

# MDCStore™

## High Content Data Management Solution Database Schema

Version 2.3

## Installation and Update Guide

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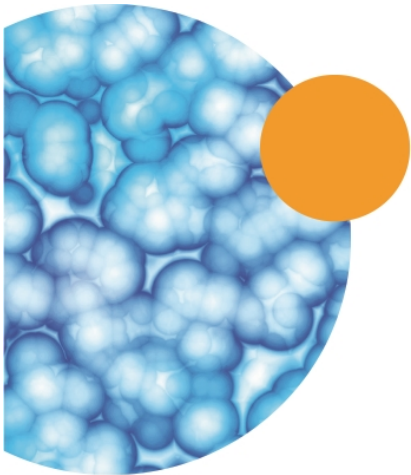
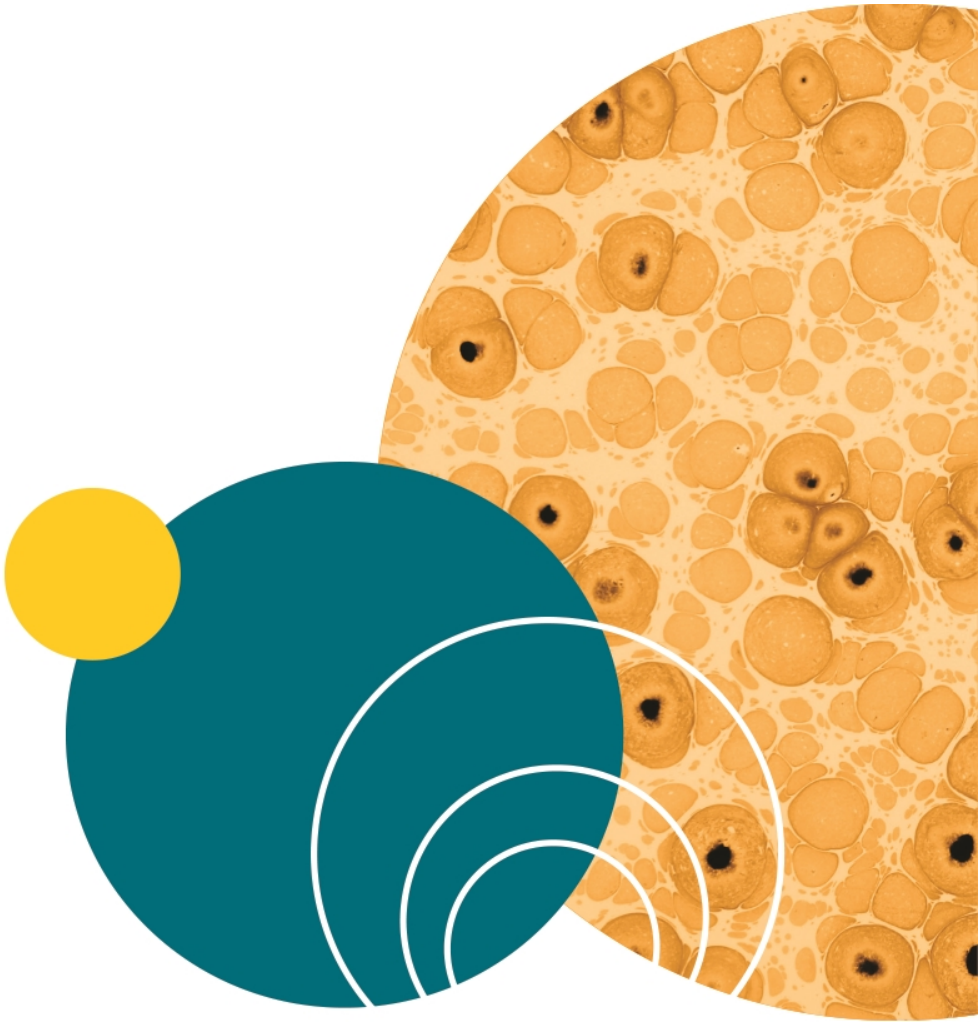
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## Chapter 1: About MDCStore Data Manager Database Schema Installation

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 for 64-bit systems only. For 32-bit systems, see the *MDCStore High Content Data Management Solution Database Schema Installation Guide, Revision J* for software version 2.3 of this guide. Updating an existing MDCStore Data Manager database schema from version 2.0, 2.1, or 2.2 to version 2.3 is also explained.



**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 and newer 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.

Additional information is available on the Web:

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

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

## 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 level of technical service.

Our Support website, [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 still need assistance, submit a request to Molecular Devices Technical Support.

Please have your instrument serial number or Work Order number and your software version number available when you call.

## Chapter 2: Installing the MDCStore Data Manager Database Schema for SQL Server

This chapter explains how to install the MDCStore™ High Content Data Management Solution version 2.3 database schema for Microsoft SQL Server 2012, Microsoft SQL Server 2014, or Microsoft SQL Server 2016 databases. Throughout this section, the Microsoft SQL Server database software is referred to as SQL Server.

These instructions are for a new 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 37](#).



**Note:** If you have an Oracle database, do not use these instructions. See [Installing the MDCStore Data Manager Database Schema for Oracle on page 13](#). To install Microsoft SQL Server Express, see [Installing SQL Server Express on page 43](#).

Topics in this section:

- [Prerequisites on page 7](#)
- [Choosing the Appropriate Installer on page 8](#)
- [Creating User Accounts for the MDCStore Database on page 12](#)

### Prerequisites

Before you install the MDCStore Data Manager database schema, you must set up a Windows 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 documentation from Microsoft.

Molecular Devices recommends that you use a dedicated server for the MDCStore Data Manager database. Using a server that hosts other databases or applications can 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: [www.moleculardevices.com/support](http://www.moleculardevices.com/support).

## Choosing the Appropriate Installer

The MDCStore Data Manager database schema installer is available on the MetaXpress® High-Content Image Acquisition and Analysis Software Installation flash drive and also as a standalone installer. The software must be installed on a 64-bit operating system.

- If you are installing from the MetaXpress Software Installation flash drive, install the provided 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. Instructions for using the standalone installer are included in this chapter. See [Using the Standalone Installer on page 8](#).

## 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. Right-click the downloaded MDCStore Data Manager archive file and select **Run as Administrator**.
3. In the **WinZip Self Extractor** dialog, click **Setup**.  
The system checks for prerequisites.



4. If required components are missing, a warning is displayed, 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 is displayed.

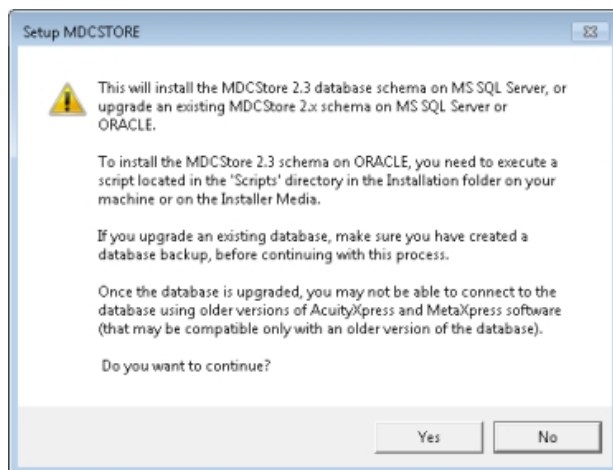


5. Click **Next** and follow the on-screen instructions to set up the MDCStore Data Manager database schema installer.

6. In the **Confirm Installation** dialog, click **Next** to start the database installation. During the installation, the **Setup MDCSTORE** dialog is displayed.

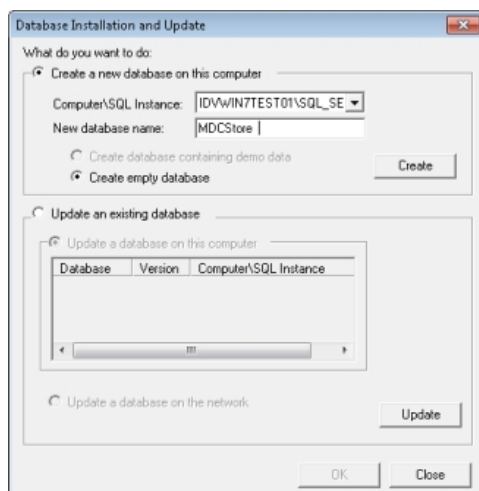


7. Click **Install/Upgrade MDCStore**. The **Setup MDCSTORE** message is displayed.



8. Click **Yes**.

The **Database Installation and Update** dialog is displayed.



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 does not have the operating system and main applications running increases performance and ensures that your data is accessible even if the operating system located on the "C:" drive is damaged or needs to be reinstalled.

Do not install on an external hard drive because it can be turned off and disconnect access to your 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 is displayed: **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 Data Manager database, see [Creating User Accounts for the MDCStore Database on page 12](#).

## Creating User Accounts for the MDCStore Database

By default, there is a single user account for the SQL Server MDCStore Data Manager 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 Data Manager database, use the **MDCStoreTools Utility**. See the *MDCStoreTools Data Management Utility User Guide* included on the MetaXpress Software Installation flash drive.



