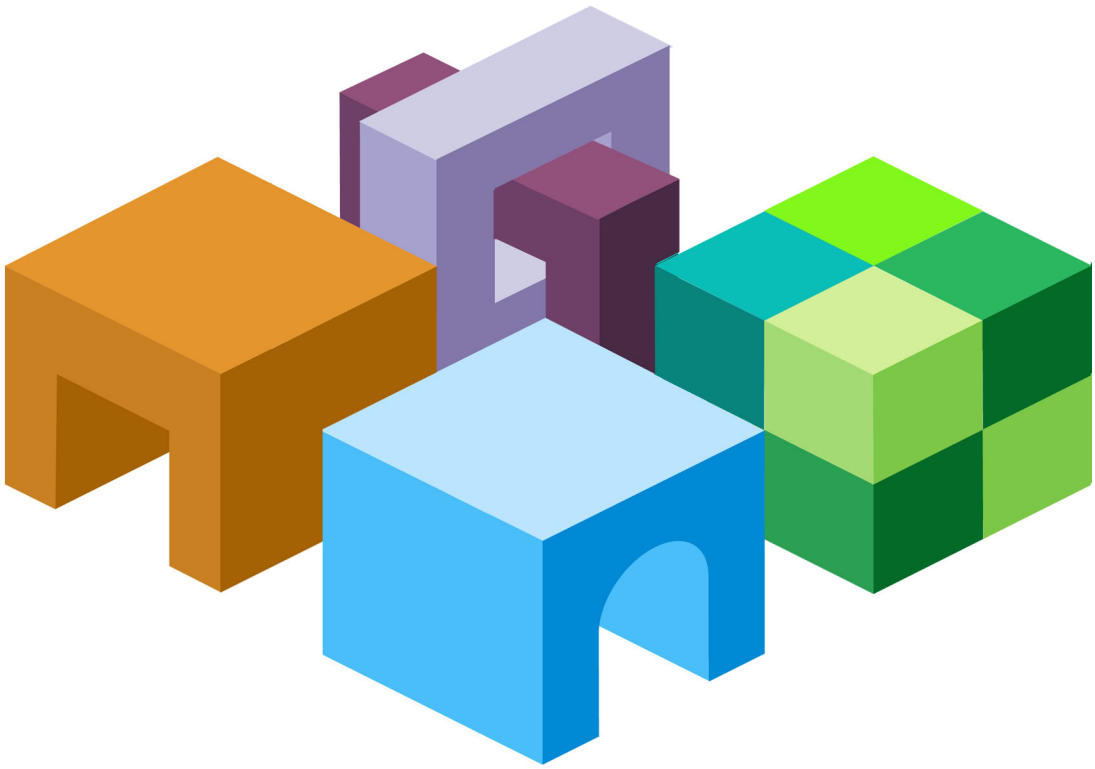

ORACLE® HYPERION DATA RELATIONSHIP MANAGEMENT, FUSION EDITION

RELEASE 11.1.1.2

N-TIER INSTALLATION GUIDE

ORACLE®
ENTERPRISE PERFORMANCE MANAGEMENT SYSTEM

Data Relationship Management N-tier Installation Guide, 11.1.1.2

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Contents

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1 System Architecture and Requirements

In This Chapter

Data Relationship Management N-tier Architecture

The Oracle Hyperion Data Relationship Management, Fusion Edition N-tier product is based on an application server (N-tier) architecture. The N-tier architecture enables the bulk of system processing to be performed on a centralized server and simplifies the client requirements for each end user.

Figure 1 gives a top-level overview of the Data Relationship Management N-tier architecture. The Data Relationship Management client is a Windows application that runs on the user's local computer. The client connects to the Data Relationship Management application server which can support multiple, simultaneous users. You can run multiple Data Relationship Management engines on one server or distributed across multiple servers. The Data Relationship Management database can be hosted on the application server computer or elsewhere.

Figure 1 Data Relationship Management N-tier Architecture

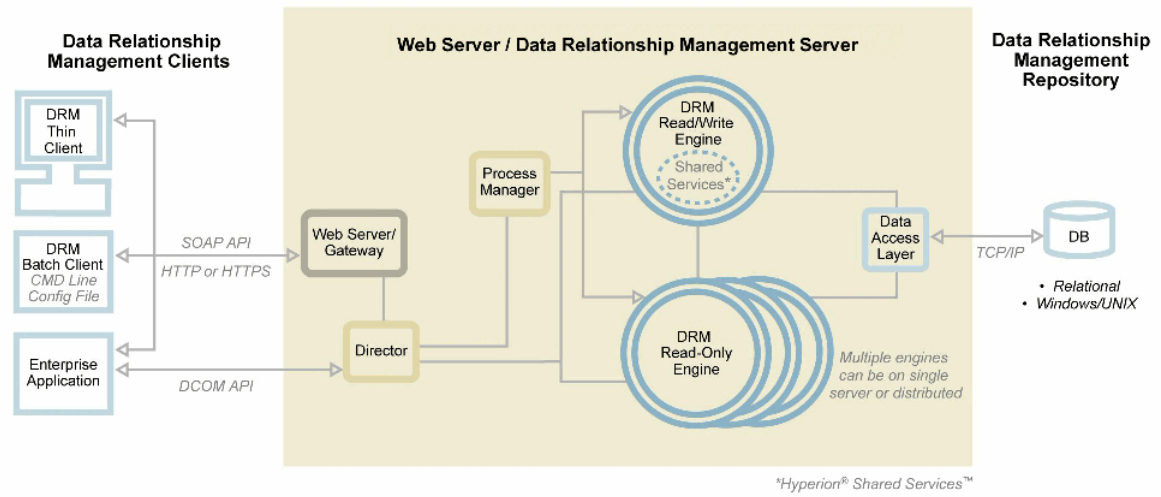
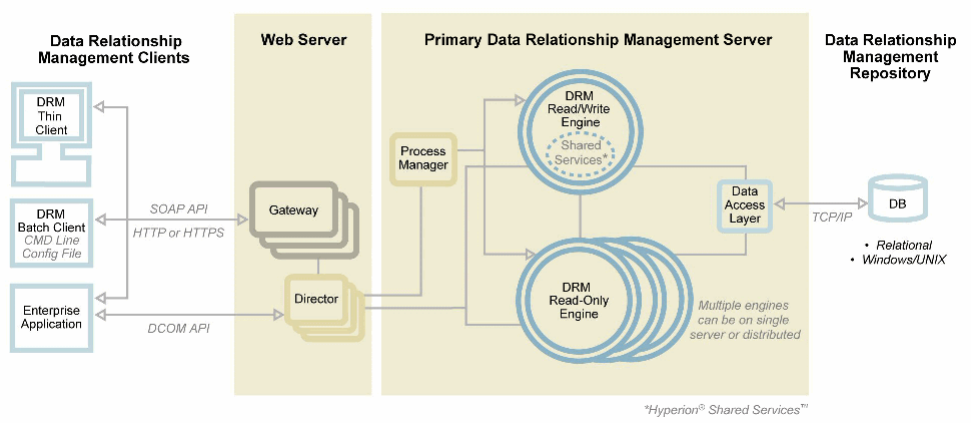


Figure 1 illustrates the simplest N-tier configuration where the Web server and application server functions are on one computer.

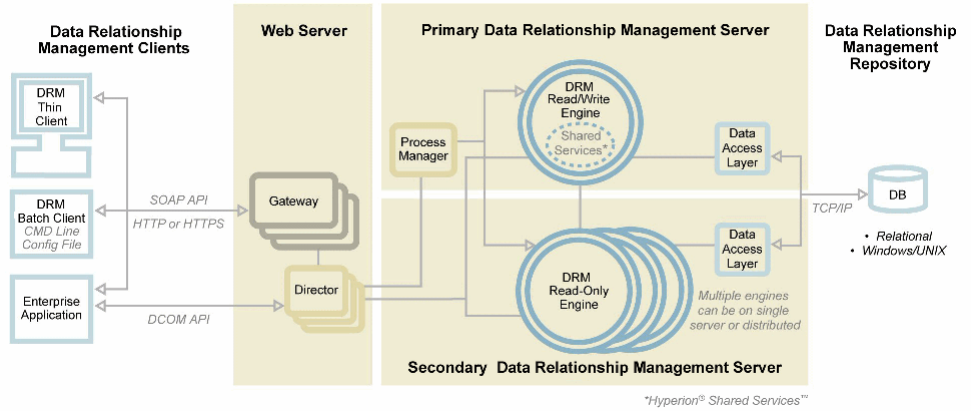
It is also possible to separate the Web server tier from the application server.

Figure 2 Separate Web and Application Server Configuration



For maximum scalability, you can distribute the Data Relationship Management engines across multiple application servers.

Figure 3 Multiple Application Server Configuration



Other configurations are also possible such as using multiple Web servers to provide increased throughput and redundancy. In that configuration, each Web server hosts identical components.

The majority of the installation steps described in this document apply to all N-tier configurations. Steps for certain configurations are noted.

System Requirements

The system requirements are intended as a general guideline and may not completely address all the technical needs necessary to accommodate the application when added to an existing environment.

Client

Table 1 Client Requirements

Component	Requirement
Processor	2 GHz minimum
RAM	1 GB minimum
Disk Space	20 MB minimum
Operating System	One of the following: ● Windows Vista ● Windows XP Professional SP2 ● Windows 2003 SP1
Application Software	● Microsoft .NET Framework 2.0* ● Data Relationship Management Client application

*Only required for the Data Relationship Management Batch Client security credentials utility.

Note:

All Data Relationship Management client users must have write access to the Windows/Temp directory.

Database Server

Table 2 Database Server Requirements

Component	Requirement
Processor	Dual 900 MHz minimum, Dual 2.0+ GHz preferred
RAM	2 GB minimum
Disk Space	2 GB minimum
Operating System	Determined by database platform
Application Software	One of the following: ● Oracle Database 9.2.0.5 – 11*g* (11.1.0.6.0)* ● Microsoft SQL Server 2005 SP1 ● Microsoft SQL Server 2000 SP3a

Component	Requirement
	Note: Run SQL Server in mixed authentication mode, not Windows-only mode.

*For all supported versions of Oracle: Includes support for RAC — Real Application Cluster and ASM. Includes support for SE, SE1, and EE. The Oracle OLE provider and Oracle Database server must be the same version.

Application Server

The Data Relationship Management N-tier system consists of the following components:

- Database Server
- Primary Application Server
- Secondary Application Server
- Web Server

For small implementations, the components can be configured on a single server. For scalability, the components can be split out to multiple servers.

Table 3 Application Server Requirements

Component	Requirement
Processor	Dual 2.0+ GHz minimum
RAM	4 GB minimum
Disk Space	100 MB minimum
Operating System	Windows Server 2003 SP1

Application Software	• Client drivers (DLLs) for one of the following databases:
	  ○ Oracle Database 9.2.0.5 – 11*g* (11.1.0.6.0)
	  ○ Microsoft SQL Server 2005 SP1
	  ○ Microsoft SQL Server 2000 SP3a
	If using a SQL Server database, the client software is not required as long as Microsoft Data Access Components (MDAC) 2.8 or later is installed.
	Note: Additional client software, such as Oracle SQL*Plus for Oracle, Query Analyzer for SQL Server, is optional. These provide tools to verify connectivity and can help with troubleshooting.
	• Data Relationship Management N-tier application
	• Internet Information Services (IIS) 6.0
	• Microsoft .NET Framework 2.0

Using External Authentication

Data Relationship Management provides the option to authenticate users internally within Data Relationship Management or externally via an authentication repository. For external authentication, the information is maintained in a central authentication directory, such as

Lightweight Directory Access Protocol (LDAP) Directory, Microsoft Active Directory, or Windows NT LAN Manager.

Data Relationship Management performs external authentication by interacting with the Common Security Services (CSS) component of Oracle's Hyperion® Shared Services.

For more information about common security, see the *Oracle Hyperion Enterprise Performance Management System Security Administration Guide*.

The method for authenticating Data Relationship Management users at login is configured by selecting one of the following options during installation:

- Authenticate users using internal Data Relationship Management tables only – users are authenticated based solely on the information stored in the Data Relationship Management database.
- Authenticate users using Active Directory, LDAP or NTLM only – users are authenticated based on information stored in an external authentication directory.
- Authenticate some users using internal Data Relationship Management and authenticate other users using Active Directory, LDAP or NTLM – users can be specified to authenticate by either internal or external authentication.

Note:

The authentication mode can be selected during installation and can be changed later using the Data Relationship Management Console.

