MDCStore™ High Content Data Management Solution Database Schema

Version 2.3

Installation and Update Guide

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About MDCStore Data Manager Database Schema Installation

1

Introduction

This guide explains how to install the MDCStore™ High Content Data Management Solution version 2.3 database schema for use with Microsoft SQL Server and Oracle databases. It also explains how to update an existing MDCStore database schema from version 2.0, 2.1, or 2.2 to version 2.3.

CAUTION! The database-related information in this document is provided for guidance only. Molecular Devices is not responsible for damage to existing user data due to network problems, power failure, or unexpected termination of the database. Molecular Devices is not responsible for poor database performance due to an unoptimized database environment. Molecular Devices strongly recommends that you hire a database administrator (DBA) to set up, maintain, and optimize the database for your installation. A DBA will monitor the usage of your database configuration and can optimize the database for best performance. For more information about database installation, security, operation, and optimization, contact the appropriate software vendor.

Product Compatibility

The MDCStore Data Manager version 2.3 database schema is compatible with:

- Versions 2.0 or later of the MetaXpress® High Content Image Acquisition and Analysis Software
- Version 1.0 or later of the MetaXpress® PowerCore™ High Content Distributed Image Analysis Software
- Version 2.0 or later of the AcuityXpress[™] High Content Informatics Software

Version 5.1 of the MetaXpress Software requires version 2.3 of the MDCStore Data Manager database schema.

Version 2.3 of the MDCStore Data Manager database schema is not compatible with versions 1.6 and 1.7 of the MetaXpress Software or version 1.0 of the AcuityXpress Software.

How to Obtain More Information

Additional information is available on the Web:

- For general information, go to http://www.moleculardevices.com.
- To search the knowledge base, go to http://www.moleculardevices.com/support.html.

Required Documents

Before you install the MDCStore Data Manager database schema, you should review the information in the following documents:

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

These documents are available in the knowledge base on the Molecular Devices support site: http://www.moleculardevices.com/support.html.

How to Obtain Support

For technical support, see the Molecular Devices support site on the Web at http://www.moleculardevices.com/support.html.

The knowledge base gives you access to support documentation and software downloads as well as technical and troubleshooting information. If you require personal technical support, you can submit a service request form.

To speak to a Technical Support representative by phone, call 1-800-635-5577 (toll free in the US) or 1-408-747-1700.

Introduction

This chapter explains how to install the MDCStore™ High Content Data Management Solution version 2.3 database schema for Microsoft SQL Server 2005 or Microsoft SQL Server 2012 databases. Throughout this chapter, the Microsoft SQL Server database software is referred to as SQL Server.

These instructions are for a fresh installation of the MDCStore Data Manager database schema only. To update an existing installation of the MDCStore Data Manager database schema, see Updating an Existing MDCStore Data Manager Database Schema on page 43.



Note: If you have an Oracle database, do not use these instructions. See Installing the MDCStore Data Manager Database Schema for Oracle on page 15. To install Microsoft SQL Server 2012 Express, see Installing SQL Server 2012 Express on page 49.

Topics in this section:

- Prerequisites on page 8
- Choosing the Appropriate Installer on page 9
- Creating User Accounts for the MDCStore Database on page 14

Prerequisites

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

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



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

Required Documents

Before you install the MDCStore Data Manager database schema, you should review the information in the following documents:

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

These documents are available in the knowledge base on the Molecular Devices support site: http://www.moleculardevices.com/support.html.

Choosing the Appropriate Installer

The MDCStore Data Manager database schema installer is available on the MetaXpress® Software Installation flash drive and also as a standalone installer. If you are installing the software on a 64-bit operating system, you can install either the 32-bit or 64-bit version of each component. Molecular Devices recommends that you use the 64-bit version if you have a 64-bit operating system. If you are installing the software on a 32-bit operating system, you can install only the 32-bit version of each component.

- If you are installing from the MetaXpress Software Installation flash drive, you can choose to install the appropriate 32-bit or 64-bit version. For complete instructions, see the MetaXpress High Content Image Acquisition and Analysis Software Suite Installation and Update Guide.
- If you are installing from a standalone installer, make sure that you download the appropriate version of the MDCStore installation package for your operating system (either 32-bit or 64-bit). Instructions for using the standalone installer are included in this chapter. See Using the Standalone Installer on page 9.