**Note:** The MDCStore Data Manager 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.

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## Chapter 3: Installing the MDCStore Data Manager Database Schema for Oracle

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 new 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 37](#).



**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 2014 Express on page 43](#).

Topics in this section:

- [Prerequisites on page 13](#)
- [About Installing the MDCStore Data Manager Database Schema Database Schema on Oracle on page 14](#)
- [Choosing the Appropriate Installer on page 14](#)
- [Using the Standalone Installer on page 15](#)
- [Creating Tablespaces and Configuring Users on page 17](#)
- [Creating User Accounts for the MDCStore Database on page 19](#)

### 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.



**Note:** Oracle database names cannot contain spaces or special characters, nor can the name be longer than 23 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 Data Manager 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: [www.moleculardevices.com/support](http://www.moleculardevices.com/support).

## 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® High-Content Image Acquisition and Analysis Software Installation flash drive and also as a standalone installer. The software must be installed on a 64-bit operating system.

- If you are installing from the MetaXpress Software Installation flash drive, install the provided 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. Instructions for using the standalone installer are included in this chapter. See [Using the Standalone Installer on page 15](#).

## 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. Right-click the downloaded MDCStore Data Manager archive file and select **Run as Administrator**.
3. In the **WinZip Self Extractor** dialog, click **Setup**.  
The system checks for prerequisites.
4. If required components are missing, a warning is displayed, 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 is displayed.



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 is displayed.



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 17](#).



## Creating Tablespaces and Configuring Users

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**CAUTION!** Read the whole procedure before starting to setup an MDCStore schema on Oracle.

If the schema contains data, DO NOT run the script, because it overwrites the data without warning and corrupts the resulting database.

To preserve existing data, use a new tablespace and schema name when installing MDCStore Data Manager on Oracle.

---

When setting up a new schema, use a new schema name.

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 Data Manager schema created by a database administrator knowledgeable in Oracle.

---



**CAUTION!** The tablespace of the MDCStore Data Manager 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:

1. Open the **SQL\*Plus Worksheet**, which is installed as part of the Oracle client program.
2. 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 '<table space location>' 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** '**<table space location>**', 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 the schema contains data do not run the script, because it overwrites the data without warning and can corrupt the resulting database. To preserve existing data, use a new tablespace and schema name when installing MDCStore Data Manager on Oracle.

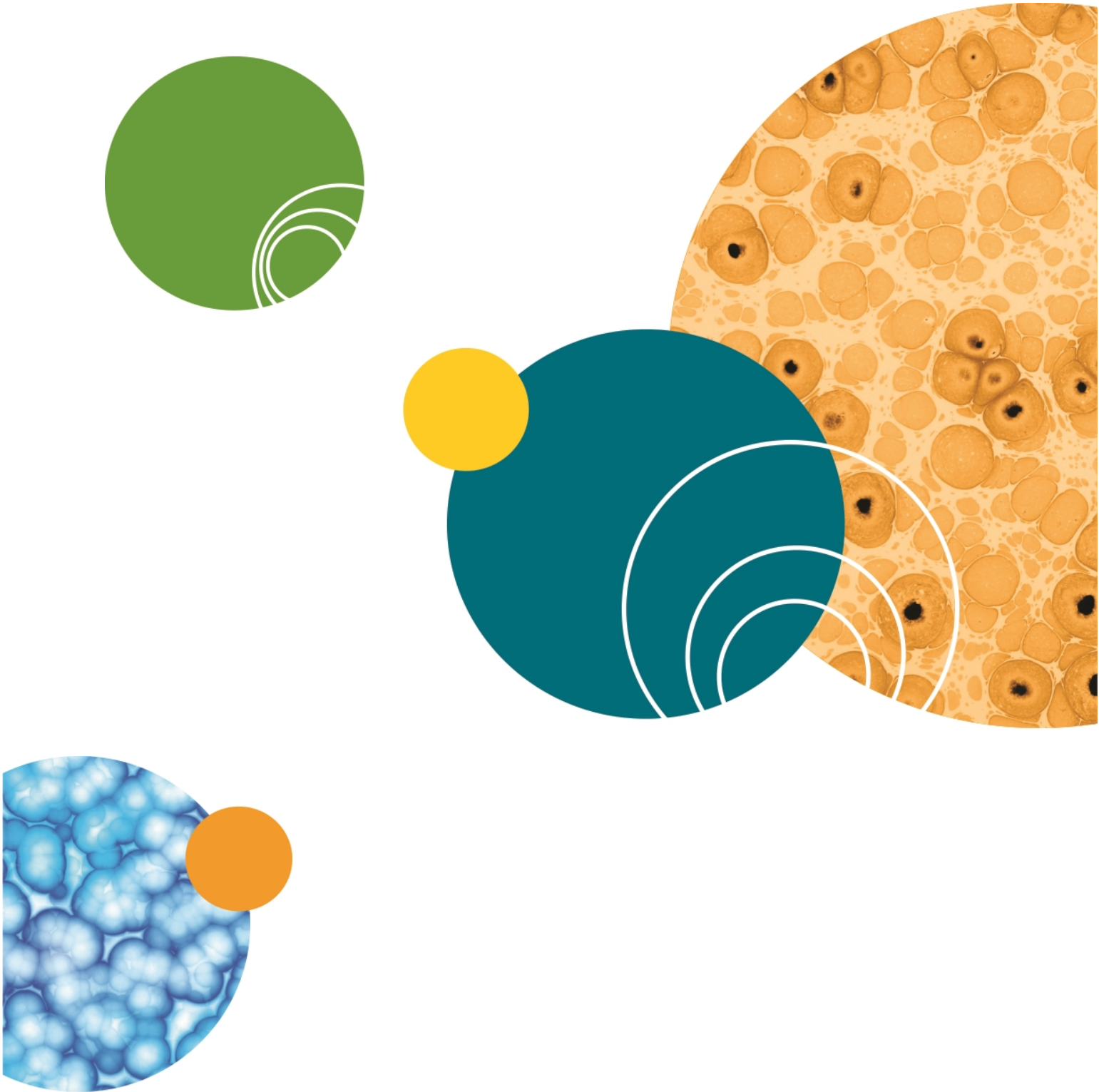
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7. In the **SQL\*Plus Worksheet**, click **File > Open** and select the appropriate **Installation.sql** file. To locate the .sql file, click **All Programs > MDCStore > MDCStore Database > Scripts > MDCStore Install Script (Oracle)**.
8. Click **Execute** to create the database in the specified schema.
- The MDCStore Data Manager database schema is installed. To set up user accounts for the MDCStore Data Manager database, see [Creating User Accounts for the MDCStore Database on page 19](#).

## Creating User Accounts for the MDCStore Database

By default, there is a single user account for the MDCStore Data Manager 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 Data Manager database, use the **MDCStoreTools™ Utility**. See the *MDCStoreTools Database Management Utility User Guide* included on the MetaXpress Software Installation flash drive.



## Chapter 4: Configuring the Database Client Software

# 4

To test the connection to the MDCStore Data Manager 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 21](#)
- [Information You Need on page 21](#)
- [Installing and Configuring the Oracle Client on page 21](#)
- [SQL Client Configuration on page 32](#)

### 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 13](#)



**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.

### Installing and Configuring the Oracle Client

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



**CAUTION!** You must install the database client (32-bit or 64-bit) that matches your operating system.

Oracle installation and configuration tasks include:

- [Oracle Client Installation and Configuration on page 22](#)
- [Configuring the Oracle Net Service on page 28](#)
- [Configuring the Oracle ODBC Data Source on page 30](#)

## Oracle Client Installation and Configuration

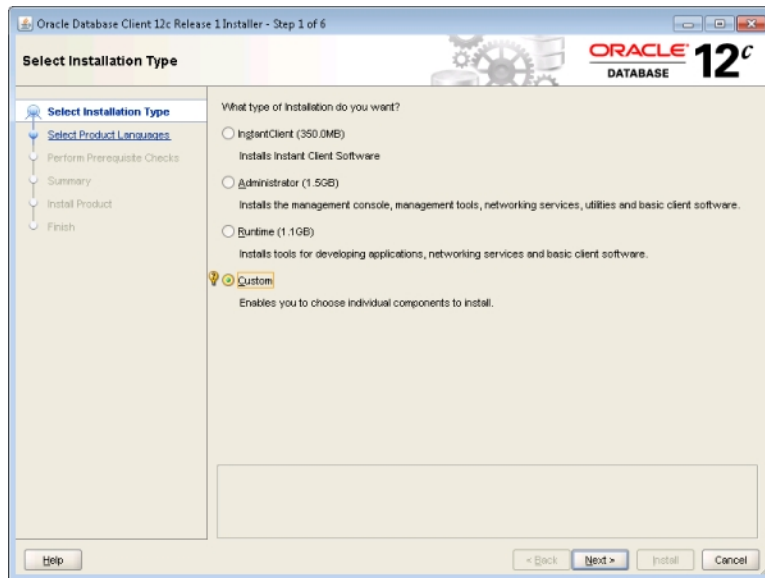
To install and configure the Oracle client:

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>.