When running Data Relationship Management in the Internal authentication mode, it is not necessary to have access to CSS.

When running in CSS or Mixed mode, access to CSS must be configured properly or the Data Relationship Management server will not start. In Mixed mode, the default engine user (mdm_system) may be an internal or external user. However, in CSS mode, the engine user must be an external user and exist in Shared Services. You can either provision mdm_system as a user in Shared Services and ensure that mdm_system is marked as an external user in Data Relationship Management; or change the engine user in Data Relationship Management Console from mdm_system to an admin user that exists in Shared Services.

When using Data Relationship Management with external authentication (CSS or Mixed mode) it is necessary for Data Relationship Management to have direct access to certain CSS components. The easiest way to achieve this is to first install Shared Services on the server where the Data Relationship Management application server will be installed. This is required to provide components needed for interoperability. Even if Shared Services is on another server, you must still run the installer on the Data Relationship Management server. It is not necessary to actually start Shared Services on the Data Relationship Management server.

Before attempting to start the Data Relationship Management server with external authentication (CSS or Mixed mode), ensure the following on the Common Security Services tab of the Data Relationship Management Console:

- The hostname and port number (default is 28080) are set correctly for the server where Shared Services is actually running.
- The file paths listed under System Path and Class Path are correct for the Data Relationship Management server. Note that *#root* represents the directory pointed to by the %HYPERION_HOME% environment variable and *#local* represents the directory where Data Relationship Management is installed (default is %HYPERION_HOME%\Master Data Management).

Note:

The default Data Relationship Management configuration includes file paths that are specific to the current release of Shared Services. If the Data Relationship Management release and Shared Services release being used are the same (for example, Data Relationship Management 11.1.1 and Shared Services 11.1.1) then no updates are required. However, when running Data Relationship Management with a previous release of Shared Services, it is necessary to update the file paths with the correct version number.

For example, if the Data Relationship Management configuration currently shows this file path:

- `#root/Hyperion/common/CSS/9.3.1/bin`

but an earlier version of Shared Services is being used and the actual path on the server is:

- `#root/common/CSS/9.3.0/bin`

then the paths in the configuration must be updated. In this example, all occurrences of 9.3.1 in the file paths must be replaced with 9.3.0. These updates can be done on the Common Security Services page of the Data Relationship Management Console. Remember to save the changes after completing the updates.

Caution!

If you change the classpath or systempath, you must reboot the computer.

Troubleshooting Tips

If the Data Relationship Management server fails to start when using either CSS or mixed authentication mode, try the following steps:

- If you change the classpath or systempath you must reboot the computer.
- Change the authentication mode to Internal and try starting the Data Relationship Management server again. If it starts successfully, then this confirms that the issue is related to CSS.
- Check the Event Log for error messages.
- For errors such as “Invalid classpath root,” rebooting the server typically resolves the issue.

- For errors such as “Unable to create a JVM…,” this indicates that CSS was not fully enabled during installation. Click Enable CSS on the Common Security Services page of the Data Relationship Management Console to resolve this issue and restart the service.
- For errors such as “Cannot configure the system. Please check the configuration,” ensure that the hostname field on the Common Security Services page of the Data Relationship Management Console contains the correct name of the server where CSS is actually running.

2 Installing Data Relationship Management

In This Chapter

Upgrading Data Relationship Management

Data Relationship Management supports upgrades from any previous 9.x release.

➤ To upgrade a database only (without affecting server components), do the following:

1. **Run `mdm_server_setup.exe` on a computer where the application server components are not installed such as the database server.**
2. **If the installer has been previously run on this machine, you must first run `mdm_server_setup.exe` and select the Remove option. This does not affect the existing database.**
3. **Run the installer again and select the Custom option. Select only the database and specify credentials for the database to be upgraded.**

Installation Prerequisites

Items to check:

- Intended host computers meet or exceed the minimum system requirements defined in "System Requirements" on page 8.
- Database server is installed and running on the database computer.
- Internet Information Services (IIS) is installed and operational on the Web server.
- Latest Data Relationship Management N-tier release package is available.
- User accounts that can perform these actions are available on the application server:
  - Edit registry settings
  - Read and write to the local file system

- Launch processes
- Run as a service

- When using Data Relationship Management with external authentication, you must first install Shared Services on the server where the Data Relationship Management application server will be installed. This is required to provide components needed for interoperability. Even if Shared Services is hosted on another server, you must still run the installer on the Data Relationship Management server. It is not necessary to actually start Shared Services on the Data Relationship Management server.
- When you manually execute the database scripts, the MDM_DB user is created in the RDBMS (if it does not already exist). For all database systems, you can use the Data Relationship Management Console to change the default user from MDM_DB to a different user.

Oracle Database Prerequisites

- If you are using an Oracle RAC database system, you must create the tablespaces with the appropriate RDBMS software prior to installation.
- Whether the scripts are run automatically or manually, the user must be logged in as SYSTEM. When you manually execute the database scripts, the MDM_DB user is created in the RDBMS (if it does not already exist). The MDM_DB user is assigned a default tablespace of MDM_DATA and must have access rights to the following items:
  - Default tablespace (usually MDM_Data)
  - UNLIMITED TABLESPACE
  - CONNECT
  - CREATE ANY SEQUENCE
  - CREATE USER
  - ALTER USER
- When you manually execute the database scripts, the user is logged in as the schema owner which, has a default tablespace of MDM_DATA. This user must have access rights to the following items:
  - Default tablespace (usually MDM_Data) — this can be done after the install if the tablespaces were not created.
  - UNLIMITED TABLESPACE
  - DBA
  - CONNECT
  - CREATE ANY SEQUENCE
  - CREATE USER
  - ALTER USER

Note:

You can change the schema owner name during the installation process.

SQL Server Database Prerequisites

- If you are using a SQL Server Cluster database system, you must create the database with the appropriate RDBMS software prior to installation.
- If MDM_DB is created manually prior to the installation, it is important to make this user database owner of the Data Relationship Management database.

About the Hyperion Home Directory

The Hyperion home directory location is defined during the first product installation on the computer. Subsequent installations on the computer use the previously defined location.

The Hyperion home directory location is defined in the system environment variable called *HYPERION_HOME*. The default location is `C:\Hyperion`. The Hyperion home directory location is referred to as *HYPERION_HOME* throughout this document.

Installing Server Components

The server installation program allows you to install Data Relationship Management database server, primary and secondary application servers, and Web server components.

➤ To install Data Relationship Management server components:

1. Navigate to the directory where you downloaded the installation program and double-click **`mdm_server_setup.exe`**.
2. On the **Welcome** dialog box, read the license agreement and click **Next**.
3. Click **Next** to accept the default installation path to the Hyperion home folder. If you want to change the installation location, click **Change**, navigate to a directory, and click **Next**.

Note:

When multiple Hyperion products are installed on one computer, common internal and third-party components used by the products are installed in the Hyperion home directory. The Hyperion home directory name cannot contain spaces. If the installation program detects an existing Hyperion home directory, the Directory Name field and Browse button are not selectable.

4. On the **Setup Type** dialog box, select the type of installation to perform and click **Next**:
   - **Complete** — installs the database server, application server, and Web server components.
   - **Custom** — allows you to select the server components to install. Select this option when installing a secondary application server.

Note:

The Custom installation provides you with a subset of the following screens depending on the components that you choose to install. For the basic configuration as shown in Figure 1 on page 7, select Complete.

5 **Do one of the following:**

- If you selected **Complete** in step 4, skip to the next step.
- If you selected **Custom** in step 4, select the components to install, for example Secondary Application Server, and click **Next**.

6 **(For Database Installation Only)**

On the User Authentication Method dialog box, select the method by which Data Relationship Management will authenticate users and click Next.

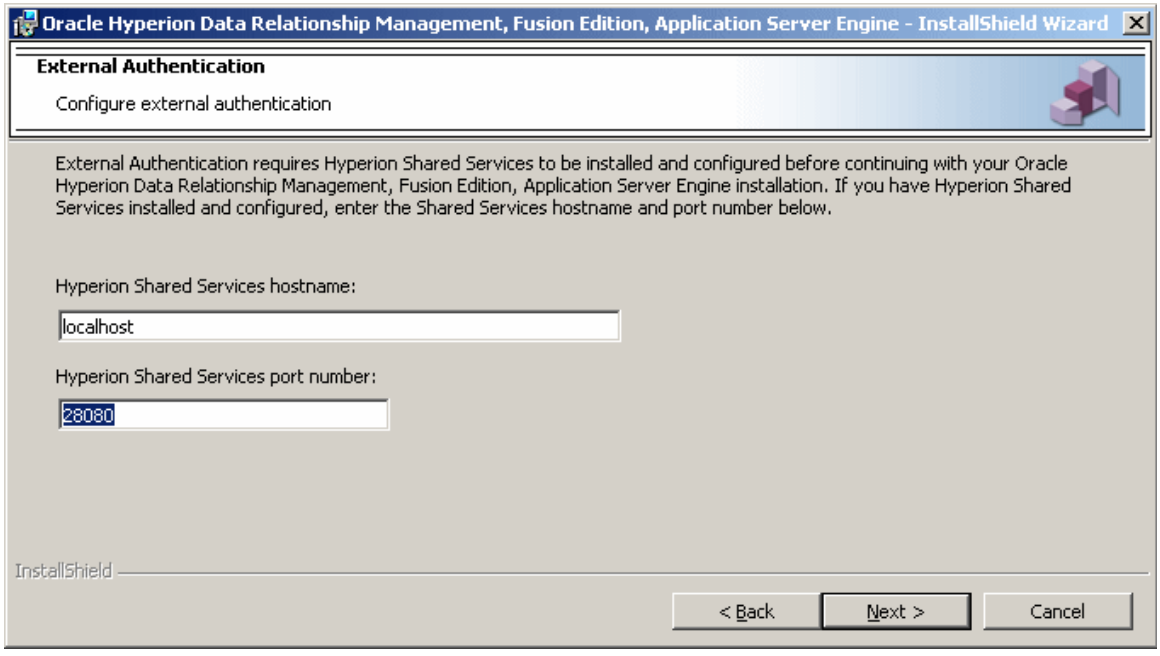
Note:

For information on authentication methods, see "Using External Authentication" on page 10.

7 **(For Database Installation Only)**

Do one of the following:

- If you selected **Authenticate users using internal Oracle Hyperion Data Relationship Management tables only** in step 6, skip to the next step.
- If you did not select internal tables in step 6, on the **External Authentication** dialog box enter the name of the computer running Shared Services and the Shared Services port number 28080 unless directed to a different port by the Shared Services Administrator and click **Next**.



8 **(For Database Installation Only)**

On the Database Creation dialog box, select whether to create the database automatically or to save the database scripts to run manually, and click Next.

Note:

If the default installation location is used, database scripts are saved to: `C:\HYPERION_HOME\Master Data Management\Database`

Caution!

If using a clustered database environment, you need to select the Save database scripts to disk option. This allows the database to be created appropriately in the clustered environment and then populated by running the Data Relationship Management scripts manually. When installing the Data Relationship Management database, the installer attempts to create a new Data Relationship Management database if the one specified does not exist. When creating the database, the installer creates the data files using an explicit file path. Since this is not compatible with how data files are managed in clustered database environments (such as Oracle Real Application Clusters), only the Save database scripts to disk option should be used.

For information on manually running database scripts, see "Manually Running Database Scripts" on page 25.

