Informatica® MDM Multidomain Edition
(Version 10.2 HotFix 1)

Upgrading from Version 10.0, 10.1, or 10.2
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Preface

Welcome to the *Informatica MDM Multidomain Edition Upgrade Guide*. This guide explains how to upgrade your Informatica® MDM Multidomain Edition implementation to the most recent version. Ensure you use the *Informatica MDM Multidomain Edition Upgrade Guide* that applies to the version you currently have installed.

This guide is intended for technical specialists who are responsible for upgrading their Informatica MDM Multidomain Edition implementation.

Informatica Resources

Informatica Network

Informatica Network hosts Informatica Global Customer Support, the Informatica Knowledge Base, and other product resources. To access Informatica Network, visit [https://network.informatica.com](https://network.informatica.com).

As a member, you can:

- Access all of your Informatica resources in one place.
- Search the Knowledge Base for product resources, including documentation, FAQs, and best practices.
- View product availability information.
- Review your support cases.
- Find your local Informatica User Group Network and collaborate with your peers.

Informatica Knowledge Base

Use the Informatica Knowledge Base to search Informatica Network for product resources such as documentation, how-to articles, best practices, and PAMs.

To access the Knowledge Base, visit [https://kb.informatica.com](https://kb.informatica.com). If you have questions, comments, or ideas about the Knowledge Base, contact the Informatica Knowledge Base team at [KB_Feedback@informatica.com](mailto:KB_Feedback@informatica.com).

Informatica Documentation


If you have questions, comments, or ideas about this documentation, contact the Informatica Documentation team through email at [infa_documentation@informatica.com](mailto:infa_documentation@informatica.com).
Informatica Product Availability Matrixes

Product Availability Matrixes (PAMs) indicate the versions of operating systems, databases, and other types of data sources and targets that a product release supports. If you are an Informatica Network member, you can access PAMs at https://network.informatica.com/community/informatica-network/product-availability-matrices.

Informatica Velocity

Informatica Velocity is a collection of tips and best practices developed by Informatica Professional Services. Developed from the real-world experience of hundreds of data management projects, Informatica Velocity represents the collective knowledge of our consultants who have worked with organizations from around the world to plan, develop, deploy, and maintain successful data management solutions.

If you are an Informatica Network member, you can access Informatica Velocity resources at http://velocity.informatica.com.

If you have questions, comments, or ideas about Informatica Velocity, contact Informatica Professional Services at ips@informatica.com.

Informatica Marketplace

The Informatica Marketplace is a forum where you can find solutions that augment, extend, or enhance your Informatica implementations. By leveraging any of the hundreds of solutions from Informatica developers and partners, you can improve your productivity and speed up time to implementation on your projects. You can access Informatica Marketplace at https://marketplace.informatica.com.

Informatica Global Customer Support

You can contact a Global Support Center by telephone or through Online Support on Informatica Network.

To find your local Informatica Global Customer Support telephone number, visit the Informatica website at the following link: http://www.informatica.com/us/services-and-training/support-services/global-support-centers.

If you are an Informatica Network member, you can use Online Support at http://network.informatica.com.
CHAPTER 1

Upgrade Overview

This chapter includes the following topics:

- Informatica MDM Multidomain Edition Upgrade, 9
- Upgrade Process for a Clean Upgrade (Recommended), 10
- Upgrade Process for an In-place Upgrade, 11
- Document the Upgrade, 11

Informatica MDM Multidomain Edition Upgrade


An MDM Multidomain Edition environment can include a development environment, test environment, and production environment. You must upgrade each of these environments. As a best practice, upgrade your development environment first. Identify and resolve any upgrade issues. After you successfully upgrade the development environment, you can upgrade the test and production environments with a high degree of confidence.

Before You Begin

Before you begin, ensure that you have the necessary guides and that you review the Product Availability Matrix:

- Ensure that you have the correct upgrade guide for your installed version of MDM Multidomain Edition. On the title page, check the major version number in the title Upgrading from Version. Make sure it matches the major version number in the installed product. To find the version number in the installed product, in the MDM Hub Console click Help > About. Click Installation Details. The version number appears in the release name column. For the purposes of the upgrade, it does not matter whether hotfixes have been applied to the installed product.
- Download the Informatica MDM Multidomain Edition Installation Guide that applies to your database and application server. To ensure a smooth upgrade, you must perform some of the tasks that are described in the installation guide.

Upgrade Process

You can upgrade MDM Multidomain Edition in one of the following ways:
Clean Upgrade (Recommended)

A clean upgrade requires a new set of machines that are configured to meet the system requirements for a new version of MDM Multidomain Edition. For a clean upgrade, you install a Hub Server and a Process Server on the new machines, and you copy the MDM Hub Master Database and Operational Reference Stores to the new machines and upgrade them. All components must be upgraded to the same version of MDM Multidomain Edition. For information about planning an infrastructure, see the *Informatica MDM Multidomain Edition Infrastructure Planning Guide*.

In-place Upgrade

An in-place upgrade occurs on the machines where MDM Multidomain Edition is currently installed. For an in-place upgrade, you update the system requirements, run the upgrade wizard to update the Hub Server, Process Servers, MDM Hub Master Database, and Operational Reference Stores. All components must be upgraded to the same version of MDM Multidomain Edition.

Review the following guidelines to choose an appropriate upgrade process:

- If you are upgrading to a new major version of MDM Multidomain Edition, perform a clean upgrade.
- If you are applying a hotfix for the installed version of MDM Multidomain Edition, and the PAM requires a major update to an application server, you must perform a clean upgrade.
- If you are applying a hotfix for the installed version of MDM Multidomain Edition, and the PAM does not require a major update to the application server, you can choose to perform either an in-place upgrade or a clean upgrade.

Upgrade Process for a Clean Upgrade (Recommended)

The process for a clean upgrade consists of the following phases:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Task</th>
<th>Location of Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pre-installation tasks</td>
<td>Installation Guide</td>
</tr>
<tr>
<td>2</td>
<td>Pre-upgrade tasks</td>
<td>Upgrade Guide</td>
</tr>
<tr>
<td>3</td>
<td>Back up and clone the Hub Store, and then copy the Hub Store to the new machines</td>
<td>Ask your DBA to perform this task</td>
</tr>
<tr>
<td>4</td>
<td>Hub Store upgrade</td>
<td>Upgrade Guide</td>
</tr>
<tr>
<td>5</td>
<td>Hub Server installation and post-installation tasks</td>
<td>Installation Guide</td>
</tr>
<tr>
<td>6</td>
<td>Process Server installation and post-installation tasks</td>
<td>Installation Guide</td>
</tr>
<tr>
<td>7</td>
<td>Post-upgrade tasks</td>
<td>Upgrade Guide</td>
</tr>
<tr>
<td>8</td>
<td>ActiveVOS post-installation tasks for the application server</td>
<td>Installation Guide</td>
</tr>
<tr>
<td>9</td>
<td>ActiveVOS post-upgrade tasks for the business entity adapter</td>
<td>Upgrade Guide</td>
</tr>
</tbody>
</table>
Upgrade Process for an In-place Upgrade

The process for an in-place upgrade consists of the following phases:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Task</th>
<th>Location of Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pre-installation tasks</td>
<td>Installation Guide</td>
</tr>
<tr>
<td>2</td>
<td>Pre-upgrade tasks</td>
<td>Upgrade Guide</td>
</tr>
<tr>
<td>3</td>
<td>Hub Store upgrade</td>
<td>Upgrade Guide</td>
</tr>
<tr>
<td>4</td>
<td>Hub Server upgrade</td>
<td>Upgrade Guide</td>
</tr>
<tr>
<td>5</td>
<td>Process Server upgrade</td>
<td>Upgrade Guide</td>
</tr>
<tr>
<td>6</td>
<td>Resource Kit upgrade</td>
<td>Upgrade Guide</td>
</tr>
<tr>
<td>7</td>
<td>Post-upgrade tasks</td>
<td>Upgrade Guide</td>
</tr>
<tr>
<td>8</td>
<td>ActiveVOS post-installation tasks for the application server</td>
<td>Installation Guide</td>
</tr>
<tr>
<td>9</td>
<td>ActiveVOS Post-Installation tasks for the business entity adapter</td>
<td>Upgrade Guide</td>
</tr>
<tr>
<td>10</td>
<td>ActiveVOS Post-Installation tasks for the subject area adapter</td>
<td>Upgrade Guide</td>
</tr>
</tbody>
</table>

Document the Upgrade

You must capture the details of the Informatica MDM Hub environment before, during, and after you upgrade to verify and, if required, troubleshoot the upgrade. You can provide copies of this information to Informatica Global Customer Support if you require assistance with troubleshooting the upgrade.
The following table describes the sources of upgrade information:

<table>
<thead>
<tr>
<th>Upgrade Information</th>
<th>Source of Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational Reference Store (ORS) metadata</td>
<td>Validation results from the Repository Manager tool in the Hub Console. Generate the validation results for the ORS metadata before and after the upgrade.</td>
</tr>
<tr>
<td>Upgrade events for the Hub Server and Process Server upgrades</td>
<td>Informatica MDM Hub installer log files</td>
</tr>
<tr>
<td>Hub Server and Process Server information</td>
<td>Hub Server and Process Server log files</td>
</tr>
<tr>
<td>Hub Console information</td>
<td>Hub Console log files</td>
</tr>
</tbody>
</table>

**Related Topics:**

- “Saving the MDM Hub Environment Report” on page 71
Pre-Upgrade Tasks

This chapter includes the following topics:

- Pre-Upgrade Tasks, 13
- Prepare for the Upgrade, 13
- Prepare the Environment, 15
- Process Existing Jobs, 16
- Update the MDM Hub Configuration, 16
- Prepare the BPM Upgrade, 19
- Prepare the Existing Machines (In-place Upgrade), 22

Pre-Upgrade Tasks

Whether you perform a clean upgrade or an in-place upgrade, perform the pre-upgrade tasks to ensure your environment is properly configured.

Prepare for the Upgrade

Perform the following tasks to prepare for the upgrade:

<table>
<thead>
<tr>
<th>Upgrade Task</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read the Release Notes</td>
<td>The Release Notes contain information about updates to the installation and upgrade process.</td>
</tr>
<tr>
<td>Get the latest license file</td>
<td>In version 10.2, the license file was updated. Request the latest license file when you request the upgrade software for MDM Multidomain Edition.</td>
</tr>
<tr>
<td>Upgrade Task</td>
<td>Details</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Review the upgrade restrictions</td>
<td>Review the following conditions before you begin the upgrade:</td>
</tr>
<tr>
<td></td>
<td>- All the components of the Informatica MDM Multidomain Edition implementation must be the same version. If you have multiple versions of Informatica MDM Multidomain Edition, each version must be installed in a separate environment. Different versions of Informatica MDM Multidomain Edition cannot coexist in the same environment.</td>
</tr>
<tr>
<td></td>
<td>- You must not make any major changes to your environment while you upgrade Informatica MDM Multidomain Edition. For example, do not upgrade the Oracle, IBM DB2, or Microsoft SQL Server database during the upgrade process.</td>
</tr>
<tr>
<td></td>
<td>- You must upgrade your Operational Reference Store (ORS) using the upgrade scripts provided. The Repository Manager is not intended to be used as an upgrade tool because some of the artifacts might not be carried over or might be carried over incorrectly from one version to another. For more information, see the Informatica MDM Multidomain Edition Release Notes.</td>
</tr>
<tr>
<td>Create an upgrade documentation</td>
<td>Create a folder named upgradedoc to store copies of all your upgrade artifacts such as metadata validation results, environment reports, and log files. If you encounter problems during the upgrade, you need to send a copy of this directory to Informatica Global Customer Support for analysis.</td>
</tr>
<tr>
<td>folder</td>
<td></td>
</tr>
<tr>
<td>Review the MDM Hub Environment</td>
<td>Use the Enterprise Manager tool in the Hub Console to review the current MDM Hub configuration for Hub Servers, Process Servers, the MDM Hub Master Database, and Operational Reference Store databases. Also note the version history of the components. Save a copy of the environment report in the upgrade documentation folder.</td>
</tr>
</tbody>
</table>
# Prepare the Environment

Perform the following tasks to prepare the environment:

<table>
<thead>
<tr>
<th>Upgrade Task</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade the machines to meet the system requirements</td>
<td>You may need to upgrade the operating system, application server, JDK, and database server. For the system requirements, see the Product Availability Matrix on Informatica Network: <a href="https://network.informatica.com/community/informatica-network/product-availability-matrices/overview">https://network.informatica.com/community/informatica-network/product-availability-matrices/overview</a> You can upgrade the machines in the following ways:</td>
</tr>
<tr>
<td>Perform a clean upgrade (recommended)</td>
<td>Informatica recommends that you perform a clean upgrade. To perform a clean upgrade, perform a fresh installation of the Hub Server and Process Servers on new machines that meet the system requirements. Clone the MDM Hub Master Database and Operational Reference Stores and copy them over to the new machines, then perform the Hub Store upgrade.</td>
</tr>
<tr>
<td>Perform an in-place upgrade</td>
<td>You can perform an upgrade in-place on existing machines. To perform an in-place upgrade, update the environment to be compliant with the Product Availability Matrix, and then upgrade the Informatica MDM Multidomain Edition components. You can access PAMs at <a href="https://network.informatica.com/community/informatica-network/product-availability-matrices">https://network.informatica.com/community/informatica-network/product-availability-matrices</a>. Note: If you need to perform a major update of the application server to meet the system requirements, you cannot perform an upgrade on existing machines. Perform a clean upgrade.</td>
</tr>
<tr>
<td>Back up the implementation</td>
<td>Back up your current implementation to retain your customizations and to allow you to restore the environment. If you encounter issues during the upgrade, you can restore your environment from the backup.</td>
</tr>
<tr>
<td>Back Up the Schema</td>
<td>Perform a full back up of the schema. You cannot roll back schema changes that the upgrade process makes. If you encounter upgrade issues, you can restore the schema from the backup. To back up your schema, see the documentation for the database.</td>
</tr>
<tr>
<td>Back Up Your Informatica Data Director Applications</td>
<td>Back up your Informatica Data Director (IDD) applications. For more information about exporting IDD applications, see the <em>Informatica MDM Multidomain Edition Informatica Data Director Implementation Guide</em>.</td>
</tr>
<tr>
<td>Register or Back Up Customizations</td>
<td>Customizations that you register in the Hub Console such as custom queries, custom functions, and user exits are maintaining during the upgrade process. Back up the latest source code of customizations that you do not register in the Hub Console. Unregistered customizations might be unavailable after you upgrade.</td>
</tr>
<tr>
<td>Back Up Customized Cleanse Engine Configuration Files</td>
<td>Back up any cleanse engine configuration files that you have customized.</td>
</tr>
</tbody>
</table>
Upgrade Task | Details
--- | ---
Validate the metadata | Ensure the Operational Reference Stores (ORS) do not have any validation errors. If you upgrade the Hub Store when an ORS contains metadata that is not valid, the upgrade might generate unexpected results. Use the Repository Manager in the Hub Console to validate metadata. Resolve any validation issues and then validate the metadata again to confirm that you have resolved the validation issues.
Save a copy of the final validation results in the upgradedoc upgrade documentation folder.
Use the Repository Manager tool in the MDM Hub Console to validate and then save the validation results.

Update persistent ID implementation | If you use persistent IDs, contact Informatica Global Customer Support. You must update the persistent ID implementation to be compatible with the upgraded version of MDM Multidomain Edition.

Process Existing Jobs

Perform the following tasks to process existing jobs:

Upgrade Task | Details
--- | ---
Run load job on staging tables that contain records | In Microsoft SQL Server environments, run the load batch job on staging tables that contain records.
If you upgrade the Operational Reference Store when the staging tables contain records, the upgrade can fail because the log file size can exceed the available hard drive space.

Complete stage jobs and delete stage table contents | Before you upgrade the Operational Reference Store, complete any stage jobs that are in progress, and then delete the contents of the stage table.
If you do not delete the contents of the stage table, the Operational Reference Store upgrade takes longer than expected to complete in Microsoft SQL Server environments.

Update the MDM Hub Configuration

Perform the following tasks to update the MDM Hub configuration.

Upgrade Task | Details
--- | ---
Grant select right on SYS.V_$PARAMETER for the ORS user | To grant the select right, run the following SQL statement:
grant select on SYS.V_$PARAMETER to <Operational Reference Store user>;

Remove special characters from names in the subject area configuration | You cannot use special characters in names in the Provisioning tool. If you plan to generate a business entity schema from a subject area configuration, you must first remove the special characters from any names in the subject area configuration.
<table>
<thead>
<tr>
<th>Upgrade Task</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure column names do not contain reserved words</td>
<td>Additional keywords have been marked as reserved in recent versions of MDM Multidomain Edition. Ensure you do not use reserved keywords in your implementation. For a complete list of reserved words, refer to the &quot;Requirements for Defining Schema Objects&quot; section of the Informatica MDM Multidomain Edition Configuration Guide. To obtain a script that changes the name of a column that contains data, contact Informatica Global Customer Support.</td>
</tr>
<tr>
<td>Ensure mapped columns have compatible data types</td>
<td>If you use an Oracle database for your Operational Reference Store, check the mappings from landing table to staging table to ensure that the data types of the mapped columns are compatible. In previous versions, you can create a mapping from a landing table to a staging table where the data types of the mapped columns are not compatible. In this version, the data types of the mapped columns must be compatible. When you load data, if there is a data type mismatch, the load fails with an error in the log files. For more information about mapping columns, see the Informatica MDM Multidomain Edition Configuration Guide.</td>
</tr>
<tr>
<td>Ensure users have a valid email address</td>
<td>Ensure that existing users have valid email addresses associated with their user names in the Hub Console. To reset their passwords to access the MDM Hub, users must have a valid email address. For more information about editing user information in the Hub Console, see the Informatica MDM Multidomain Edition Security Guide. <strong>Note:</strong> You cannot change the email address for the admin user in the Hub Console. To change the email address for the admin user, update the admin user entry directly in the C_REPOS_USER table under CMX_SYSTEM schema.</td>
</tr>
<tr>
<td>Register indexes</td>
<td>If you upgrade schemas with custom indexes, you must register the custom indexes. Use the RegisterCustomIndex SIF API to register the custom indexes. For more information about the RegisterCustomIndex SIF API, see the Informatica MDM Multidomain Edition Services Integration Framework Guide.</td>
</tr>
</tbody>
</table>

**Register the Operational Reference Stores with the Original Schema Owner**

If any of the Operational Reference Store (ORS) databases are registered with a proxy user, register the ORS database with the original schema owner. You must register the ORS with the original schema owner to ensure that you have sufficient privileges to perform the upgrade operations. You can reregister the ORS with the proxy user after you upgrade. The original default schema owner is CMX_ORS.

1. Start the Hub Console.
   The Change database dialog box appears.
2. Select the MDM Hub Master database, and click Connect.
3. Select the Databases tool from the Configuration workbench.
4. Select Write Lock > Acquire Lock.
5. Click the Register database button.
   The Informatica MDM Hub Connection Wizard appears and prompts you to select the database type.
6. Select the type of database, and click Next.
7. Configure connection properties for the database.
   
a. Select an Oracle connection method, and then click **Next**.
   
   You can select the following Oracle connection methods:
   
   **Service**
   
   Connect to Oracle by using the service name.
   