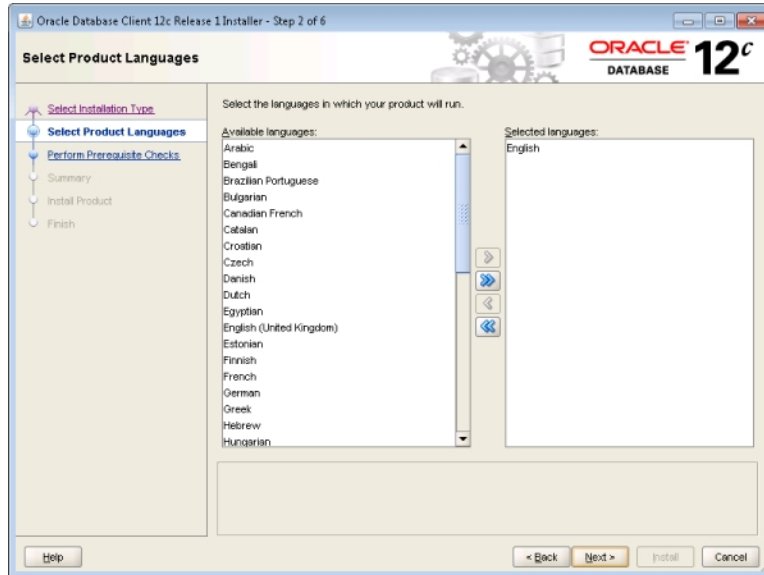


**Note:** You must install the appropriate version of the database client to access the database. The 64-bit version of the database client must be installed with the 64-bit version of the MetaXpress Software to connect to the database. The AcuityXpress software is a 32-bit application, which requires the installation of the 32-bit version of the database client.

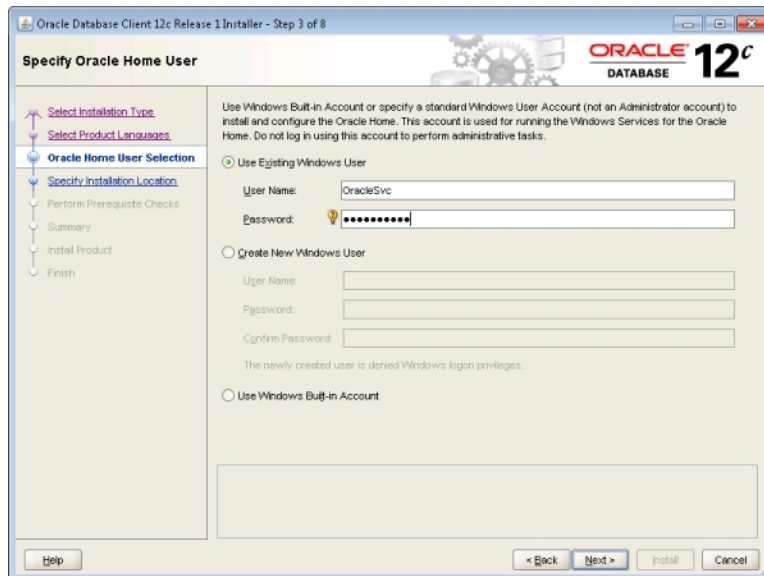
3. Unzip the downloaded package and double-click **setup.exe** to start the installation.
4. In the Welcome dialog, click **Next**.
5. In the **Select Installation Type** dialog, click **Custom**.



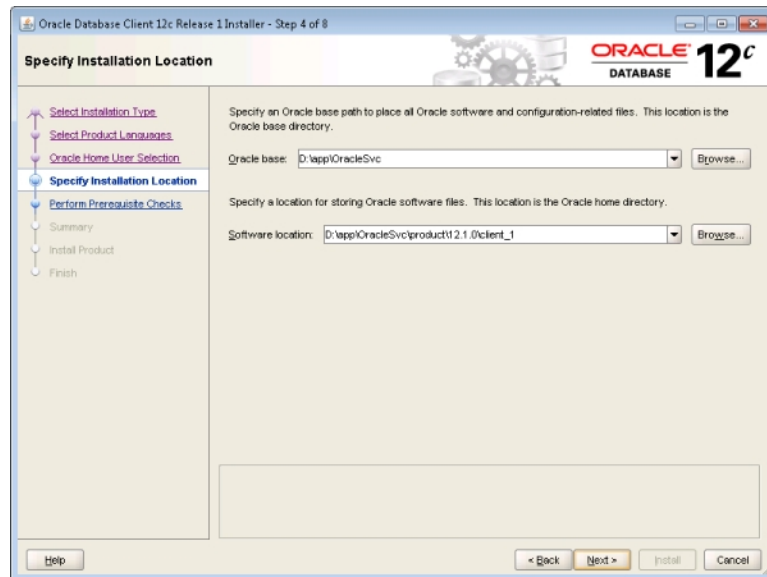
6. If your system uses a language other than English (United States), click **Product Languages**, select **English (United States)** and then click **Next**. This ensures that the Oracle installers use English (United States) regional and language settings, which are required for the MDCStore Data Manager.



7. In the **Specify Oracle Home User** dialog, specify the **Windows User** and **Password** and then click **Next**.

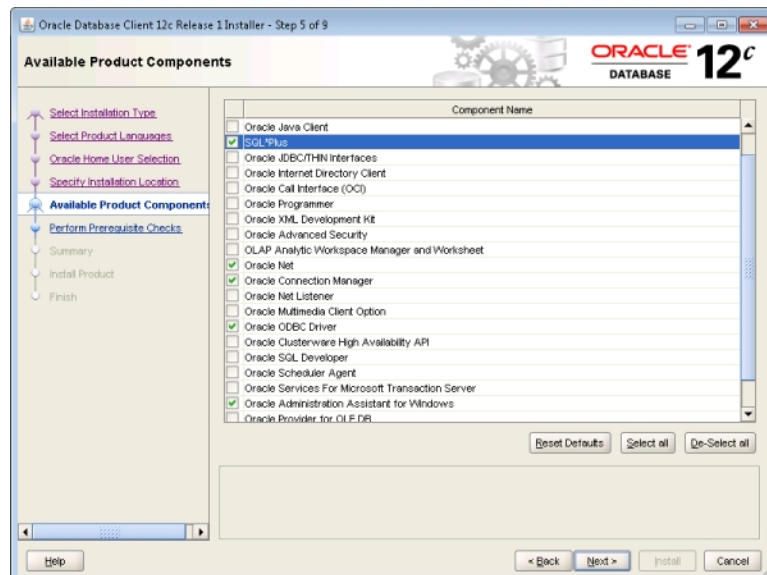


8. In the **Specify Installation Location** dialog, select the installation location and then click **Next**.



9. In the **Available Product Components** dialog, ensure that the following check boxes are selected:

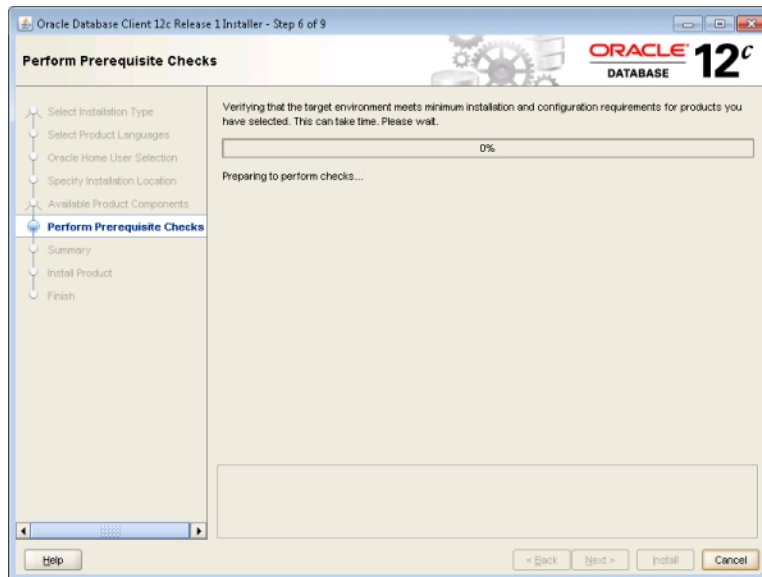
- Oracle Administration Assistant for Windows
- Oracle ODBC Driver
- Oracle Net
- SQL Plus
- Oracle Connection Manager



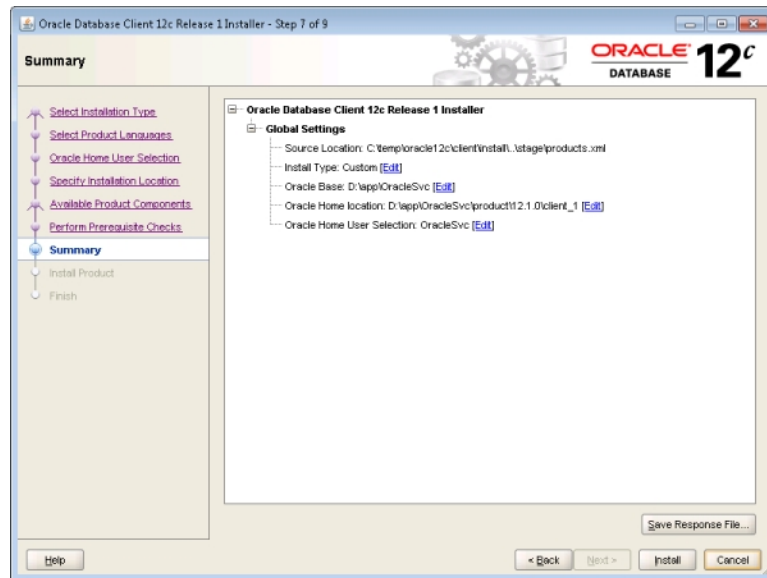
10. Click **Next**.