Using the Standalone Installer

To install the MDCStore Data Manager database schema from the standalone installer

- **1.** Log in to the computer where you want to install the MDCStore Data Manager database schema.
 - If you are installing from the MetaXpress Software Installation flash drive, see the MetaXpress High Content Image Acquisition and Analysis Software Suite Installation and Update Guide.
- 2. Double-click the downloaded MDCStore archive file.
- **3.** In the WinZip Self Extractor dialog, click **Setup**. The system checks for prerequisites.
- **4.** If required components are missing, a warning appears, and you must click **Install** to install the components and continue. Follow the installation instructions for any required components.

When the prerequisite check is complete and all required components are installed, the **MDCStore Database Installer Setup Wizard** dialog appears.



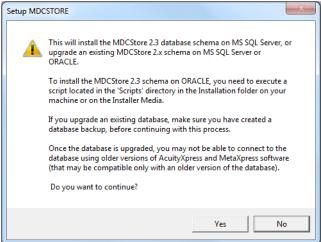
- **5.** Click **Next** and follow the on-screen instructions to set up the MDCStore Data Manager database schema installer.
- **6.** In the **Confirm Installation** dialog, click **Next** to start the database installation.



During the installation, the **Setup MDCSTORE** dialog appears.

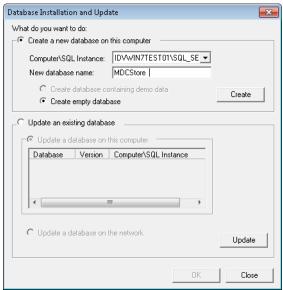
7. Click Install\Upgrade MDCStore.





8. Click Yes.

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



- **9.** Select **Create a new database on this computer**, and then provide the information required to create the database:
 - In the Computer\SQL Instance field, select the appropriate instance, such as COMPUTERNAME\SQLSERVER.

- In the New database name field, type a name for the new database.
- Click Create, and then specify a directory in which to install the database.
- Click **Browse** to select the directory.



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

10. Click **OK** to continue.

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

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

The MDCStore Data Manager database schema is installed. To set up user accounts for the MDCStore database, see Creating User Accounts for the MDCStore Database on page 14.

Creating User Accounts for the MDCStore Database

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

To create user accounts for the MDCStore database, use the MDCStoreTools Utility. See the MDCStoreTools Data Management Utility User Guide included on the MetaXpress Software Installation flash drive.



Note: The MDCStore database schema comes pre-installed on the instrument workstation. For the MetaXpress Software version 4.0 and above, 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.

For increased security, you can change the password for the system administrator to something other than the default password shipped with the system.

Introduction

This chapter explains how to install the MDCStore™ High Content Data Management Solution version 2.3 database schema for Oracle databases. These instructions are for a fresh installation of the MDCStore Data Manager database schema only. To update an existing installation of the MDCStore Data Manager database schema, see Updating an Existing MDCStore Data Manager Database Schema on page 43.



Note: If you are using SQL Server do not use these instructions. See Installing the MDCStore Data Manager Database Schema for SQL Server on page 7. To use SQL Server Express, see Installing SQL Server 2012 Express on page 49.

Topics in this section:

- Prerequisites on page 16
- About Installing the MDCStore Data Manager Database Schema on Oracle on page 17
- Choosing the Appropriate Installer on page 17
- Using the Standalone Installer on page 18
- Creating Tablespaces and Configuring Users on page 20
- Creating User Accounts for the MDCStore Database on page 22

Prerequisites

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

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 $(_)$.

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

Required Documents

Before you install the MDCStore Data Manager database schema, you should review the information in the following documents:

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

These documents are available in the knowledge base on the Molecular Devices support site: http://www.moleculardevices.com/support.html.

About Installing the MDCStore Data Manager Database Schema on Oracle

There can be significant differences from one version of Oracle to another, and these can affect the way the MDCStore Data Manager database schema is installed and used. For example, Oracle 10g introduced big tablespaces. These have not been tested and they are not described in this document.

Keep these points in mind when installing the schema on Oracle:

- The MDCStore Data Manager database schema can be installed on different partitions.
- There are no restrictions on creating global users in Oracle through the MDCStore Data Manager version 2.3.
 Administrators must choose a user creation policy that meets their requirements.

Consult a database administrator for more information.