   **SID**
   
   Connect to Oracle by using the Oracle System ID.
   
   For more information about SERVICE and SID names, see the Oracle documentation.
   
   The **Connection Properties** page appears.
   
b. Specify the connection properties for the connection type that you select, and click **Next**.
   
   You can configure the following connection properties:
   
   **Database Display Name**
   
   Name for the Operational Reference Store that must appear in the Hub Console.
   
   **Machine Identifier**
   
   Prefix given to keys to uniquely identify records from the Hub Store instance.
   
   **Database host name**
   
   IP address or name of the server that hosts the Oracle database.
   
   **SID**
   
   Oracle System Identifier that refers to the instance of the Oracle database running on the server. The **SID** field appears if you selected the **SID** connection type.
   
   **Service**
   
   Name of the Oracle SERVICE used to connect to the Oracle database. The **Service** field appears if the you selected the **Service** connection type.
   
   **Port**
   
   The TCP port of the Oracle listener running on the Oracle database server. The default is **1521**.
   
   **Oracle TNS Name**
   
   Name by which the database is known on your network as defined in the **TNSNAMES.ORA** file of the application server.
   
   For example: `mydatabase.mycompany.com`.
   
   You set the Oracle TNS name when you install the Oracle database. For more information about the Oracle TNS name, see the Oracle documentation.
   
   **Schema Name**
   
   Name of the Operational Reference Store.
   
   **User name**
   
   Specify the original user name for the ORS. Default is **CMX_ORS**.
   
   **Password**
   
   Password associated with the original user for the ORS.
   
   The **Summary** page appears.
c. **Review the summary, and specify additional connection properties.**

The following table describes the additional connection properties that you can configure:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Connection URL**              | Connect URL. The Connection Wizard generates the connect URL by default. **Service connection type**
|                                 | jdbc:oracle:thin:@//database_host:port/service_name |
|                                 | **SID connection type**
|                                 | jdbc:oracle:thin:@//database_host:port:sid |
|                                 | For a service connection type, you have the option to customize and later test a different connection URL. |
| **Create datasource after registration** | Select to create the datasource on the application server after registration. **Note**: If you do not select the option, you must manually configure the data source. |

**d.** For a service connection type, if you want to change the default URL, click the **Edit** button, specify the URL, and then click **OK**.

8. **Click Finish.**

   The **Registering Database** dialog box appears.

9. **Click OK.**

   The MDM Hub registers the ORS.

---

**Prepare the BPM Upgrade**

Perform the following tasks to prepare for the BPM upgrade:
Choose a workflow adapter

Review the following upgrade options for workflow adapters, and choose the upgrade option that suits your needs:

<table>
<thead>
<tr>
<th>Current Workflow Adapter</th>
<th>Upgrade Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIPERIAN</td>
<td>Deprecated.</td>
</tr>
<tr>
<td></td>
<td><strong>Option 1</strong></td>
</tr>
<tr>
<td></td>
<td>Keep SIPERIAN as the primary workflow adapter.</td>
</tr>
<tr>
<td></td>
<td><strong>Option 2</strong></td>
</tr>
<tr>
<td></td>
<td>Upgrade to the BE ActiveVOS workflow adapter based on business entities. You must have a business entity configuration to use the BE ActiveVOS workflow adapter.</td>
</tr>
<tr>
<td></td>
<td>For more information, see <em>Migrating IDD Applications to the Business Entity Data Model</em>.</td>
</tr>
<tr>
<td>Informatica ActiveVOS</td>
<td>This workflow adapter is based on subject areas and operates using SIF APIs.</td>
</tr>
<tr>
<td></td>
<td><strong>Option 1</strong></td>
</tr>
<tr>
<td></td>
<td>Keep Informatica ActiveVOS as the primary workflow adapter.</td>
</tr>
<tr>
<td></td>
<td><strong>Option 2</strong></td>
</tr>
<tr>
<td></td>
<td>Upgrade to the BE ActiveVOS workflow adapter based on business entities. You must have a business entity configuration to use the BE ActiveVOS workflow adapter.</td>
</tr>
<tr>
<td></td>
<td>For more information, see <em>Migrating IDD Applications to the Business Entity Data Model</em>.</td>
</tr>
<tr>
<td>BE ActiveVOS</td>
<td>This workflow adapter is based on business entities and operates using business entity services. You must use the version of ActiveVOS that is defined in the Product Availability Matrix. If an older version is detected in your environment, the upgrade process installs the required version of ActiveVOS.</td>
</tr>
</tbody>
</table>

Configure the Java Environment Variable for ActiveVOS

If you use ActiveVOS, perform the following task to configure the Java environment variable:

Configure `INSTALL4J_JAVA_HOME_OVERRIDE` 

ActiveVOS 9.2.4.2 requires JDK 1.7, whereas MDM Multidomain Edition requires JDK 1.8. Configure `INSTALL4J_JAVA_HOME_OVERRIDE` to ensure that JDK 1.7 is used during ActiveVOS installation.

For example, set `INSTALL4J_JAVA_HOME_OVERRIDE` to the following path:

```
INSTALL4J_JAVA_HOME_OVERRIDE=/root/jdk1.7.0_53/jre
```

If you do not configure this environment variable, ActiveVOS is not installed. You are not notified if ActiveVOS is not installed.
Prepare to move from standalone ActiveVOS to embedded ActiveVOS (In-place Upgrade)

If you are upgrading existing machines and want to move from standalone ActiveVOS to embedded ActiveVOS, perform the following upgrade tasks:

<table>
<thead>
<tr>
<th>Upgrade Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remove the ActiveVOS data sources</td>
<td>If the standalone ActiveVOS server is in the same JBoss instance, WebSphere profile, or WebLogic domain as MDM Multidomain Edition, remove the data source for ActiveVOS from the application server.</td>
</tr>
</tbody>
</table>
| Edit the URN mapping in a WebSphere environment | 1. Launch the ActiveVOS Console. In a browser, type the following URL, substituting the correct host name and port number:  
   - Secure connections. https://<host>:<port>/activevos  
   2. In the ActiveVOS Console, on the Home page, click Administration > Configure Server > URN Mappings.  
   3. Ensure that URN `java:comp/env/jdbc/ActiveVOS` maps to URL `java:comp/env/jdbc/ActiveVOS`. |

Edit the build.properties file (In-place Upgrade)

If you use ActiveVOS, perform the following tasks to edit the build.properties file:

<table>
<thead>
<tr>
<th>Upgrade Task</th>
<th>Details</th>
</tr>
</thead>
</table>
| Configure the database connection properties for IBM DB2 | In IBM DB2 environments, before you upgrade, add the ActiveVOS database connection properties to the build.properties file in `<MDM Hub installation directory>/hub/server/bin`.  
   The following sample shows the ActiveVOS database connection properties with sample entries:  
   activevos.db.type=db2  
   activevos.db.server=localhost  
   activevos.db.port=50000  
   activevos.db.user=AVOS  
   activevos.db.dbname=INFA102  
   activevos.db.schemaname=AVOS  
   activevos.db.jdbc.url=jdbc:db2://localhost:50000/INFA102  
   AeB4PTaskClient-taskOperations |
| Configure the ActiveVOS installation directory | If the upgrade process detects that the installed version of ActiveVOS does not meet the system requirements, the upgrade process installs the required version of ActiveVOS in a new directory.  
   To install ActiveVOS in the same directory as a previous installation, delete or comment out the following entry in the build.properties file:  
   activevosinstall.dir=<ActiveVOS installation directory> |
Prepare the Existing Machines (In-place Upgrade)

<table>
<thead>
<tr>
<th>Upgrade Task</th>
<th>Details</th>
</tr>
</thead>
</table>
| Configure the JAVA_HOME environment variable | If you apply the upgrade to the existing installation directory, perform the following steps:  
  1. In a JBoss environment, manually remove the JAVA_HOME environment variable setting from the following file:  
    - Windows: `<MOM Hub installation directory>`\setSiperianEnv.bat  
    - UNIX: `<MOM Hub installation directory>/setSiperianEnv.sh  
  2. In a JBoss or WebLogic environment, set the JAVA_HOME environment variable to the path of a supported JDK version. |
Pre-Installation Tasks

Whether you perform a clean upgrade or an in-place upgrade, perform the pre-installation tasks to ensure your environment is properly configured.

For pre-installation task instructions, see the Pre-Installation Tasks chapter in the Informatica MDM Multidomain Edition Installation Guide that applies to your environment.
Hub Store Upgrade Overview

The Hub Store is the database that contains the MDM Hub Master Database and one or more Operational Reference Store (ORS) databases. Use the scripts provided in the distribution to upgrade the databases.

If your database environment is set to a non-English locale, ensure that the character set is a Unicode character set before you upgrade the Hub Store. After the upgrade completes successfully, you can select your preferred locale. The locale is stored as a user account preference, rather than at the database level.

**Note:** In UNIX environments, ensure that you do not include spaces in the path to the database directory or folder names. If you specify a path that has spaces in the directory or folder names, the upgrade fails.

Clone the Hub Store (Clean Upgrade)

If you are performing a clean upgrade, have a DBA back up and clone the Hub Store. Perform the upgrade of the Hub store after the DBA has copied the clone to the new machines.
Databases Set to a Non-English Locale

If the Hub Store database environment is set to a non-English locale, ensure that the database environment uses a Unicode character set before you run the upgrade script. You set the character set using a database environment variable.

The upgrade script translates metadata to English and associates a translation key with the metadata. After the upgrade is successful, each MDM Hub Console user can select any supported locale for the user interface and databases. The locale selection for each user is stored in the Master Database with all user data.

For example, consider an MDM Hub Store that resides in an Oracle database environment in a Korean locale. Before you upgrade, you ensure that the database environment variable NLS_LANG is set to KOREAN_KOREAN.AL32UTF8 (Korean Unicode). After the upgrade, you can set your locale to Korean, while someone else can choose a different supported locale.

The following table lists database environment variables that you can use to set the character set:

<table>
<thead>
<tr>
<th>Database</th>
<th>Environment Variable Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle</td>
<td>NLS_LANG</td>
</tr>
<tr>
<td>IBM DB2</td>
<td>DB2CODEPAGE</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>SET LANGUAGE clause (for session only)</td>
</tr>
</tbody>
</table>

For more information about database environment variables, see the documentation for your database.

Upgrading the MDM Hub Master Database in Verbose Mode

To upgrade the MDM Hub Master Database, run the upgrade script.

**Note:** If you did not use the Hub Console to make metadata changes, the database upgrade script might fail. If a script fails, contact Informatica Global Customer Support.

1. Open a command prompt.
2. Navigate to the following directory:
   - In UNIX. `<MDM Hub distribution directory>/database/bin`
   - In Windows. `<MDM Hub distribution directory>\database\bin`
3. Run the MDM Hub Master Database upgrade script with the following command:
   - In UNIX. `sip_ant.sh updatemasterdatabase`
   - In Windows. `sip_ant.bat updatemasterdatabase`
4. Answer the prompts.
5. Answer the following prompt if it appears during the Master Database upgrade:

   This upgrade should be performed by a DBA to grant 'create sequence' privileges for the master database. The master database does not have 'create sequence' privileges,
you can either grant it now (manually) and then move forward or re-start the
upgrade, or direct this process to do so for you now, and continue the current
upgrade. 
Do you want the process to create this privilege? Yes/No

• If enter No, the upgrade process checks again to ensure the user granted the privilege, and then
returns to the TNS name prompt.
• If you enter Yes, you must answer the following prompts before you can continue with the upgrade
process:
  Enter DBA username:
  Enter DBA password:

6. In JBoss environments, restart the application server.
7. Save a copy of the CMX_SYSTEM upgrade log files to the upgrade documentation directory. There is a
log file for each change script.

The upgrade process saves the files to the following location:
• In UNIX.
  <MDM Hub installation directory>/server/resources/database/db_changes/<database
name>/Master
• In Windows.
  <MDM Hub installation directory>/server/resources/database/db_changes/<database
name>/Master

### Upgrading the MDM Hub Master Database in Silent Mode

To upgrade the MDM Hub Master Database in silent mode, run the upgrade script with the appropriate
command for the environment.

**Note:** To display the silent upgrade process in the command line, set -Dnoprompt to true. To display the only
the start time and end time in the command line, set -Dnoprompt to true -silent.

1. Open a command prompt.
2. Navigate to the following directory:
   • UNIX. <MDM Hub distribution directory>/database/bin
   • Windows. <MDM Hub distribution directory>\database\bin
3. To upgrade the MDM Hub Master Database in an Oracle environment, run the following command:

   UNIX.
   ```bash
   sip_ant.sh updatemasterdatabase -Dmaster.tnsname=<TNS name> -
   Dmaster.connectiontype=<SID or SERVICE> -Dmaster.server=<host name> -
   Dmaster.port=<port> -Dmaster.sid=<SID name> -Dmaster.username=<MDM Hub Master
   Database username> -Dmaster.password=<MDM Hub Master Database password> -
   Dcmx.username=<administrator username> -Dcmx.password=<administrator password> -
   Dcmx.server.masterdatabase.type=ORACLE -Dnoprompt=true
   ```

   Windows.
   ```cmd
   sip_ant.bat updatemasterdatabase -Dmaster.tnsname=<TNS name> -
   Dmaster.connectiontype=<SID or SERVICE> -Dmaster.server=<host name> -
   Dmaster.port=<port> -Dmaster.sid=<SID name> -Dmaster.username=<MDM Hub Master
   ```
To upgrade the MDM Hub Master Database in an IBM DB2 environment, run the following command:

**UNIX.**
```
/sip_ant.sh updatemasterdatabase -Dcmx.server.masterdatabase.type=DB2 -Dmaster.hostname<host name> -Dmaster.port<port> -Dmaster.username=<MDM Hub Master Database username> -Dcmx.password=<MDM Hub Master Database password> -Ddba.usernamem=DBA username> -Dbdb.password=DBA password> -Dnoprompt=true
```

**Windows.**
```
sip_ant.bat updatemasterdatabase -Dcmx.server.masterdatabase.type=DB2 -Dmaster.hostname<host name> -Dmaster.port<port> -Dmaster.username=<MDM Hub Master Database username> -Dcmx.password=<MDM Hub Master Database password> -Ddba.username=DBA username> -Dbdb.password=DBA password> -Dnoprompt=true
```

5. To upgrade the MDM Hub Master Database in a Microsoft SQL Server environment, run the following command:

**UNIX.**
```
sip_ant.sh updatemasterdatabase -Dmaster.hostname<host name> -Dmaster.port<port> -Dmaster.username=<MDM Hub Master Database username> -Dcmx.username=<MDM Hub Master Database username> -Dcmx.password<administrator password> -Dcmx.server.masterdatabase.type=MSSQL -Dmaster.database=<MDM Hub Master Database name> -Dnoprompt=true
```

**Windows.**
```
sip_ant.bat updatemasterdatabase -Dmaster.hostname<host name> -Dmaster.port<port> -Dmaster.username=<MDM Hub Master Database username> -Dcmx.username=<MDM Hub Master Database username> -Dcmx.password<administrator password> -Dcmx.server.masterdatabase.type=MSSQL -Dmaster.database=<MDM Hub Master Database name> -Dnoprompt=true
```

---

**Upgrading Operational Reference Store Databases in Verbose Mode**

To upgrade each Operational Reference Store (ORS) database, run an upgrade script. Upgrade the MDM Hub Master Database before you upgrade the ORS databases.

**Note:** If you did not use the Hub Console to make metadata changes, the database upgrade script might fail. If a script fails, contact Informatica Global Customer Support.

1. Stop the application server.
2. Open a command prompt.
3. Navigate to the following directory:
   - On UNIX. `<MDM Hub distribution directory>/database/bin`
   - On Windows. `<MDM Hub distribution directory>\database\bin`
4. Run the Operational Reference Store upgrade script with the following command:
   - UNIX. `./sip_ant.sh updatemastersdatabase`
5. Answer the prompts.

For Oracle environments, provide the following information:

<table>
<thead>
<tr>
<th>Prompts</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter database type (ORACLE, MSSQL, DB2)</td>
<td>Database type. Specify <strong>Oracle</strong>.</td>
</tr>
<tr>
<td>Enter Oracle Connection Type (service, sid). [service]</td>
<td>Connection type. Use one of the following values:</td>
</tr>
<tr>
<td></td>
<td><strong>SERVICE</strong></td>
</tr>
<tr>
<td></td>
<td>Uses the service name to connect to Oracle.</td>
</tr>
<tr>
<td></td>
<td><strong>SID</strong></td>
</tr>
<tr>
<td></td>
<td>Uses the Oracle System ID to connect to Oracle.</td>
</tr>
<tr>
<td></td>
<td>Default is <strong>SERVICE</strong>.</td>
</tr>
<tr>
<td>Enter the Operational Reference Store database host name [localhost]</td>
<td>Name of the host that is running the database.</td>
</tr>
<tr>
<td>Enter the Operational Reference Store database port number. [1521]</td>
<td>Port number that the database listener uses. Default is 1521.</td>
</tr>
<tr>
<td>Enter the Operational Reference Store database service name [orcl]</td>
<td>Name of the Oracle service. This prompt is displayed if the selected Oracle</td>
</tr>
<tr>
<td></td>
<td>connection type is <strong>SERVICE</strong>.</td>
</tr>
<tr>
<td>Enter Oracle Net connect identifier (TNS Name) [orcl]</td>
<td>Oracle TNS name. Default is <strong>orcl</strong>.</td>
</tr>
<tr>
<td>Master Database Connect URL: &quot;jdbc:oracle:thin:@//&lt;host_name&gt;:&lt;port&gt;/&lt;service_name&gt;&quot;.</td>
<td>Connect URL for the Oracle connection type <strong>SERVICE</strong>. You can type \textit{y} to change the default connect URL. To use the default connect URL, type \textit{n}.</td>
</tr>
<tr>
<td>Do you want to change the connect URL (y/n) [n]</td>
<td></td>
</tr>
<tr>
<td>Enter database Sid [orcl]</td>
<td>Name of the Oracle System ID. This prompt is displayed if the selected Oracle</td>
</tr>
<tr>
<td></td>
<td>connection type is <strong>SID</strong>.</td>
</tr>
<tr>
<td>Enter the Operational Reference Store database name [cmx_ors]</td>
<td>Name of the Operational Reference Store database. Default is <strong>cmx_ors</strong>.</td>
</tr>
<tr>
<td>Enter the Operational Reference Store database user password</td>
<td>Password to access the Operational Reference Store.</td>
</tr>
<tr>
<td>Enter the DBA username [sys]</td>
<td>Name of the user with DBA-level permissions.</td>
</tr>
<tr>
<td>Enter the DBA password</td>
<td>Password of the user with DBA-level permissions.</td>
</tr>
<tr>
<td>Enter integer code of ORS Timeline Granularity: Year 5, Month 4, Day 3, Hour 2, Minute 1, Second 0 [3]</td>
<td>Specify timeline units to use.</td>
</tr>
</tbody>
</table>
For IBM DB2 environments, provide the following information:

<table>
<thead>
<tr>
<th>Prompts</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter database type (ORACLE, MSSQL, DB2)</td>
<td>Database type. Specify DB2.</td>
</tr>
<tr>
<td>Enter the Operational Reference Store database host name [localhost]</td>
<td>Name of the host that is running the database.</td>
</tr>
<tr>
<td>Enter the Operational Reference Store database port number [50000]</td>
<td>Port number that the database listener uses. Default is 50000.</td>
</tr>
<tr>
<td>Enter the Operational Reference Store database name [SIP97]</td>
<td>Name of the database. Default is SIP97.</td>
</tr>
<tr>
<td>Enter the Operational Reference Store database name [cmx_ors]</td>
<td>Name of the Operational Reference Store database. Default is cmx_ors.</td>
</tr>
<tr>
<td>Enter the Operational Reference Store database user password</td>
<td>Password to access the Operational Reference Store.</td>
</tr>
<tr>
<td>Enter locale name from list: de, en_US, fr, ja, ko, zh_CN. [en_US]</td>
<td>Operating system locale. Default is en_US.</td>
</tr>
<tr>
<td>Enter the DBA username [sys]</td>
<td>Name of the user with DBA-level permissions.</td>
</tr>
<tr>
<td>Enter the DBA password</td>
<td>Password of the user with DBA-level permissions.</td>
</tr>
<tr>
<td>Enter integer code of ORS Timeline Granularity: Year 5, Month 4, Day 3, Hour 2, Minute 1, Second 0 [3]</td>
<td>Specify timeline units to use.</td>
</tr>
</tbody>
</table>

For Microsoft SQL Server environments, provide the following information:

<table>
<thead>
<tr>
<th>Prompts</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter database type (ORACLE, MSSQL, DB2)</td>
<td>Database type. Specify MSSQL.</td>
</tr>
<tr>
<td>Enter the Operational Reference Store database host name [localhost]</td>
<td>Name of the host that is running the database.</td>
</tr>
<tr>
<td>Enter the Operational Reference Store database port number [1433]</td>
<td>Port number that the database listener uses. Default is 1433.</td>
</tr>
<tr>
<td>Enter the Operational Reference Store database name [cmx_ors]</td>
<td>Name of the Operational Reference Store database. Default is cmx_ors.</td>
</tr>
<tr>
<td>Enter the Operational Reference Store database user password</td>
<td>Password to access the Operational Reference Store.</td>
</tr>
<tr>
<td>Enter locale name from list: de, en_US, fr, ja, ko, zh_CN. [en_US]</td>
<td>Operating system locale. Default is en_US.</td>
</tr>
<tr>
<td>Enter the DBA username [sys]</td>
<td>Name of the user with DBA-level permissions.</td>
</tr>
</tbody>
</table>
Register the upgraded ORS in the Hub Console.