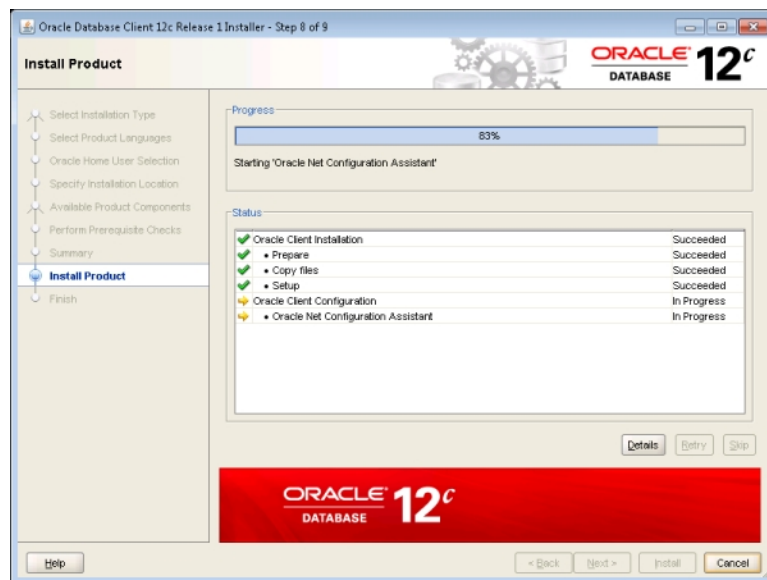
11. Resolve any issues identified in the **Perform Prerequisite Checks** dialog, and then click **Next**.



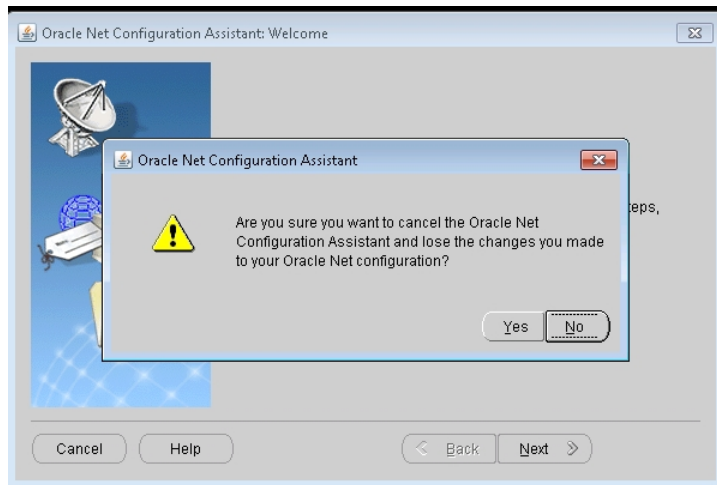
12. In the **Summary** dialog, expand the **New Installations** section to verify that the installation summary includes the correct version of the ODBC driver, and then click **Install**.



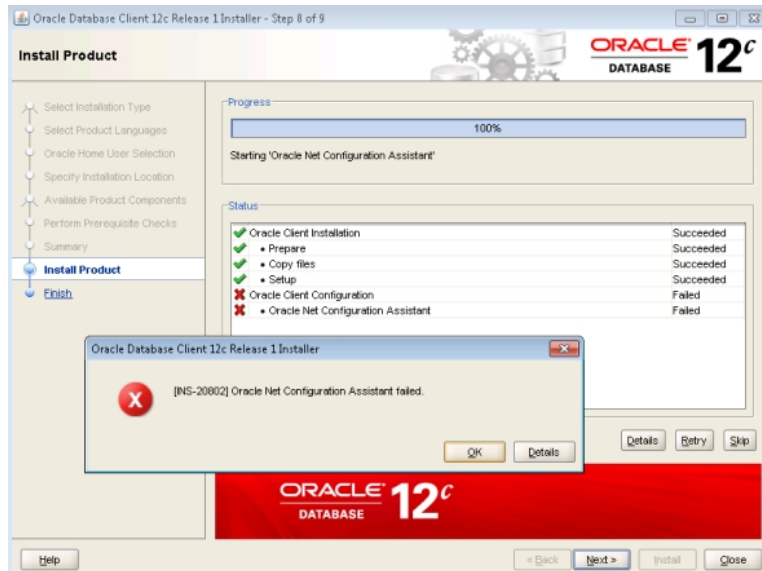
The software installs.



13. When the **Oracle Net Configuration Assistant: Welcome** dialog is displayed, click **Cancel** then click **Yes**.



14. When the **Oracle Net Configuration Assistant failed** dialog is displayed, click **OK**.

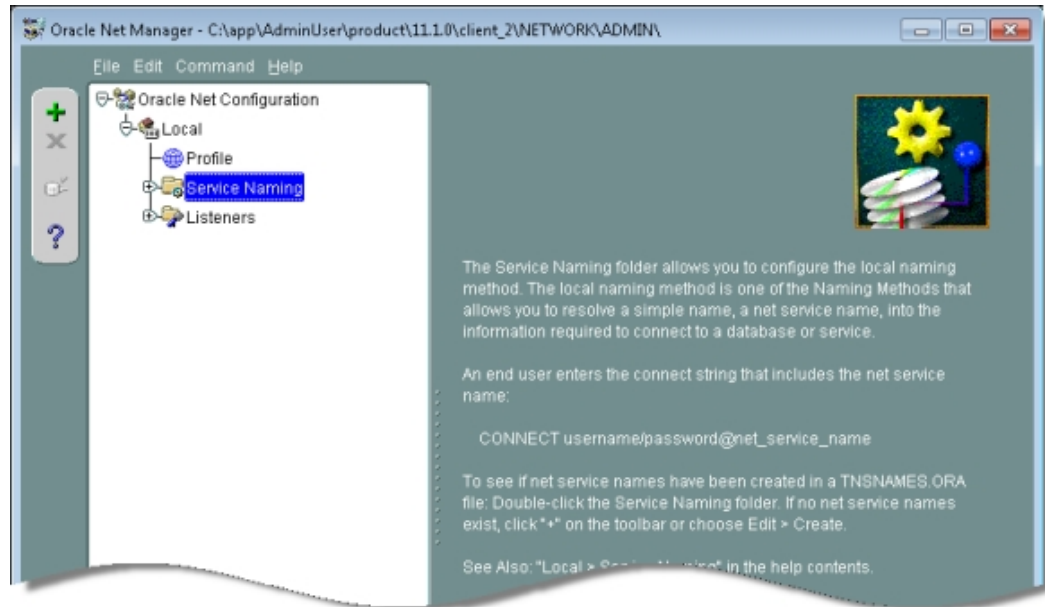


15. Follow the on-screen instructions to complete the installation. If prompted, skip any additional service configurations during this installation.  
The Oracle client software installation is complete.

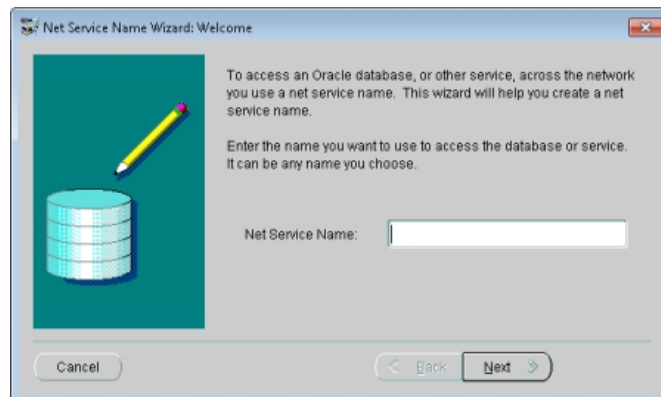
## Configuring the Oracle Net Service

To configure the Oracle Net Service:

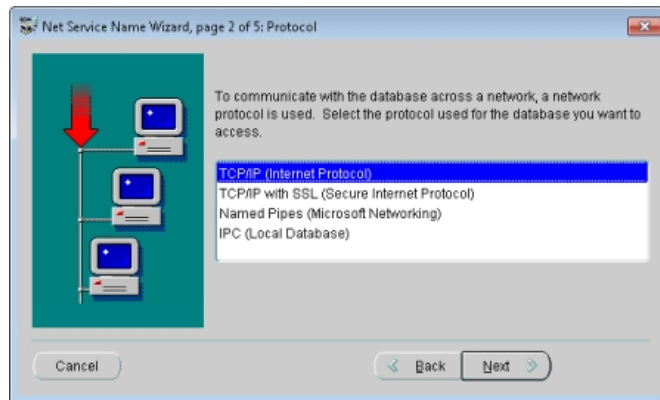
1. On the MDCStore server or client, click **Start > All Programs > Oracle Client > Configuration and Migration Tools > Net Manager**.