Choosing the Appropriate Installer

The MDCStore Data Manager database schema installer is available on the MetaXpress® Software Installation flash drive and also as a standalone installer. If you are installing the software on a 64-bit operating system, you can install either the 32-bit or 64-bit version of each component. Molecular Devices recommends that you use the 64-bit version if you have a 64-bit operating system. If you are installing the software on a 32-bit operating system, you can install only the 32-bit version of each component.

- If you are installing from the MetaXpress Software Installation flash drive, you can choose to install the appropriate 32-bit or 64-bit version. For complete instructions, see the MetaXpress High Content Image Acquisition and Analysis Software Suite Installation and Update Guide.
- If you are installing from a standalone installer, make sure that you download the appropriate version of the MDCStore installation package for your operating system (either 32-bit or 64-bit). Instructions for using the standalone installer are included in this chapter. See Using the Standalone Installer on page 18.

Using the Standalone Installer

To install the MDCStore Data Manager database schema from the standalone installer

- **1.** Log in to the computer where you want to install the MDCStore Data Manager database schema.
 - If you are installing from the MetaXpress Software Installation flash drive, see the MetaXpress High Content Image Acquisition and Analysis Software Suite Installation and Update Guide.
- 2. Double-click the downloaded MDCStore archive file.
- **3.** In the WinZip Self Extractor dialog, click **Setup**. The system checks for prerequisites.
- **4.** If required components are missing, a warning appears, and you must click **Install** to install the components and continue. Follow the installation instructions for any required components.

When the prerequisite check is complete and all required components are installed, the **MDCStore Database Installer Setup Wizard** dialog appears.



- **5.** Click **Next** and follow the on-screen instructions to set up the MDCStore Data Manager database schema installer.
- **6.** In the **Confirm Installation** dialog, click **Next** to start the database installation.



During the installation, the **Setup MDCSTORE** dialog appears.

7. Click **Database Scripts** to find the location of the installation scripts, and confirm that the scripts are present.

You must run the installer to this point to access the Oracle installation scripts. However, do not continue using the installer to complete the installation.

- **8.** In the **Setup MDCStore** screen, click **Exit**.
- 9. Click Close.

To complete the installation, follow the instructions in Creating Tablespaces and Configuring Users on page 20.

Creating Tablespaces and Configuring Users

To perform these tasks, you must connect to the Oracle server as user **SYS**, connected as **SYSDBA**. This ensures that you can:

- Create tablespaces
- Create users
- Create groups
- Grant permissions on database objects
- Create and drop in database objects

Molecular Devices recommends that you have the MDCStore database schema created by a database administrator knowledgeable in Oracle.

CAUTION! The tablespace of the MDCStore database must be allowed to expand past its initial size, since the database might grow significantly. Molecular Devices recommends starting with 32 GB of space and installing the database on a dedicated data partition, not on the primary drive. Using external hard drives is not recommended since they can be easily turned off, which prevents access to the data.

To create tablespaces and configure users

- Open the SQL*Plus Worksheet, which is installed as part of the Oracle client program.
- Connect to the Oracle server as user SYS, connected as SYSDBA. This requires that you change from the default or Normal connection.
- 3. In the SQL*Plus Worksheet, run the following command to create a tablespace for the MDCStore Data Manager database schema.



Note: In the command, brackets (<>) indicate variables. You must replace this text and the brackets with the appropriate values. Do not type the brackets themselves. Quotation marks that appear around text, however, are part of the command.

CREATE TABLESPACE "<your table space name>"

NOLOGGING

DATAFILE '' SIZE <initial size of the database (for example, 32000M)>

EXTENT MANAGEMENT LOCAL

SEGMENT SPACE MANAGEMENT AUTO;

COMMIT;



Note: Using AutoExtend is not recommended. Calculate the space requirements of the database based on the size of experiments you plan to run, and then create additional data files to allow the database to grow. You can approximate the data storage space to be twice the amount of storage required for images.

For the **DATAFILE** '', use these formats:

- Windows:
 - C:\ORACLE\ORADATA\MDCStore1\MDCStore.ora
- Linux/UNIX: C/opt/oracle/oradata/ora1/MDCStore.dbf

CAUTION! The recommendations in this guide are for MDCStore Data Manager database schema installation only. They are not intended to provide guidelines for managing corporate databases. Some options might not be appropriate for certain environments, and your database administrator must determine whether 32 GB is a sufficient starting point. Eventually, the tablespace requirements of the database might increase.