Restart the application server.

Save a copy of the CMX_ORS upgrade log files to the upgrade documentation directory. There is a log file for each change script.

The upgrade process saves the files to the following location:

- In UNIX:
  ```
  /<MDM Hub installation directory>/server/resources/database/db_changes/<database name>/ORS
  ```
- In Windows:
  ```
  \<MDM Hub installation directory>\server\resources\database\db_changes\<database name>\ORS
  ```

**Important:** The `sip_ant` log file is overwritten every time you execute `sip_ant` from the command line. You must save a backup copy before you run the `sip_ant` script to upgrade another ORS.

### Upgrading Operational Reference Store Databases in Silent Mode

To upgrade an Operational Reference Store database in silent mode, run the upgrade script with the appropriate command for the environment.

**Note:** To display the silent upgrade process in the command line, set `-Dnoprompt to true`. To display the only the start time and end time of the silent upgrade process in the command line, set `-Dnoprompt to true -silent`.

1. Open a command prompt.
2. Navigate to the following directory:
   - UNIX. `<MDM Hub distribution directory>/database/bin`
   - Windows. `<MDM Hub distribution directory>\database\bin`
3. To upgrade an Operational Reference Store in an Oracle environment, run the following command:
   ```
   unix.
   sip_ant.sh updateorsdatabase -Dors.tnsname=<tns name> -Dors.connectiontype=sid -Dors.hostname=<hostname> -Dors.port=<port> -Dors.sid=<Oracle SID> -Dors.username=<ORS username> -Dors.password=<ORS password> -Dcmx.server.masterdatabase.type=oracle -Dnoprompt=true
   ```
To upgrade the Operational Reference Store in an IBM DB2 environment, run the following command:

Windows.

```
sip_ant.bat updateorsdatabase -Dors.tnsname=<tns name> -Dors.connectiontype=sid -Dors.hostname=<host name> -Dors.port=<port> -Dors.sid=<Oracle SID> -Dors.username=<ORS username> -Dors.password=<ORS password> -Dcmx.server.masterdatabase.type=oracle -Dnoprompt=true
```

4. To upgrade the Operational Reference Store in an IBM DB2 environment, run the following command:

UNIX.

```
sip_ant.sh updateorsdatabase -Dors.hostname=<host name> -Dors.database=%db2database% -Dors.port=<port> -Dors.username=<ORS username> -Dors.password=<ORS password> -Dcmx.server.masterdatabase.type=db2 -Dnoprompt=true
```

Windows.

```
sip_ant.bat updateorsdatabase -Dors.hostname=<host name> -Dors.database=%db2database% -Dors.port=<port> -Dors.username=<ORS username> -Dors.password=<ORS password> -Dcmx.server.masterdatabase.type=db2 -Dnoprompt=true
```

5. To upgrade the Operational Reference Store in a Microsoft SQL Server environment, run the following command:

UNIX.

```
sip_ant.sh updateorsdatabase -Dors.hostname=<hostname> -Dors.port=<port> -Dors.username=<ORS username> -Dors.password=<ORS password> -Dors.database=<database name> -Dcmx.server.masterdatabase.type= MSSQL -Dnoprompt=true
```

Window.

```
sip_ant.bat updateorsdatabase -Dors.hostname=<hostname> -Dors.port=<port> -Dors.username=<ORS username> -Dors.password=<ORS password> -Dors.database=<database name> -Dcmx.server.masterdatabase.type= MSSQL -Dnoprompt=true
```

Confirm that the Upgrade Scripts Ran Successfully

Check the C_REPOS_DB_CHANGE table to see that the Hub Store upgrade scripts ran successfully.

Scripts run during the upgrade process if they have not run during previous upgrades. If the C_REPOS_DB_CHANGE table indicates that a script failed, contact Informatica Global Customer Support.
CHAPTER 5

Hub Server Upgrade (In-place Upgrade)

This chapter includes the following topics:

- Hub Server Upgrade Overview, 32
- Application Server Upgrades, 33
- Upgrading the Hub Server in Graphical Mode, 33
- Upgrading the Hub Server in Console Mode, 36
- Upgrading the Hub Server in Silent Mode, 38
- Run the patchInstallSetup Script, 40
- Copy Hub Server Log Files to the Upgrade Documentation Folder, 41
- Reapplying the Hub Server Upgrade (Optional), 42

Hub Server Upgrade Overview

The Hub Server is the MDM Hub software that runs in an application server environment. Use the core and common services of the MDM Hub, including access, security, and session management through the Hub Server.

The instructions in this chapter apply to an in-place upgrade. For instructions on how to install the Hub Server for a clean upgrade, see the Hub Server Installation chapter and the Hub Serve Post-Installation Tasks chapter in the Informatica MDM Multidomain Edition Installation Guide that applies to your environment.

You can upgrade in graphical mode, console mode, or silent mode. To upgrade the Hub Server in graphical mode or console mode, run the Hub Server Installer provided in the distribution. To upgrade the Hub Server in silent mode, configure the silent installer property files.

If you use a version of ActiveVOS Server that is not supported, you are prompted to install ActiveVOS Server during the Hub Server upgrade process.

The Hub Server installer differentiates a patch installation from a full installation when, during installation, you point to the existing MDM Hub installation as the target. Before overwriting the existing Hub Server installation, the MDM Hub Installer creates a backup of critical files.
Application Server Upgrades

If you upgrade the application server to a new major version for the MDM Multidomain Edition upgrade, you must perform a reinstallaion of the Hub Server and Process Servers. Upgrade the Hub Store according to the instructions in this guide.

Before you install the Hub Server and Process Servers, back up the Hub Server and Process Server installation folders in your environment.

For instructions on installing the Hub Server and Process Servers, see the Informatica MDM Multidomain Edition Installation Guide.

Upgrading the Hub Server in Graphical Mode

To upgrade the Hub Server in graphical mode, run the Hub Server installer.

1. Log in using the user name that was used to install the Hub Server.
2. Start the application server on which the Hub Server is deployed.
3. Open a command prompt and navigate to the Hub Server installer in the distribution directory. By default the installer is in the following directory:
   - On UNIX: /<MDM Hub distribution directory>/<operating system name>/mrms
   - On Windows: \<MDM Hub distribution directory>\mrms
4. Run the following command:
   - On UNIX: hub_install.bin
   - On Windows: hub_install.exe
5. From the Introduction window, click Next. The License Agreement window appears.
6. Review and accept the terms of the license agreement. Click Next.
8. Click OK to upgrade an existing Hub Server installation.
9. If the previous installation uses WebLogic as the application server, the Hub Server installer prompts you to provide the WebLogic Admin password. Enter the WebLogic password.
10. If you want to install embedded ActiveVOS, select Yes and perform the following substeps:
    a. Specify an installation folder. You cannot install ActiveVOS in the same folder as a previous ActiveVOS installation. On the Choose ActiveVOS Installation Folder page, accept the default installation path or specify a preferred location. Click Next.
    b. On the Database Information page, enter the database details that you specified when you created the ActiveVOS database schema, and click Next.
c. On the Application Server Web URL page, accept the default URL or specify the URL that you want to use to call ActiveVOS web services. Ensure the URL contains the correct port number for the connection to the application server. Click **Next**.

The post installation setup script uses the URL to call ActiveVOS web services, deploy the predefined MDM workflows to ActiveVOS, and create the URN mapping.

d. On the ActiveVOS Installer page, click **Choose**. Browse to the ActiveVOS_Server installation file in the distribution package. Click **Next**.

e. Enter the administrative user name and password to create an administrative user for the ActiveVOS Console.

**Important:** The user name and password must be the same as the ActiveVOS Console user name and password that was created in the application server.

f. Click **Next**.

11. If you have an older version of ActiveVOS installed, perform the following substeps.

   a. Specify an installation folder. You cannot install ActiveVOS in the same folder as a previous ActiveVOS installation. On the Choose ActiveVOS Installation Folder page, accept the default installation path or specify a preferred location. Click **Next**.

   b. On the **Database Information** page, enter the database details that you specified when you created the ActiveVOS database schema, and click **Next**.

   **Note:** If you are moving from standalone ActiveVOS to embedded ActiveVOS, enter the details for the standalone ActiveVOS schema.

   c. On the Application Server Web URL page, accept the default URL or specify the URL that you want to use to call ActiveVOS web services. Ensure the URL contains the correct port number for the connection to the application server. Click **Next**.

   The post installation setup script uses the URL to call ActiveVOS web services, deploy the predefined MDM workflows to ActiveVOS, and create the URN mapping.

   d. On the ActiveVOS Installer page, click **Choose**. Browse to the ActiveVOS_Server installation file in the distribution package. Click **Next**.

   e. Enter the administrative user name and password to create an administrative user for the ActiveVOS Console.

   **Important:** The user name and password must be the same as the ActiveVOS Console user name and password that was created in the application server.

   f. Click **Next**.

12. If you have the correct version of embedded ActiveVOS installed, perform the following substeps.

   a. Enter the administrative user name and password to create an administrative user for the ActiveVOS Console.

   **Important:** The user name and password must be the same as the ActiveVOS Console user name and password that was created in the application server.

   b. Enter the ActiveVOS database credentials that you specified when you created the ActiveVOS database schema. Click **Next**.

   c. Click **Next**.

13. Select one of the following Informatica platform installation options:

   - **Yes.** Install Informatica platform.
   - **No.** Does not install Informatica platform.
14. If you select **Yes** in the preceding step, click **Choose** and browse to the following Informatica platform file locations:
   - Installation response file
   - Platform installation file

15. On the Product Usage Toolkit page, select the industry to which the organization belongs and the environment type.

16. If you want to use a proxy server, select **Yes**, and enter the proxy server details. Otherwise, select **No**. You can enter the following proxy server details:
   - Proxy server name/IP
   - Proxy server port
   - Proxy server domain name. Leave blank if not applicable.
   - Proxy server user name. Leave blank if not applicable.
   - Proxy server password. Leave blank if not applicable.

17. Click **Next**. The Deploy page appear.

18. Select whether to deploy automatically or manually. Click **Yes** to deploy automatically, or click **No** to deploy manually, and then click **Next**.
   - If you are installing embedded ActiveVOS for the first time, or are using the correct version of ActiveVOS, click **Yes** to deploy automatically.
   - If you use an older version of ActiveVOS in your environment, click **No** to deploy manually, and then click **Next**. You must upgrade the ActiveVOS schema to 9.2.4.1 before you deploy manually.
   - On WebLogic or clustered environments, click **No** to deploy manually, and then click **Next**.
   - On WebSphere standalone environments or JBoss standalone environments without ActiveVOS, click **Yes** to deploy automatically, and then click **Next**.

The **Pre-Installation Summary** window appears.

19. To change any options, click the **Previous** button to change your previous selections.

20. After the summary window displays the options you want, click **Install** to start the installation process. The Hub Server installer displays the **Please Wait** screen while the installer configures the system. The Hub Server installer backs up critical files to an archive that is stored in the **backup** folder in the MDM Hub installation directory. The file name of the archive uses the format shown in the following example:

   Informatica MDM Hub Server-2010-09-27_12-13.jar

When the installation completes, the **Install Complete** window appears.

21. Click **Done** to exit the Hub Server installer.

   **Note:** If the upgrade does not complete successfully, a window appears that states that the upgrade failed and displays the location of the log file that contains the failure messages.

22. If you selected **No** in step 18, repackage and manually deploy the EAR file.
   a. Run the following command to repackage the EAR file:

   On UNIX:

   ```bash
   cd <MDM Hub installation directory>/hub/server/bin
   ./sip_ant.sh repackage
   ```
On Windows.

```
cd <MDM Hub installation directory>/hub/server/bin
sip_ant.bat repackage
```

b. From the application server administration console, manually deploy the Hub Server EAR file. Refer to the application server documentation.

23. Restart the application server.

---

## Upgrading the Hub Server in Console Mode

You can upgrade the Hub Server in console mode in UNIX.

1. Start the application server.
2. Navigate to the following directory in the MDM Hub distribution:
   On UNIX: `<MDM Hub distribution directory>/<operating system name>/mrmsserver`
3. Run the following command from the command prompt:
   ```
   ./hub_install.bin -i console
   ```
4. Enter the number of the locale you want to choose for the upgrade, and then press **Enter**.
   The introduction information about the upgrade appears.
5. Press **Enter**.
   The license agreement appears.
6. Read the License Agreement. Type **Y** to accept the terms of the license agreement, or type **N** if you do not want to accept the license agreement and want to exit the installation program.
7. Press **Enter**.
   If you entered **Y** in the preceding step, information about the installation folder appears.
8. Specify the directory where you installed the Hub Server.
   - To choose the default folder, press **Enter**.
   - To change the path, type the absolute path of the installation folder, and press **Enter**.
9. Confirm the location of the installation folder. Type **Y** to confirm the installation folder, or type **N** to change the installation folder.
   The version warning message appears.
10. Press **Enter** to confirm that you want to proceed.
11. In WebLogic environments, enter your WebLogic password, and press **Enter**.
12. If you want to install embedded ActiveVOS, Press **Enter** for Yes and perform the following substeps.
   a. Specify the location where you want to install the ActiveVOS Server. You cannot install ActiveVOS in the same folder as a previous ActiveVOS installation.
   b. Enter the database details that you specified when you created the ActiveVOS database schema, and click **Next**.
   c. Specify the URL that you want to use to call MDM and ActiveVOS web services. Ensure the URL contains the correct port number for the connection to the application server.
   d. On the ActiveVOS Installer page, select **Choose** and browse to the ActiveVOS_Server installation file in the distribution package.
e. Enter a user name and password to create an administrative user for the ActiveVOS Server Administration Console.

**Important:** The user name and password must be the same as the ActiveVOS Console user name and password that was created in the application server.

13. If you have an older version of ActiveVOS installed, perform the following substeps.
   a. Specify the location where you want to install the ActiveVOS Server. You cannot install ActiveVOS in the same folder as a previous ActiveVOS installation.
   b. Enter the database details that you specified when you created the ActiveVOS database schema, and click **Next**.
      
      **Note:** If you are moving from standalone ActiveVOS to embedded ActiveVOS, enter the details for the standalone ActiveVOS schema.
   c. Specify the URL that you want to use to call MDM and ActiveVOS web services. Ensure the URL contains the correct port number for the connection to the application server.
   d. On the ActiveVOS Installer page, select **Choose** and browse to the ActiveVOS_Server installation file in the distribution package.
   e. Enter a user name and password to create an administrative user for the ActiveVOS Server Administration Console.
      
      **Important:** The user name and password must be the same as the ActiveVOS Console user name and password that was created in the application server.

14. If you have the correct version of embedded ActiveVOS installed, perform the following substeps.
   a. Enter a user name and password to create an administrative user for the ActiveVOS Server Administration Console.
      
      **Important:** The user name and password must be the same as the ActiveVOS Console user name and password that was created in the application server.
   b. Enter the database details that you specified when you created the ActiveVOS database schema, and click **Next**.

15. Press **Enter**.

   The Informatica platform installation prompt appears.

16. If you want to install the Informatica platform, press **Enter** for Yes. Otherwise, type 2 for No and press **Enter**.

   The prompts for the Informatica platform installation response file and archive file locations appear.

17. Enter the locations of the Informatica platform installation response file and archive file, and press **Enter**.

18. Specify the Product Usage Toolkit options.
   a. Enter the industry to which the organization belongs, and then press **Enter**.
   b. Enter the environment type. Type 1 for Production, type 2 for Test/QA, or type 3 for Development, and then press **Enter**.

19. Select whether you have a proxy server. Press **Enter** for Yes. Otherwise, type 2 for No and then press **Enter**.

   You can enter the following proxy server details:
   - Proxy server name/IP
   - Proxy server port
   - Proxy server domain name. Leave blank if not applicable.
• Proxy server user name. Leave blank if not applicable.
• Proxy server password. Leave blank if not applicable.

The summary of the installation choices appears.

20. Choose whether you want to run the postInstallSetup script as part of the installation, or run it manually later.
    • If you are installing embedded ActiveVOS for the first time, or are using the correct version of ActiveVOS, choose to deploy automatically.
    • If you use an older version of ActiveVOS in your environment, choose to deploy manually. You must upgrade the ActiveVOS schema to 9.2.4.1 before you deploy manually.
    • On WebLogic or clustered environments, choose to deploy manually.
    • On WebSphere standalone environments or JBoss standalone environments without ActiveVOS, choose to deploy automatically.


The summary of the upgrade choices appears.

22. Verify the information in the pre-upgrade summary. If the information is correct, press Enter to start the upgrade. If you need to make changes, type BACK to the specific information and make changes.

When the process is complete, the upgrade completion information appears.

23. Press Enter to exit the installer.

Upgrading the Hub Server in Silent Mode

You can upgrade the Hub Server without user interaction in silent mode. You might want to perform a silent upgrade if you have multiple installations, or if you need to upgrade on a machine cluster. A silent upgrade does not show any progress or failure messages.