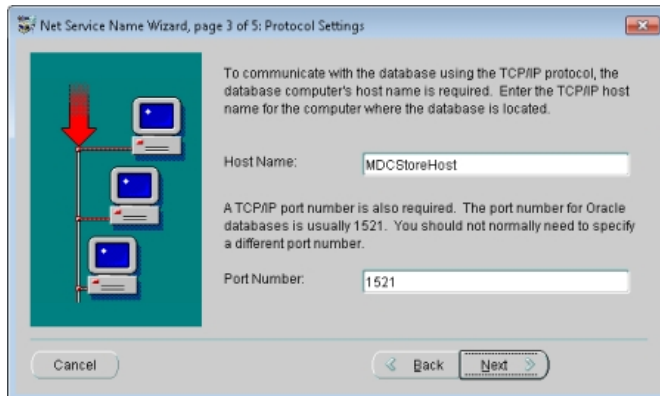
2. In the **Oracle Net Manager** window, select **Service Naming**, and then click the green plus sign (+).  
The **Net Service Name** wizard is displayed.
3. In the **Welcome** dialog, in the **Net Service Name** field, type a name for the service, and then click **Next**.



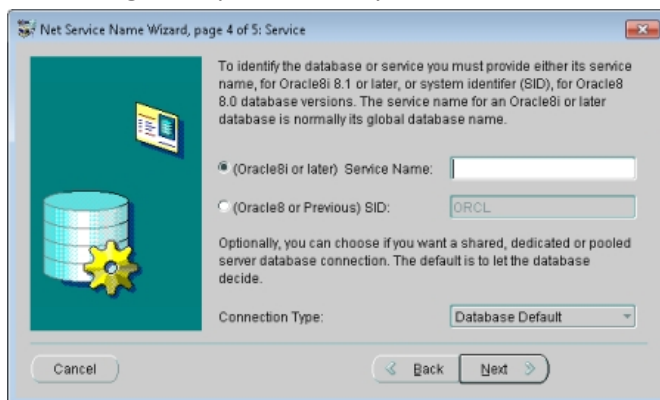
4. In the **Protocol** dialog, select TCP/IP, and then click **Next**.



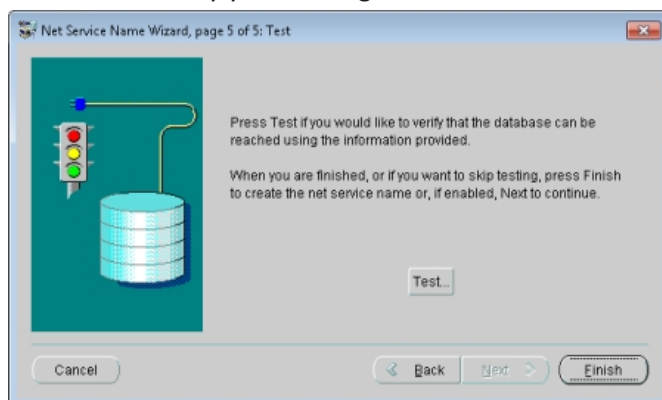
5. In the **Protocol Settings** dialog, type the host name of the server that hosts your Oracle database and the port number that the database server listens to, and then click **Next**. The default **Port Number** for Oracle is 1521.



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 is displayed.

If a problem is detected, try changing the *username* and *password* to a valid account and click **Test** to verify your settings 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 is displayed 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, 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**.

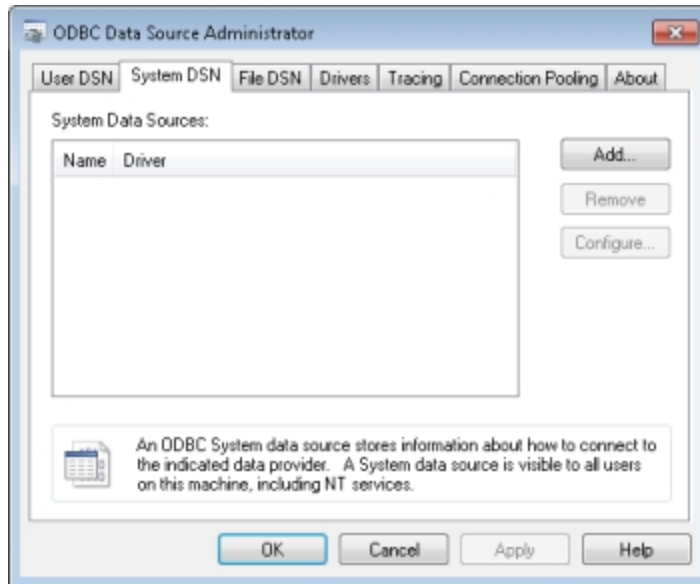
You can use this procedure to configure a data source.



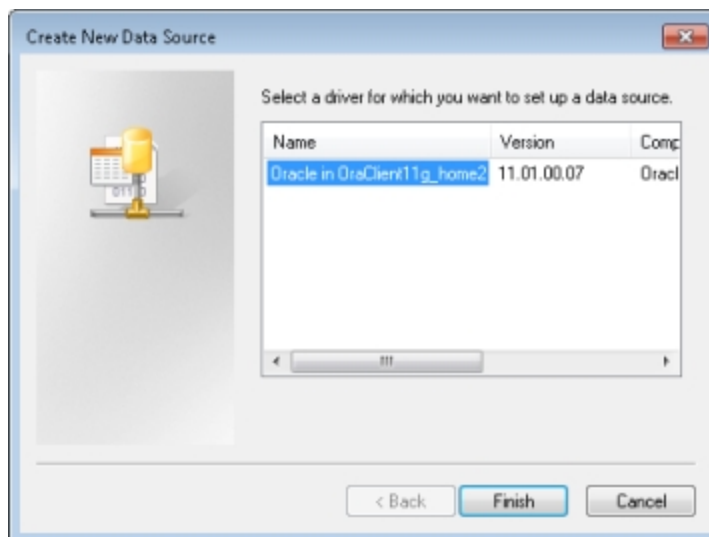
**Note:** Do not use this procedure if you have MetaXpress Software or AcuityXpress Software installed on the client computer. Molecular Devices recommends that you configure new data sources by clicking the **New Data Source** button on the dialog that is displayed when you start the MetaXpress Software.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

To configure the Oracle ODBC data source using Control Panel:

1. 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.



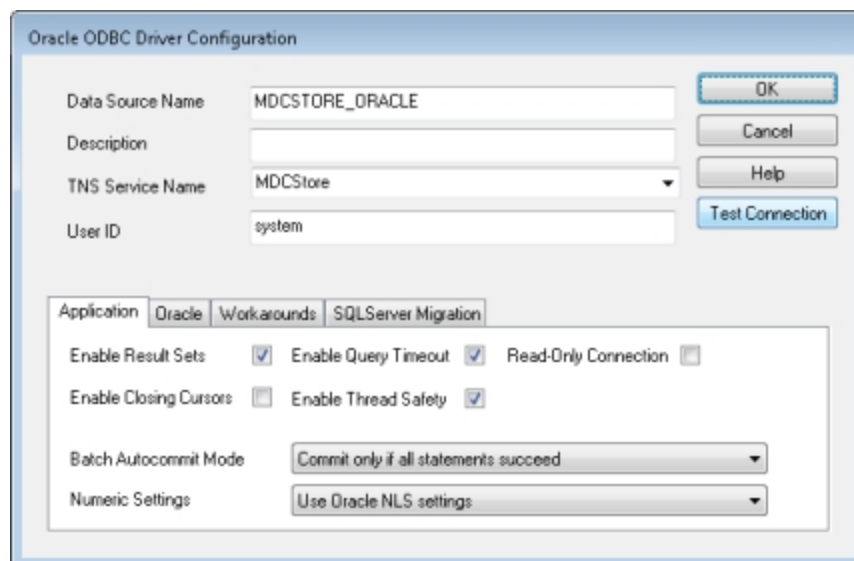
3. Click **Add**.



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

- Click **Finish**.

The **Oracle ODBC Driver Configuration** property sheet is displayed.



- In the **Data Source Name** field, type the name of your data source. This name must be the same for all MDCStore Data Manager servers and clients.
- 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.
- In the **User ID** field, type the ID of a user account that has access to the MDCStore Data Manager database.
- 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 Data Manager clients as described in this section.

### Configuring the SQL Client



**Note:** **NOTE:** 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. AcuityXpress Software only supports a 32-bit ODBC connection.

Molecular Devices recommends that you configure new data sources by clicking the **New Data Source** button on the dialog that is displayed when you start the MetaXpress Software or AcuityXpress 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.