4. To create a global user to be used as the schema provider, run this command:

CREATE USER <global user name> PROFILE "DEFAULT" IDENTIFIED GLOBALLY AS "

DEFAULT TABLESPACE "<your table space name>"

TEMPORARY TABLESPACE "<your temporary table space name>"

QUOTA UNLIMITED

ON "<your table space name here>"

ACCOUNT UNLOCK;

COMMIT;

GRANT "CONNECT" TO "<global user name>";

COMMIT;

5. To change your current connection to the schema where you want to install the MDCStore Data Manager database schema, run this command:

ALTER SESSION SET CURRENT_SCHEMA = <global user name>;

COMMIT;

6. To ensure the schema does not already contain data, run this command:

select * from all_objects where owner = '<global user name>'; If there is no response, the schema contains no data.

CAUTION! If there is a response, the schema contains data, and that data will be overwritten without warning when you run the installation script in the next steps. To preserve existing data, use a new tablespace and schema name when installing MDCStore Data Manager on Oracle.

- 7. In the SQL*Plus Worksheet, click File > Open and select the appropriate Installation.sql file. To locate the .sql file, click All Programs > MDCStore > MDCStore Database > Scripts > MDCStore Install Script (Oracle).
- **8.** Click **Execute** to create the database in the specified schema. The MDCStore Data Manager database schema is installed. To set up user accounts for the MDCStore database, see Creating User Accounts for the MDCStore Database on page 22.

Creating User Accounts for the MDCStore Database

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

To create user accounts for the MDCStore database, use the MDCStoreTools[™] Utility. See the MDCStoreTools Database Management Utility User Guide included on the MetaXpress Software Installation flash drive.

Configuring the Database Client Software

Introduction

To test the connection to the MDCStore $^{\text{TM}}$ database, you must install and configure the Oracle or SQL Server database client software on a client computer as described in this section.

Topics in this section:

- Prerequisites on page 23
- Information You Need on page 23
- Oracle Client Installation and Configuration on page 24
- SQL Client Configuration on page 37

Prerequisites

Before you begin, you must install and configure the MDCStore Data Manager database schema for SQL Server or Oracle as described in the following chapters:

- Installing the MDCStore Data Manager Database Schema for SQL Server on page 7
- Installing the MDCStore Data Manager Database Schema for Oracle on page 15



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

Information You Need

When you configure the database clients, you need to know:

- The port number and other settings used by your MDCStore database.
- Whether your operating system and database software are 32-bit or 64-bit. You must install the database client (32-bit or 64-bit) that matches your operating system.

Oracle Client Installation and Configuration

If you are using an Oracle database, you must install and configure Oracle client drivers and services on all MDCStore clients as described in this section.

Oracle installation and configuration tasks include:

- Installing and Configuring the Oracle Client on page 24
- Configuring the Oracle Net Service on page 31
- Configuring the Oracle ODBC Data Source on page 34

Installing and Configuring the Oracle Client

To install and configure the Oracle client

- **1.** Log in to the client computer.
- **2.** Download the appropriate Oracle database **client** drivers from http://www.oracle.com/technology/software/products/database/index.html.

CAUTION! You must install the appropriate version of the database client to access the database. For example, if you have a 32-bit operating system and you have installed the 32-bit version of the MetaXpress® Software, you must use the 32-bit version of the database client. You cannot use the 64-bit version of the database client with the 32-bit version of the MetaXpress software to connect to the database.

3. Unzip the downloaded package and double-click **setup.exe** to start the installation.



4. In the **Welcome** dialog, click **Next**.



- 5. In the Select Installation Type dialog, click Custom.
- **6.** If your system uses a language other than English (United States), click **Product Languages**, and then select **English** (**United States**). This ensures that the Oracle installers use English (United States) regional and language settings, which are required for the MDCStore Data Manager.
- 7. Click Next.



8. In the **Specify Home Details** dialog, select the installation location and then click **Next**.



9. Resolve any issues identified in the **Product-Specific Prerequisite Checks** dialog, and then click **Next**.



- 10. In the Available Product Components dialog, select Oracle Windows Interfaces, deselect Oracle Services for Microsoft Transaction Server,
- 11. Ensure that the following check boxes are selected:
 - Oracle Administration Assistant for Windows
 - Oracle ODBC Driver
 - Oracle Net
 - SQL Plus
 - Oracle Connection Manager
- 12. Click Next.



