

MDCStore[™]

High Content Data Management Solution Database Schema Version 2.3

Installation and Update Guide



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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.
- To search the knowledge base, go to 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.

Obtaining Support

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

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

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

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 2005, Microsoft SQL Server 2012, or Microsoft SQL Server 2014 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 49.



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 2014 Express, see Installing SQL Server 2014 Express on page 57.

Topics in this section:

- Prerequisites on page 7
- Choosing the Appropriate Installer on page 8
- Creating User Accounts for the MDCStore Database on page 13

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.

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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.

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.

B MDCStore Database Installer	
Welcome to the MDCStore Database I Setup Wizard	nstaller Molecular
The installer will guide you through the steps required to set up the your computer.	e MDCStore Database Installer on
WARNING: This computer program is protected by copyright law Unauthorized duplication or distribution of this program, or any por or criminal penalties, and will be prosecuted to the maximum exter	and international treaties. rtion of it, may result in severe civil nt possible under the law.
Cancel	< Back Next >

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

 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.

Setup MD	CSTORE	83
4	This will install the MDCStore 2.3 database schema on MS SQL Server, or upgrade an existing MDCStore 2.x schema on MS SQL Server or ORACLE.	
	To install the MDCStore 2.3 schema on ORACLE, you need to execute a script located in the 'Scripts' directory in the Installation folder on your machine or on the Installer Media.	
	If you upgrade an existing database, make sure you have created a database backup, before continuing with this process.	
	Once the database is upgraded, you may not be able to connect to the database using older versions of AcuityXpress and MetaXpress software (that may be compatible only with an older version of the database).	
	Do you want to continue?	
	Yes No	

8. Click Yes.

The Database Installation and Update dialog is displayed.

Database Installation and Update	— ×		
What do you want to do:			
Computer/SQL Instance: IDVWIN7TEST01\SQL SE			
New database name: MDCStore			
 Create database containing demo data Create empty database 	Create		
C Update an existing database			
Database Version Computer\SQL Instance			
4			
C Update a database on the network	Update		
OK	Close		

- 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 13.

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.

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 49.



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 57.

Topics in this section:

- Prerequisites on page 15
- About Installing the MDCStore Data Manager Database Schema Database Schema on Oracle on page 16
- Choosing the Appropriate Installer on page 16
- Using the Standalone Installer on page 17
- Creating Tablespaces and Configuring Users on page 19
- 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.

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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.

About Installing the MDCStore Data Manager Database Schema 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 17.

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.

B MDCStore Database Installer			
Welcome to the MDCSto Setup Wizard	ore Database	e Installer	DEVICES
The installer will guide you through the st your computer.	eps required to set up) the MDCStore Data	abase Installer on
WARNING: This computer program is pro Unauthorized duplication or distribution of or criminal penalties, and will be prosecut	otected by copyright I f this program, or any ed to the maximum e:	aw and international portion of it, may res ktent possible under l	treaties. ult in severe civil the law.
	Cancel	< Back	Next >

- 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 19.

Creating Tablespaces and Configuring Users



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 Devicesrecommends 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.

 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 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.

- 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 22.

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

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 23
- Information You Need on page 23
- Installing and Configuring the Oracle Client on page 24
- SQL Client Configuration on page 42

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.

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 24
- Configuring the Oracle Net Service on page 34
- Configuring the Oracle ODBC Data Source on page 38

Oracle Client Installation and Configuration

To install and configure the Oracle client:

- 1. Log in to the client computer.
- 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 only 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**.

🎒 Oracle Database Client 12c Relea	ase 1 Installer - Step 1 of 6
Select Installation Type	
Select Installation Type Select Product Languages Perform Prerequisite Checks Summary Install Product Finish	What type of Installation do you want? Installs Instant Client (350.0MB) Installs Instant Client Software Administrator (1.5GB) Installs the management console, management tools, networking services, utilities and basic client software. Runtime (1.1GB) Installs tools for developing applications, networking services and basic client software. Custorn Enables you to choose individual components to install.
	< Back Next > Install Cancel

5. In the **Select Installation Type** dialog, click **Custom**.

 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.