9 On the **Database Type** dialog box, select the type of database to use and click **Next**.

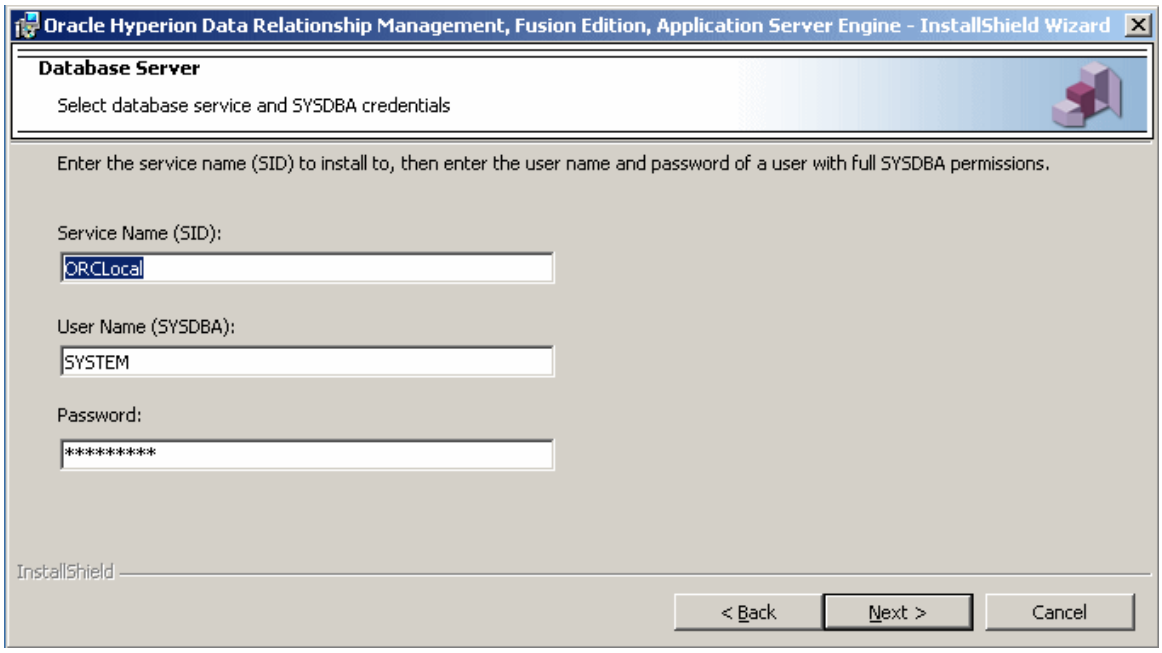
10 Do one of the following:

- If you selected Oracle, go to "Installing on Oracle" on page 19 to continue the installation.
- If you selected Microsoft SQL Server, go to "Installing on Microsoft SQL Server" on page 22 to continue the installation.

Installing on Oracle

➤ To install Data Relationship Management server components on Oracle:

1 On the Database Server dialog box, enter the service name (SID) hosting the database you want to use, and enter the username and password for a user with SYSTEM-level permissions and then click **Next**.



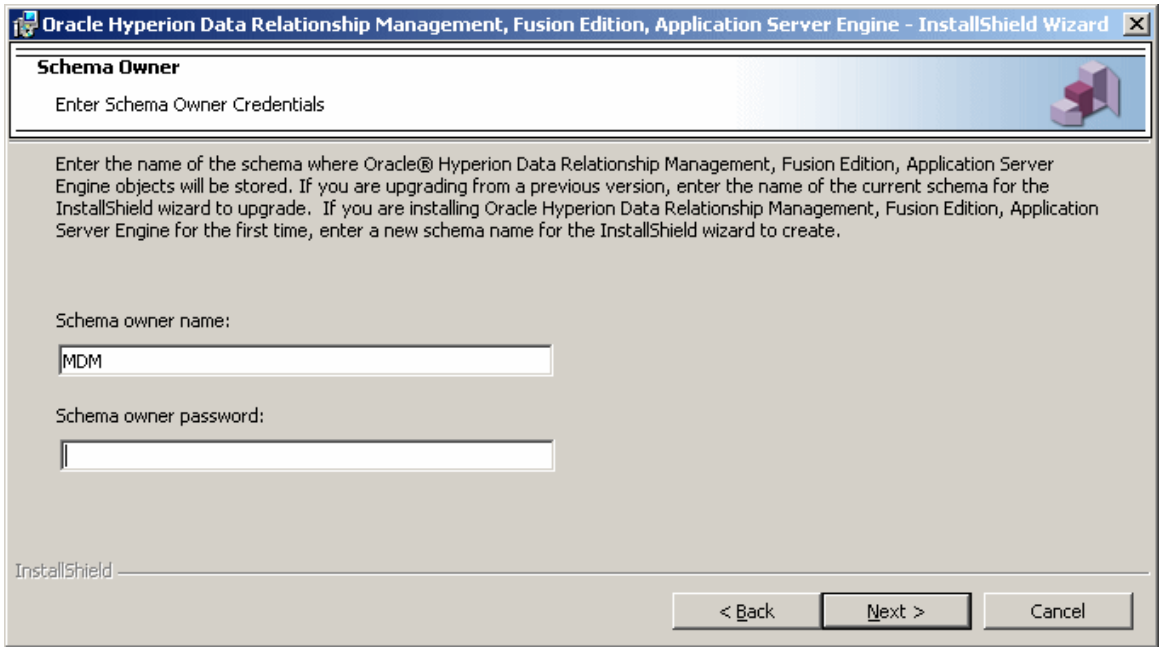
2 Enter the name of the schema and the schema password, and then click **Next**.

Caution!

Schema names cannot begin with a number.

Note:

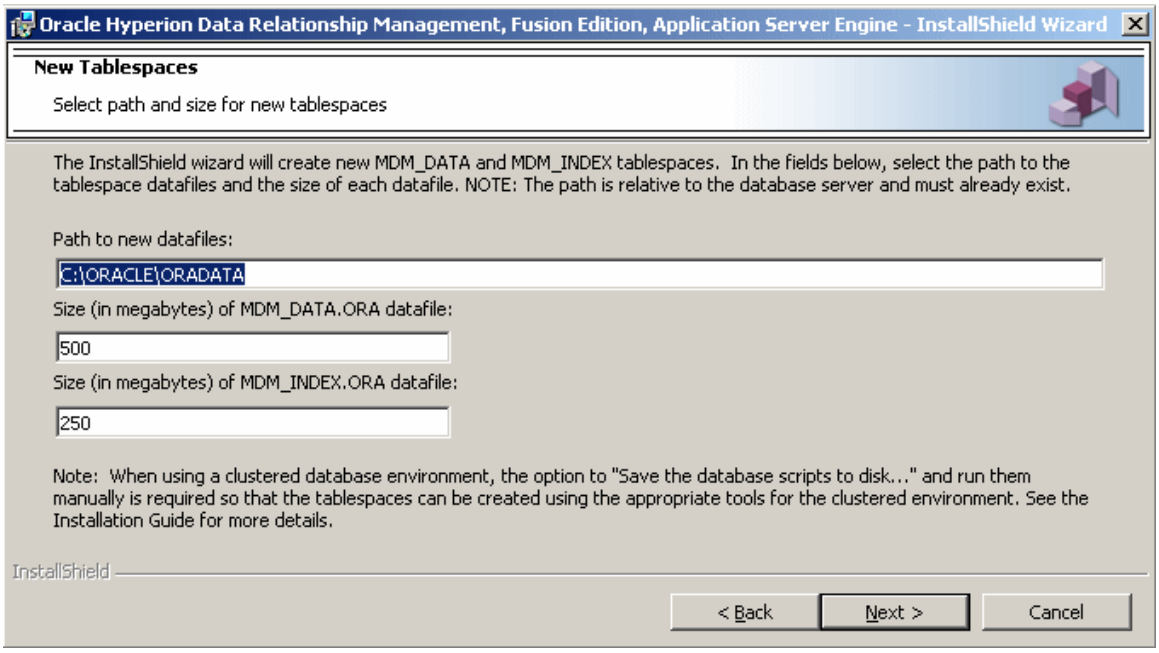
If you are upgrading from a previous version, enter the name of the schema to upgrade.



3 Enter the path to the tablespace files (default tablespace names are MDM_DATA.ORA and MDM_INDEX.ORA) and the size in megabytes for the data and index tablespaces and then click **Next**.

Note:

The path is relative to the database server and must exist.



4 On the **Primary Application Server** dialog box, specify the name of the machine where the primary application server will run and click **Next**.

Note:

This dialog box displays only for Custom installations.

Caution!

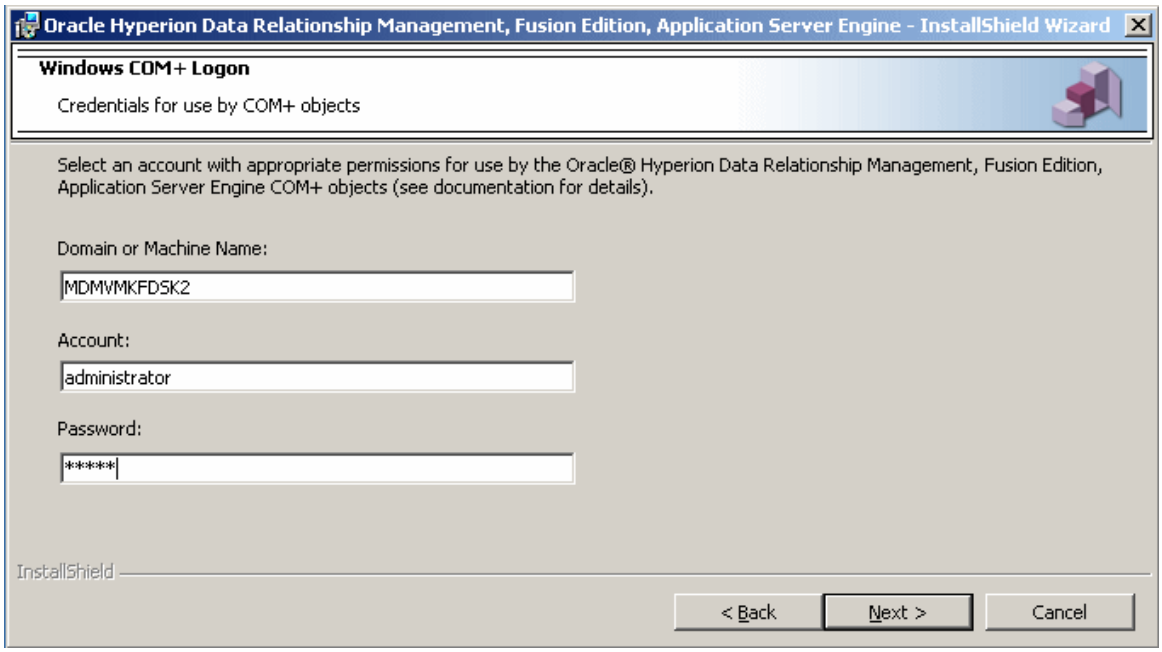
In order for the secondary server to communicate with the primary server and vice versa, the same user account must be specified on both servers. The user account can be a domain account that has administrator access on both servers or a local machine account. If using a local machine account, the username and password should be the same for both machines.

5 On the **Windows COM+ Logon** dialog box, enter the domain or machine name (for example, hyperionad) and the account name and password for a user who has rights to perform the following actions:

- Edit registry settings
- Read and write to the local file system
- Launch processes
- Run as a service

Note:

When installing a secondary application server, if the user accounts are not synchronized, an "Access is denied" error may display when Data Relationship Management attempts to use the secondary server. This can be resolved by editing the DCOM properties of the MDM Application Object and changing the identity from "The Launching User" to "This User" and specifying the same user account as on the primary server.



6 Click **Next**.

7 Click **Next** to accept the default directory for Web components, or click **Change** to select an installation directory other than the default, and click **Next**.

8 Click **Install**.

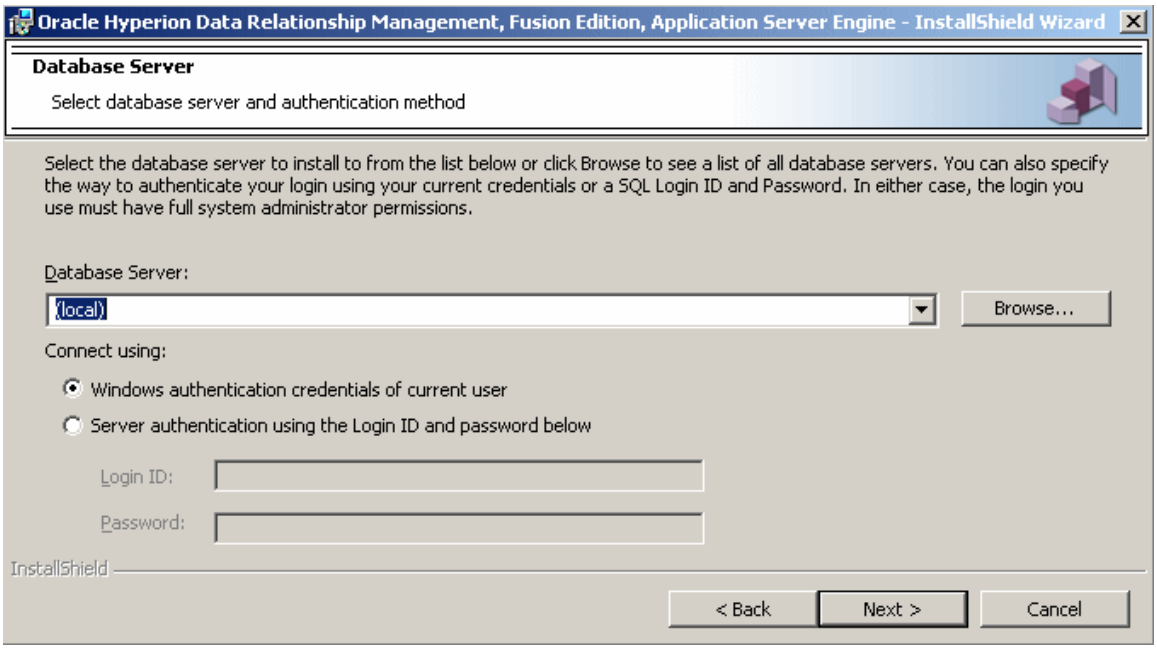
Note:

You can launch the Data Relationship Management Console after the install completes.