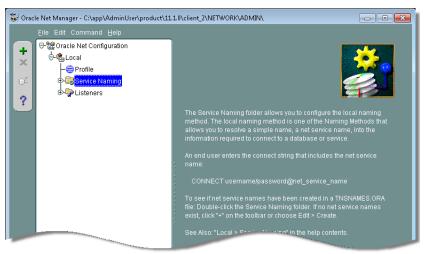
- **13.** In the **Summary** dialog, expand the **New Installations** section to verify that the installation summary includes the correct version of the ODBC driver, and then click **Install**.
- **14.** Follow the on-screen instructions to complete the installation. Do not configure any services during the installation if prompted to do so.

The Oracle client software is installed.

Configuring the Oracle Net Service

To configure the Oracle Net Service

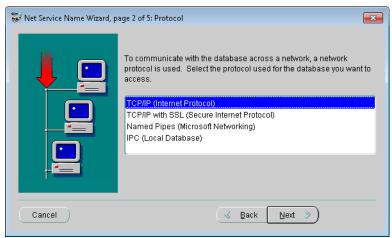
On the MDCStore server or client, click Start > All Programs > Oracle Client > Configuration and Migration Tools > Net Manager.



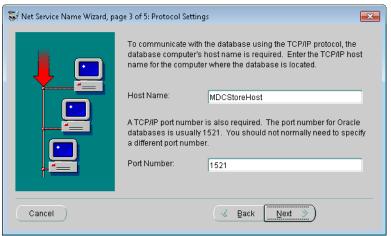
 In the Oracle Net Manager window, select Service Naming, and then click the green plus sign (→).
 The Net Service Name wizard appears.



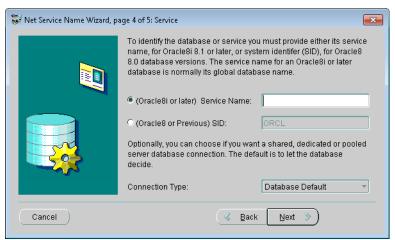
In the Welcome dialog, in the Net Service Name field, type a name for the service, and then click Next.



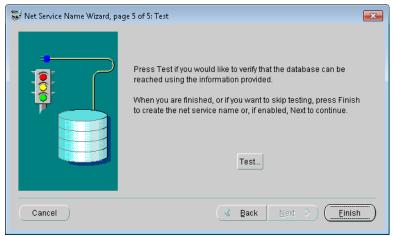
4. In the Protocol dialog, select a protocol that is supported by your system and by your Oracle database, and then click Next.



5. In the **Protocol Settings** dialog, type the host name of the server that hosts your Oracle database and the port number that the database server listens to, and then click **Next**. The default port for Oracle is 1521.



6. In the **Service** dialog, type the service name that is used by the Oracle database you are connecting to, or provide the system identifier, and then click **Next**.



7. Click **Test** to verify your settings.

If the configuration is complete, a confirmation message appears.

If a problem is detected, change your connection settings and try again.

Configuring the Oracle ODBC Data Source

32-bit applications can use only data sources configured with a 32-bit ODBC driver and 64-bit applications can use only data sources configured with a 64-bit ODBC driver.

Molecular Devices recommends that you configure new data sources using the New Data Source button on the dialog that appears when you start the MetaXpress Software. For instructions, see "Set Up the MetaXpress Software" in the MetaXpress Software Installation Guide included on the MetaXpress Software Installation flash drive.

If you do not have MetaXpress Software or AcuityXpress Software installed on the client computer, you can configure the ODBC data source using the Administrative Tools section of the Windows Control Panel as described in the following procedure.



Note: If your client computer is running Microsoft Windows 7 or Vista, and if the User Access Control (UAC) is enabled, you must log in using the main Administrator account, not the local Administrator account, to create a data source. To access UAC, go to **Control Panel** > **User Accounts**.