**CAUTION!** Do not use this procedure if you have MetaXpress Software or AcuityXpress Software installed on the client computer.

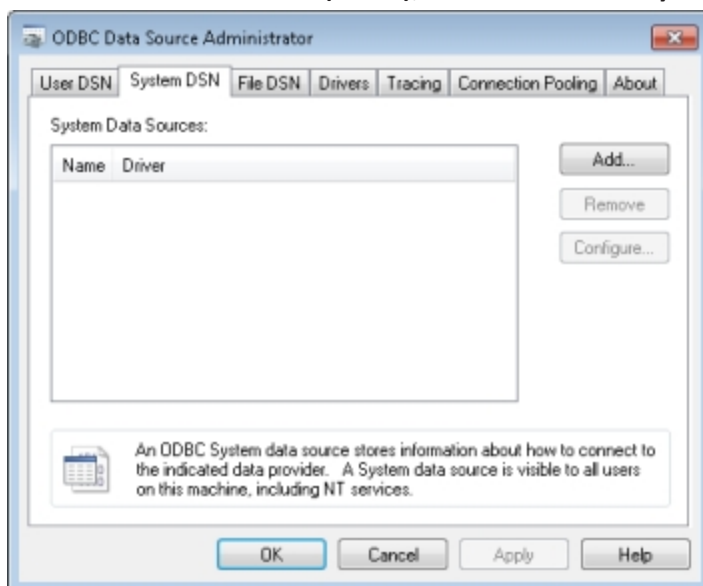
Molecular Devices recommends that you configure new data sources by clicking the **New Data Source** button on the dialog that is displayed when you start the MetaXpress Software. For instructions, see “Setting Up the MetaXpress Software” in the MetaXpress Software *Installation Guide* included on the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

To configure the SQL client using Control Panel:

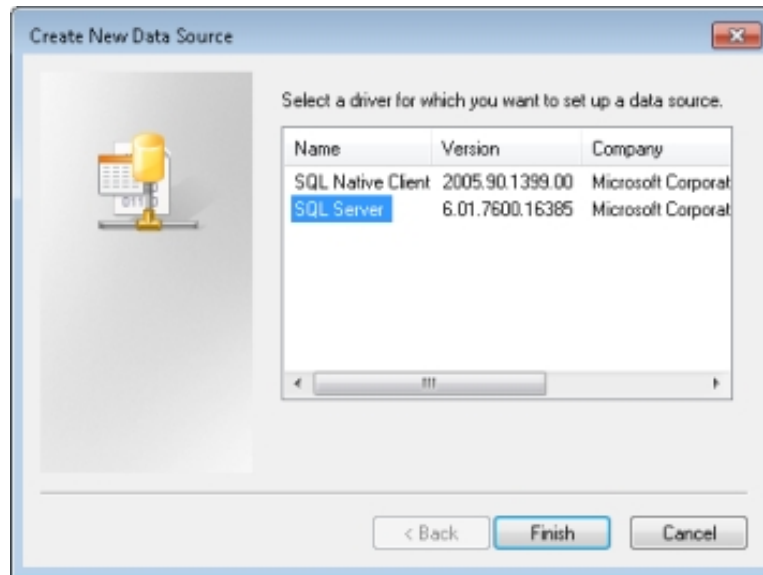


**CAUTION!** The following procedure is only for the 64-bit version of MetaXpress Software and will not work for the 32-bit version of AcuityXpress Software.

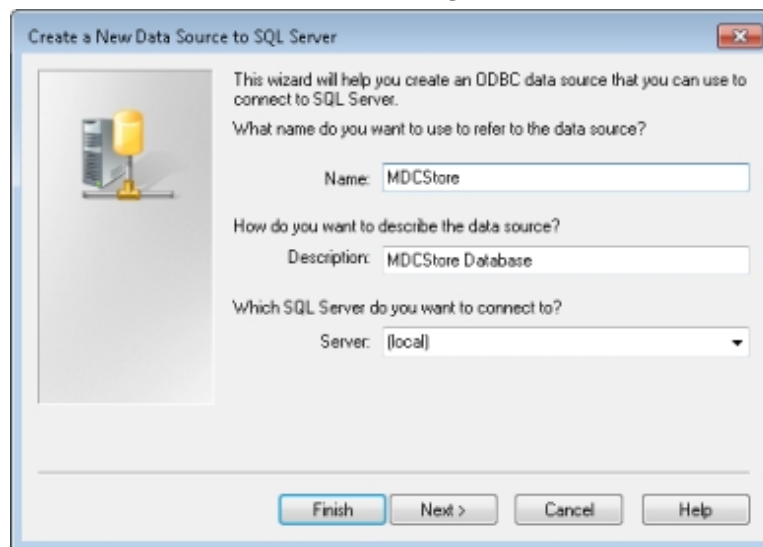
1. Log in to the client computer.
2. Go to the **Administrative Tools** section of the Windows Control Panel.
3. Double-click **Data Sources (ODBC)**, and then click the **System DSN** tab.



4. Click **Add**.



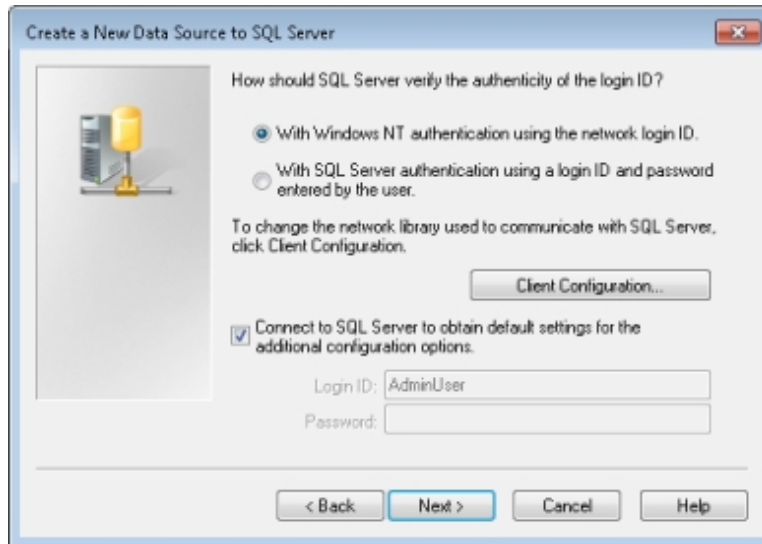
5. In the **Create New Data Source** dialog, select **SQL Server**, and then click **Finish**.



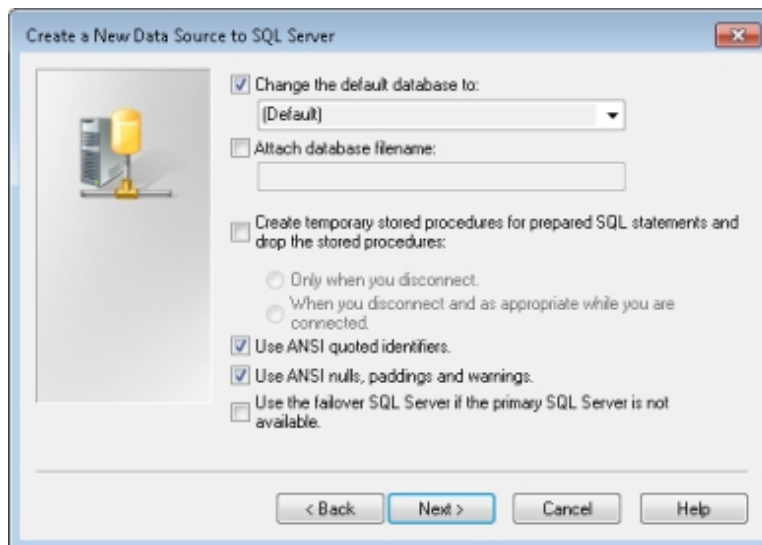
6. In the first dialog of the **Create a New Data Source to SQL Server** wizard, type the name and description of the SQL Server data source, select the server you want to connect to, and then click **Next**.



**Note:** If you do not see your local server listed, try using `(local)\Instance` [for example, `(local)\SQLEXPRESS`].

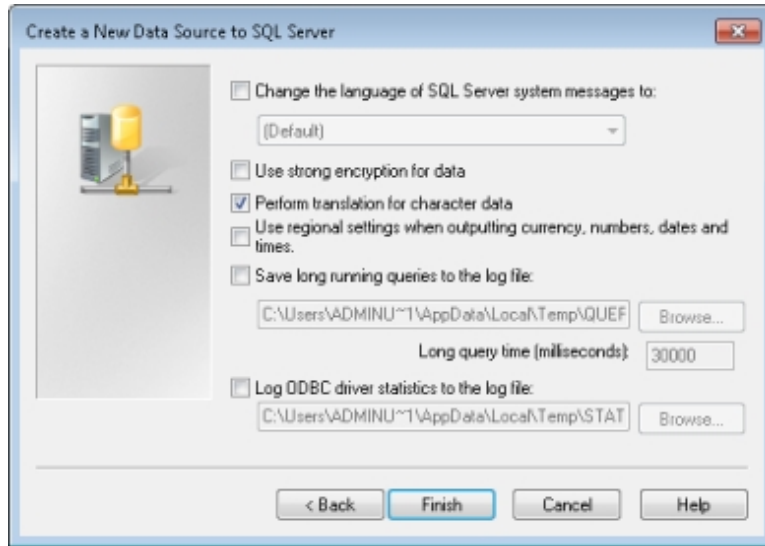


7. In the second dialog of the wizard, provide authentication information, and then click **Next**.



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 Data Manager database.