Before you run the silent upgrade for the Hub Server, you must configure the properties file for the silent upgrade. The installer reads the file to determine the upgrade options. The silent upgrade process might complete successfully even if you provide incorrect settings, such as an incorrect application server path or port. You must ensure that you provide correct settings in the properties file.

Copy the Hub Server upgrade files to the hard disk on the machine where you plan to install the Hub Server. To upgrade in silent mode, complete the following tasks:

1. Configure the installation properties file and specify the installation options in the properties file.
2. Run the upgrade with the installation properties file.

Configuring the Properties File

Verify the values of the parameters in the properties file that affect the silent upgrade process.

1. Find the properties file that you configured when you installed the Hub Server.
2. If you are installing the bundled, licensed version of the ActiveVOS Server, add the ActiveVOS properties to your properties file.
    a. Open the silentInstallServer_sample.properties file that ships with this release.
b. Search for ActiveVOS.

c. Copy the ActiveVOS Installation section to your properties file.

```
#%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
# ActiveVOS Server installation
#%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

# Do you want to install ActiveVOS (Yes/No)
AVOS.INSTALL=Yes
# Path to ActiveVOS Installer (ActiveVOS_Server_windows_9.2.4.1.exe for Windows
or ActiveVOS_Server_unix_9.2.4.1.sh for Linux/UNIX)
AVOS_INSTALLER_PATH=c:\\ActiveVOS_Server_windows_9.2.4.1.exe
# ActiveVOS server install directory
AVOS_INSTALL_DIR=c:\\infadm\\avos\\server

# Database type is the same as for HUB (There is no ability to set a different
database type for ActiveVOS)
# Oracle connection data
# Connection Type SID or Service Name
AVOS.ORACLE.CONNECTION.TYPE="Service Name"
AVOS.DB.SERVER=localhost
AVOS.DB.PORT=1521
# Oracle SID name or service name
AVOS.DB.SID=orcl
AVOS.DB.SCHEMA_NAME=avos
AVOS.DB.PASSWORD=!!cmx!!

# DB2 connection data
AVOS.DB.SERVER=localhost
AVOS.DB.PORT=50000
AVOS.DB.DBNAME=AVOS
AVOS.DB.SCHEMA_NAME=AVOS
AVOS.DB.USER=avos
AVOS.DB.PASSWORD=!!cmx!!

# MSSQL connection data
AVOS.DB.SERVER=localhost
AVOS.DB.PORT=1433
AVOS.DB.DBNAME=avos
AVOS.DB.USER=avos
AVOS.DB.PASSWORD=!!cmx!!

# If you are moving from standalone ActiveVOS to embedded ActiveVOS, enter the
details for the standalone ActiveVOS schema.
```

d. In your properties file, specify the information for your ActiveVOS database and remove the
properties for the other supported databases. If you need help with properties, see the Informatica

3. If you use the licensed version of ActiveVOS server, add and configure the following properties in the
silent installation properties file:

```
SIP.APPSERVER.WEB.URL=http://localhost:8080
# Avos console's administrator username
AVOS.CONSOLE.USER=aeadmin
# Avos console's administrator password
AVOS.CONSOLE.PASSWORD=mdp
```

The user name and password must be the same as the ActiveVOS Console user name and password
that was created in the application server during the pre-installation process.

---

**Running the Silent Upgrade**

After you configure the properties file, you can start the silent upgrade.

1. Ensure that the application server is running.
2. Open a command window.
3. Run the following command:
   On UNIX. `./hub_install.bin -f <location of silent properties file for hub server>`
   On Windows. `hub_install.exe -f <location of silent properties file for hub server>`

   The silent upgrade runs in the background. The process can take a while. If you ran the postInstallSetup script for the Hub Server as part of the silent installation, check the postinstallSetup.log files to verify that the upgrade was successful.

   The log file is available in the following directory:
   On UNIX. `<MDM Hub installation directory>/hub/server/logs/`
   On Windows. `<MDM Hub installation directory>`\`hub\server\logs\`

---

### Run the patchInstallSetup Script

If you chose to deploy manually during the Hub Server installation, you must run the patchInstallSetup script.

1. Navigate to the following directory:
   - On UNIX. `<MDM Hub installation directory>/hub/server`
   - On Windows. `<MDM Hub installation directory>`\`hub\server`

2. Run the following command to deploy the Hub Server application and apply changes to the application server configuration.

   **On UNIX**
   ```
   WebLogic
   patchInstallSetup.sh -Dweblogic.password=<WebLogic password> -
   Ddatabase.password=<MDM Hub Master database password> -
   Davos.username=<ActiveVOS Console username> -
   Davos.password=<ActiveVOS Console password> -
   Davos.jdbc.database.password=<ActiveVOS database password>
   ```
   **WebSphere with security enabled**
   ```
   patchInstallSetup.sh -Dwebsphere.password=<WebSphere password> -
   Ddatabase.password=<MDM Hub Master database password> -
   Davos.username=<ActiveVOS Console username> -
   Davos.password=<ActiveVOS Console password> -
   Davos.jdbc.database.password=<ActiveVOS database password>
   ```
   **WebSphere with security disabled**
   ```
   patchInstallSetup.sh -Ddatabase.password=<MDM Hub Master database password> -
   Davos.username=<ActiveVOS Console username> -
   Davos.password=<ActiveVOS Console password> -
   Davos.jdbc.database.password=<ActiveVOS database password>
   ```
   **JBoss**
   ```
   patchInstallSetup.sh -Ddatabase.password=<MDM Hub Master database password> -
   Davos.username=<ActiveVOS Console username> -
   Davos.password=<ActiveVOS Console password> -
   Davos.jdbc.database.password=<ActiveVOS database password>
   ```

   **Note:** On UNIX, if you include an exclamation mark (!) character in the password, you must include a backslash before the exclamation mark (!) character. For example, if the password is `!!cmx!!`, enter `\\!!cmx\\!!`.  

   **On Windows**
   ```
   WebLogic
   patchInstallSetup.bat -Dweblogic.password=<WebLogic password> -
   Ddatabase.password=<MDM Hub Master database password> -
   Davos.username=<ActiveVOS Console username> -
   Davos.password=<ActiveVOS Console password> -
   Davos.jdbc.database.password=<ActiveVOS database password>
   ```
Copy Hub Server Log Files to the Upgrade Documentation Folder

Save a copy of the Hub Server log files. Use these log files assist if you need to troubleshoot the upgrade.

Copy the Hub Server log files to the upgradedoc upgrade documentation folder. Save these files in a separate subfolder, such as hub_server_upgrade. If you upgraded multiple Hub Servers in a cluster, save the files for each Hub Server instance in a separate folder.

The following table describes the log files to copy:

<table>
<thead>
<tr>
<th>File</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;MDM Hub installation directory&gt;/hub/server/Infammd_Hub_Server_InstallLog.xml</td>
<td>Contains log messages for the Hub Server installation.</td>
</tr>
<tr>
<td>&lt;MDM Hub installation directory&gt;/hub/server/infammd_installer_debug.txt</td>
<td>Contains debug messages and all the options that you selected when you ran the upgrade process.</td>
</tr>
<tr>
<td>&lt;MDM Hub installation directory&gt;/hub/server/logs/patchInstallSetup.log</td>
<td>Contains the patchInstallSetup script results.</td>
</tr>
<tr>
<td>&lt;MDM Hub installation directory&gt;/hub/server/logs/cmxserver.log</td>
<td>Contains the Hub Server log. The Hub Server creates this file when you start the Hub Server.</td>
</tr>
<tr>
<td>Application server log files.</td>
<td>Located in the tree under the installation directory for the application server.</td>
</tr>
</tbody>
</table>

WebSphere with security enabled

```
patchInstallSetup.bat -DwebSphere.password=<WebSphere password> -Ddatabase.password=<MDM Hub Master database password> -Davos.username=<ActiveVOS Console username> -Davos.password=<ActiveVOS Console password> -Davos.jdbc.database.password=<ActiveVOS database password>
```

WebSphere with security disabled

```
patchInstallSetup.bat -Ddatabase.password=<MDM Hub Master database password> -Davos.username=<ActiveVOS Console username> -Davos.password=<ActiveVOS Console password> -Davos.jdbc.database.password=<ActiveVOS database password>
```

JBoss

```
patchInstallsetup.bat -Ddatabase.password=<MDM Hub Master database password> -Davos.username=<ActiveVOS Console username> -Davos.password=<ActiveVOS Console password> -Davos.jdbc.database.password=<ActiveVOS database password>
```

**Note:** On UNIX, if you include an exclamation mark (!) character in the password, you must include a backslash before the exclamation mark (!) character. For example, if the password is `!!cmx!!`, enter `\!!cmx\!!`. 

Copy Hub Server Log Files to the Upgrade Documentation Folder       41
Reapplying the Hub Server Upgrade (Optional)

If you complete the Hub Server upgrade, the upgrade process does not allow you to reapply the Hub Server upgrade. For example, you might want to reapply the Hub Server upgrade if hardware fails during the upgrade process. You can also perform this procedure if you test an upgrade and then want to revert to an earlier version of the software.

1. Back up the siperian-mrm.ear file in the following directory:
   - On UNIX. <MDM Hub installation directory>/hub/server
   - On Windows. <MDM Hub installation directory>\hub\server

2. Repeat the upgrade steps. Add the parameter -DSIPERIAN_FORCED_PATCH_INSTALL=true to the install command.

   For example, if you reapply the upgrade in graphical mode in UNIX, run the following command:

   ```
   hub_install.bin -DSIPERIAN_FORCED_PATCH_INSTALL=true
   ```
This chapter includes the following topics:

- Process Server Upgrade Overview, 43
- Application Server Upgrades, 44
- Upgrading the Process Server in Graphical Mode, 44
- Upgrading the Process Server in Console Mode, 46
- Upgrading the Process Server in Silent Mode, 47
- Steps to Upgrade to Informatica Address Verification 5 Integration, 49
- Configure Match Population, 51
- Copy Process Server Log Files to the Upgrade Documentation Directory, 53
- Reapplying the Process Server Upgrade (Optional), 53

Process Server Upgrade Overview

The Process Server is a servlet that handles data cleansing operations, match operations, and batch jobs. To upgrade the Process Server, run the Process Server installer provided in the distribution. The Process Server installer differentiates an upgrade from a full installation when you select the existing MDM Hub installation location as the target location during the upgrade process. Before overwriting the existing Process Server installation, the Process Server Installer creates a backup of critical files.

The instructions in this chapter apply to an in-place upgrade. For instructions on how to install the Process Server for a clean upgrade, see the Process Server Installation chapter and the Process Serve Post-Installation Tasks chapter in the Informatica MDM Multidomain Edition Installation Guide that applies to your environment.
Application Server Upgrades

If you upgrade the application server to a new major version for the MDM Multidomain Edition upgrade, you must perform a reinstallation of the Hub Server and Process Servers. Upgrade the Hub Store according to the instructions in this guide.

Before you install the Hub Server and Process Servers, back up the Hub Server and Process Server installation folders in your environment.

For instructions on installing the Hub Server and Process Servers, see the Informatica MDM Multidomain Edition Installation Guide.

Upgrading the Process Server in Graphical Mode

To upgrade the Process Server in graphical mode, run the Process Server installer.

1. Log in using the user name that was used to install the Process Server.
2. Start the application server on which the Process Server is deployed.
3. Open a command prompt and navigate to the Process Server installer in the distribution directory. By default the installer is in the following directory:
   - On UNIX: `<MDM Hub distribution directory><operating system name>/mrmcleanse`
   - On Windows: `<MDM Hub distribution directory>\windows\mrmcleanse`
4. Run the following command:
   - On UNIX: `hub_cleanse_install.bin`
   - On Windows: `hub_cleanse_install.exe`
5. From the Introduction window, click Next. The License Agreement window appears.
6. Select the I accept the terms of the License Agreement option, and then click Next. The Choose Install Folder window appears.
   - To choose the default location, click Next.
   - To choose another location, click Choose, and then click Next. The Version Warning message appears.
8. Click OK to confirm that you want to proceed. The Enter Location of License File window appears.
9. Select the location of the license file, and then click Next.
10. If the previous installation uses WebLogic as the application server, the Process Server Installer prompts you to provide the WebLogic Admin password. Enter the WebLogic password.
11. On the Product Usage Toolkit page, select the Environment Type.
12. If you have a proxy server, select Yes, and enter the proxy server details. Otherwise, select No, and click Next.
You can enter the following proxy server details:

- Proxy server name/IP
- Proxy server port
- Proxy server domain name. Leave blank if not applicable.
- Proxy server user name. Leave blank if not applicable.
- Proxy server password. Leave blank if not applicable.

13. Click **Next**.

The Deploy page appears.

14. Select whether to deploy automatically or manually. Click **Yes** to deploy automatically, or click **No** to deploy manually, and then click **Next**.

- On WebSphere standalone environments or JBoss standalone environments, click **Yes** to deploy automatically, and then click **Next**.
- On WebLogic or clustered environments, click **No** to deploy manually, and then click **Next**.

The **Pre-installation Summary** window appears.

15. To change any options, click the **Previous** button to change your previous selections.

16. After the summary window displays the options you want, click **Install** to start the installation process.

The Process Server installer displays the **Please Wait** screen while the installer configures the system. The Process Server installer backs up critical files to an archive that is stored in the **backup** folder in the MDM Hub installation directory. The file name of the archive uses the format shown in the following example:

```
Siperian Hub Cleanse Match Server-2010-05-12_18-09.jar
```

When the installation completes, the **Install Complete** window appears.

17. Click **Done** to exit the Process Server installer.

**Note:** If the upgrade does not complete successfully, a window appears that states that the upgrade failed and displays the location of the log file that contains the failure messages.

18. If you selected **No** in step 14, repackage and manually deploy the EAR file.

a. Run the following command to repackage the EAR file:

On UNIX.

```
    cd <MDM Hub installation directory>/hub/cleanse/bin
    ./sip_ant.sh repackage
```

On Windows.

```
    cd <MDM Hub installation directory>\hub\cleanse\bin
    sip_ant.bat repackage
```

b. From the application server administration console, manually deploy the Process Server EAR file. Refer to the application server documentation.

19. Copy the **SSA-Name3 library files** from `<MDM Hub installation directory>/hub/cleanse/lib/upgrade/SSA` to `<MDM Hub installation directory>/hub/cleanse/lib`.

20. Restart the application server.
You can upgrade the Process Server in console mode on UNIX.

**Note:** Do not use the root user when you upgrade the Process Server on RedHat Linux. The root user does not have a .profile, which InstallAnywhere requires. Instead, create and use a separate user profile to upgrade the Process Server.

1. Start the application server.
2. Navigate to the following directory in the MDM Hub distribution:
   - On Solaris. `<MDM Hub distribution directory>/solaris/mrmcleanse`
   - On HP-UX. `<MDM Hub distribution directory>/hpux/mrmcleanse`
   - On Linux. `<MDM Hub distribution directory>/linux/mrmcleanse`
   - On AIX. `<MDM Hub distribution directory>/aix/mrmcleanse`
3. Run the following command from the command prompt:
   ```
   ./hub_cleanse_install.bin -i console
   ```
4. Enter the number of the locale you want to choose for the installation, and then press **Enter**.
   The introduction information about the installation appears.
5. Press **Enter**.
   The license agreement appears.
6. Read the License Agreement. Type **Y** to accept the license agreement, or type **N** if you do not want to accept the license agreement and want to exit the installation program.
7. Press **Enter**.
   If you entered **Y** in the preceding step, information about the installation folder appears.
8. Specify the directory where you installed the Process Server.
   - To choose the default location, press **Enter**.
   - To change the path, type the absolute path of the installation folder, and press **Enter**.
9. Confirm the location of the installation folder. Type **Y** to confirm the installation folder, or type **N** to change the installation folder.
   The version warning message appears.
10. Press **Enter** to confirm that you want to proceed.
    The prompt for the license file location appears.
11. Enter the absolute path of the license file, and press **Enter**.
12. In WebLogic environments, enter your WebLogic password, and press **Enter**.
13. From the Product Usage Toolkit options, select the environment type. Type **1** for Production, type **2** for Test/QA, or type **3** for Development, and then press **Enter**.
14. Select whether you have a proxy server. Press **Enter** for Yes. Otherwise, type **2** for No and then press **Enter**.
   You can enter the following proxy server details:
   - Proxy server name/IP
   - Proxy server port
   - Proxy server domain name. Leave blank if not applicable.
• Proxy server user name. Leave blank if not applicable.
• Proxy server password. Leave blank if not applicable.

The summary of the installation choices appears.

15. Choose whether you want to run the `postInstallSetup` script as part of the installation, or run it manually later.

16. Press **Enter**.

   The summary of the upgrade choices appears.

17. Verify the information in the pre-upgrade summary. If the information is correct, press **Enter** to start the upgrade. If you need to make changes, type `BACK` to the specific information and make changes.

   When the process is complete, the upgrade completion information appears.

18. Press **Enter** to exit the installer.

### Upgrading the Process Server in Silent Mode

You can upgrade the Process Server without user interaction in silent mode. You might want to perform a silent upgrade if you have multiple installations, or if you need to upgrade on a machine cluster. A silent upgrade does not show any progress or failure messages.

Before you run the silent upgrade for the Process Server, you must configure the properties file for the silent upgrade. The installer reads the file to determine the upgrade options. The silent upgrade process might complete successfully even if you provide incorrect settings, such as an incorrect application server path or port setting. You must ensure that you provide correct settings in the properties file.

Copy the Process Server upgrade files to the hard disk on the machine where you plan to upgrade the Process Server. To upgrade in silent mode, complete the following tasks:

1. Configure the installation properties file and specify the installation options in the properties file.
2. Run the upgrade with the installation properties file.

### Configuring the Properties File

Verify the values of the parameters in the properties file that affect the silent upgrade process.

1. Find the properties file that you configured when you installed the Process Server.
2. Use a text editor to open the file and verify the values of the parameters that affect the silent upgrade process.
Add and configure the following product usage toolkit properties to the silent installation properties file:

<table>
<thead>
<tr>
<th>Property Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>USER_INSTALL_DIR</td>
<td>Directory where you installed the Process Server. For example, C:\MDM Hub installation directory\cleanse. You must escape backslash characters in the properties file. Use double backslashes when you specify the installation directory path.</td>
</tr>
<tr>
<td>SIP.APPSERVER.PASSWORD</td>
<td>Password to access WebLogic. For WebLogic environments.</td>
</tr>
<tr>
<td>RUN_DEPLOYMENT_FLAG</td>
<td>Runs the postInstallSetup script as part of the silent upgrade. Set to 1 if you want to run postInstallSetup at the end of the silent upgrade. Set to 0 if you do not want to run postInstallSetup.</td>
</tr>
</tbody>
</table>

3. Add and configure the following product usage toolkit properties to the silent installation properties file:

```bash
#Product Usage Toolkit Installation
# CSM_TYPE is the type of Product Usage Toolkit installation. # valid values are:Production, Test, Development. Should not be blank.
CSM_TYPE=Production

# If the network has a proxy server, fill in the following parameters (leave empty if no proxy):
# proxy server host
# CSM_HOST=
# proxy server port
CSM_PORT=
# Proxy server domain name (leave blank, if not applicable)
CSM_DOMAIN=
# Proxy server user name (leave blank, if not applicable)
CSM_PROXY_USER_NAME=
# Proxy server password (leave blank, if not applicable)
CSM_PROXY_PASSWORD=
```

**Running the Process Server Silent Upgrade**

After you configure the properties file, you can start the silent upgrade.