🚳 Oracle Database Client 12c Release 1 Installer - Step 2 of 6		
Select Product Languages		
A Select Installation Type	Select the languages in which your product will run.	
Select Product Languages	Available languages: Selected languages:	
Perform Prerequisite Checks Summary Install Product Finish	Arabic Bengaii Brazilian Portuguese Bulgarian Canadian French Catalan Croatian Czech Danish Dutch Egyptian English (United Kingdom) Estonian Finnish French German Greek Hebrew Hungarian	
Help	< Back Next > Install Cancel	

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

🛃 Oracle Database Client 12c Release 1 Installer - Step 3 of 8		
Specify Oracle Home User		
Select Installation Type	Use Windows Built-in Account or specify a standard Windows User Account (not an Administrator account) to install and configure the Oracle Home. This account is used for running the Windows Services for the Oracle Home. Do not log in using this account to perform administrative tasks.	
Oracle Home User Selection	Use Existing Windows User	
Specify Installation Location Perform Prerequisite Checks Summary Install Product Finish	Liser Name: OracleSvc Password: • Uger Name: • Password: • Confirm Password: • The newly created user is denied Windows logon privileges.	
Help	< <u>Back</u> <u>N</u> ext> Install Cancel	//

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

🍰 Oracle Database Client 12c Release :	1 Installer - Step 4 of 8
Specify Installation Location	
Select Installation Type Y Select Product Languages	Specify an Oracle base path to place all Oracle software and configuration-related files. This location is the Oracle base directory.
Oracle Home User Selection	Oracle base: D:\app\OracleSvc
Specify Installation Location	
Perform Prerequisite Checks	Specify a location for storing Oracle software files. This location is the Oracle home directory.
Ú Summary	Software location: D:\app\OracleSvc\product\12.1.0\client_1 Browse
 Install Product 	
ບໍ່ Finish	
Help	< Back Next > Install Cancel

- 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

Oracle Database Client 12c Release Available Product Componen	nstaller - Step 5 of 9	12 ^c
 Select Installation Type 	Component Name	
T <u>Sciect installation rype</u>	Oracle Java Client	
Select Product Languages	SQL*Plus	
Oracle Home User Selection	Oracle JDBC/THIN Interfaces	
	Oracle Internet Directory Client	
Specify Installation Location	Oracle Call Interface (OCI)	
🙊 Available Product Component:	Oracle Programmer	
Perform Prerequisite Checks	Oracle XML Development Kit	
	Oracle Advanced Security	
Summary	OLAP Analytic Workspace Manager and Worksheet	
Unstall Product	Oracle Net	
	Oracle Connection Manager	
O Finish	Oracle Net Listener	
	Oracle Clusterware High Availability API	
	Oracle SQL Developer	
	Oracle Scheduler Agent	
	Oracle Services For Microsoft Transaction Server	
	Oracle Administration Assistant for Windows	
	Oracle Provider for OLE DB	
	Reset Defaults Select all	-Select all
Help	< Back Next > Install	Cancel

10. Click Next.

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

🍰 Oracle Database Client 12c Release	1 Installer - Step 6 of 9
Perform Prerequisite Check	
Select Installation Type	Verifying that the target environment meets minimum installation and configuration requirements for products you have selected. This can take time. Please wait.
Oracle Home Liser Selection	0%
Specify Installation Location	Preparing to perform checks
Available Product Components	
Perform Prerequisite Checks	
y Summary	
Install Product	
U Finish	
Help	< Back Next > Install Cancel

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**.

🎒 Oracle Database Client 12c Release	: 1 Installer - Step 7 of 9 💼 🔳 💌
Summary	
Select Installation Type Select Product Languages Oracle Home User Selection Specify Installation Location Available Product Components Perform Prerequisite Checks Summary Install Product Finish	Oracle Database Client 12c Release 1 Installer Global Settings Source Location: C: 'temploracle12c/client'Install!stage/products.xml Install Type: Custom [Edit] Oracle Base: D: 'applOracleSvc [Edit] Oracle Home location: D: 'applOracleSvc/product1/2.1.0/client_1 [Edit] Oracle Home User Selection: OracleSvc [Edit]
	Save Response File
Help	< Back Next > Install Cancel

The software installs.

🍰 Oracle Database Client 12c Release	LInstaller - Step 8 of 9	
Install Product		
Select Installation Type Select Product Languages Oracle Home User Selection Specify Installation Location Available Product Components	Progress 83% Starting 'Oracle Net Configuration Assistant'	
Summary Install Product Finish	Oracle Client Installation Prepare Copy files Setup Oracle Client Configuration Oracle Net Configuration Assistant	Succeeded Succeeded Succeeded In Progress In Progress
Неф	ORACLE 12 ^C DATABASE	Details Retry Skip