9. 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.

## Chapter 5: Updating an Existing MDCStore Data Manager Database Schema

# 5

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 21](#)
- [Information You Need on page 21](#)
- [Installing and Configuring the Oracle Client on page 21](#)
- [SQL Client Configuration on page 32](#)

### Prerequisites

Before you install 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 Data Manager 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.



**Note:** 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 Data Manager 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: [www.moleculardevices.com/support](http://www.moleculardevices.com/support).

## Choosing the Appropriate Installer

The MDCStore Data Manager database schema installer is available on the MetaXpress® High-Content Image Acquisition and Analysis Software Installation flash drive and also as a standalone installer. The software must be installed on a 64-bit operating system.

- If you are installing from the MetaXpress Software Installation flash drive, install the provided 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. Instructions for using the standalone installer are included in this chapter. See [Using the Standalone Installer on page 8](#).

## Updating from Version 2.0 or Newer 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*.



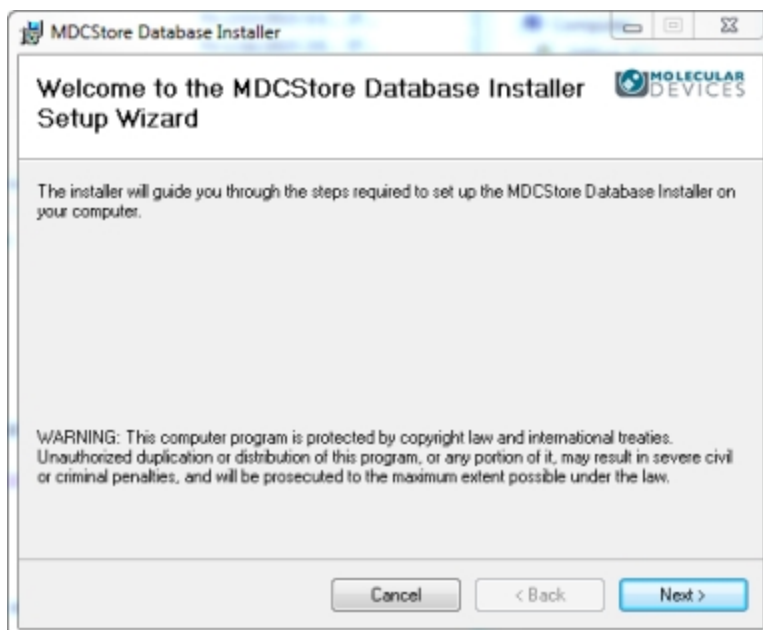
**Note:** If your database administrator has deactivated or removed this account from the MDCStore Data Manager, you now need access made available.

---

2. Right-click the downloaded MDCStore Data Manager archive file and select **Run as Administrator**.
3. In the WinZip Self Extractor dialog, click **Setup**.  
The system checks for prerequisites.

4. If required components are missing, a warning is displayed, 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 is displayed.

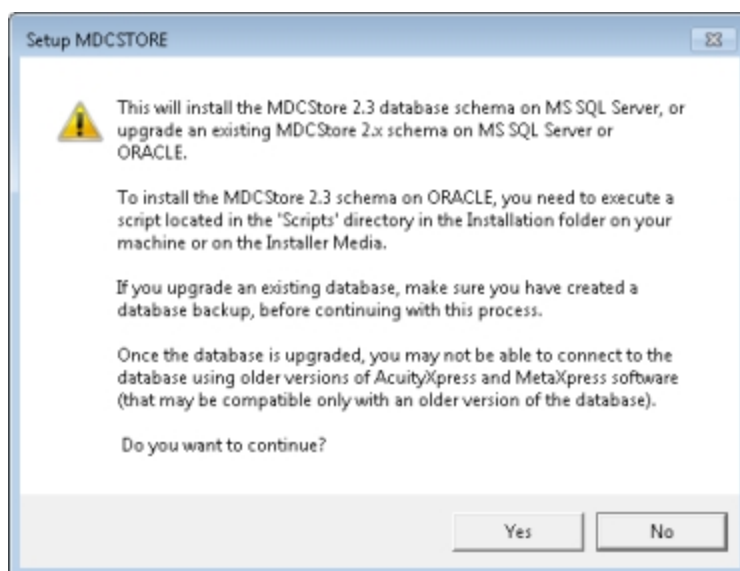


5. Click **Next** and follow the on-screen instructions to set up the MDCStore Data Manager database schema installer.

6. In the **Confirm Installation** dialog, click **Next** to start the database installation.  
During the installation, the **Setup MDCSTORE** dialog is displayed.



7. Click **Install\Upgrade MDCStore**.  
The Setup MDCSTORE message is displayed.





8. Click **Yes**.

The **Database Installation and Update** dialog is displayed.

Database Installation and Update

What do you want to do:

☐ Create a new database on this computer

Computer\SQL Instance: IDVWIN7TEST01\SQL\_SE

New database name: MDCStore

☐ Create database containing demo data

☒ Create empty database

Create

☒ Update an existing database

☒ Update a database on this computer

Database	Version	Computer\SQL Instance
MDCStore	2.3.0	IDVWIN7TEST01\SQLSEXP
MDCStoreMX	2.3.0	IDVWIN7TEST01\SQLSEXP

☐ Update a database on the network

Update

OK Close

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 is displayed stating that the database has been updated successfully.

## Appendix A: Installing SQL Server Express

# A

This appendix explains how to install the following versions of Microsoft SQL Server Express included on the MetaXpress Software installation flash drive:

- [Installing SQL Server 2014 Express on page 43](#)
- [Installing SQL Server 2016 Express on page 45](#)

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.

### Installing SQL Server 2014 Express

The following are procedures for installing Microsoft SQL Server 2014 Express 64-bit on Windows 7 computers, which is referred to as SQL Express throughout this section.



**Note:** Molecular Devices recommends that you do not install SQL Express if either SQL Server 2012, SQL Server 2014, or SQL Server 2016 is already installed.

Topics in this appendix:

- [Accessing the SQL Express Installer on page 43](#)
- [Enabling Named Pipes and TCP/IP Connections on page 44](#)

### Accessing the SQL Express Installer

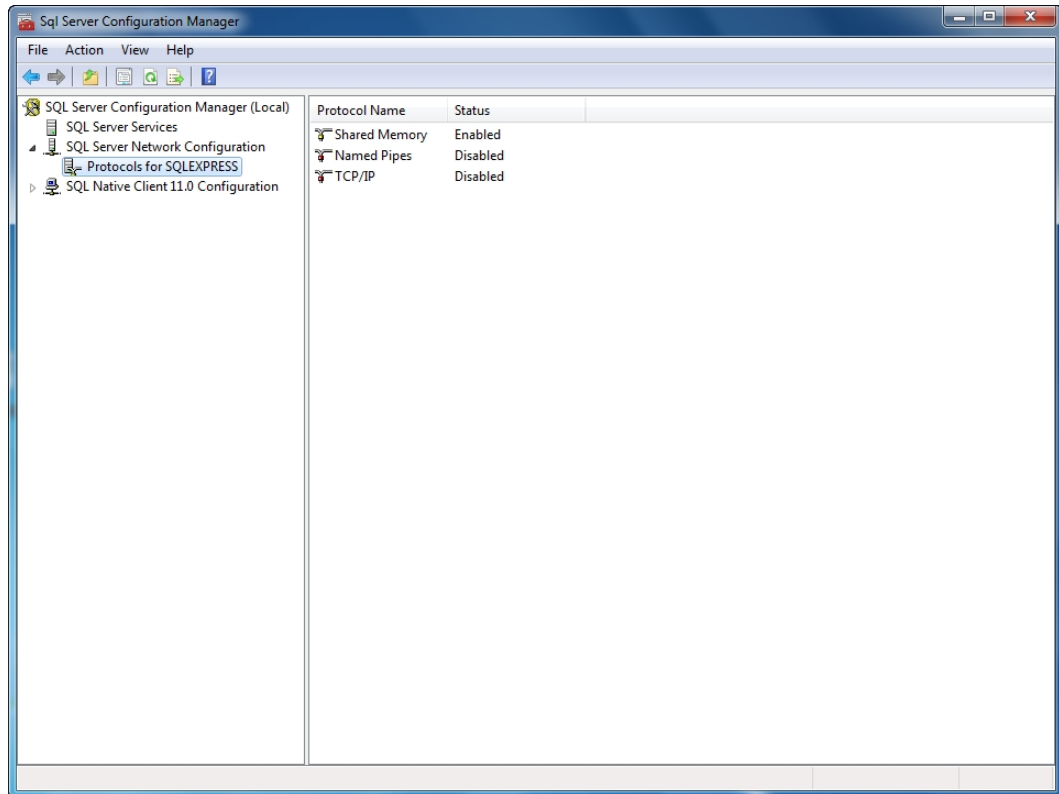
Microsoft SQL Server 2014 Express 64-bit is included on the MetaXpress Software Installation flash drive. It can be installed by following the procedure in the *MetaXpress High-Content Image Acquisition and Analysis Software Suite Installation and Update Guide* that is provided on the MetaXpress Software Installation flash drive and is available in the Molecular Devices knowledge base at [www.moleculardevices.com/support](http://www.moleculardevices.com/support).