1. Ensure that the application server is running.
2. Open a command window.
3. Run the following command:

   **On UNIX.** .\hub_cleanse_install.bin -f <location of silent properties file for process server>

   **On Windows.** hub_cleanse_install.exe -f <location of silent properties file for process server>

   The silent upgrade runs in the background. The process can take a while. If you ran the post install script for the Process Server as part of the silent installation, check the postinstallSetup.log files to verify that the upgrade was successful.

   The log file is available in the following directory:

   **On UNIX.** <MDM Hub installation directory>/hub/cleanse/logs/

   **On Windows.** <MDM Hub installation directory>\hub\cleanse\logs\
Steps to Upgrade to Informatica Address Verification 5 Integration

This section describes the upgrade process required for the MDM Hub implementation to use Informatica Address Verification 5.

**Note:** This section is applicable to users with a license for using Informatica Address Verification.

You must perform the following steps to upgrade to Informatica Address Verification 5 integration:

1. Open the `cmxcleanse.properties` file. This file is located at:
   
   **Windows:** `<infadm_install_directory>\hub\cleanse\resources`  
   **UNIX:** `<infadm_install_directory>/hub/cleanse/resources`  

2. Ensure that the following Informatica Address Verification 5 properties are set in the `cmxcleanse.properties` file:

   **Windows:**
   
   ```xml
   cleanse.library.addressDoctor.property.SetConfigFile=C:\infadm\hub\cleanse\resources\AddressDoctor\5\SetConfig.xml  
   cleanse.library.addressDoctor.property.ParametersFile=C:\infadm\hub\cleanse\resources\AddressDoctor\5\Parameters.xml  
   cleanse.library.addressDoctor.property.DefaultCorrectionType=PARAMETERS_DEFAULT
   ```

   **UNIX:**
   
   ```xml
   cleanse.library.addressDoctor.property.SetConfigFile=/ui/infadm/hub/cleanse/resources/AddressDoctor/5/SetConfig.xml  
   cleanse.library.addressDoctor.property.ParametersFile=/ui/infadm/hub/cleanse/resources/AddressDoctor/5/Parameters.xml  
   cleanse.library.addressDoctor.property.DefaultCorrectionType=PARAMETERS_DEFAULT
   ```

3. Save and close the properties file.

4. Copy `SetConfig.xml` and `Parameters.xml` to the location specified in the `cmxcleanse.properties` file.

The following is a sample `SetConfig.xml` file:

```xml
<SetConfig>
  <General WriteXMLEncoding="UTF-16" WriteXMLBOM="NEVER" MaxMemoryUsageMB="600" MaxAddressObjectCount="10" MaxThreadCount="10" />
  <UnlockCode>79FYL9UAXAXQRS0KL1TD6PAQVC3KM14F2C</UnlockCode>
  <DataBase CountryISO3="ALL" Type="BATCH_INTERACTIVE" Path="c:\addressdoctor\5" PreloadingType="NONE" />
  <DataBase CountryISO3="ALL" Type="FASTCOMPLETION" Path="c:\addressdoctor\5" PreloadingType="NONE" />
  <DataBase CountryISO3="ALL" Type="CERTIFIED" Path="c:\addressdoctor\5" PreloadingType="NONE" />
  <DataBase CountryISO3="ALL" Type="GEOCODING" Path="c:\addressdoctor\5" PreloadingType="NONE" />
  <DataBase CountryISO3="ALL" Type="SUPPLEMENTARY" Path="c:\addressdoctor\5" PreloadingType="NONE" />
</SetConfig>
```

Steps to Upgrade to Informatica Address Verification 5 Integration
The following is a sample Parameters.xml file:

```xml
<?xml version="1.0" encoding="iso-8859-1"?>
<!DOCTYPE Parameters SYSTEM "Parameters.dtd">
<Parameters
    WriteXMLEncoding="UTF-16"
    WriteXMLBOM="NEVER">
    <Process
        Mode="BATCH"
        EnrichmentGeoCoding="ON"
        EnrichmentCASS="ON"
        EnrichmentSERP="ON"
        EnrichmentSNA="ON"
        EnrichmentSupplementaryGB="ON"
        EnrichmentSupplementaryUS="ON" />
    <Input
        Encoding="UTF-16"
        FormatType="ALL"
        FormatWithCountry="ON"
        FormatDelimiter="PIPE" />
    <Result
        AddressElements="STANDARD"
        Encoding="UTF-16"
        CountryType="NAME EN"
        FormatDelimiter="PIPE" />
</Parameters>
```

5. Specify the Informatica Address Verification 5 unlock code in the configuration file, SetConfig.xml.
   For more information about the SetConfig.xml file and Parameters.xml file, refer to your Informatica Address Verification 5 documentation.

6. Copy the Informatica Address Verification 5 library from the following location:
   - Windows: `<infadm_install_directory>\hub\cleanse\lib\upgrade\AddressDoctor`
   - UNIX: `<infadm_install_directory>/hub/cleanse/lib/upgrade/AddressDoctor`

7. Replace JADE.dll (or equivalent Informatica Address Verification 4 library) with the Informatica Address Verification 5 library at the following location:
   - Windows: `<infadm_install_directory>\hub\cleanse\lib`
   - UNIX: `<infadm_install_directory>/hub/cleanse/lib`

   For more information, refer to the `libupdate_readme.txt` document available at:
   - Windows: `<infadm_install_directory>\hub\cleanse\lib\upgrade`
   - UNIX: `<infadm_install_directory>/hub/cleanse/lib/upgrade`

8. Restart the application server.
   Ensure that you are logged in with the same user name that is currently running the application server and that no exceptions occur while starting the application server.

   During the Process Server initialization, you should see a message similar to the following in the terminal console:
   ```
   [INFO ] com.siperian.mrm.cleansc.addressDoctor.Library: Initializing AddressDoctor5
   ```

10. Start the Cleanse Functions tool.

11. Obtain a write lock (Write Lock > Acquire Lock).

12. Select the Informatica Address Verification cleanse function.

13. Click the Refresh button.
   The Informatica Address Verification 5 cleanse function is added to the Informatica Address Verification cleanse functions node.
Configure Match Population

The match population contains the standard population set to use for the match process. Each supported
country, language, or population has a standard population set. You must enable the match population to use
for the match rules.

The match population is available as a population.ysp file with the Informatica MDM Hub installation. The
population name is the same as the ysp file name. If you add a Japanese population, and want to use the
Person_Name_Kanji match field, add _Kanji to the population name. For example, Japan_Kanji or
Japan_i_Kanji. If you do this, the standard Person_Name match field is not available.

The population that you use must be compatible with the SSA-Name3 version of the MDM Hub. If you need
additional population files or if you need an updated population file to upgrade to a later version, contact
Informatica Global Customer Support. The first population file that you request with the product is free. You
might need population files for other countries or you might need an updated population file to upgrade to a
later version of the MDM Hub.

Upgrading custom population files

During the upgrade process, the population files are upgraded. If you have customized your population files,
contact Informatica Global Customer Support to have the customizations applied to the upgraded properties
file.

Enabling Match Population

You must enable the match population to use for the match rules.

1. Copy the <population>.ysp files to the following location:
   - On UNIX. <MDM Hub installation directory>/hub/cleanse/resources/match
   - On Windows. <MDM Hub installation directory>\hub\cleanse\resources\match

2. In the C_REPOS_SSA_POPULATION metadata table, verify that the population is registered.
   The seed database for the MDM Hub installation has some populations registered in the
   C_REPOS_SSA_POPULATION table, but not enabled.

3. If the C_REPOS_SSA_POPULATION table does not contain the population, add it to the table and
   enable it.
   The population name is the same as the ysp file name. For example, if the ysp file name is US.ysp, the
   population name is US.
   To add the population to an Operational Reference Store, use the following steps:
   - On IBM DB2 or Oracle.
     a. Connect to the Operational Reference Store schema that you want to add the population to.
     b. In SQL*Plus, run the add_std_ssa_population.sql script in the following directory:
        - On UNIX. <MDM Hub installation directory>/server/resources/database/custom_scripts/oracle
        - On Windows. <MDM Hub installation directory>\server\resources\database\custom_scripts\oracle
c. **Answer the prompts described in the following table:**

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter the population to add</td>
<td>Name of the population.</td>
</tr>
<tr>
<td>Enter a value for ROWID_SSA_POP (example: INFA.0001) DEFAULT [INFA.0001]</td>
<td>Unique value for the ROWID_SSA_POP column of the C_REPOS_SSA_POPULATION metadata table. Default is INFA.0001</td>
</tr>
</tbody>
</table>

The population is registered in the C_REPOS_SSA_POPULATION table.

d. **Run the following command to enable the population:**

   ```sql
   UPDATE c_repos_ssa_population SET enabled_ind = 1 WHERE population_name = '<Your Population>';
   COMMIT;
   ```

On Microsoft SQL Server

a. **Run the add_std_ssa_population.bat script in the following directory:**

   `<MDM Hub installation directory>\server\resources\database\custom_scripts\MSSQL`

b. **Answer the prompts described in the following table:**

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hostname with MSSQL instance for CMX_ORS DB (&quot;localhost&quot;)</td>
<td>Host name of the Microsoft SQL Server instance.</td>
</tr>
<tr>
<td>cmx_ors user name (&quot;cmx_ors&quot;)</td>
<td>User name of the Operational Reference Store.</td>
</tr>
<tr>
<td>cmx_ors user password</td>
<td>Password of the Operational Reference Store.</td>
</tr>
<tr>
<td>Enter the population name (Note: If you use Person_Name_Kanji for the Japan population or Japan_i population, add the suffix '_Kanji' to the end of the name) DEFAULT (&quot;&quot;)</td>
<td>Name of the population.</td>
</tr>
<tr>
<td>Enter a value for ROWID_SSA_POP (example: INFA.0001) DEFAULT (INFA.0001)</td>
<td>Unique value for the ROWID_SSA_POP column of the C_REPOS_SSA_POPULATION metadata table.</td>
</tr>
</tbody>
</table>

The population is registered in the C_REPOS_SSA_POPULATION table.

c. **Run the following command to enable the population:**

   ```sql
   USE <Operational Reference Store user>
   GO
   UPDATE [dbo].[C_REPOS_SSA_POPULATION] SET ENABLED_IND = 1 WHERE POPULATION_NAME = '<population>'
   ```

4. **Restart the Process Server.**
5. **Log in to the Hub Console to verify that the population is enabled.**

   The population appears in the **Match/Merge Setup** user interface for base objects.
Copy Process Server Log Files to the Upgrade Documentation Directory

Save a copy of the Hub Server log files. Use these log files assist if you need to troubleshoot the upgrade.

Copy the Process Server log files to the upgrade documentation folder. Save these files in a separate subfolder, such as `cleanse_match_server_upgrade`. If you upgraded multiple Process Servers in a cluster, save the files for each Process Server instance in a separate folder.

The following table describes the log files to copy:

<table>
<thead>
<tr>
<th>File</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;cleanse installation directory&gt;/hub/cleanse/infamdm_installer_debug.txt</code></td>
<td>Contains debug messages and all the options that you selected when you ran the upgrade process.</td>
</tr>
<tr>
<td><code>&lt;cleanse installation directory&gt;/hub/cleanse/logs/patchInstallSetup.log</code></td>
<td>Contains the patchInstallSetup script results.</td>
</tr>
<tr>
<td><code>&lt;cleanse installation directory&gt;/hub/cleanse/logs/cmxsஆerver.log</code></td>
<td>Contains the Process Server logs.</td>
</tr>
<tr>
<td>Application server log files.</td>
<td>Located in the tree under the installation directory for the application server.</td>
</tr>
</tbody>
</table>

Reapplying the Process Server Upgrade (Optional)

If you complete the Process Server upgrade, the upgrade process does not allow you to reapply the Process Server upgrade. For example, you might want to reapply the Process Server upgrade if hardware fails during the upgrade process. You can also perform this procedure if you test an upgrade and then want to revert to an earlier version of the software.

1. **Back up the `siperian-mrm.ear` file in the following directory:**
   - **On UNIX.** `<MDM Hub installation directory>/hub/cleanse`
   - **On Windows.** `<MDM Hub installation directory>/hub\cleanse`

2. **Repeat the upgrade steps. Add the parameter `-DSIPERIAN_FORCED_PATCH_INSTALL=true` to the install command.**
   
   For example, if you reapply the upgrade in graphical mode in UNIX, run the following command:
   ```
   hub_cleanse_install.bin -DSIPERIAN_FORCED_PATCH_INSTALL=true
   ```
Chapter 7

Resource Kit Upgrade

This chapter includes the following topics:

- Resource Kit Upgrade Overview, 54
- Uninstalling the Resource Kit (In-place Upgrade), 54
- Installing the Resource Kit, 55

Resource Kit Upgrade Overview

To upgrade to the current version of the Resource Kit, perform a full installation of the Resource Kit. You cannot perform a patch installation of the Resource Kit.

1. If you are performing an in-place upgrade, uninstall the Resource Kit.
2. Install the current version of the Resource Kit.

Uninstalling the Resource Kit (In-place Upgrade)

To remove the installed version of the Resource Kit, you must run the uninstaller. The uninstaller is located in the Resource Kit directory.

1. Start the application server.
2. Open a command prompt and navigate to the following directory:
   - On UNIX. `<Resource Kit installation directory>/deploy/UninstallerData`
   - On Windows. `<Resource Kit installation directory>\deploy\UninstallerData`
3. Run the following command:
   - On UNIX. `Uninstall_Informatica_MDM_Hub_Resource_Kit.bin`
   - On Windows. `Uninstall Informatica MDM Hub Resource Kit.exe`
4. Click Uninstall.
   - The Uninstall Complete window appears.
5. Uninstall the previous version of the Resource Kit.
6. Click Done.
Installing the Resource Kit

After you uninstall the Resource Kit, install the current version of the Resource Kit.

1. Start the application server.
2. Navigate to the Resource Kit installer in the distribution directory. By default the installer is in the following directory:
   - On UNIX. `<MDM Hub distribution directory>/<operating system name>/mrmresourcekit`
   - On Windows. `<MDM Hub distribution directory>\windows\mrmresourcekit`
3. Run the following command:
   - On UNIX. `hub_resourcekite_install.bin`
   - On Windows. `hub_resourcekite_install.exe`
4. Select the language for the installation, and then click **OK**.
   The **Introduction** window appears.
5. Click **Next**.
   The **License Agreement** window appears.
6. Select the **I accept the terms of the License Agreement** option, and then click **Next**.
   The **Installation Feature** window appears.
7. Select the Resource Kit features that you want to install and click **Next**.
   You can choose the following Resource Kit features:
   - **Sample Schema**
     Select this option to install the Sample Schema. You must create a sample schema and register it with the Hub Server before you install the sample applications.
   - **Samples and Utilities**
     Select this option to install the sample applications and utilities.
     The list of sample applications deployed is stored in the `build.properties` file.
     The `build.properties` file is located in the following directory: `<MDM Hub installation directory>\hub\resourcekite\samples`
   - **SIF SDK and Javadocs**
     Select this option to install the javadocs, libraries, and resources associated with the SIF SDK.
   - **BPM SDK**
     Select this option to install the resources associated with the BPM SDK.
   - **Jaspersoft**
     Select this option to copy the Jaspersoft installer to the Resource Kit home.
   - **SSA-NAME3**
     Select this option to copy the SSA-NAME3 installer to the Resource Kit home.
   The **Choose Install Folder** window appears.
8. Select the location of the Resource Kit installation.
   - To choose the default location, click **Next**.
   - To enter a path, type the path to the installation folder, and click **Next**.
   **Note**: The installation fails if you specify a path that has spaces in a folder name.
To return to the default installation location, click **Restore Default Folder**.

To choose another location, click **Choose**, and then click **Next**.

On UNIX, the **Choose Link Folder** window appears. On Windows, the **Choose Shortcut Folder** window appears.

9. Select the location to create a product icon or link, or select the option not to create a product icon or link, and click **Next**.

The **Configuration Selection** window appears.

10. Select a configuration option, and click **Next**.

You can choose the following configuration options:

- **Configure Samples**
  - Configures the samples.

- **Source Only**
  - Installs the sources of samples.

If you select **Configure samples**, the **Resource Kit App Server** window appears. If you select **Source only**, the **Pre-Installation Summary** window appears.

11. From the **Resource Kit App Server** window, select the application server on which you want to install the Resource Kit, and click **Next**.

The **Application Server Home** window for the application server that you select appears.

12. Configure the application server settings.

- Configure the JBoss settings:
  1. Specify the application server installation directory, and then click **Next**.
     - The **JBoss Application Server Configuration Name** window appears.
  2. Specify the Configuration Name, and then click **Next**.
     - The default value is **standalone**.
  3. Specify the remote port.

- Configure the WebLogic settings:
  1. Choose a path to the WebLogic domain installation directory for the domain you want to use for the MDM Hub, and click **Next**.
     - The **WebLogic Application Server Login** window appears.
2. Enter WebLogic Server login information.  
You can configure the following login parameters:

- **Host**  
  Name of the host computer that has the WebLogic installation.

- **Server**  
  Name of the WebLogic Server instance in the domain on which WebLogic is deployed.

- **User Name**  
  Name of the user for the WebLogic installation.

- **Password**  
  Password that corresponds to the WebLogic user.

- **Port Number**  
  Port number on which the WebLogic Server is listening.

- **Configure the WebSphere settings:**
  1. Choose a path to the WebSphere application server, and click **Next**.  
     The **Reminder** window appears.
  2. Ensure that you have fulfilled the prerequisites and click **OK**.  
     The **WebSphere Security Selection** window appears.
  3. Select whether WebSphere is security enabled or not, and click **Next**.  
     If you select **No**, and then click **Next**, the **WebSphere Application Server Port** window appears.  
        Default is **No**.
     Set the server name, and the RMI and SOAP ports for the WebSphere application server. In a clustered environment, enter one of the cluster server names and its corresponding SOAP and RMI port information.
     If you select **Yes**, and then click **Next**, the **WebSphere Application Server Port and User Credentials** window appears. Specify the WebSphere user name and the WebSphere password.

13. Enter the information for the Hub Server installation, and click **Next**.  
You can specify the following Hub Server information:

- **Server Name**  
  Name of the server that hosts the Hub Server.

- **Server HTTP Port**  
  Port number of the Hub Server.

- **Informatica MDM Administrative password**  
  Password to access the MDM Hub.

The **Resource Kit ORS ID** window appears.

14. Select a Resource Kit ORS ID from the list, and click **Next**.  
The list contains the Operational Reference Store IDs that you created. Select an Operational Reference Store ID related to the Sample Schema.

If you did not register the sample schema, the Operational Reference Store ID for the Sample schema does not appear. Register the sample Operational Reference Store, and then restart the installation.

The **Deployment Selection** window appears.
15. Select a deployment option, and then click Next:

You can select one of the following deployment options:

Yes, run it during this installation.

Deploys and configures the Resource Kit during the installation.

No, it can be deployed later.

Select this option to deploy and configure manually at a later time.

If you chose to install the Samples and Utilities feature, deploy and configure the Resource Kit in this installation step. If you do not deploy and configure the Resource Kit in this installation step, you cannot make changes and redeploy the samples using the postInstallSetup script.

If you choose to run the post-install setup manually, you cannot deploy the EAR file using the postInstallSetup script at a later time. You must manually edit the EAR file and deploy it to make any changes to your installation.