Installing on Microsoft SQL Server

➤ To install Data Relationship Management server components on Microsoft SQL Server:

1 From the Database Server drop-down list, select the database server on which to install the database component, or click **Browse** to select an available server.



2 **Select the connection method to use and click Next.**

Note:

If you select server authentication, you must enter the login ID and password for a system administrator on the SQL server.

3 **Enter a name for the Data Relationship Management database and click Next.**

This step creates the mdm_db user with the default password of "Welcome!".

Note:

If you are upgrading from a previous version, enter the database to upgrade.

4 **Do one of the following:**

- If you are upgrading an existing database, skip to the next step.
- If you are creating a database, enter the path and name of the database file, the path and name of the log file, the starting size for the SQL log file, and a starting size for the SQL database file.

Caution!

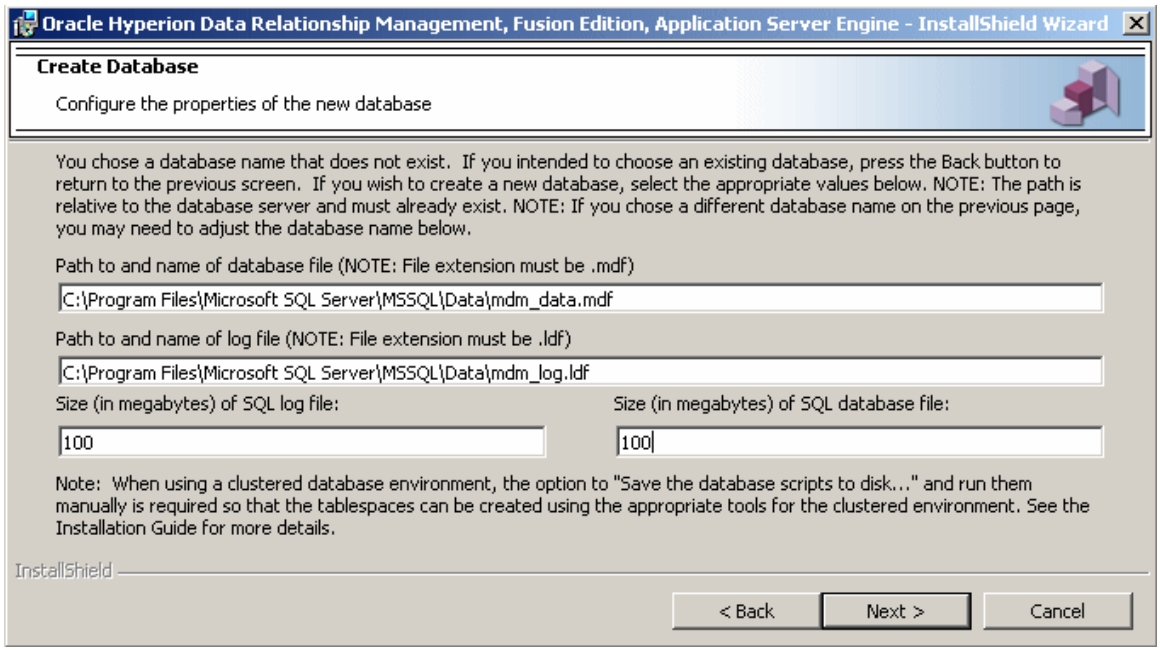
Database names cannot begin with a number.

Note:

The paths for the database and the log files are relative to the database server and not to the machine on which you are running the installer. The paths must exist or the directories are not created.

Caution!

If using a clustered database environment, you need to save the database scripts to disk and manually install them. For more information, see step 8 on page 18.



5 **Do one of the following:**

- If you are installing a secondary application server, specify the name of the machine where the primary application server will run and click **Next**.

  Caution!

  In order for the secondary server to communicate with the primary server and vice versa, the same user account must be specified on both servers. The user account can be a domain account that has administrator access on both servers or a local machine account. If using a local machine account, the username and password should be the same for both machines.

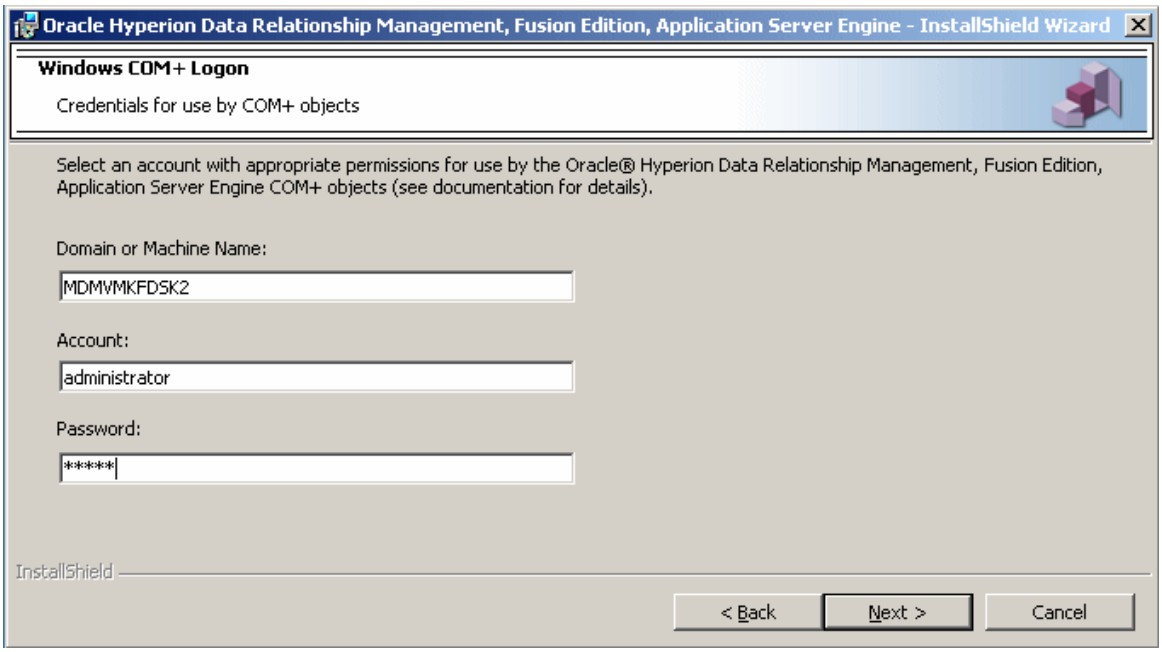
- If you are installing a primary application server, skip to the next step.

6 **On the Windows COM+ Logon dialog box, enter the domain or machine name (for example, hyperionad) and the account name and password for a user who has rights to perform the following actions:**

- Edit registry settings
- Read and write to the local file system
- Launch processes
- Run as a service

Note:

When installing a secondary application server, if the user accounts are not synchronized, an "Access is denied" error may display when Data Relationship Management attempts to use the secondary server. This can be resolved by editing the DCOM properties of the MDM Application Object and changing the identity from "The Launching User" to "This User" and specifying the same user account as on the primary server.



7 Click **Next**.

8 Click **Next** to accept the default installation directory for Web components, or click **Change** to select an installation location and then click **Next**.

9 Click **Install**.

Note:

You can launch the Data Relationship Management Console after the install completes.

Manually Running Database Scripts

Based on your local security procedures, creating a new database may require a level of access that is not available to the user installing Data Relationship Management. Thus, during the installation, there is an option to save the database scripts to disk rather than running them automatically. The scripts can then be run separately by the appropriate database administrator.

When the installer runs the database scripts automatically, the user is prompted for database connection information. The installer connects to the database server using the supplied credentials and determines whether an existing database needs to be upgraded or a new database created.

Alternatively, when you save the database scripts to disk, no connection information is needed. In this case, the installer does not attempt to verify whether the database already exists and saves both the upgrade scripts and the scripts for creating a new database. The installer does prompt for information relevant to upgrading and creating the database. However, this information is only used to populate the scripts before they are saved.

Manually Running Oracle Scripts

➤ To create a new Data Relationship Management database using Oracle:

1 **Locate the database creation scripts in the Data Relationship Management installation directory.**

The default location is `C:\HYPERION_HOME\Master Data Management\Database`.

2 **Log into the database server as SYSTEM.**

3 **Edit the script `Oracle Build Tablespaces.sql` and replace the string [SCHEMA_OWNER_PW] with the actual schema owner password.**

Note:

If tablespaces already exist or are going to be created manually by a database administrator, skip to step 5.

Note:

If the tablespaces are named different from MDM_Data and MDM_Index, then `Oracle Build.sql` must be edited to reflect the different names.

4 **Execute this script.**

5 **Log into the database server as the newly created schema owner.**

6 **Run the following scripts in this order:**

- `Oracle Build.sql`
- `Oracle Build Global Temp Tables.sql`
- `Oracle Build Sequences.sql`
- `Oracle Build Stored Procs.sql`
- `Oracle MDM Role Setup.sql`
- `Oracle MDM Init.sql`
- `Oracle Import Table Section Init.sql`
- `Oracle Demote Schema Owner.sql`
- `Oracle Set AuthMethod.sql`

7 **After all scripts have been successfully run, open the Data Relationship Management Console.**

8 **Select Database Settings.**

9 **Enter the appropriate value in the Service Name field and click Save Changes.**

This completes the manual creation of the Data Relationship Management database.

➤ To upgrade an existing Data Relationship Management database from a previous release using Oracle:

1 **Locate the database upgrade scripts in the Data Relationship Management installation directory.**

The default location is `C:\HYPERION_HOME\Master Data Management\Database \Oracle Update Scripts`.

2 **Log into the database server as the schema owner.**

3 **Execute each script to upgrade from the previously installed Data Relationship Management release to the current release.**

Also, if the Data Relationship Management authentication method was changed since the previous installation, run the script `Oracle Set AuthMethod.sql` to update the database accordingly. The authentication method can also be changed via the Data Relationship Management Console by changing the method on the System Preferences tab.

This completes the manual upgrade of the Data Relationship Management database.

Manually Running SQL Server Scripts

➤ To create a new Data Relationship Management database using SQL Server:

1 **Locate the database creation scripts in the Data Relationship Management installation directory.**

The default location is `C:\HYPERION_HOME\Master Data Management\Database`

2 **Log into the database server with database administrator rights.**

3 **Edit the script `SQL Server Create Database.sql`, update the directory paths for the database files if desired, then execute the script.**

4 **Execute the script `SQL Server Init.sql`.**

Note:

The `SQL Server Init.sql` script attempts to create a database user named MDM_DB with password “Welcome!”. This step may fail if the password policy in the current environment requires longer or more complex passwords. If this step fails, either edit the script and change the password appropriately or update the password requirements on the local system.

5 **Log into the database server as the newly created user mdm_db (default password "Welcome!") and execute the following scripts in this order:**

- `SQL Server Build.sql`
- `SQL Server Build Stored Procs.sql`
- `SQL Server MDM Role Setup.sql`
- `SQL Server MDM Init.sql`
- `SQL Server Import Table Section Init.sql`

- `SQL Server Set AuthMethod.sql`

6 **After all scripts have been successfully run, open the Data Relationship Management Console.**

7 **Select Database Settings.**

8 **Enter the appropriate value in the database Server Name field and click Save Changes.**

This completes the manual creation of the Data Relationship Management database.

➤ To upgrade an existing Data Relationship Management database from a previous release using SQL Server:

1 **Locate the database upgrade scripts in the Data Relationship Management installation directory.**

The default location is `C:\HYPERION_HOME\Master Data Management\Database\SQL Server Update Scripts`.