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 44](#).

## Enabling Named Pipes and TCP/IP Connections

To enable named pipes and TCP/IP connections:

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



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.

## Installing SQL Server 2016 Express

The following are procedures for installing Microsoft SQL Server 2016 Express 64-bit on Windows 10 computers, which is referred to as SQL Express throughout this section.



**Note:** Molecular Devices recommends that you do not install SQL Express if either SQL Server 2012, SQL Server 2014, or SQL Server 2016 is already installed.

Topics in this appendix:

- [Accessing the SQL Express 2016 Installer on page 45](#)
- [Enabling Named Pipes and TCP/IP Connections on page 46](#)

### Accessing the SQL Express 2016 Installer

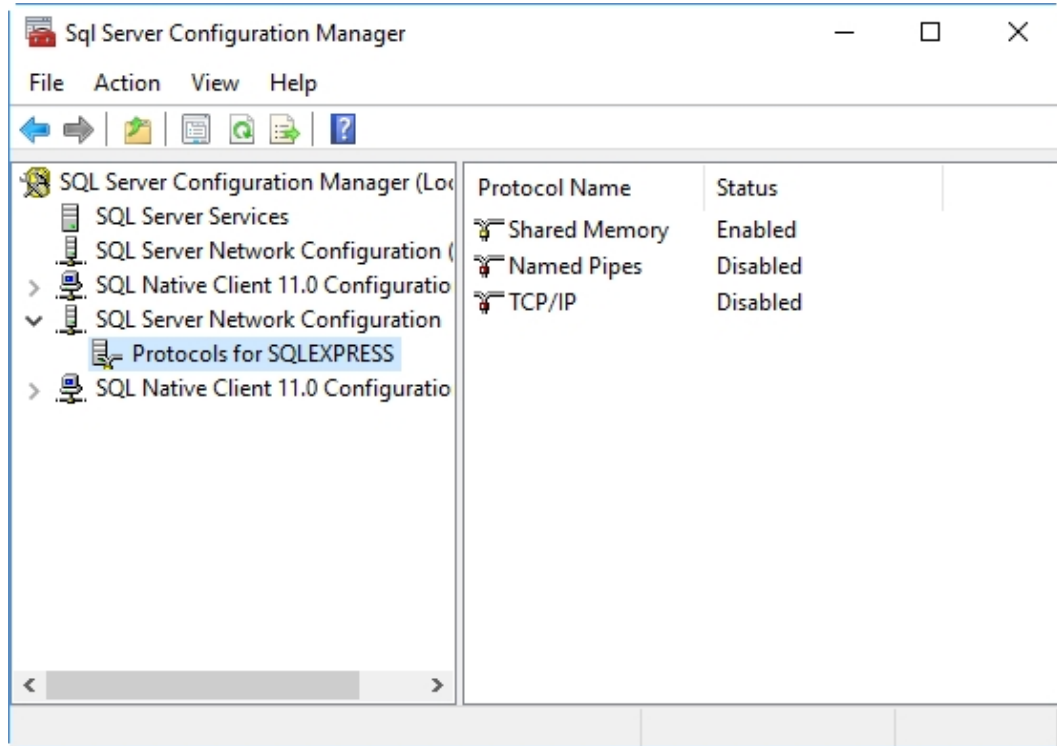
Microsoft SQL Server 2016 Express 64-bit is included on the MetaXpress Software Installation flash drive. It can be installed by following the procedure in the *MetaXpress High-Content Image Acquisition and Analysis Software Suite Installation and Update Guide* that is provided on the MetaXpress Software Installation flash drive and is available in the Molecular Devices knowledge base at [www.moleculardevices.com/support](http://www.moleculardevices.com/support).

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 46](#).

## Enabling Named Pipes and TCP/IP Connections

To enable named pipes and TCP/IP connections:

1. Click **Start > Apps > SQL Server 2016 Configuration Manager**.



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.

## Appendix B: Installing Microsoft SQL Management Studio 17

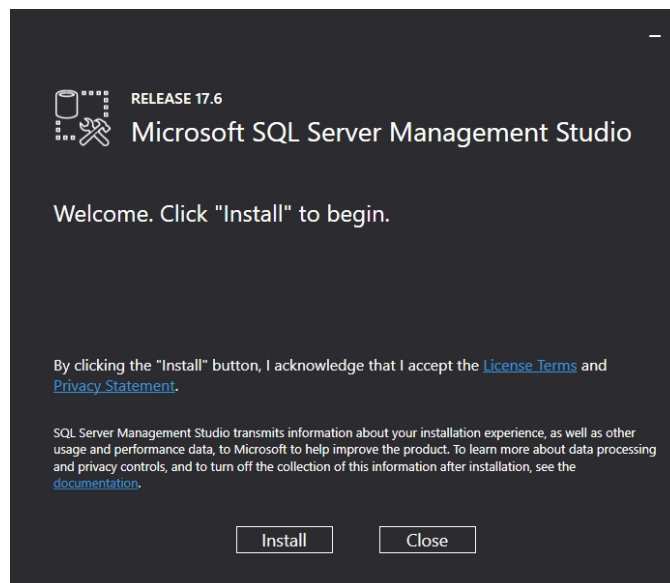
# B

This appendix explains how to install the Microsoft SQL Management Studio 17, included on the MetaXpress Software installation flash drive.

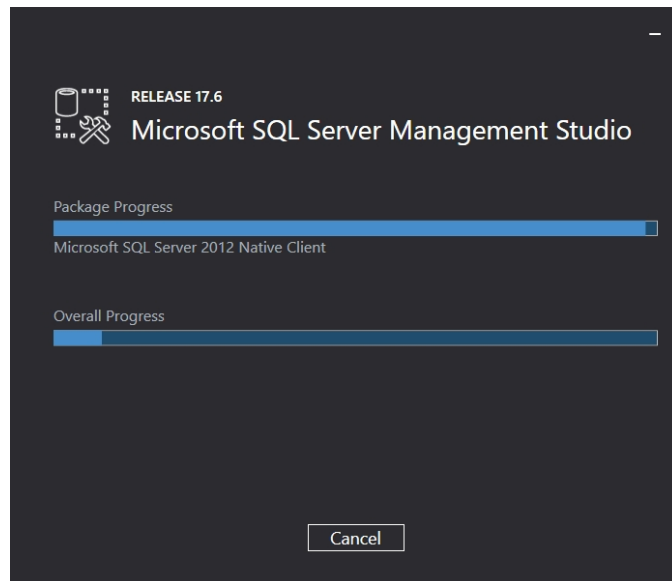
Microsoft SQL Management Studio 17 is an optional but useful utility for managing your SQL database, for example, to expand your MDCStore database.

To install Microsoft SQL Management Studio:

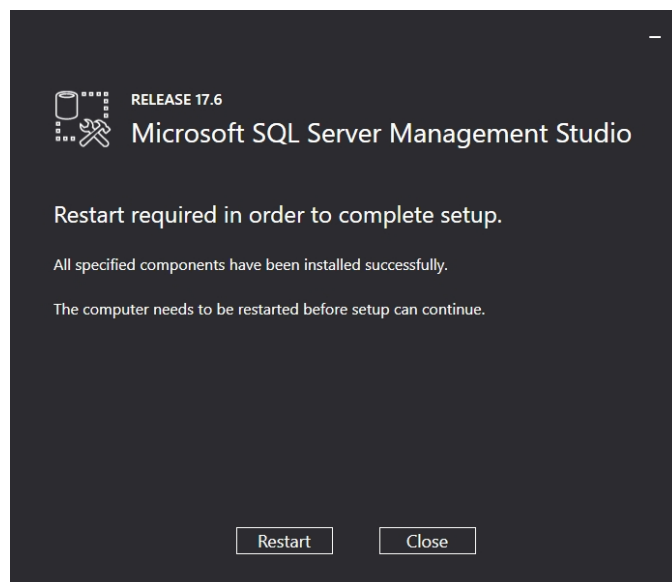
1. On the MetaXpress Software installation flash drive, start the **MetaXpress Installation Utility**.
2. Next to **Install MDCStore Software**, click **Details**.
3. Click **Install Microsoft SQL Server**.
4. Click **Microsoft SQL Management Studio 17 > Install**.
5. When the **Welcome** dialog appears, click **Install**.



6. Wait for the installation to finish.



7. When the installation finishes successfully, click **Restart**.



After your computer restarts, Microsoft SQL Management Studio 17 is ready for use.



## Contact Us

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