The Pre-Installation Summary window appears.

16. Review the pre-Installation summary to confirm your installation choices, and then click Install.

When the installation completes, the Install Complete window appears.

17. Click Done to exit the Resource Kit installer.
CHAPTER 8

Post-Upgrade Tasks

This chapter includes the following topics:

- Post-Upgrade Tasks, 59
- Update Properties, 60
- Restart the MDM Hub Environment, 60
- Perform Post-Upgrade Tasks for In-place Upgrade, 61
- Drop Objects, Columns, and References to Deprecated Objects, 61
- Remove the odjbc6 JAR File, 61
- Configure WebSphere Administrative Security, 61
- Configure Cleanse Functions for Platform Transformations, 69
- Validate the Upgraded Metadata, 69
- Review the MDM Hub Environment Report, 71
- Upgrading the SiperianClient Library Classes for the EJB Protocol, 72
- Prepare the MDM Hub Metadata, 72
- Upgrade Tests, 72
- Informatica Data Director and Hub Server Properties, 74
- Generate the Business Entity Schema, 74

Post-Upgrade Tasks

Whether you perform a clean upgrade or an in-place upgrade, perform the post-upgrade tasks to ensure your environment is properly configured.
Update Properties

<table>
<thead>
<tr>
<th>Upgrade Task</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update the Application Server Settings in the Properties Files</td>
<td>If you upgrade the application server, you must manually update the application server settings in the properties files. In the <code>build.properties</code> file located in <code>&lt;MDM Hub installation directory&gt;\hub\server\bin</code>, update the following settings: - SIP.AS.HOME - SIP.AS.SERVER_FOLDER - SIP.AS.DEPLOY_FOLDER In the <code>setSiperianEnv.bat</code> file located in <code>&lt;MDM Hub installation directory&gt;\hub\server</code>, update the following settings: - SET JBS_HOME - SET JBS_SERVER_DIR - SET JBS_DEPLOY_DIR - SET JBS_CLIENT_CLASSPATH In the <code>cmxserver.properties</code> file located in <code>&lt;MDM Hub installation directory&gt;\hub\server\resources</code>, update the following settings: - cmx.apps.server.version If you have changed any other application server configuration settings, such as port numbers, you must also update the settings in <code>cmxserver.properties</code>.</td>
</tr>
</tbody>
</table>

Restart the MDM Hub Environment

Restart the MDM Hub environment after you upgrade.

Restarting the Application Servers

Restart the application servers and then launch the Hub Console.

1. Shut down the application servers that run the Hub Server and the Process Servers.
2. Start the application servers that run the Hub Server and the Process Servers.
Perform Post-Upgrade Tasks for In-place Upgrade

<table>
<thead>
<tr>
<th>Upgrade Task</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear the Java cache</td>
<td>1. Clear the Java WebStart cache. For instructions, see the Java documentation.</td>
</tr>
<tr>
<td></td>
<td>2. Clear the Java cache. For instructions, see the Java documentation.</td>
</tr>
<tr>
<td></td>
<td>3. Launch the Hub Console.</td>
</tr>
<tr>
<td>Delete the ZooKeeper data directory</td>
<td>If you use smart search, delete the ZooKeeper data directory.</td>
</tr>
<tr>
<td></td>
<td>You set the ZooKeeper data directory when you configure a Process Server as a ZooKeeper Server.</td>
</tr>
</tbody>
</table>

Drop Objects, Columns, and References to Deprecated Objects

<table>
<thead>
<tr>
<th>Upgrade Task</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update references to REL_START_DATE, REL_END_DATE, and HUID tables</td>
<td>Update references to the REL_START_DATE and REL_END_DATE system columns and to the HUID table. The upgrade process removes references to the REL_START_DATE and REL_END_DATE columns in the packages and views used in a Hierarchy Manager base object. Change references from REL_START_DATE to PERIOD_START_DATE. Change references from REL_END_DATE to PERIOD_END_DATE.</td>
</tr>
</tbody>
</table>

Remove the odjbc6 JAR File

In JBoss environments, remove the odjbc6.jar file from the following locations:

- `<JBoss install location>/modules/com/activevos\main`
- `<JBoss install location>/modules/com/informatica\mdm\jdbc\main`
- `<MDM Hub installation directory>/hub\server\lib`

Configure WebSphere Administrative Security

You can configure WebSphere administrative security to control MDM Hub access to the WebSphere administrative console.

To configure WebSphere administrative security, perform the following steps:

1. Unregister the Operational Reference Stores (ORS).
2. Uninstall the EAR files and remove data sources from WebSphere.
3. Enable WebSphere administrative security in the WebSphere administrative console.
5. Run the Hub Server and Process Server PostInstallSetup scripts.
6. Register the ORS.

Enter your WebSphere credentials when you register the ORS. You do not need to enter your credentials after you verify the ORS.

**Unregister the Operational Reference Store**

To unregister the Operational Reference Store (ORS), use the Databases tool in the MDM Hub Console.

1. From the MDM Hub Console, click **Write Lock > Acquire Lock**.
2. From the **Configuration** workbench, select the **Databases** tool.
   - The **Database Information** page appears.
3. From the list of databases, select the ORS to unregister.
4. Click **Unregister database**.
   - The Database tool prompts you to confirm that you want to unregister the ORS.
5. Click **Yes**.

**Uninstall the EAR files and Remove Data Sources**

To uninstall the EAR files and remove data sources, use the WebSphere administrative console.

1. Use the WebSphere administrative console to undeploy the following deployment files:

<table>
<thead>
<tr>
<th>Deployment File Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>siperian-mrm.ear</td>
<td>Required. The Hub Server application.</td>
</tr>
<tr>
<td>provisioning-ear.ear</td>
<td>Required. The Provisioning tool application.</td>
</tr>
<tr>
<td>entity360view-ear.ear</td>
<td>Optional. The Entity 360 framework.</td>
</tr>
<tr>
<td>informatica-mdm-platform-ear.ear</td>
<td>Optional. The Informatica platform application.</td>
</tr>
</tbody>
</table>

2. Use the WebSphere administrative console to undeploy the **siperian-mrm-cleanse.ear** file.
3. Use the WebSphere administrative console to remove all data sources for the MDM Hub Master Database and the Operational Reference Stores.
4. Restart the application server.

For more information, see the WebSphere documentation.

**Enable WebSphere Administrative Security in the WebSphere Administrative Console**

You must enable WebSphere administrative security in the WebSphere administrative console. When you enable WebSphere administrative security, disable WebSphere application security.  

For more information, see the WebSphere documentation.
Configure the Hub Server and Process Server Properties

You must configure the Hub Server and Process Server property files to enable WebSphere administrative security.

1. Stop the application server.

2. Enable WebSphere security on the Hub Server.
   a. Open cmxserver.properties in the following directory:
      - On UNIX. <MDM Hub installation directory>/hub/server/resources
      - On Windows. <MDM Hub installation directory>\hub\server\resources
   b. Set cmx.websphere.security.enabled to true.

   a. Open cmxcleanse.properties in the following directory:
      - On UNIX. <MDM Hub installation directory>/hub/cleanse/resources
      - On Windows. <MDM Hub installation directory>\hub\cleanse\resources
   b. Set cmx.websphere.security.enabled to true.

4. Configure the WebSphere user name on the Hub Server.
   a. Open build.properties in the following directory:
      - On UNIX. <MDM Hub installation directory>/hub/server/bin
      - On Windows. <MDM Hub installation directory>\hub\server\bin
   b. Set websphere.username to the WebSphere administrative user name.

5. Configure the WebSphere user name on the Process Server.
   a. Open build.properties in the following directory:
      - On UNIX. <MDM Hub installation directory>/hub/cleanse/bin
      - On Windows. <MDM Hub installation directory>\hub\cleanse\bin
   b. Set websphere.username to the WebSphere administrative user name.

6. In SQL* Plus, run the following command to set \c_repos_cleanse_match_server.is_secured to 1.
   ```sql
   UPDATE c_repos_cleanse_match_server SET is_secured = 1 WHERE rowid_cleanse_match_server = 'Insert value here';
   COMMIT;
   ```

7. Start the application server.

Run the Hub Server PostInstallSetup Script Manually

You must run the Hub Server PostInstallSetup script.

1. Open a command prompt.

2. Navigate to the PostInstallSetup script in the following directory:
   - On UNIX. <MDM Hub installation directory>/hub/server
   - On Windows. <MDM Hub installation directory>\hub\server

3. Run the following command:
   - On UNIX. postinstallsetup.sh -database.password=<MDM Hub Master Database> -Dwebsphere.password=<WebSphere administrative user password>
On Windows. postinstallsetup.bat -Ddatabase.password=<MDM Hub Master Database> -Dwebsphere.password=<WebSphere administrative user password>

4. Restart the application server.

**Run the Process Server PostInstallSetup Script**

You must run the Process Server PostInstallSetup script.

1. Open a command prompt.
2. Navigate to the PostInstallSetup script in the following directory:
   - On UNIX. `<MDM Hub installation directory>/hub/cleanse`
   - On Windows. `<MDM Hub installation directory>\hub\cleanse`
3. Run the following command:
   - On UNIX. `postinstallsetup.sh -Dwebsphere.password=<websphere administrative user password>`
   - On Windows. `postinstallsetup.bat -Dwebsphere.password=<websphere administrative user password>`
4. Restart the application server.

**Register the Operational Reference Stores**

To register the Operational Reference Stores, use the Hub Console.

1. Start the Databases tool under the Configuration workbench.
2. Click **Write Lock > Acquire Lock**.
3. Click **Register database**.

   The **Informatica MDM Hub Connection Wizard** appears and prompts you to select the database type.

4. Select Microsoft SQL Server, Oracle, or IBM DB2, and click **Next**.
5. In Microsoft SQL Server, configure connection properties for the database.
   a. In the Connection Properties page, specify the connection properties, and then click **Next**.

   The following table lists and describes the connection properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Display Name</td>
<td>Name for the Operational Reference Store that must appear in the Hub Console.</td>
</tr>
<tr>
<td>Machine Identifier</td>
<td>Prefix given to keys to uniquely identify records from the Hub Store instance.</td>
</tr>
<tr>
<td>Database hostname</td>
<td>IP address or name of the server that hosts the Microsoft SQL Server database.</td>
</tr>
<tr>
<td>Port</td>
<td>Port of the Microsoft SQL Server database. The default is 1433.</td>
</tr>
<tr>
<td>Schema Name</td>
<td>Name of the Operational Reference Store.</td>
</tr>
</tbody>
</table>
b. In the Connection Properties page, specify the connection properties, and then click **Next**.

c. Review the summary, and specify additional connection properties.

The following table lists additional connection properties that you can configure:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Password</td>
<td>Password associated with the user name for the Operational Reference Store.</td>
</tr>
<tr>
<td>Dynamic Data Masking host</td>
<td>IP address or name of the server that hosts Dynamic Data Masking. Leave empty if you do not use Dynamic Data Masking.</td>
</tr>
<tr>
<td>DDM connection URL</td>
<td>Optional. URL for the Dynamic Data Masking server. Leave empty if you do not use Dynamic Data Masking.</td>
</tr>
</tbody>
</table>

6. In Oracle environments, configure connection properties for the database.

a. Select an Oracle connection method, and click **Next**.

The following table describes the Oracle connection methods that you can select:

<table>
<thead>
<tr>
<th>Connection Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>Connect to Oracle by using the service name.</td>
</tr>
<tr>
<td>SID</td>
<td>Connect to Oracle by using the Oracle System ID.</td>
</tr>
</tbody>
</table>

For more information about SERVICE and SID names, see the Oracle documentation.

The **Connection Properties** page appears.

b. Specify the connection properties for the connection type that you select, and click **Next**.

The following table lists and describes the connection properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Display Name</td>
<td>Name for the Operational Reference Store that must appear in the Hub Console.</td>
</tr>
<tr>
<td>Machine Identifier</td>
<td>Prefix given to keys to uniquely identify records from the Hub Store instance.</td>
</tr>
<tr>
<td>Database hostname</td>
<td>IP address or name of the server that hosts the Oracle database.</td>
</tr>
<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SID</td>
<td>Oracle System Identifier that refers to the instance of the Oracle database running on the server. The SID field appears if you selected the SID connection type.</td>
</tr>
<tr>
<td>Service</td>
<td>Name of the Oracle SERVICE used to connect to the Oracle database. The Service field appears if you selected the Service connection type.</td>
</tr>
<tr>
<td>Port</td>
<td>The TCP port of the Oracle listener running on the Oracle database server. The default is 1521.</td>
</tr>
<tr>
<td>Oracle TNS Name</td>
<td>Name by which the database is known on your network as defined in the TNS NAMES.ORA file of the application server. For example: mydatabase.mycompany.com. You set the Oracle TNS name when you install the Oracle database. For more information about the Oracle TNS name, see the Oracle documentation.</td>
</tr>
<tr>
<td>Schema Name</td>
<td>Name of the Operational Reference Store.</td>
</tr>
<tr>
<td>User name</td>
<td>User name for the Operational Reference Store. By default, this is the user name that you specify in the script that you use to create the Operational Reference Store. This user owns all of the Operational Reference Store database objects in the Hub Store. If a proxy user is configured for the Operational Reference Store, then you can specify the proxy user instead.</td>
</tr>
<tr>
<td>Password</td>
<td>Password associated with the user name for the Operational Reference Store. For Oracle, the password is not case sensitive. By default, this is the password that you specify when you create the Operational Reference Store. If a proxy user is configured for the Operational Reference Store, then you specify the password for the proxy user instead.</td>
</tr>
<tr>
<td>Dynamic Data Masking host</td>
<td>IP address or name of the server that hosts Dynamic Data Masking. Leave empty if you do not use Dynamic Data Masking.</td>
</tr>
<tr>
<td>DDM connection URL</td>
<td>Optional. URL for the Dynamic Data Masking server. Leave empty if you do not use Dynamic Data Masking.</td>
</tr>
</tbody>
</table>

**Note:** The **Schema Name** and the **User Name** are both the names of the Operational Reference Store that you specified when you created the Operational Reference Store. If you need this information, consult your database administrator.

The **Summary** page appears.

c. Review the summary, and specify additional connection properties.
The following table lists additional connection properties that you can configure:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection URL</td>
<td>Connect URL. The Connection Wizard generates the connect URL by default. The following list shows the format of the connect URL for the Oracle connection types:</td>
</tr>
<tr>
<td></td>
<td><strong>Service connection type</strong></td>
</tr>
<tr>
<td></td>
<td>jdbc:oracle:thin:@database_host:port/service_name</td>
</tr>
<tr>
<td></td>
<td><strong>SID connection type</strong></td>
</tr>
<tr>
<td></td>
<td>jdbc:oracle:thin:@database_host:port:sid</td>
</tr>
<tr>
<td></td>
<td>For a service connection type only, you have the option to customize and later test a different connection URL.</td>
</tr>
<tr>
<td>Create datasource after registration</td>
<td>Select to create the datasource on the application server after registration. <strong>Note:</strong> If you do not select the option, you must manually configure the data source.</td>
</tr>
</tbody>
</table>

7. For a service connection type, if you want to change the default URL, click the **Edit** button, specify the URL, and then click **OK**.

7. In IBM DB2 environments, configure connection properties for the database.
   a. Specify the connection properties, and click **Next**.

The following table lists and describes the connection properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Display Name</td>
<td>Name for the Operational Reference Store that must appear in the Hub Console.</td>
</tr>
<tr>
<td>Machine Identifier</td>
<td>Prefix given to keys to uniquely identify records from the Hub Store instance.</td>
</tr>
<tr>
<td>Database server name</td>
<td>IP address or name of the server that hosts the IBM DB2 database.</td>
</tr>
<tr>
<td>Database name</td>
<td>Name of the database that you create.</td>
</tr>
<tr>
<td>Database hostname</td>
<td>IP address or name of the server that hosts the IBM DB2 database.</td>
</tr>
<tr>
<td>Schema Name</td>
<td>Name of the Operational Reference Store.</td>
</tr>
<tr>
<td>User name</td>
<td>User name for the Operational Reference Store. By default, this is the user name that you specify in the script that you use to create the Operational Reference Store. This user owns all the Operational Reference Store database objects in the Hub Store. If a proxy user is configured for the Operational Reference Store, then you can specify the proxy user instead.</td>
</tr>
</tbody>
</table>
Password

Password associated with the user name for the Operational Reference Store. For IBM DB2, the password is case sensitive. By default, this is the password that you specify when you create the Operational Reference Store. If a proxy user is configured for the Operational Reference Store, then you specify the password for the proxy user instead.

Dynamic Data Masking host
IP address or name of the server that hosts Dynamic Data Masking. Leave empty if you do not use Dynamic Data Masking.

DDM connection URL
Optional. URL for the Dynamic Data Masking server. Leave empty if you do not use Dynamic Data Masking.

Note: The Schema Name and the User Name are both the names of the Operational Reference Store that you specified when you created the Operational Reference Store. If you need this information, consult your database administrator.

The Summary page appears.

b. Review the summary, and specify additional connection properties.

The following table lists additional connection properties that you can configure:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection URL</td>
<td>Connect URL. The Connection Wizard generates the connect URL by default. The following example shows the format of the connect URL: jdbc:db2://database_host:port/db_name</td>
</tr>
<tr>
<td>Create datasource after registration</td>
<td>Select to create the datasource on the application server after registration. Note: If you do not select the option, you must manually configure the data source.</td>
</tr>
</tbody>
</table>

8. Click **Finish**.

The **Registering Database** dialog box appears.

9. Click **OK**.

The **Application Server Login** dialog box appears.

10. Enter the WebSphere administrative user name and password.

11. Click **OK**.

The MDM Hub registers the ORS.

12. Restart the application server.

13. Select the Operational Reference Store that you registered, and click the **Test database connection** button to test the database settings.

The Test Database dialog box displays the result of the database connection test.

14. Click **OK**

The ORS is registered, and the connection to the database is tested.
Configure Cleanse Functions for Platform Transformations

If you want to use the platform transformations that you configured, add an IDQ library in the Cleanse Functions tool. You can then use the cleanse functions in the library in place of the platform transformations.

1. Launch the Hub Console and start the Cleanse Functions tool.
2. Acquire a write lock.
3. Right-click Cleanse Functions, and then click Add IDQ Library.
   The Add IDQ Library dialog box appears.
4. Specify the following properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library Name</td>
<td>Name of the IDQ library. The name appears as the folder name in the Cleanse Functions list.</td>
</tr>
<tr>
<td>IDQ WSDL URI</td>
<td>URI of the WSDL associated with the platform transformation.</td>
</tr>
<tr>
<td>IDQ WSDL Service</td>
<td>Service of the WSDL associated with the platform transformation.</td>
</tr>
<tr>
<td>IDQ WSDL Port</td>
<td>Port of the WSDL associated with the platform transformation.</td>
</tr>
<tr>
<td>Description</td>
<td>Descriptive text for the library that you want displayed in the Cleanse Functions tool.</td>
</tr>
</tbody>
</table>

5. Click OK.
   The IDQ library appears in the Cleanse Functions navigator.
6. Click Refresh to generate the IDQ library.
   The Cleanse Functions tool retrieves the WSDL associated with the platform transformation, generates the IDQ library, and displays the available cleanse functions in the Cleanse Functions list.
7. Test the cleanse functions.
   You can now use the cleanse functions in place of the platform transformations. The cleanse functions in the IDQ library can call the web services associated with the platform transformations.

