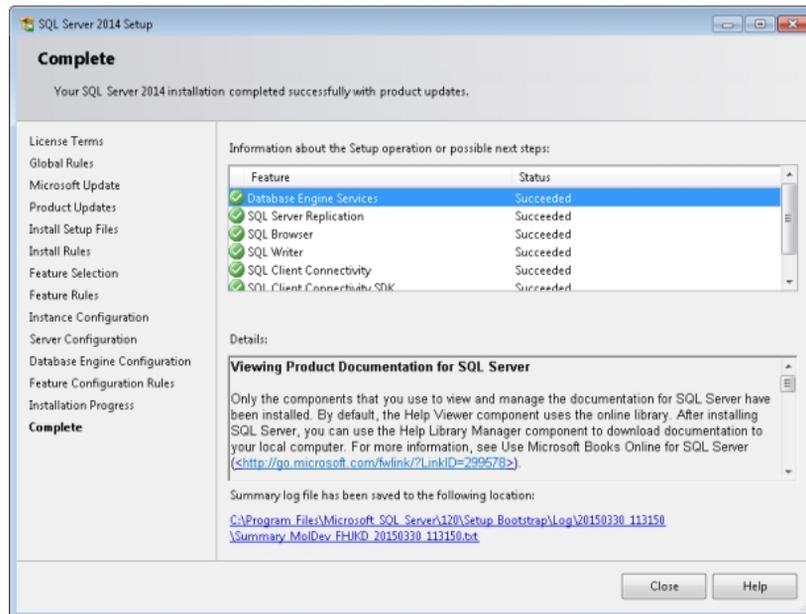
12. In the **Enter password** field, type the password for the SQL Server system administrator (sa) account.
13. In the **Confirm password** field, type the password for the SQL Server system administrator (sa) account again.



**Note:** The password must meet the Windows logon requirements for your organization. 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**.

After the installation completes, 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 **Succeeded**, read the feedback in the Summary log and resolve the issues accordingly.

16. Click **Close**.
17. Exit the **SQL Server Installation Center** dialog.

18. 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 90](#).

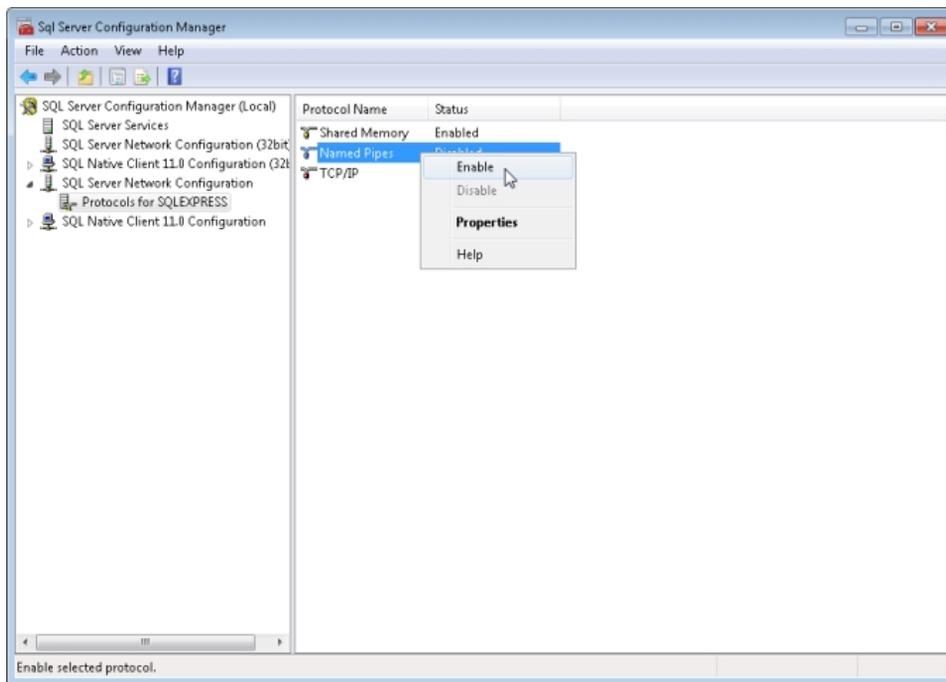
## Enabling Named Pipes and TCP/IP Connections

1. Click **Start > All Programs > Microsoft SQL Server 2014 > Configuration Tools > SQL Server 2014 Configuration Manager**.



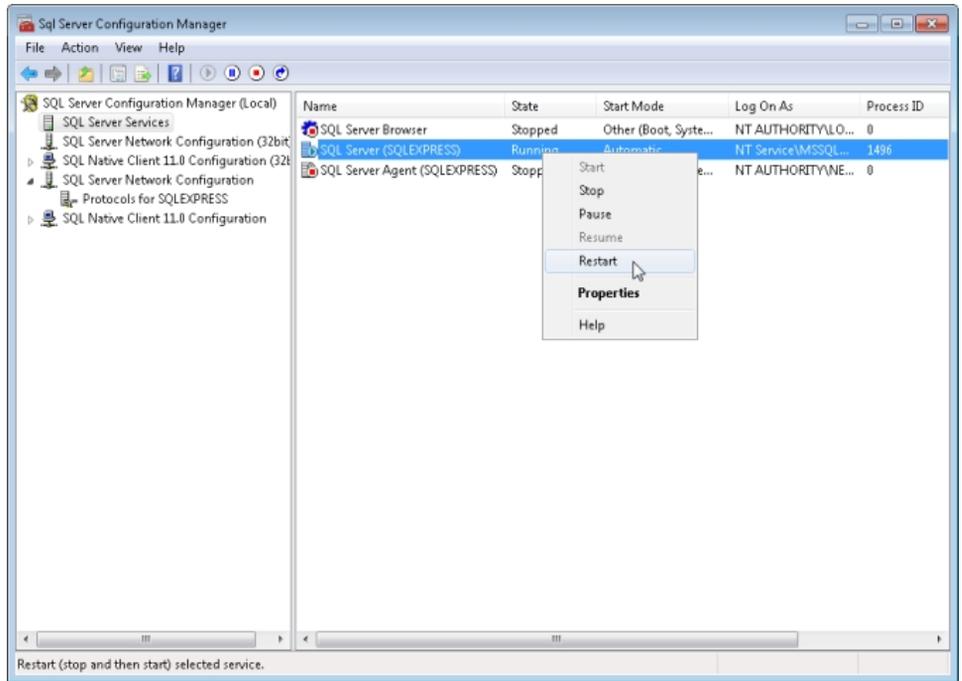
**Note:** You will also see a listing for Microsoft SQL Server 2008. These are support files that are needed for SQL Server Express 2014.

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**.

- In the left pane of the **Sql Server Configuration Manager**, click **SQL Server Services**.



- In the right pane of the **Sql Server Configuration Manager**, right-click **SQL Server (SQLEXPRESS)**, and then click **Restart**.
- After the service restarts, close the **SQL Server Configuration Manager**.



**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.

- When the green check is displayed by the **Install SQL Server Express 2014** option, click **Previous** to return to the **Install MDCStore Software** dialog. Continue with [Installing the MDCStore Database Components on page 27](#).

## MetaXpress High Content Image Acquisition and Analysis Software Suite Installation and Update Guide

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