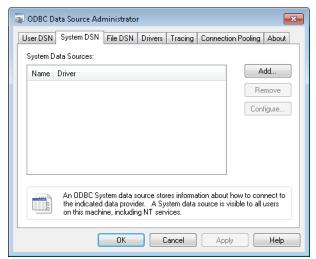
To configure the Oracle ODBC data source using Control Panel

You can use this procedure to configure a 32-bit data source on a 32-bit operating system, or a 64-bit data source on a 64-bit operating system.

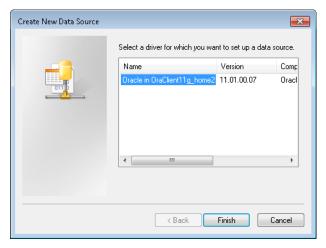


Note: Do not use this procedure if you have MetaXpress Software or AcuityXpress Software installed on the client computer. Molecular Devices recommends that you configure new data sources by clicking the New Data Source button on the dialog that appears when you start the MetaXpress Software. For instructions, see "Set Up the MetaXpress Software" in the *MetaXpress Software Installation Guide* included on the MetaXpress Software Installation flash drive.

- On the client computer, go to the Administrative Tools section of the Windows Control Panel.
- 2. in the Administrative Tools list, double-click Data Sources (ODBC), and then click the System DSN tab.

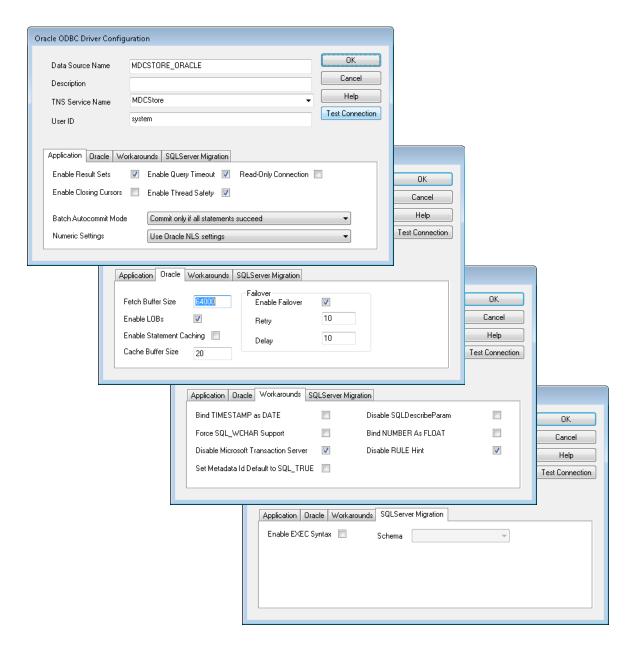


3. Click Add.



- **4.** In the **Create New Data Source** dialog, select the Oracle driver provided by Oracle Corporation.
- 5. Click Finish.

The **Oracle ODBC Driver Configuration** property sheet appears.



- **6.** In the **Data Source Name** field, type the name of your data source. This name must be the same for all MDCStore servers and clients.
- 7. In the **TNS Service Name** field, select a name from the list. The TSN Name must match the name of the service that is set up in the Oracle Net Manager.
- **8.** In the **User ID** field, type the ID of a user account that has access to the MDCStore database.
- 9. Click Test Connection.

If the connection test is successful, data source configuration is complete. If a problem is detected, change your connection settings and try again.

SQL Client Configuration

If you are using the SQL Server database, you can configure the SQL client on the MDCStore clients as described in this section.

Configuring the SQL Client

32-bit applications can use only data sources configured with a 32-bit ODBC driver and 64-bit applications can use only data sources configured with a 64-bit ODBC driver.

Molecular Devices recommends that you configure new data sources by clicking the New Data Source button on the dialog that appears when you start the MetaXpress Software. For instructions, see "Setting Up the MetaXpress Software" in the MetaXpress Software Installation Guide included on the MetaXpress Software Installation flash drive.

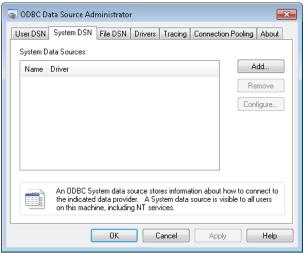
If you do not have MetaXpress Software or AcuityXpress Software installed on the client computer, you can configure the ODBC data source using the Administrative Tools section of the Windows Control Panel as described in the following procedure.