Validate the Upgraded Metadata

Ensure the Operational Reference Stores (ORS) do not have any validation errors. Compare the results with the previous validation results that you obtained in before the upgrade. Use the Repository Manager in the Hub Console to validate metadata.

Note: After you upgrade from a previous version of the MDM Hub, you might have validation errors for old databases that had staging tables without any mappings. In the Repository Manager tool in the Hub Console, click the Repair button to fix these repairable issues.
Validating Metadata

To validate the metadata of an Operational Reference Store (ORS) repository, use the Repository Manager tool in the Hub Console.

1. From the Configuration workbench in the Hub Console, select the Repository Manager tool.
2. From the Repository Manager tool, select the Validate tab.
3. From the Select the repository to validate list, select a repository.
4. Click the Validate button.
5. From the Select Validation Checks dialog box, select the validation checks to perform. Click OK.
   The Repository Manager tool validates the repository and displays any issues in the Issues Found pane.
6. Click the Repair button to fix repairable issues.
7. If the ORS remains in the Unknown state, synchronize the system clocks of the application server and the database machine.

Saving the Validation Results

After you run the validation process, you can save the validation results as an HTML file.

1. From the Repository Manager tool in the Hub Console, select the Validate tab.
2. Click the Save button.
3. From the Save dialog box, navigate to the directory where you want to save the validation results.
4. Specify a descriptive file name for the HTML file. Click Save.
   The Repository Manager saves the validation results as an HTML file in the specified location.

Resolving Metadata Validation Messages

After you run the validation tool, you might receive validation messages.

The following error messages are some of the most common validation messages.

Warning SIP-PV-10703 Package 'EMPLOYEEDETAILS_PKG' is not synchronized with its database view.
To synchronize with the database view, run the Repair process from the Repository Manager.

View 'C_EMPLOYEEDETAILS_MTIP' - SELECT privilege for proxy user role is not granted. or SIP-MV-11410- SQL of the root MTIP is incorrect.

Rebuild the MTIP views.
1. In the Hub Console, open the Configuration workbench and click Enterprise Manager.
2. Acquire a write lock.
3. Select the ORS databases tab.
4. Select the database.
5. Select the Properties tab.
6. Find the property called MTIP regeneration required, and click the Regenerate MTIPs button.
View 'EMPLOYEEDETAILS_PKG' - SELECT privilege for proxy user role is not granted.

Update the proxy user role to include this privilege.

1. In the Hub Console, open the Security Access Manager workbench and click Roles.
2. Acquire a write lock.
3. Select the proxy user role.
4. Select the Resource Privileges tab.
5. Find the package or table that was named in the message.
6. Select the Read check box.

SIP-PV-11105 - SELECT privilege for proxy user role has not been granted for a view.

View 'C_REPOGROUP_ALL' - SELECT privilege for proxy user role is not granted.

The database migration script created the proxy user role but did not grant privileges to the proxy user on the repository views. From the database, grant the proxy user SELECT privileges on the repository views.

**Review the MDM Hub Environment Report**

Use the Enterprise Manager tool in the Hub Console to review the current MDM Hub configuration for Hub Servers, Process Servers, the MDM Hub Master Database, and Operational Reference Store databases. Note the version history of the components.

Save a copy of the environment report in the upgradedoc upgrade documentation folder.

**Saving the MDM Hub Environment Report**

To save the MDM Hub environment report, use the Enterprise Manager tool in the Hub Console.

1. From the Configuration workbench in the Hub Console, select the Enterprise Manager tool.
2. From the Enterprise Manager tool, select the Environment Report tab.
3. Click Save.
4. From the Save Hub Environment Report dialog box, navigate to the directory where you want to save the environment report.
5. Click Save.
Upgrading the SiperianClient Library Classes for the EJB Protocol

If you use the EJB protocol to communicate with the MDM Hub through the Services Integration Framework (SIF) requests, you must use the latest version of the SiperianClient library classes. If you use custom JNDI lookup methods, update the lookup methods so that the methods conform to the EJB3 conventions.

1. Replace the existing SiperianClient library classes with the latest version of the SiperianClient library classes.
   The siperian-api.jar file located in the following directories contains the SiperianClient library classes:
   • <Resource Kit Installation Directory>/sdk/sifsdk/lib
   • <MDM Hub Installation Directory>/hub/server/lib

2. If you use custom JNDI lookup methods, update the lookup methods so that the methods conform to the EJB3 conventions.

Prepare the MDM Hub Metadata

<table>
<thead>
<tr>
<th>Upgrade Task</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regenerate match tokens.</td>
<td>Run the Generate Match Tokens batch job for each base object. The Generate Match Tokens batch job creates the match tokens based on the SSA-Name3 library files that you update during the Process Server upgrade.</td>
</tr>
<tr>
<td>Reindex the smart search data.</td>
<td>If the smart search data contains any accented characters, such as â and î, you can run the Initially Index Smart Search Data batch job to reindex the data. After you reindex the data, a smart search request can return records that contain accented characters.</td>
</tr>
</tbody>
</table>
| Configure metadata caching    | In version 10.1 and earlier, the MDM Hub used JBoss Cache for metadata caching. After you upgrade from one of these versions, the MDM Hub Server uses the Infinispan configuration file instead of the JBoss Cache configuration file. You might need to configure Infinispan caching to achieve similar results as JBoss Cache.  
For more information, see "Configuring Metadata Caching (Optional)" on page 104. |
| Reregister custom indexes.    | You must reregister custom indexes after the migration. Use the registerCustomIndex SIF API to reregister the custom indexes. 
For more information about the RegisterCustomIndex SIF API, see the Informatica MDM Multidomain Edition Services Integration Framework Guide. 
For SOAP and Java code samples to run the registerCustomIndex SIF API, see KB 500116. https://kb.informatica.com/howto/6/Pages/19/500116.aspx?myk=500116. |

Upgrade Tests

Test the upgraded Informatica MDM Hub implementation. Each Informatica MDM Multidomain Edition implementation is unique and the testing requirements vary between the development, test, and production
environments. If a suggested upgrade test is not appropriate for your environment, you can design your own tests. Design the test activities to meet the unique requirements of your implementation.

**Informatica Data Director Upgrade Tests**

Perform the following Informatica Data Director upgrade tests that apply to your environment:

1. Launch the Informatica Data Director Configuration Manager, and then deploy an Informatica Data Director application instance.
2. Log in to Informatica Data Director.
3. Run multiple searches.
4. Create and process multiple tasks.
5. Insert a test record.
6. Copy the test record to create a second test record.
7. Run a search to find the two test records.
8. Merge and unmerge the two test records.

**MDM Hub Upgrade Tests**

Perform the following Hub Console upgrade tests that apply to your environment:

1. Launch the Hub Console.
2. Select the **Users** tool in the **Configuration** workbench to view the properties of an existing user.
3. Select the **Schema Viewer** tool in the **Model** workbench, and then connect to an Operational Reference Store. Review the schema in the **Schema Viewer**.
4. Select the **Schema** tool in the **Model** workbench to view the **Match/Merge Setup** for a base object.
5. Select the **Batch Viewer** tool in the **Utilities** workbench. If possible, run test batch jobs for the Stage batch job, the Load batch job, the Match batch job, and the Merge batch job.
7. Select the **Cleanse Functions** tool in the **Model** workbench. Run a test cleanse function for each external cleanse engine.
8. Select the **Data Manager** tool in the **Data Steward** workbench. Create two matching test records.
9. Select the **Merge Manager** tool in the **Data Steward** workbench. Find the two test records, merge the test records, and then unmerge the test records.
Custom Code Upgrade Tests

If you have custom code such as custom client applications, run tests to verify that the custom code works as expected.

Informatica Data Director and Hub Server Properties

The upgrade process preserves the values of the Hub Server properties that affect Informatica Data Director (IDD).

When you upgrade from earlier versions, the pre-upgrade cmxserver.properties file does not contain some properties that were added in version 10.0.0 and later. The new Hub Server properties control whether to enable the Data workspace, the Entity 360 framework, and Smart Search. The upgrade process adds the properties to the cmxserver.properties file, and sets the values of the properties so that IDD applications behave in the same way as they did in earlier versions.

The following table describes the Data workspace, the Entity 360 framework, and Smart Search properties and states the default values:

<table>
<thead>
<tr>
<th>Property</th>
<th>Default Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cmx.dataview.enabled</td>
<td>true</td>
<td>When IDD application developers implement the subject area model, IDD users use the Data workspace to search, edit, and manage master data. This property specifies whether the Data workspace and related elements appear in IDD applications.</td>
</tr>
<tr>
<td>cmx.e360.view.enabled</td>
<td>false</td>
<td>When developers implement the Entity 360 framework, IDD users use the Search box to find entities and an entity workspace to edit and manage master data. This property specifies whether the entity workspace and related elements appear in IDD applications.</td>
</tr>
<tr>
<td>cmx.e360.match_xref.view.enabled</td>
<td>false</td>
<td>To enable the Cross-reference view and the Matching Records view for the Entity 360 Framework, set this property to true. Only set to true if you use the ActiveVOS workflow adapter that is based on business entities.</td>
</tr>
<tr>
<td>cmx.ss.enabled</td>
<td>false</td>
<td>To enable the Search box, set this property to true and configure Smart Search.</td>
</tr>
</tbody>
</table>

Generate the Business Entity Schema

If you use business entity services, you must generate the business entity schema after you upgrade. You can generate the business entity schema, use the Informatica Data Director Configuration Manager.

Back up and customized business entity or business entity service configuration files before you generate the business entity schema.

To generate the business entity schema from the Informatica Data Director Configuration Manager, in the Applications screen, click Generate Business Entity Schema.
ActiveVOS Post-Installation Tasks for the Application Server

This chapter includes the following topic:

- ActiveVOS Post-Installation Tasks for the Application Server, 75

ActiveVOS Post-Installation Tasks for the Application Server

Whether you perform a clean upgrade or an in-place upgrade, perform the ActiveVOS post-installation tasks for the application server to ensure your environment is properly configured.

For ActiveVOS post-installation tasks for the application server, see the ActiveVOS Post-Installation Tasks for the Application Server chapter in the Informatica MDM Multidomain Edition Installation Guide that applies to your environment.
CHAPTER 10

ActiveVOS Post-Upgrade Tasks for Business Entity Adapter

This chapter includes the following topics:

- ActiveVOS Post-Upgrade Tasks for the Business Entity Adapter, 76
- Configuring the ActiveVOS URNs for the Business Entity Workflow Adapter, 77
- Set the ActiveVOS Protocol to HTTPS, 77
- Update the Presentation Parameters for Customized Workflows, 78
- Configure the MDM Identity Services for ActiveVOS, 82
- Custom BeMDMWorkflow Project (In-place Upgrade), 82
- Configure Unmerge and Merge Workflow Triggers (In-place Upgrade), 83
- Add the Entity 360 Framework Task Manager, 83

ActiveVOS Post-Upgrade Tasks for the Business Entity Adapter

Whether you perform a clean upgrade or an in-place upgrade, if you use the ActiveVOS workflow adapter based on business entities, perform the ActiveVOS post-upgrade tasks for the business entity adapter to ensure your environment is properly configured.
Configuring the ActiveVOS URNs for the Business Entity Workflow Adapter

The ActiveVOS Server has two predefined uniform resource names (URNs) that it uses internally. You need to update the URL in the URN mappings to use the host name and the port number where the ActiveVOS Server runs.

1. Launch the ActiveVOS Console. In a browser, type the following URL, substituting the correct host name and port number:
   - Encrypted connections: https://[host]:[port]/activevos
   - Non-encrypted connections: http://[host]:[port]/activevos

2. In the ActiveVOS Console, on the Home page, click Administration > Configure Server > URN Mappings.

3. For the following URNs, update the paths to reflect the host name and port number of the ActiveVOS Server:

<table>
<thead>
<tr>
<th>URN</th>
<th>URL Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>ae:internal-reporting</td>
<td>Encrypted connections: https://[host]:[port]/activevos/internalreports</td>
</tr>
<tr>
<td></td>
<td>Non-encrypted connections: http://[host]:[port]/activevos/internalreports</td>
</tr>
<tr>
<td>ae:task-inbox</td>
<td>Encrypted connections: https://[host]:[port]/activevos-central/avc</td>
</tr>
<tr>
<td></td>
<td>Non-encrypted connections: http://[host]:[port]/activevos-central/avc</td>
</tr>
</tbody>
</table>

4. Verify that urn:mdm:service is mapped to the host name and port number of the MDM Hub Server:
   - Encrypted connections: https://[host]:[port]/cmx/services/BeServices
   - Non-encrypted connections: http://[host]:[port]/cmx/services/BeServices

Set the ActiveVOS Protocol to HTTPS

To enable secure communication between ActiveVOS and the MDM Hub, set the protocol to HTTPS in the Hub Console Workflow Manager.

You must first configure the application server for HTTPS communications.

1. Start the Hub Console.
2. Acquire a write lock.
3. Click Workflow Manager under the Configuration workbench.
4. In the Workflow Manager, click the Workflow Engines tab.
5. Select the ActiveVOS workflow engine, and then click the Edit button.
6. In the Edit Workflow dialog box, set the protocol to HTTPS.
7. In a WebLogic environment, in the Edit Workflow dialog box, enter the user name and password of the user that belongs to the abAdmin role.
Update the Presentation Parameters for Customized Workflows

If you customized the workflows prior to version 10.0 HotFix 2, you must update the presentation parameters in the ActiveVOS .BPEL file for each workflow.

The following table describes the presentation parameters that you must add or update in the ActiveVOS project in environments that use the business entity workflow adapter:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Expression for Business Entity Workflow Adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>hubUsername</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:hubUsername/text()</td>
</tr>
<tr>
<td>hubPassword</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:hubPassword/text()</td>
</tr>
<tr>
<td>securityPayload</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:securityPayload/text()</td>
</tr>
<tr>
<td>orsId</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:orsId/text()</td>
</tr>
<tr>
<td>taskTypeName</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:name/text()</td>
</tr>
<tr>
<td>taskTypeDisplayName</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:displayName/text()</td>
</tr>
<tr>
<td>taskTypeDescription</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:description/text()</td>
</tr>
<tr>
<td>pendingBVT</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:pendingBVT</td>
</tr>
<tr>
<td>taskTypeDataUpdateType</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:dataUpdateType/text()</td>
</tr>
<tr>
<td>taskTypeDisplayType</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:displayType/text()</td>
</tr>
<tr>
<td>defaultApproval</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:defaultApproval</td>
</tr>
<tr>
<td>taskDataTaskId</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:taskId/text()</td>
</tr>
<tr>
<td>taskDataOwnerUID</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:ownerUID/text()</td>
</tr>
<tr>
<td>taskDataGroups</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:groups/mdmavxsd:groups/text()</td>
</tr>
<tr>
<td>dueDate</td>
<td>let $in := $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:dueDate/text() let $out :=</td>
</tr>
<tr>
<td>status</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:status/text()</td>
</tr>
<tr>
<td>taskDataPriority</td>
<td>length($out) &gt; 0) + (string-length($in)) * xsd:int((string-length($out) == 0))</td>
</tr>
<tr>
<td>taskDataSubjectAreaUID</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:subjectAreaUID/text()</td>
</tr>
<tr>
<td>taskDataTitle</td>
<td>let $in := $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:title/text() let $out :=</td>
</tr>
<tr>
<td>taskDataComments</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:comments/text()</td>
</tr>
<tr>
<td>Parameter</td>
<td>Expression for Business Entity Workflow Adapter</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>taskDataInteractionId</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:interactionId/text()</td>
</tr>
<tr>
<td>taskDataCreator</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:creator/text()</td>
</tr>
<tr>
<td>createDate</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:createDate</td>
</tr>
<tr>
<td>taskDataUpdatedBy</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:updatedBy/text()</td>
</tr>
<tr>
<td>lastUpdateDate</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:lastUpdateDate</td>
</tr>
<tr>
<td>beRowId</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:taskRecords/</td>
</tr>
<tr>
<td></td>
<td>mdmavxsd:INFARecordKey[1]/mdmavxsd:rowId/text()</td>
</tr>
<tr>
<td>bePkeySrcObject</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:taskRecords/</td>
</tr>
<tr>
<td></td>
<td>mdmavxsd:INFARecordKey[1]/mdmavxsd:pkeySrcObject/text()</td>
</tr>
<tr>
<td>beSystem</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:taskRecords/</td>
</tr>
<tr>
<td></td>
<td>mdmavxsd:INFARecordKey[1]/mdmavxsd:system/text()</td>
</tr>
<tr>
<td>beRowidXref</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:taskRecords/</td>
</tr>
<tr>
<td></td>
<td>mdmavxsd:INFARecordKey[1]/mdmavxsd:rowidXref/text()</td>
</tr>
<tr>
<td>beTableUID</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:taskRecords/</td>
</tr>
<tr>
<td></td>
<td>mdmavxsd:INFARecordKey[1]/mdmavxsd:tableUID/text()</td>
</tr>
<tr>
<td>taskTypeCreationType</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:creationType/text()</td>
</tr>
</tbody>
</table>

The following table describes the presentation parameters that you must add or update in the ActiveVOS project in environments that use the subject area workflow adapter:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Expression for Subject Area Workflow Adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>subjectareauid</td>
<td>string</td>
<td>$InfaTask/mdmavxsd:taskData/mdmavxsd:subjectAreaUID</td>
</tr>
<tr>
<td>title</td>
<td>string</td>
<td>$InfaTask/mdmavxsd:taskData/mdmavxsd:title</td>
</tr>
<tr>
<td>creator</td>
<td>string</td>
<td>$InfaTask/mdmavxsd:taskData/mdmavxsd:creator</td>
</tr>
<tr>
<td>mdmtasktype</td>
<td>string</td>
<td>$InfaTask/mdmavxsd:taskData/mdmavxsd:name</td>
</tr>
<tr>
<td>orsid</td>
<td>string</td>
<td>$InfaTask/mdmavxsd:orsId</td>
</tr>
<tr>
<td>duedate</td>
<td>string</td>
<td>$InfaTask/mdmavxsd:taskData/mdmavxsd:dueDate</td>
</tr>
<tr>
<td>tasktypename</td>
<td>string</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:name</td>
</tr>
<tr>
<td>taskTypedisplayname</td>
<td>string</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:displayName</td>
</tr>
</tbody>
</table>
### Parameter | Type | Expression for Subject Area Workflow Adapter
---|---|---
taskTypeDescription | string | $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:description

taskTypePendingBVT | boolean | $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:pendingBVT

taskTypeDataUpdateType | string | $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:dataUpdateType

taskTypeDisplayType | string | $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:displayType

### Updating the Customized Business Entity ActiveVOS Workflows

If you customized the business entity ActiveVOS workflows, you must update the presentation parameters and the sif:encrypted property in the ActiveVOS .BPEL file for each workflow.

1. Set `sif:encrypted` to `true` to enable password encryption.
2. Update the presentation parameters to avoid task filtering issues.