2 **Log into the database server as the mdm_db user.**

3 **Execute each script to upgrade from the previously installed Data Relationship Management release to the current release.**

For example, if release 9.3 was previously installed, then the following scripts should be run in this order:

- `updatesV9.3.1.sql`
- `updatesV9.3.2.sql`
- `updatesV11.1.1.sql`

Also, if the Data Relationship Management authentication method was changed since the previous installation, run the script `SQL Server Set AuthMethod.sql` to update the database accordingly. The authentication method can also be changed via the Data Relationship Management Console by changing the method on the System Preferences tab.

This completes the manual upgrade of the Data Relationship Management database.

Installing Client Components

The Data Relationship Management client installation installs the client application, the Data Relationship Management Batch Client command-line utility used to run processes in batch mode, and the documentation. See the *Oracle Hyperion Data Relationship Management N-tier User's Guide*.

➤ To install the Data Relationship Management client components:

1 **Navigate to the directory where you downloaded the installation program and double-click `mdm_client_setup.exe`.**

2 **On the Welcome dialog box, read the license agreement and click Next.**

3 **Click Next to accept the default installation directory for Data Relationship Management files, or click Change, select an installation location and then click Next.**

4 On the Setup Type dialog box, select the type of installation to perform and click **Next**:

- **Complete**— installs the database server, application server, and Web server components
- **Custom**— allows you to select the server components to install

Note:

Client components include the client application, Data Relationship Management Batch Client application, and the documentation.

5 Do one of the following:

- If you selected **Complete**, skip to the next step.
- If you selected **Custom**, on the **Custom Setup** dialog box select the features to install and click **Next**.

6 Click **Install**.

7 Click **Finish**.

Note:

You can select to launch the Data Relationship Management client after the install completes.

3 Configuring Data Relationship Management

In This Chapter

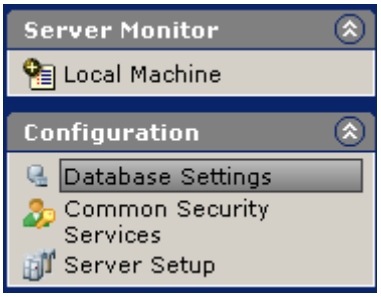
The Data Relationship Management Console is an application server configuration and monitoring tool.

When you install the Data Relationship Management application server component, the Data Relationship Management Console is installed to the server. You can launch the console at the end of the installation program.

Starting the Data Relationship Management Console

➤ To open the Data Relationship Management Console, select **Start**, then **Programs**, then **Oracle EPM System**, then **Data Relationship Management**, then **Data Relationship Management Console**.

The Data Relationship Management Console includes navigation controls in the left side of the user interface.



In the Server Monitor section, you can perform the following actions for the servers listed:

- Start, stop, and view Data Relationship Management Service status

- View server information including operating system, COM+ components, and out of process application information
- View engine status including user sessions, versions, and event queues
- View the event log for Data Relationship Management events

In the Configuration section, you can configure servers, database settings, and Common Security Services (CSS) and import registry settings

Note:

Import Registry Settings is only available if you are upgrading from a version of Master Data Management prior to 9.0.

Monitoring Servers

The Server Monitor panel is accessed by selecting a server from the list in the left side of the user interface. The Server Monitor has the following tabs:

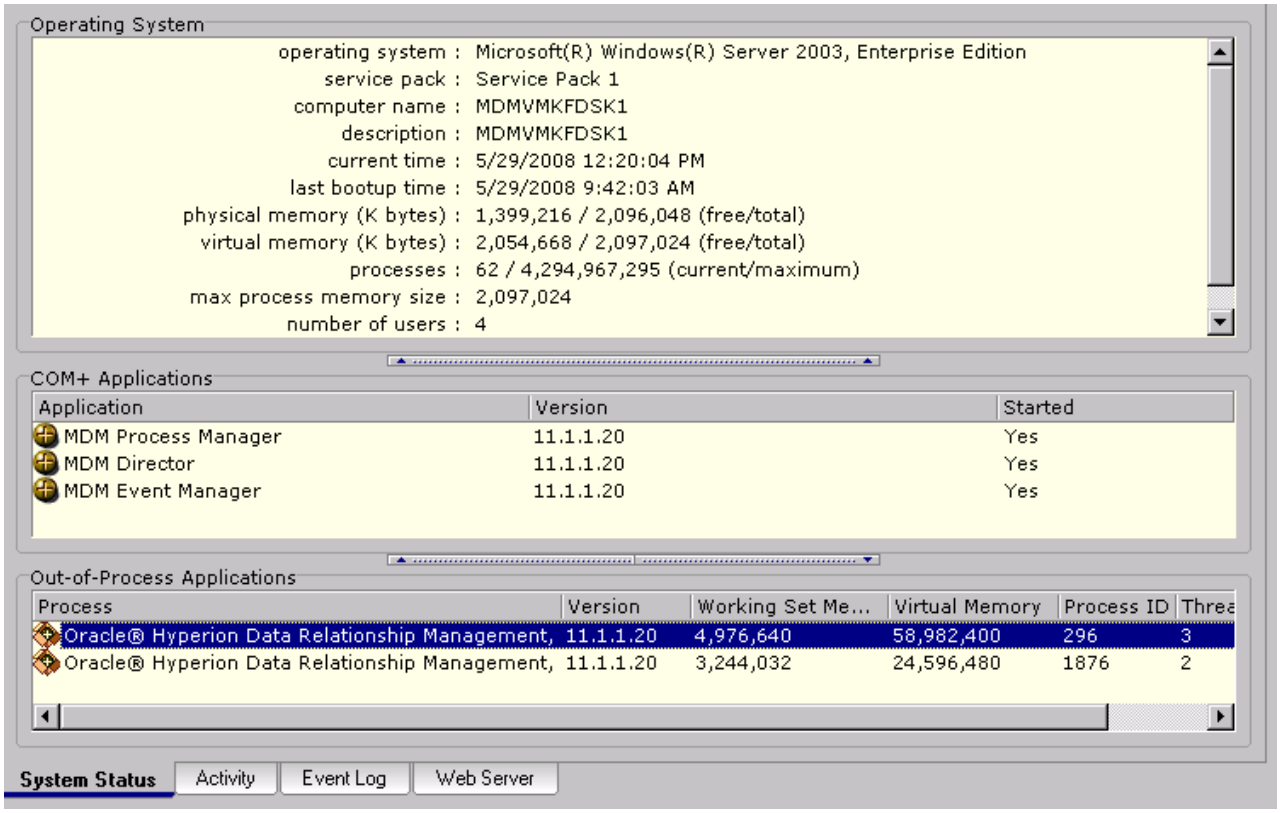
- "System Status Tab" on page 32
- "Activity Tab" on page 33
- "Event Log Tab" on page 34
- "Web Server Tab" on page 35

System Status Tab

The System Status tab provides information on the operating system, including total working set memory, Data Relationship Management COM+ applications with version and status, as well as the out of process Data Relationship Management applications with version and working set memory.

Note:

Some information is not available unless the service is running.



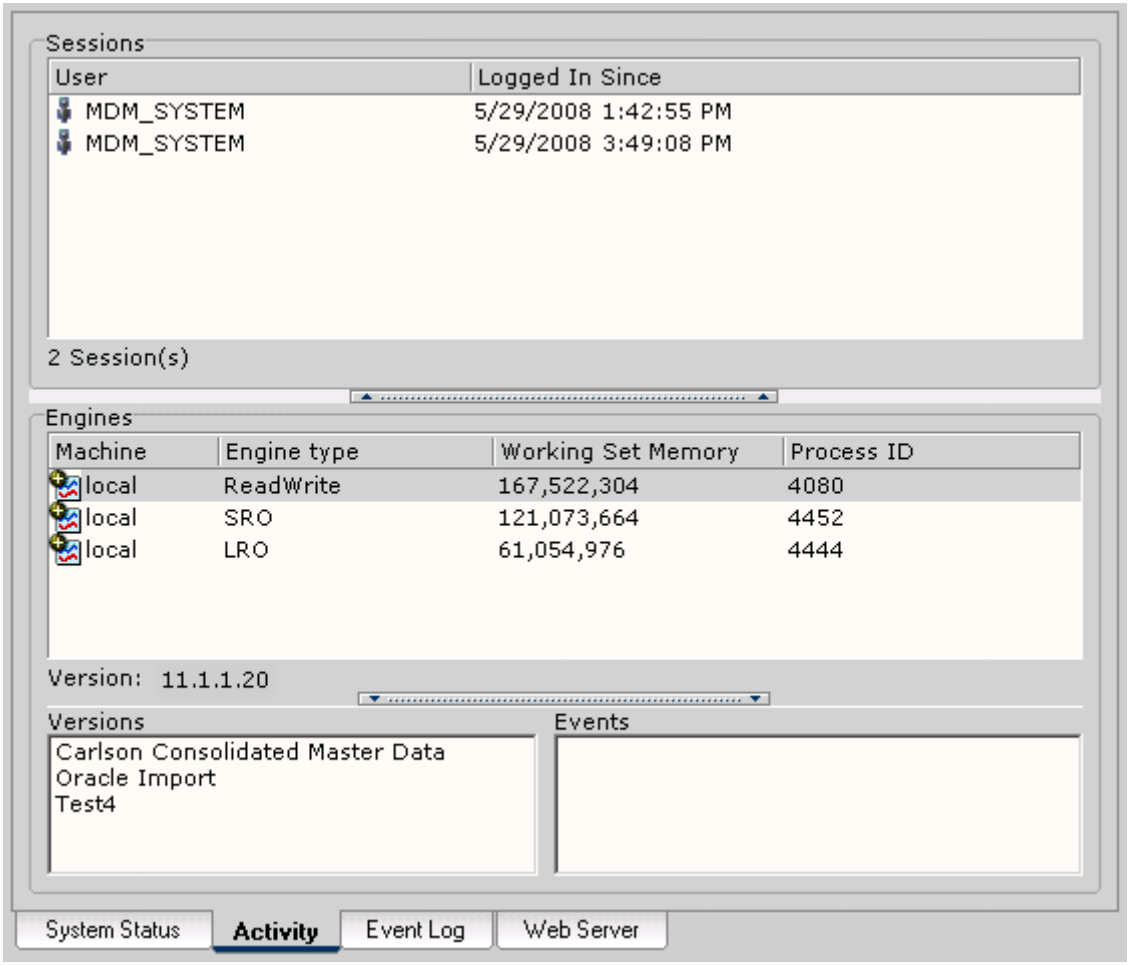
Note:

The COM+ applications are started and stopped as needed, so it is not unusual for the Started status to display No.

Activity Tab

The Activity tab provides information on:

- User sessions
- Engines, including engine type, working set memory used, and process ID
- Loaded versions and items in the event queue for the selected engine



Event Log Tab

The Event Log tab provides a filtered version of the application event log which includes Data Relationship Management events only. The top section shows the events in a grid format with type, source, and time. The bottom window shows the details for the selected event. You can save or copy the details for each event.

Events that occur after the console is started are displayed by default.

➤ To reset the starting time to the current time, click **Clear**.

➤ To view events from the past seven days, select **Show History**.

Note:

For events from more than seven days ago, use the Windows event viewer.

Web Server Tab

If the Web server exists on the computer with the application server, a Web Server tab is also displayed. The Web Server tab can be used to troubleshoot connection problems.

- To test the N-tier virtual directory, it attempts to connect to the following URL:

  `http://localhost/mdm_ntier/mdm_console_test.html`

- To test the access to the Data Relationship Management N-tier Gateway Web services, it attempts to connect to the following URL:

  `http://localhost/mdm_ntier/VersionMgr.asmx`

where *localhost* is the Web server name.

Configuring Database Settings

The Database Settings section allows you to configure the information that defines the connection to the database and the logins needed for startup.

Multiple connections can be defined but only the one marked Default Connection is used. This allows you to have multiple connections for testing and easily switch between them by updating the default designation.