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

🙆 Oracle Net Configuration Assistant: Welcome	8
eps,	
Cancel Help Sack Next S	

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

Oracle Database Client 12c Releas	e 1 Installer - Step 8 of 9	DRACLE 12
		DATABASE
C Select Installation Type	Progress	
Select Product Languages	100%	
Oracle Home User Selection	Starting 'Oracle Net Configuration Assistant'	
Specify Installation Location		
Available Product Components	_ Status	
Perform Prerequisite Checks		Succeeded
Summary	• Prepare	Succeeded
Inetall Product	✓ • Copy files	Succeeded
	🖌 🖌 Setup	Succeeded
<u>Finish</u>	X Oracle Client Configuration	Failed
	Oracle Net Configuration Assistant	Failed
Oracle Database Clien	t 12c Release 1 Installer	
	OK Details	Details Retry Sk
	DATABASE 12	

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:

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

😸 Oracle Net Manager - C:\app\AdminUser\product\11	1.0\client_2\NETWORK\ADMIN\
Eile Edit Command <u>H</u> elp	
C-220 Oracle Net Configuration C-220 Oracle Net Configuration C-200 Oracle Net Config	
	The Service Naming folder allows you to configure the local naming method. The local naming method is one of the Naming Methods that allows you to resolve a simple name, a net service name, into the information required to connect to a database or service.
	An end user enters the connect string that includes the net service , name:
	, CONNECT username/password@net_service_name
	To see if net service names have been created in a TNSNAMES.ORA file: Double-click the Service Naming folder. If no net service names exist, click "+" on the toolbar or choose Edit > Create.
	See Also: "Local > ??????????????? in the help contents.

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**.

🐺 Net Service Name Wizard: W	elcome 🔀
/	To access an Oracle database, or other service, across the network you use a net service name. This wizard will help you create a net service name. Enter the name you want to use to access the database or service. It can be any name you choose.
	Net Service Name:
Cancel	< Back Next >>

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

😽 Net Service Name Wizard, p	age 2 of 5: Protocol
	To communicate with the database across a network, a network protocol is used. Select the protocol used for the database you want to access. <u>TCP/IP (Internet Protocol)</u> TCP/IP with SSL (Secure Internet Protocol) Named Pipes (Microsoft Networking) IPC (Local Database)
Cancel	🔇 Back Next >>

 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.

🐺 Net Service Name Wizard, pa	ige 3 of 5: Protocol Settings
	To communicate with the database using the TCP/IP protocol, the database computer's host name is required. Enter the TCP/IP host name for the computer where the database is located.
	Host Name: MDCStoreHost
	A TCP/IP port number is also required. The port number for Oracle databases is usually 1521. You should not normally need to specify a different port number.
	Port Number: 1521
Cancel	🔇 Back Next 📎

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**.

🐺 Net Service Name Wizard, p	age 4 of 5: Service	—
	To identify the database or service you name, for Oracle8i 8.1 or later, or syst 8.0 database versions. The service na database is normally its global databa	u must provide either its service tem identifer (SID), for Oracle8 ame for an Oracle8i or later ase name.
	(Oracle8i or later) Service Name:	
	C (Oracle8 or Previous) SID:	ORCL
	Optionally, you can choose if you wan server database connection. The defa decide.	t a shared, dedicated or pooled ault is to let the database
	Connection Type:	Database Default
Cancel	Back	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.

🐺 ODBC Data Source Administrator	×
User DSN System DSN File DSN Drivers Tracing Connect	ion Pooling About
System Data Sources:	
Name Driver	Add
	Remove
	Configure
An ODBC System data source stores information about the indicated data provider. A System data source is on this machine, including NT services.	t how to connect to visible to all users
OK Cancel App	bly Help

3. Click Add.

Create New Data Source			×
	Select a driver for which you wa Name Oracle in OraClient11g_home2	nt to set up a data Version 11.01.00.07	a source. Comp Oracl
	•		ł
	< Back	Finish	Cancel

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 is displayed.

Oracle ODBC Driver Configu	uration
Data Source Name Description	MDCSTORE_ORACLE
TNS Service Name	MDCStore Help
User ID	system Test Connection
Application Oracle Workarounds SQLServer Migration Enable Result Sets Image: Complex Comp	
Numeric Settings	Use Oracle NLS settings 🔹

- 6. 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.
- 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 Data Manager 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 Data Manager clients as described in this section.

Configuring the SQL Client



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.