To configure the SQL client using Control Panel

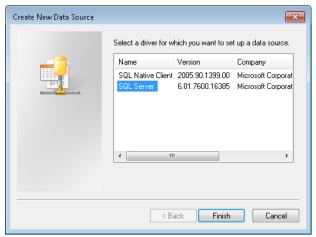


Note: Do not use this procedure if you have MetaXpress Software or AcuityXpress Software installed on the client computer. Molecular Devices recommends that you configure new data sources by clicking the New Data Source button on the dialog that appears when you start the MetaXpress Software. For instructions, see "Setting Up the MetaXpress Software" in the *MetaXpress Software Installation Guide* included on the MetaXpress Software Installation flash drive.

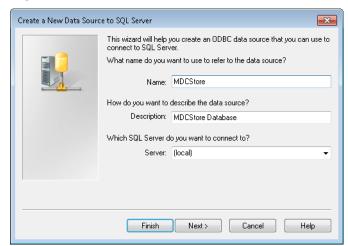
- **1.** Log in to the client computer.
- Go to the Administrative Tools section of the Windows Control Panel.
- 3. Double-click **Data Sources (ODBC)**, and then click the **System DSN** tab.



4. Click Add.



5. In the Create New Data Source dialog, select SQL Server or SQL Native Client, and then click Finish.



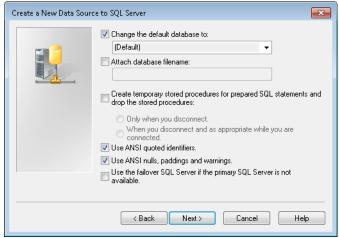
6. In the first dialog of the Create a New Data Source to SQL Server wizard, type the name and description of the SQL Server data source, select the server you want to connect to, and then click Next.



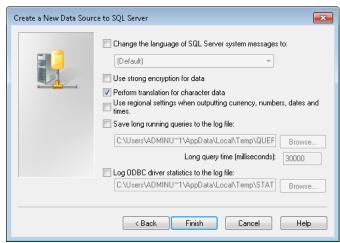
Note: To connect to a local instance of SQL Server, choose the server from the list. If you do not see the local server listed try using (local)\Instance [for example, (local)\SQLEXPRESS].



7. In the second dialog of the wizard, provide authentication information, and then click **Next**.



- 8. In the third dialog of the wizard, select the **Change the default database to** check box and choose the database you are using as the MDCStore database.
- Select the Use ANSI quoted identifiers and Use ANSI nulls, paddings and warnings check boxes, and then click Next.



- **10.** Select the **Perform translation for character data** check box.
- 11. Clear the Use regional settings when outputting currency, numbers, dates, and times check box, and then click Finish.
- **12.** In the final dialog of the wizard, test your data source connection by clicking **Test data source** and then following the on-screen instructions.

Introduction

This section explains how to update the MDCStore™ Data Manager database schema from version 2.0 or above to version 2.3.

Topics in this section:

- Prerequisites on page 43
- Choosing the Appropriate Installer on page 44
- Updating from Version 2.0 or Above to Version 2.3 Using the Standalone Installer on page 45

Prerequisites

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

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

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

Required Documents

Before you install the MDCStore Data Manager database schema, you should review the information in the following documents:

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

These documents are available in the knowledge base on the Molecular Devices support site: http://www.moleculardevices.com/support.html

Choosing the Appropriate Installer

The MDCStore Data Manager database schema installer is available on the MetaXpress® Software Installation flash drive and also as a standalone installer. If you are installing the software on a 64-bit operating system, you can install either the 32-bit or 64-bit version of each component. Molecular Devices recommends that you use the 64-bit version if you have a 64-bit operating system. If you are installing the software on a 32-bit operating system, you can install only the 32-bit version of each component.

- If you are installing from the MetaXpress Software Installation flash drive, you can choose to install the appropriate 32-bit or 64-bit version. For complete instructions, see the MetaXpress High Content Image Acquisition and Analysis Software Suite Installation and Update Guide.
- If you are installing from a standalone installer, make sure that you download the appropriate version of the MDCStore installation package for your operating system (either 32-bit or 64-bit). Instructions for using the standalone installer are included in this chapter. See Updating from Version 2.0 or Above to Version 2.3 Using the Standalone Installer on page 45.

Updating from Version 2.0 or Above to Version 2.3 Using the Standalone Installer

To update the MDCStore Data Manager database schema from the standalone installer

- **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.