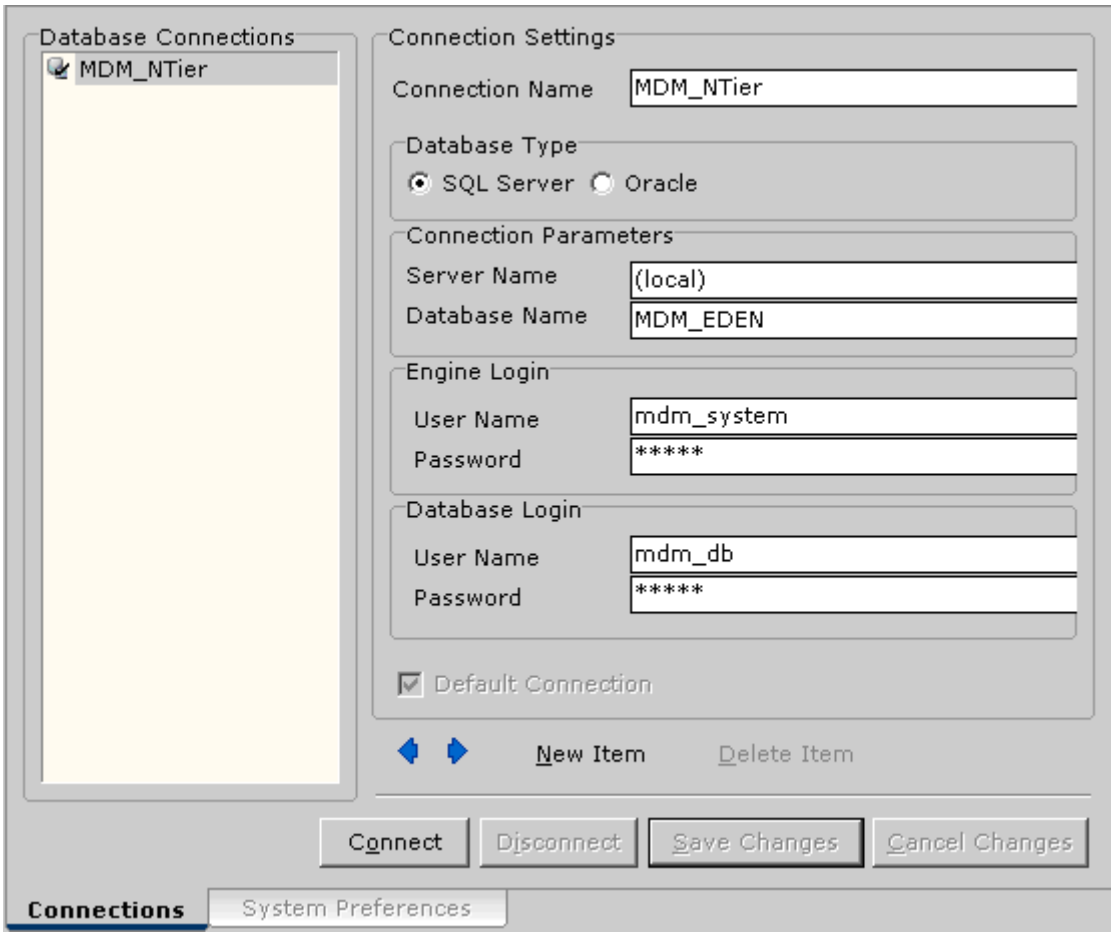
After a connection is defined, you can use it to connect to a database. After connecting, the System Preferences tab is available. This tab allows you to edit some system preferences before starting the server. This allows the user to complete the configuration before starting the service.

Database Connections has the following tabs:

- "Connections Tab" on page 35
- "System Preferences Tab" on page 36

Connections Tab

From the Connections tab you can create, edit, and delete connections.



Connection information includes connection name, database type, connection parameters, engine login, database login, and default connection. The database type determines the connection parameters.

The Engine Login is a Data Relationship Management user that is used for the process manager connections. It is also used in the Process Manager tab of the Engine Monitor to gather process level information.

The database login specifies the credentials used to access the Data Relationship Management database. The user must also exist in the Username table of the Data Relationship Management database. You can change the default login (MDM_DB) in the Data Relationship Management Console. However, the Username table must also be manually updated to reflect the new user.

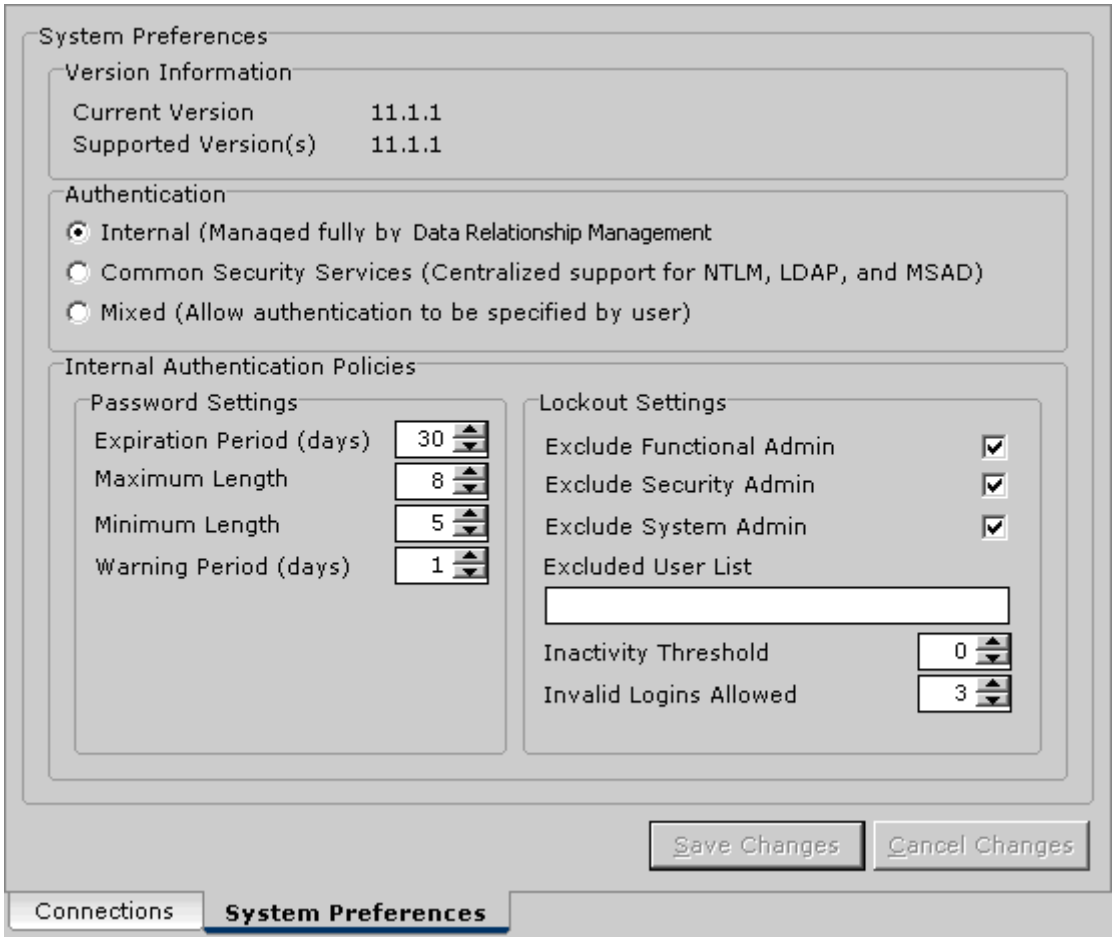
System Preferences Tab

The System Preferences tab provides access to some system preferences so you can configure them before starting the service.

In the system preferences panel, you can select the authentication type, modify internal authentication policies and set lockout parameters for users.

➤ To open the system preferences panel:

1. From the Connections tab, select a database connection and click **Connect**.
2. Enter the password for the specified database user.
3. Select the **System Preferences** tab.



Configuring Common Security Services

The main parameters to be configured in the Common Security Services are the host name and the port for Oracle's Hyperion® Shared Services which contains the Common Security Services to be used for external authentication.

Note:

See "Using External Authentication" on page 10 for more information.

You can use the Alternate URL and Use Alternate option to point to a backup CSS server.

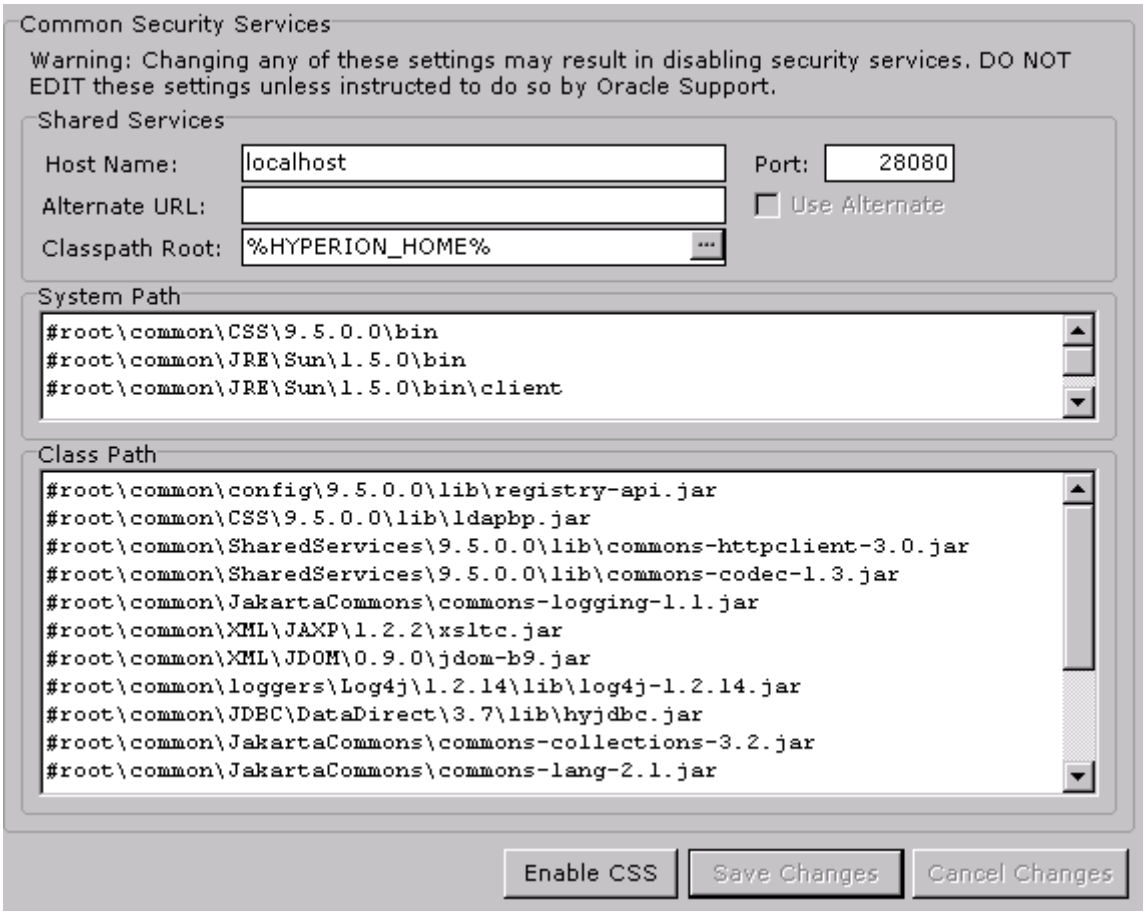
The Classpath Root, System Path, and Class Path sections should not be modified without a full understanding of the impact.

Caution!

If you change the classpath or systempath, you must reboot the computer.

Note:

After installing Data Relationship Management and attempting to start the service with Common Security Services enabled, you may get an error message in the Event Log such as "unable to create a JVM...". This indicates that CSS was not fully enabled during installation. Click the Enable CSS button to resolve this issue and restart the service.