👼 ODBC 🛛)ata Source Ad	ministrator	,			×
User DSN	System DSN	File DSN	Drivers	Tracing	Connection	Pooling About
System [Data Sources:					
Name	Driver					Add
						Remove
						Configure
	An ODBC Sy the indicated on this mach	stem data s data provid ine, includin	ource stor ler. A Sy: g NT serv	es informa stem data rices.	tion about ho source is visib	w to connect to ble to all users
	(OK		ancel	Apply	Help

4. Click Add.

Create New Data Source			×
	Select a driver for w	hich you want to se	t up a data source.
	Name	Version	Company
	SQL Native Client	2005.90.1399.00 6.01.7600.16385	Microsoft Corporat Microsoft Corporat
	<u>ا</u>		•
	< B)	ack Finish	Cancel

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

This wizard will help you create an ODBC data source that you can use	0			
connect to SQL Server.	This wizard will help you create an ODBC data source that you can use to connect to SQL Server.			
What name do you want to use to refer to the data source?				
Name: MDCStore				
How do you want to describe the data source?	How do you want to describe the data source?			
Description: MDCStore Database				
Which SQL Server do you want to connect to?	Which SQL Server do you want to connect to?			
Server: (local)	Server: (local)			
	_			
Finish Next > Cancel Help				

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].

Create a New Data Sourc	:e to SQL Server		
	How should SQL Server verify the authenticity of the login ID? With Windows NT authentication using the network login ID. With SQL Server authentication using a login ID and password		
	 entered by the user. To change the network library used to communicate with SQL Server, click Client Configuration. 		
	Connect to SQL Server to obtain default settings for the additional configuration options.		
Password:			
< Back Next > Cancel Help			

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

Create a New Data Sour	ce to SQL Server 💽
	Change the default database to: Default) Attach database filename:
	 Create temporary stored procedures for prepared SQL statements and drop the stored procedures: Only when you disconnect. When you disconnect and as appropriate while you are connected. Use ANSI quoted identifiers. Use ANSI nulls, paddings and warnings. Use the failover SQL Server if the primary SQL Server is not available.
	< Back Next > Cancel Help

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.

Create a New Data Sourc	e to SQL Server
	Change the language of SQL Server system messages to: (Default) Use strong encryption for data
	Perform translation for character data Use regional settings when outputting currency, numbers, dates and times.
	Save long running queries to the log file:
	C:\Users\ADMINU~1\AppData\Local\Temp\QUEF Browse
	Long query time (milliseconds): 30000
	Log ODBC driver statistics to the log file:
	C:\Users\ADMINU~1\AppData\Local\Temp\STAT Browse
	< Back Finish Cancel Help

- 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



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 23
- Information You Need on page 23
- Installing and Configuring the Oracle Client on page 24
- SQL Client Configuration on page 42

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.

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 *MetaXpressHigh-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.
- 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.

B MDCStore Database Installer	
Welcome to the MDCStore Database Setup Wizard	Installer Molecular
The installer will guide you through the steps required to set up the your computer.	he MDCStore Database Installer on
WARNING: This computer program is protected by copyright law Unauthorized duplication or distribution of this program, or any po or criminal penalties, and will be prosecuted to the maximum exte	v and international treaties. ortion of it, may result in severe civil ent possible under the law.
Cancel	< Back Next >

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

 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.

Setup MD	CSTORE S3		
Â	This will install the MDCStore 2.3 database schema on MS SQL Server, or upgrade an existing MDCStore 2.x schema on MS SQL Server or ORACLE.		
	To install the MDCStore 2.3 schema on ORACLE, you need to execute a script located in the 'Scripts' directory in the Installation folder on your machine or on the Installer Media.		
	If you upgrade an existing database, make sure you have created a database backup, before continuing with this process.		
	Once the database is upgraded, you may not be able to connect to the database using older versions of AcuityXpress and MetaXpress software (that may be compatible only with an older version of the database).		
	Do you want to continue?		
	Yes No		

8. Click Yes.

The Database Installation and Update dialog is displayed.

Database Installation and Update	— ו
What do you want to do:	
C Create a new database on this computer	
Computer\SQL Instance: IDVwIN7TEST01\SQL_SE -	
New database name: MDCStore	
C Create database containing demo data	
Create empty database	Lreate
C Hadata an anisting database	
Ve Opdate an existing database	
Update a database on this computer	
Database Version Computer\SQL Instance	
MDCStore 2.3.0 IDVWIN7TESTUT/SQLEXPR MDCStoreMX 2.3.0 IDVWIN7TEST01/SQLEXPR	
4 III >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	
C Update a database on the network	·
	Update

- 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 2014 Express



This appendix explains how to install Microsoft SQL Server 2014 Express 64-bit, 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 2014 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, SQL Server 2012, or SQL Server 2014 is already installed.

Topics in this appendix:

- Accessing the SQL Express Installer on page 57
- Enabling Named Pipes and TCP/IP Connections on page 57

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 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.

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 57.

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.

Contact Us

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Check our website for a current listing of worldwide distributors

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