If you are installing from the MetaXpress Software Installation flash drive, see the MetaXpress High Content Image Acquisition and Analysis Software Suite Installation and Update Guide.

- 2. Double-click the downloaded MDCStore archive file.
- **3.** In the WinZip Self Extractor dialog, click **Setup**. The system checks for prerequisites.
- **4.** If required components are missing, a warning appears, and you must click **Install** to install the components and continue. Follow the installation instructions for any required components.

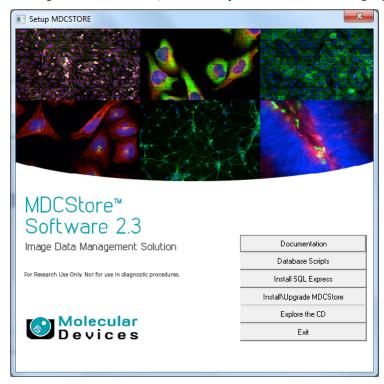
When the prerequisite check is complete and all required components are installed, the **MDCStore Database Installer Setup Wizard** dialog appears.



5. Click **Next** and follow the on-screen instructions to set up the MDCStore Data Manager database schema installer.

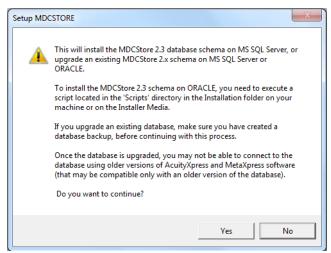
6. In the **Confirm Installation** dialog, click **Next** to start the database installation.

During the installation, the **Setup MDCSTORE** dialog appears.



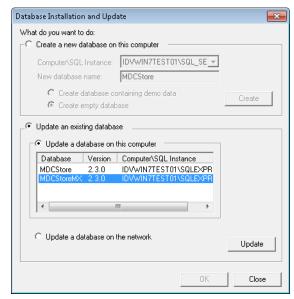
7. Click Install\Upgrade MDCStore.

The Setup MDCSTORE message appears.



8. Click Yes.

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



- 9. In the Update an existing database section, choose one of the following options:
 - To update the SQL Server database on the server you are logged into, select **Update database on this computer**, select the database you want to update, and then click **Update**.
 - To update an Oracle database, or to update the SQL Server database on a different server, click **Update a database on the network**, and then click **Update**.
- **10.** Read the warning information, and then click **OK** to acknowledge that you are ready to update the database.
- **11.** 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**.
- **12.** 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**.
- **13.** For Oracle databases, select the database schema 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 SQL Server 2012 Express



Introduction

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

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



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

Topics in this appendix:

- Accessing the SQL Express Installer on page 49
- Enabling Named Pipes and TCP/IP Connections on page 50

Accessing the SQL Express Installer

Microsoft SQL Server 2012 Express is included on the MetaXpress Software Installation flash drive. It can be installed by following procedure in the MetaXpress High Content Image Acquisition and Analysis Software Suite Installation and Update Guide, which is provided on the MetaXpress Software Installation flash drive and is available in the Molecular Devices knowledge base at http://www.moleculardevices.com/support.html.

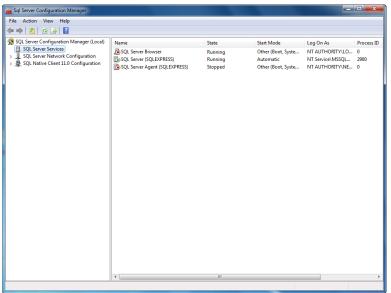
After installing SQL Express, you must enable named pipes and TCP/IP connections and ensure that the SQL Browser service is running so that remote users can connect to this instance of SQL Server Express. See Enabling Named Pipes and TCP/IP Connections on page 50.

Enabling Named Pipes and TCP/IP Connections

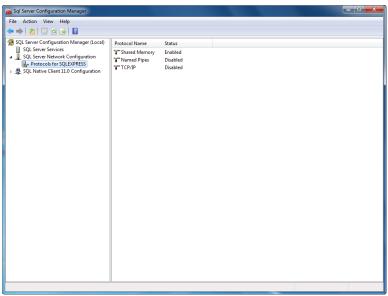
1. Click Start > All Programs > Microsoft SQL Server 2012 > Configuration Tools > SQL Server Configuration Manager.



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



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



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



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