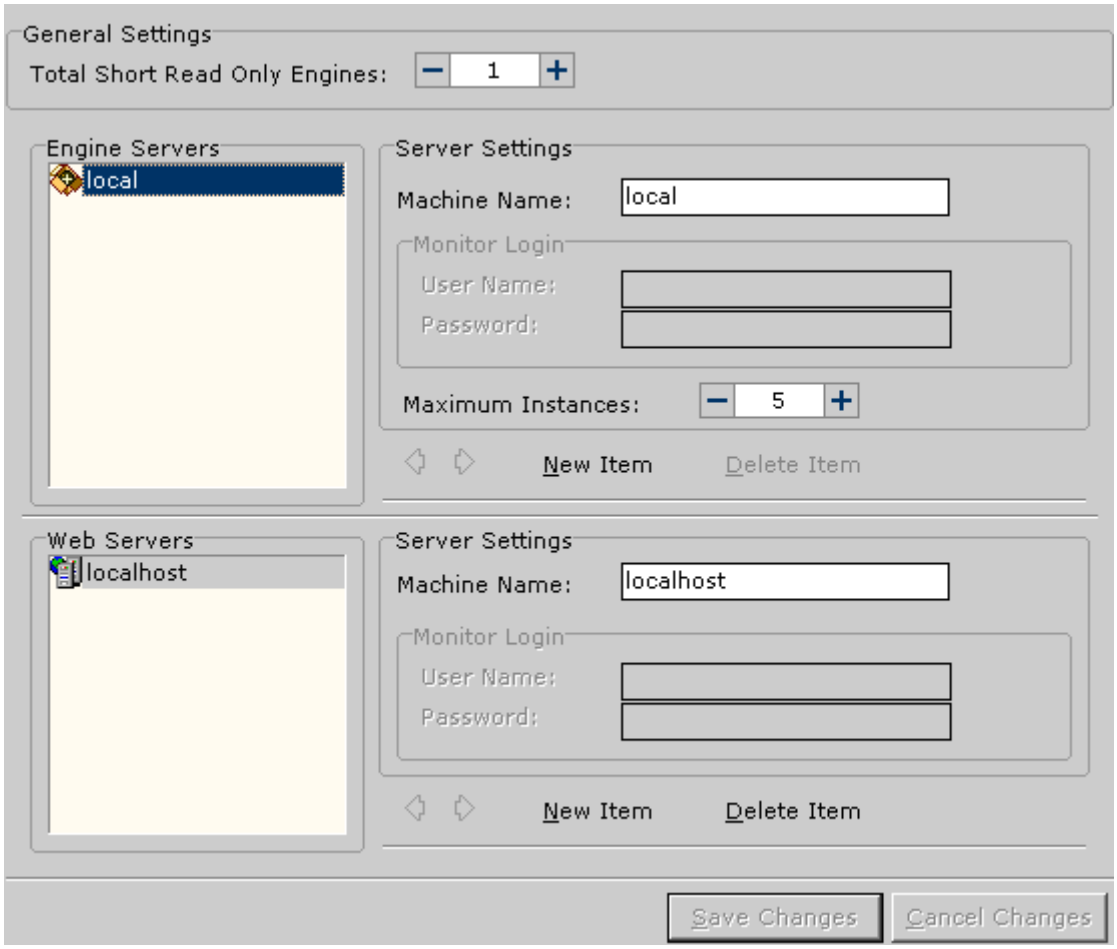
Configuring Server Setup

In the Server Setup panel, you can configure the number of short read-only engines, the servers running additional Data Relationship Management engines, and the servers running Web interfaces to Data Relationship Management.

The default value for the short read-only engines is one and should not be changed unless otherwise directed by Oracle Support.

In the Engine Servers section, you can configure the number of engine servers to use, the number of instances on each engine server, and the username and password to use to monitor the server.

In the Web Servers section, you can configure the number of Web servers to use and the username and password to use to monitor the server.



Configuring Secondary Servers

➤ To configure a secondary application server:

1 In the Data Relationship Management console, select **Server Setup**.

2 Select **New Item**.

3 Enter the following information:

- Machine Name: the server name or IP address of the secondary server
- User Name: the Windows account for accessing the server
- Password: the password for the specified account
- Maximum Instances: the maximum number of Data Relationship Management engines to be started on the secondary server.

Note:

Engines are only started when there are tasks to be processed. An engine remains running until the Data Relationship Management service is recycled.

Starting the Service

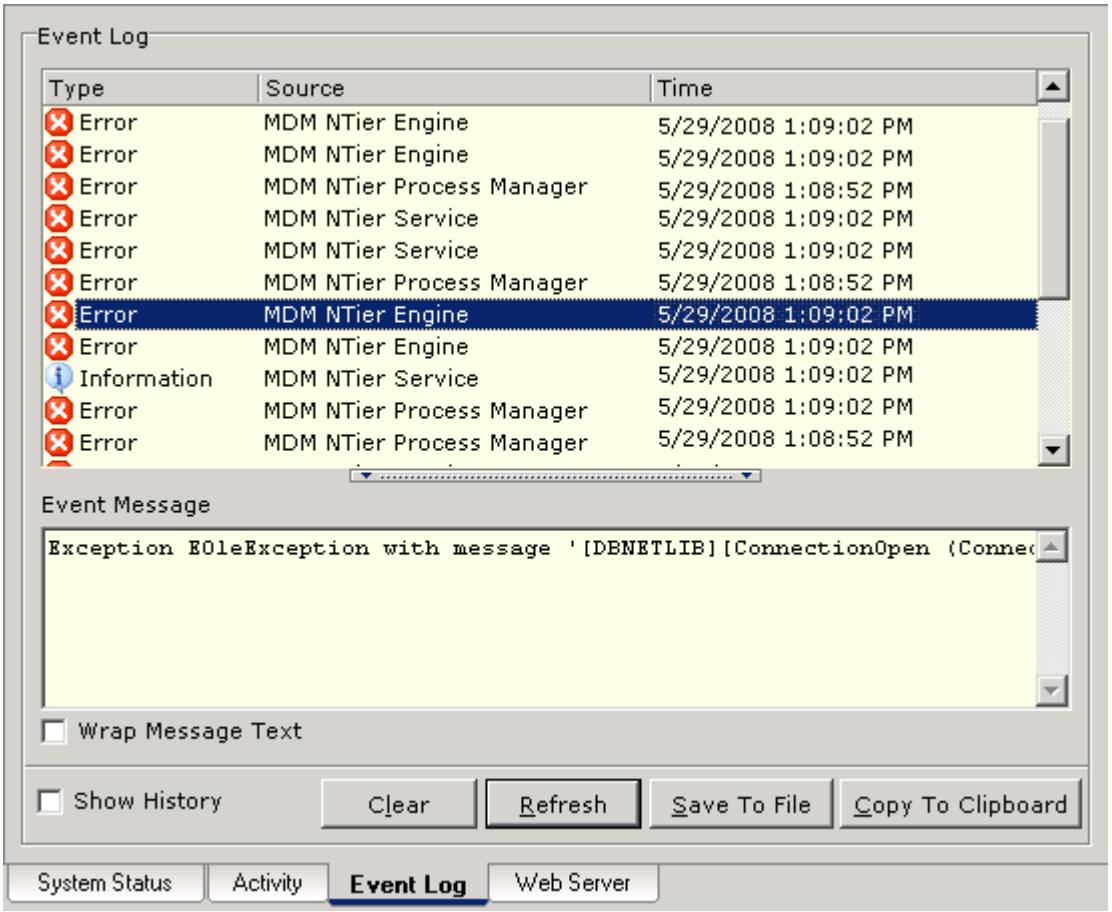
You can use the controls at the top of the console to start and stop the service.

The buttons from left to right are:

- Start service
- Stop service
- Stop and restart the system using the latest configuration
- Stop the service and force all processes to shut down

➤ To start the service, from the **System Status** tab, click  .

If the system does not start, select the Event Log tab to determine the cause.



Importing Registry Settings

You can import information from the registry for prior Master Data Management versions and convert it into the format needed for version 9.0 and later. This function should only be used to import the information on the initial upgrade from a version before 9.0.

Note:

The import registry settings item only displays in the Configuration section if you are upgrading from a version of Master Data Management prior to 9.0.

4 Installing Data Relationship Management Web Publishing

In This Chapter

Web Publishing Module Overview

The Data Relationship Management Web Publishing module provides an auxiliary means of accessing Data Relationship Management system functionality. This application provides the following capabilities through a Web browser interface:

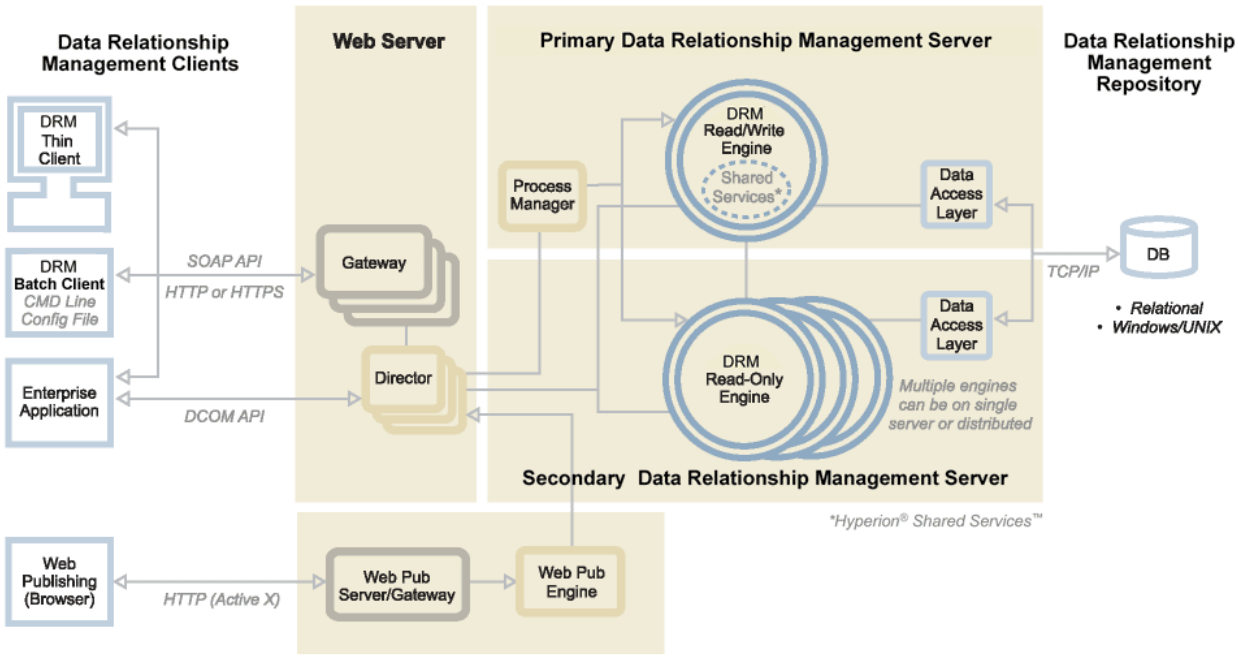
- Viewing hierarchies and node properties
- Running exports
- Printing hierarchy trees
- Searching for nodes in a given hierarchy

Data Relationship Management Web Publishing connects to the Data Relationship Management application server, but operates in a read-only mode. Various requests can be made using HTTP to either retrieve information or execute a command such as running exports or reloading from the database.

Figure 4 provides a top-level view of Data Relationship Management Web Publishing in relation to the Data Relationship Management architecture.

Web Publishing can be run on its own server or hosted on the Data Relationship Management multi-tier Web Server or the primary application server.

Figure 4 Data Relationship Management Web Publishing Architecture



System Requirements

The following topics describe the Data Relationship Management Web Publishing system requirements for:

- "Web Server" on page 44
- "Client" on page 45

Web Server

Table 4 Web Server Requirements

Component	Requirement
Processor	Dual 2.0 GHz
RAM	4 GB
Disk Space	100 MB
Operating System	Windows Server 2003 SP1
Application Software	• Internet Information Services (IIS) 6.0 • Microsoft .NET Framework 2.0

Client

- Windows Vista, Windows XP Professional SP2, or Windows 2003 SP1
- Internet Explorer 6.0 – 7.0.*x*

Note:

Data Relationship Management Web Publishing uses an ActiveX control which can only run on the Windows operating systems. While Internet Explorer (IE) can be run on a Macintosh computer, the Mac cannot run ActiveX controls.

System Components

Data Relationship Management Web Publishing consists of the following sets of components.

Table 5 System Components

File Name	Description
`mdm_web_pub_engine.exe`	DCOM Web Publishing engine
`mdm_web_pub_services_console.exe`	Web Publishing console application
`mdm_web_publishing.exe`	Web Publishing NT service executable
`web-pub-config.xml`	Web Publishing configuration file

Note:

A COM+ application is like an NT service in that it runs behind the scenes with no visible user interface. However, unlike a service, a COM+ application has a public automation interface that allows other applications to communicate with it. There are many configuration options (some of which are outlined later in this document) including the ability to specify a user id/password with which the COM+ application logs in. This provides an extra level of security in that a different set of permissions can be granted to the application id than are available to users who are interactively logged in.

The client components are listed below.

Table 6 Web Server Components

File Name	Description
`default.asp`	Web Page housing the Web Publishing ActiveX control
`mdm_web_pub_client.ocx`	Web Publishing ActiveX control
`mdm_web_pub_gateway.dll`	ISAPI application that translates the HTTP requests to the Web Publishing Engine.

File Name	Description
mdm_web_pub_console_test.html	Test HTML file used by the console to validate connectivity to the Data Relationship Management virtual directory.
Graphics Files	• hyp_sig_hg_rgb_wht.gif • logo.gif • logo_sep.gif • masthead_top.jpg • spacer.gif

Table 7 Command Components

File	Description
RegisterWebPubEngine.cmd	Command file to register Web Publishing engine
UnRegisterWebPubEngine.cmd	Command file to unregister Web Publishing engine
RegisterWebPubService.cmd	Command file to register Web Publishing service
UnRegisterWebPubService.cmd	Command file to unregister Web Publishing service

Installation Process

Installing Data Relationship Management Web Publishing for the first time involves the following tasks:

1. Verify prerequisites
2. Run the installation program
3. Configure Data Relationship Management user for Web Publishing
4. Run the Web Publishing Console to configure and start Web Publishing

Preinstallation Tasks

Caution!

You must upgrade your installation of Data Relationship Management Server before upgrading the Web Publishing installation.

The following topics describe tasks that must be performed before you can install and use Data Relationship Management Web Publishing:

- "System Administrator Tasks" on page 47
- "Network Administrator Tasks" on page 47

- "General Tasks" on page 47

System Administrator Tasks

Your Data Relationship Management system administrator must complete the following tasks before you can install and use Data Relationship Management Web Publishing:

- Ensure that the Data Relationship Management system is installed and operational.
- Create a new Data Relationship Management user name specifically for accessing Data Relationship Management Web Publishing (for example: mdm_Web). Assign the desired access rights to the user.

  Note:

  All Data Relationship Management Web Publishing users access the system through this same user name.
- Since the engine needs access to all paths that might be used for exports, provide a list of these paths to the network administrator. The system preference WebExDir controls the directory root for file storage location on the Web Publishing server.
- Configure the appropriate Data Relationship Management system preferences related to Data Relationship Management Web Publishing.

Network Administrator Tasks

Your network administrator must complete the following tasks before you can install and use Data Relationship Management Web Publishing:

- Create a new network user/application id that the engine can use to log in to the system. This id should have full access rights (including file creation) to any network shares that are designated for Data Relationship Management exports.
- Verify that IE browser policies allow for the use of digitally-signed ActiveX controls. While most Data Relationship Management Web Publishing implementations provide for browser access, some may be used strictly for automating exports. Configuring the browser can be skipped if interactive access is not desired.

General Tasks

In addition to system administrator and network administrator tasks described in the preceding topics, the following tasks must be performed before you can install and use Data Relationship Management Web Publishing:

- You must manually uninstall versions prior to release 9.3 of Data Relationship Management Web Publishing before installing this release. Auto-upgrade is supported starting with release 9.3.

Note:

Refer to the documentation for the prior version for instructions on uninstalling.

- Ensure that the intended host machine(s) meet or exceed the minimum system requirements defined in this document.
- Ensure that the user performing the installation has administrative rights to the Web server machine.
- Ensure that the Data Relationship Management Web Publishing release package is available.

Installing Data Relationship Management Web Publishing

Caution!

You must upgrade your installation of Data Relationship Management Server before upgrading the Web Publishing installation.

➤ To install Data Relationship Management Web Publishing:

1. Navigate to the directory where you downloaded the installation program and double-click `mdm_web_pub_server_setup.exe`.
2. Review the Welcome box and click **Next**.
3. From **Web Publishing Installation Options**, do one of the following:
   - Click **Next** if the computer where you are installing Data Relationship Management Web Publishing is also a Data Relationship Management Web server.
   - Select **Director** if Data Relationship Management Web Publishing is being added to a computer that is not a Data Relationship Management Web server or if it is a standalone server, and click **Next**.

Note:

Director uses COM communication to the primary application server.

4. Click **Next** to accept the default installation directory, or click **Change** to select another location and then click **Next**.
5. Do one of the following:
   - If you are not installing Director, skip to the next step.
   - If you are installing Director, enter the machine name or IP address of the Data Relationship Management primary application server and click **Next**.
6. From **Windows COM+ Logon**, enter a user name and password for a user who has rights to perform the following actions and click **Next**:
   - Edit registry settings
   - Read and write to the local file system

- Launch processes
- Run as a service

7 Click **Install**.

8 **Optional:** After installation completes, you can select **Launch Data Relationship Management Web Publishing Console**.

9 Click **Finish**.

5 Configuring Data Relationship Management Web Publishing

In This Chapter

Configuring Data Relationship Management Web Publishing Service

➤ To configure the service:

1. Select **Start**, then **Programs**, then **Administrative Tools**, then **Services**.
2. Select the **Oracle Hyperion Data Relationship Management Web Publishing** service.
3. Right-click the service and select **Properties**.
4. On the **General** tab, ensure that **Startup Type** is set to **Automatic**.
5. On the **Log On** tab, select **This Account**.
6. Enter a username and password for a Windows administrative user.
7. Click **OK**.
8. Close the Services dialog box.

Configuring Internet Information Services

➤ For IIS 6.0:

1. Select **Start**, then **Programs**, then **Administrative Tools**, the **Internet Services Manager** (or **Internet Information Services (IIS) Manager**).

2 Expand to the default Web site.

3 Select the **mdm_web** virtual directory.

4 Right-click and select **Properties**.

5 On the **Virtual Directory** tab, verify the following:

a. The **Local Path** is pointing to the Data Relationship Management Web directory.

b. The **Read** option is selected.

c. **Execute Permissions** is set to **Scripts and Executables**.

d. Application Pool is **WebPool**.

This setting enables you to unload the mdm_web application without restarting IIS.

6 Click **OK**.

7 Select the **Web Service Extensions** node and select **Active Server Pages** from the list of Web Service Extensions on the right.

8 Verify that the **Status** column displays the status **Allowed**.

9 Close the IIS Manager.

Verifying System Access

➤ To verify system access:

1 Using your Web browser, go to the following URL:

`http://`*`webservername`*`/mdm_web`

where *webservername* is the Web server computer name.

2 At the prompt, select to install the `mdm_web_client` ActiveX control.

Note:

This digitally signed control is safe to install. If you are not prompted to install the component, then it may be necessary to adjust the current browser settings to allow download and installation of ActiveX controls.

3 Click **OK**.

The Data Relationship Management Web Client page is displayed. No data (versions or hierarchies) is displayed until the service is started at the end of the installation/configuration/startup process.

Configuring Data Relationship Management Web Publishing Engine

➤ To configure the Web Publishing Engine:

1. Select **Start**, then **Administrative Tools**, then **Component Services**.
2. Expand the Component Services node to the **DCOM Config** folder.
3. In the **DCOM Config** folder, right-click the `mdm_Web_Pub_Engine` object, and select **Properties**.
4. On the **Identity** tab, select **This User** and enter the same user and password that were configured for the Data Relationship Management Web Publishing Service.
5. On the **Security** tab, under Launch and Activation Permissions, select **Customize** and click **Edit**.
6. Add the user that is configured for IIS anonymous access to the `mdm_web` virtual directory.

   Note:

   This is typically IUSR_*servername*, where *servername* is the host machine name.
7. Allow Local Activation for this user.
8. Repeat this process for the Access Permissions section, by selecting **Customize**, then **Edit**, and adding the same user and enabling the Local Access permission.
9. Click **OK** to close the Properties dialog box.

Configuring Director

If you install on a stand-alone server where Director does not already exist, you must configure the COM+ Director component.

➤ To configure the COM+ Director component:

1. Select **Start**, then **Programs**, then **Administrative Tools**, then **Component Services**.
2. Drill down and select the **Director** component.
3. Right-click and select **Properties**.
4. On the **Security** tab, verify that **Enforce Access Checks for this Application** is not selected.
5. On the **Identity** tab, verify that the appropriate user is setup and then close the **Properties** dialog box.
6. Drill down to the **Components** folder of Director.
7. Select all components by pressing **CTRL+A**, then right-click and select **Properties**.
8. Verify that **Enable Object Pooling** is selected on the **Activation** tab and then close the **Properties** dialog box.
9. Close the **Component Services** window.

Configuring Process Manager

If you install on a stand-alone server where Process Manager does not already exist, you must configure the COM+ Process Manager Proxy component.

➤ To configure the COM+ Process Manager Proxy component:

1. Select **Start**, then **Programs**, then **Administrative Tools**, then **Component Services**.
2. Drill down and select the **Process Manager** component.
3. Right-click the component and select **Properties**.
4. On the **Activation** tab, verify that the remote server is correct.
5. Close the **Component Services** window.

Starting the Data Relationship Management Web Publishing Service

➤ To start the Data Relationship Management Web Publishing Service:

1. In the Data Relationship Management Web Publishing Console, click  .
2. Verify that the Data Relationship Management Web Publishing Engine component appears in the bottom panel of the console and that the status is Running in the upper right corner.

Note:

For more information, see "Using the Data Relationship Management Web Publishing Console" on page 54.

Using the Data Relationship Management Web Publishing Console

The Data Relationship Management Web Publishing Console is designed to allow configuration, control and monitoring of the Web Publishing system. The Server Monitor Page allows the Web Publishing Service to be controlled (Start, Stop, Restart, Force Shutdown) and displays the current status of the service.

In addition there are three tabs for further information:

- System Status
- Event Log
- Web Server

The System Status tab shows basic operating system information as well as information on COM + and DCOM (Out of Process) applications. Currently Web Publishing does not use any COM + so this section is blank.

The Event Log tab filters the application event log to show events for the Web Publishing module. Clicking on an event in the top panel shows the detail for the event in the lower panel. Events shown are filtered to include only events after the console was started. To see historical events you can check the Show History and click Refresh. Clear resets the filter time to the current date and time.

The Web Server tab provides two browser views to validate access to the Web Server system. The first panel displays the test HTML in the `mdm_web` virtual directory and validates access to the virtual directory for Web Publishing.

The second view tests the Web Publishing Gateway to perform the List Versions command. If the system is up and running, the list of versions available for Web Publishing is displayed.

Note:

When stopping and starting services such as IIS, you may need to refresh these views. To refresh, right-click on the view and select Refresh.

You can set the Data Relationship Management username and password for the Web Publishing module on the Configuration page. This user is the Data Relationship Management user that the Web Publishing engine uses to retrieve the data for display on the Web client. Limiting access to this user allows the Web Publishing to be restricted.

Note:

It is important that the user specified for Web Publishing be exempt from session timeout. Thus, the system preference IdleTimeExcludeUsers should be set to include the name of the user for Web Publishing. If this user is not excluded from session timeout, then the Web Publishing service needs to be restarted each time the user session expires.

6 Installing Data Relationship Management Migration Utility

In This Chapter

The Data Relationship Management Migration Utility provides system administrators the ability to move certain metadata components between Data Relationship Management instances.

You can use the migration utility to:

- Migrate metadata changes from Development/Test/QE to production Data Relationship Management instances.
- Backup and compare metadata changes (historically or between instances.)
- Update list properties with large lists in an automated way.
- Provide support-specific metadata for issues without having to send an entire database.

System Requirements

The following topics describe the Oracle Hyperion Data Relationship Management, Fusion Edition Migration Utility system requirements for:

- "Web Server" on page 57
- "Client" on page 58

Web Server

Table 8 Web Server Requirements

Component	Requirement
Processor	2.0 GHz
RAM	2 GB
Disk Space	100 MB
Operating System	Windows Server 2003 SP1

Component	Requirement
Application Software	• Internet Information Services (IIS) 6.0 • Microsoft .NET Framework 2.0 plus ASP Ajax extensions

Client

The migration utility requires one of the following Web browsers:

- Internet Explorer 6.0 – 7.0.*x*
- Firefox 2.0.*x*

Installing the Migration Utility

➤ To install Data Relationship Management Migration Utility:

1. **Navigate to the directory where you downloaded the installation program and double-click** `mdm_migration_setup.exe`.
2. **Review the Welcome box and click Next.**
3. **Click Next to accept the default installation path to the Hyperion home folder. If you want to change the installation location, click Change, navigate to a directory, and click Next.**

   Note:

   When multiple Hyperion products are installed on one computer, common internal and third-party components used by the products are installed in the Hyperion home directory. The Hyperion home directory name cannot contain spaces. If the installation program detects an existing Hyperion home directory, the Directory Name field and Browse button are not selectable.
4. **On the Setup Type dialog box, select the type of installation to perform and click Next:**
   - **Complete** — installs the migration utility and the documentation.
   - **Custom** — allows you to select the components to install.
5. **Do one of the following:**
   - If you selected **Complete** in step 4, skip to the next step.
   - If you selected **Custom** in step 4, select the components to install and click **Next**.
6. **Click Install.**
7. **Click Finish when the installation is complete.**

   For information on using the migration utility, see *Oracle Hyperion Data Relationship Management N-Tier Administrator's Guide*.