The following table describes the presentation parameters that you must add or update in the ActiveVOS project:

### Parameter | Expression
---|---
hubUsername | $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:hubUsername/text()
hubPassword | $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:hubPassword/text()
securityPayload | $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:securityPayload/text()
orsId | $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:orsId/text()
taskTypeName | $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:name/text()
taskTypeDisplayName | $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:displayName/text()
taskTypeDescription | $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:description/text()
pendingBVT | $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:pendingBVT
taskTypeDataUpdateType | $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:dataUpdateType/text()
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Expression</th>
</tr>
</thead>
<tbody>
<tr>
<td>taskTypeDisplayType</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:displayType/text()</td>
</tr>
<tr>
<td>defaultApproval</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:defaultApproval</td>
</tr>
<tr>
<td>taskDataTaskId</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:taskId/text()</td>
</tr>
<tr>
<td>taskDataOwnerUID</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:ownerUID/text()</td>
</tr>
<tr>
<td>taskDataGroups</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:groups/mdmavxsd:groups/text()</td>
</tr>
<tr>
<td>dueDate</td>
<td>let $in := $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:dueDate/text() let $out :=</td>
</tr>
<tr>
<td>status</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:status/text()</td>
</tr>
<tr>
<td>taskDataPriority</td>
<td>length($out) &gt; 0), string-length($out) + (string-length($in )) * xsd:int((string-length($out) = 0))</td>
</tr>
<tr>
<td>taskDataSubjectAreaUID</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:subjectAreaUID/text()</td>
</tr>
<tr>
<td>taskDataTitle</td>
<td>let $in := $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:title/text() let $out :=</td>
</tr>
<tr>
<td>taskDataComments</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:comments/text()</td>
</tr>
<tr>
<td>taskDataInteractionId</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:interactionId/text()</td>
</tr>
<tr>
<td>taskDataCreator</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:creator/text()</td>
</tr>
<tr>
<td>createDate</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:createDate</td>
</tr>
<tr>
<td>taskDataUpdatedBy</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:updatedBy/text()</td>
</tr>
<tr>
<td>lastUpdateDate</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:lastUpdateDate</td>
</tr>
<tr>
<td>beRowId</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:taskRecords/mdmavxsd:INFARecordKey[1]/mdmavxsd:rowId/text()</td>
</tr>
<tr>
<td>bePkeySrcObject</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:taskRecords/mdmavxsd:INFARecordKey[1]/mdmavxsd:pkeySrcObject/text()</td>
</tr>
<tr>
<td>beSystem</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:taskRecords/mdmavxsd:INFARecordKey[1]/mdmavxsd:system/text()</td>
</tr>
<tr>
<td>beRowidXref</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:taskRecords/mdmavxsd:INFARecordKey[1]/mdmavxsd:rowidXref/text()</td>
</tr>
</tbody>
</table>
### Configure the MDM Identity Services for ActiveVOS

If you use embedded ActiveVOS, ensure that you configure ActiveVOS to use MDM Identity Services. To configure the MDM Identity Services for ActiveVOS, use the ActiveVOS Console to set the Identity Services password to the password of the MDM Hub workflow engine user.

1. In the ActiveVOS console, select **Admin > Configure Services > Identity Services**.
2. In the Provider Configuration section, enable the **Enable** check box and select **MDM** from the **Provider Type** list.
3. In the Connection tab, enter the password of the MDM Hub user with the user name `admin`.
   - **Note:** If you later change the password for the admin user, you must enter the new password in the ActiveVOS identity services settings.
4. Click **Update**.
5. Test that ActiveVOS can log in to the MDM Hub as the `admin` user, and that ActiveVOS can retrieve a list of roles for the user you specify as the **User for test**.
   a. Select the **Test** tab.
   b. In the **User for test** field, enter an MDM Hub user that is assigned to a role.
   c. Click **Test Settings**.
      - **Note:** The test fails if an Operational Reference Store is not configured and the user for test does not belong to a role.

### Custom BeMDMWorkflow Project (In-place Upgrade)

If you customized the workflows for the BeMDMWorkflow project, ensure that you update and then redeploy the project.

1. In Informatica ActiveVOS Designer, use the Project Explorer to navigate to **BeCommonMDM > wsd1 > cs.wsdl**.
2. Right-click **cs.wsdl**, and then select **Open With > Text Editor**.
3. In the text editor, navigate to the following code:
   ```xml
   <xsd:complexType name="TaskFilter">
     <xsd:sequence>
   ```
4. Add the following code:

```xml
<xs:element minOccurs="0" name="overdueOnly" type="xsd:boolean"/>
```

5. In Informatica ActiveVOS Designer, open the BeCommonMDM project to export.

6. Click File > Export.

   The Export dialog box opens.


8. In the Deployment URL field under Server Deployment Option, enter the URL for the ActiveVOS instance. Click Finish.

9. In the Deployment Complete dialog box, click OK.

---

**Configure Unmerge and Merge Workflow Triggers (In-place Upgrade)**

You must configure the unmerge and merge workflow triggers that were introduced in MDM Multidomain Edition version 10.2. To configure the unmerge and merge workflow triggers, use the Provisioning tool.

For more information, see the *Informatica MDM Multidomain Edition Provisioning Tool Guide*.

**Add the Entity 360 Framework Task Manager**

When you use the business entity ActiveVOS workflow adapter, you use the Entity360 Framework Task Manager and Entity360 Framework task inbox.

Update the Informatica Data Director configuration to replace the legacy task inbox. You can add the Task Manager to the Start page, and add the task inbox to the Entity view. For more information about designing the Informatica Data Director user interface, see the *Informatica MDM Multidomain Edition Provisioning Tool Guide*.
CHAPTER 11

ActiveVOS Post-Upgrade Tasks for Subject Areas Adapter

This chapter includes the following topics:

- **ActiveVOS Post-Upgrade Tasks for the Subject Area Adapter, 84**
- **Update the ActiveVOS URNs, 84**
- **Verifying the Trusted User for ActiveVOS, 85**
- **Update Informatica Data Director Task Configuration for ActiveVOS Workflows based on Subject Areas, 85**
- **Update the Presentation Parameters for Customized Workflows, 88**
- **Redeploy the ActiveVOS Workflows based on Subject Areas, 91**
- **Generating Business Entity and Business Entity Services Configuration Files, 92**

ActiveVOS Post-Upgrade Tasks for the Subject Area Adapter

Whether you perform a clean upgrade or an in-place upgrade, if you use the ActiveVOS workflow adapter based on subject areas, perform the ActiveVOS post-upgrade tasks for the subject area adapter to ensure your environment is properly configured.

Update the ActiveVOS URNs

To use the HTTP Secure (HTTPS) protocol for secure communication between the MDM Hub and ActiveVOS, change the URLs in the URN paths from http to https.

1. Launch the ActiveVOS Console. In a browser, type the following URL, substituting the correct host name and port number:
   - **Secure connections. https://<host>:<port>/activevos**
   - **Non-secure connections. http://<host>:<port>/activevos**
2. In the ActiveVOS Console, on the Home page, click Administration > Configure Server > URN Mappings.

3. For the following URNs, update the paths to reflect the host name and port number of the ActiveVOS Server:

<table>
<thead>
<tr>
<th>URN</th>
<th>URL Path</th>
</tr>
</thead>
</table>

4. Verify that MDMHost:InfMDM is mapped to the host name and port number of the MDM Hub Server:

   Secure connections. https://<host>:<port>/cmx/services/SifService

   Non-secure connections. http://<host>:<port>/cmx/services/SifService

Verifying the Trusted User for ActiveVOS

In the Hub Console, verify that the ActiveVOS workflow engine settings specifies the trusted user.

1. In the Hub Console, on the Configuration workbench, click Workflow Manager.
2. Select the Workflow Engines tab.
3. Acquire a write lock.
4. Select ActiveVOS and click the Edit button.
5. In the Edit Workflow dialog box, enter the user name and password of the trusted user
6. Click OK.

Update Informatica Data Director Task Configuration for ActiveVOS Workflows based on Subject Areas

To use the subject area-based ActiveVOS workflow adapter with the Task Manager, you must update the Informatica Data Director configuration file. If you use ActiveVOS workflows based on subject areas, you cannot migrate to ActiveVOS workflows based on business entities.

You can configure the following task parameters in the Informatica Data Director configuration file:

- **taskType**
  - Describes the task type.
- **taskTypeID**
  - The process name.
Configure Task Triggers For Subject Area Workflow Adapter

You must configure task triggers to use ActiveVOS workflows based on subject areas with the Task Manager. If you do not configure task triggers, the tasks do not appear in the Task Manager.

To configure triggers, use the Provisioning tool to edit the task configuration file from the Advance Configuration page. For more information, see the Informatica MDM Multidomain Edition Provisioning Tool Guide.
You can configure the following `startWorkflow` attributes to configure task triggers:

**process**
- The name of the ActiveVOS workflow process.

**taskKind**
- Defines the type of user interface required for the process. Can be REVIEW, MERGE, or UNMERGE. The taskKind is returned by the ActiveVOS workflow engine.

**taskTemplate**
- The name of the task template to use.

**firstTaskType**
- The first task in the workflow. Optional. This parameter allows the task to be assigned when the task is created.

**Two-step approval code sample**
The following code sample shows the `startWorkflow` element configuration for the ActiveVOS adapter based on subject areas for the two-step approval task:

```xml
<trigger name="DefaultApproval">
  <$startWorkflow process="IDDTwoStepApprovalTask" taskKind="REVIEW" taskTemplate="DefaultApproval" firstTaskType="AVOSReviewNoApprove" />
  <$event name="CreateBE" />
  <$event name="UpdateBE" />
  <$role name="*"/>
</trigger>
```

**One-step approval code sample**
The following code sample shows the `startWorkflow` element configuration for the ActiveVOS adapter based on subject areas for the one-step approval task:

```xml
<trigger name="DefaultApproval">
  <$startWorkflow process="IDDOneStepApprovalTask" taskKind="REVIEW" taskTemplate="DefaultApproval" firstTaskType="AVOSFinalReview" />
  <$event name="CreateBE" />
  <$event name="UpdateBE" />
  <$role name="*"/>
</trigger>
```

**Update with approval code sample**
The following code sample shows the `startWorkflow` element configuration for the ActiveVOS adapter based on subject areas for the update-with-approval task:

```xml
<trigger name="DefaultApproval">
  <$startWorkflow process="IDDUpdateWithApprovalTask" taskKind="REVIEW" taskTemplate="DefaultApproval" firstTaskType="Update" />
  <$event name="CreateBE" />
  <$event name="UpdateBE" />
  <$role name="*"/>
</trigger>
```

**Merge code sample**
The following code sample shows the `startWorkflow` element configuration for the ActiveVOS adapter based on subject areas for the merge task:

```xml
<trigger name="Matched">
  <$startWorkflow process="IDDMergeTask" taskKind="MERGE" taskTemplate="MergeTaskGenerator" firstTaskType="AVOSMerge" />
  <$event name="MatchedBE" />
  <$role name="SYSTEM"/>
</trigger>
```
## Update the Presentation Parameters for Customized Workflows

If you customized the workflows prior to version 10.0 HotFix 2, you must update the presentation parameters in the ActiveVOS .BPEL file for each workflow.

The following table describes the presentation parameters that you must add or update in the ActiveVOS project in environments that use the business entity workflow adapter:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Expression for Business Entity Workflow Adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>hubUsername</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:hubUsername/text()</td>
</tr>
<tr>
<td>hubPassword</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:hubPassword/text()</td>
</tr>
<tr>
<td>securityPayload</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:securityPayload/text()</td>
</tr>
<tr>
<td>orsId</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:orsId/text()</td>
</tr>
<tr>
<td>taskTypeName</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:name/text()</td>
</tr>
<tr>
<td>taskTypeDisplayName</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:displayName/text()</td>
</tr>
<tr>
<td>taskTypeDescription</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:description/text()</td>
</tr>
<tr>
<td>pendingBVT</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:pendingBVT</td>
</tr>
<tr>
<td>taskTypeDataUpdateType</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:dataUpdateType/text()</td>
</tr>
<tr>
<td>taskTypeDisplayType</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:displayType/text()</td>
</tr>
<tr>
<td>defaultApproval</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:defaultApproval</td>
</tr>
<tr>
<td>taskDataTaskId</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:taskId/text()</td>
</tr>
<tr>
<td>taskDataOwnerUID</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:ownerUID/text()</td>
</tr>
<tr>
<td>taskDataGroups</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:groups/ mdmavxsd:groups/text()</td>
</tr>
<tr>
<td>dueDate</td>
<td>let $in := $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:dueDate/ text() let $out := (string-length($in) * xsd:int((string-length($out) = 0))) + string-length($out)</td>
</tr>
<tr>
<td>status</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:status/text()</td>
</tr>
<tr>
<td>taskDataPriority</td>
<td>length($out &gt; 0)), string-length($out) + (string-length($in))</td>
</tr>
<tr>
<td>taskDataSubjectAreaUID</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:subjectAreaUID/ text()</td>
</tr>
<tr>
<td>taskDataTitle</td>
<td>let $in := $ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:title/text() let $out :=</td>
</tr>
<tr>
<td>taskDataComments</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:comments/text()</td>
</tr>
</tbody>
</table>
### Expression for Business Entity Workflow Adapter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Expression for Business Entity Workflow Adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>taskDataInteractionId</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:interactionId/text()</td>
</tr>
<tr>
<td>taskDataCreator</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:creator/text()</td>
</tr>
<tr>
<td>createDate</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:createDate</td>
</tr>
<tr>
<td>taskDataUpdatedBy</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:updatedBy/text()</td>
</tr>
<tr>
<td>lastUpdateDate</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:lastUpdateDate</td>
</tr>
<tr>
<td>beRowId</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskRecords/mdmavxsd:INFARecordKey[1]/mdmavxsd:rowId/text()</td>
</tr>
<tr>
<td>bePkeySrcObject</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskRecords/mdmavxsd:INFARecordKey[1]/mdmavxsd:pkeySrcObject/text()</td>
</tr>
<tr>
<td>beSystem</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskRecords/mdmavxsd:INFARecordKey[1]/mdmavxsd:system/text()</td>
</tr>
<tr>
<td>beRowidXref</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskRecords/mdmavxsd:INFARecordKey[1]/mdmavxsd:rowidXref/text()</td>
</tr>
<tr>
<td>beTableUID</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskRecords/mdmavxsd:INFARecordKey[1]/mdmavxsd:tableUID/text()</td>
</tr>
<tr>
<td>taskTypeCreationType</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:creationType/text()</td>
</tr>
</tbody>
</table>

The following table describes the presentation parameters that you must add or update in the ActiveVOS project in environments that use the subject area workflow adapter:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Expression for Subject Area Workflow Adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>subjectareauid</td>
<td>string</td>
<td>$InfaTask/mdmavxsd:taskData/mdmavxsd:subjectAreaUID</td>
</tr>
<tr>
<td>title</td>
<td>string</td>
<td>$InfaTask/mdmavxsd:taskData/mdmavxsd:title</td>
</tr>
<tr>
<td>creator</td>
<td>string</td>
<td>$InfaTask/mdmavxsd:taskData/mdmavxsd:creator</td>
</tr>
<tr>
<td>mdmtasktype</td>
<td>string</td>
<td>$InfaTask/mdmavxsd:taskData/mdmavxsd:name</td>
</tr>
<tr>
<td>orsId</td>
<td>string</td>
<td>$InfaTask/mdmavxsd:orsId</td>
</tr>
<tr>
<td>duedate</td>
<td>string</td>
<td>$InfaTask/mdmavxsd:taskData/mdmavxsd:dueDate</td>
</tr>
<tr>
<td>tasktypename</td>
<td>string</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:name</td>
</tr>
<tr>
<td>taskTypeDisplayName</td>
<td>string</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:displayName</td>
</tr>
</tbody>
</table>
### Updating the Customized Subject Area ActiveVOS Workflows

If you customized the subject area ActiveVOS workflows, you must update the presentation parameters and the `<sif:encrypted>` property in the ActiveVOS .BPEL file for each workflow.

1. Set `<sif:encrypted>` to `true` to enable password encryption.
2. Update the presentation parameters to avoid task filtering issues.

The following table describes the presentation parameters that you must add or update in the ActiveVOS project:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Expression</th>
</tr>
</thead>
<tbody>
<tr>
<td>subjectareauid</td>
<td>string</td>
<td><code>$InfaTask/mdmavxsd:taskData/mdmavxsd:subjectAreaUID</code></td>
</tr>
<tr>
<td>title</td>
<td>string</td>
<td><code>$InfaTask/mdmavxsd:taskData/mdmavxsd:title</code></td>
</tr>
<tr>
<td>creator</td>
<td>string</td>
<td><code>$InfaTask/mdmavxsd:taskData/mdmavxsd:creator</code></td>
</tr>
<tr>
<td>mdmtasktype</td>
<td>string</td>
<td><code>$InfaTask/mdmavxsd:taskType/mdmavxsd:name</code></td>
</tr>
<tr>
<td>orsId</td>
<td>string</td>
<td><code>$InfaTask/mdmavxsd:orsId</code></td>
</tr>
<tr>
<td>duedate</td>
<td>string</td>
<td><code>$InfaTask/mdmavxsd:taskData/mdmavxsd:dueDate</code></td>
</tr>
<tr>
<td>tasktypename</td>
<td>string</td>
<td><code>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:name</code></td>
</tr>
<tr>
<td>taskTypeDisplayName</td>
<td>string</td>
<td><code>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:displayName</code></td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Expression</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>taskTypeDescription</td>
<td>string</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:description</td>
</tr>
<tr>
<td>taskTypePendingBVT</td>
<td>boolean</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:pendingBVT</td>
</tr>
<tr>
<td>taskTypeDataUpdateType</td>
<td>string</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:dataUpdateType</td>
</tr>
<tr>
<td>taskTypeDisplayType</td>
<td>string</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskType/mdmavxsd:displayType</td>
</tr>
<tr>
<td>priorityOut</td>
<td>string</td>
<td>$ProcessTaskRequest/mdmavxsd:INFATask/mdmavxsd:taskData/mdmavxsd:priority</td>
</tr>
</tbody>
</table>

For more information about updating the .BPEL files, see the ActiveVOS documentation.

**Redeploy the ActiveVOS Workflows based on Subject Areas**

The ActiveVOS workflows for the workflow adapter that is based on subject areas changed in version 10.0 HotFix 2. If you use the workflow adapter based on subject areas, you must redeploy the default workflows that are provided in the Resource Kit. To deploy the Informatica ActiveVOS project that contains the task workflows to the MDM Hub Server, first export the CommonMDM project and then export the MDMWorkflow project.

1. In Informatica ActiveVOS Designer, open the BeCommonMDM project to export.
2. Click **File > Export**.
   
   The Export dialog box opens.
3. Under **Orchestration**, select **Contribution - Business Process Archive**. Click **Next**.
4. In the **Deployment URL** field under **Server Deployment Option**, enter the URL for the ActiveVOS instance. Click **Finish**.
5. In the **Deployment Complete** dialog box, click **OK**.
6. Repeat all steps for the BeMDMWorkflow project.
   
   You must export the BeCommonMDM project before you export the BeMDMWorkflow project.
Generating Business Entity and Business Entity Services Configuration Files

To generate business entity and business entity services configuration files, use the Informatica Data Director Configuration Manager.

1. In the Configuration Manager Applications pane, select the Informatica Data Director application whose configuration you want to generate into a business entity and business entity service configuration.

2. Click Generate Business Entity Schema.

Configuration Manager generates the business entity and business entity service configuration.

3. Configuration Manager displays messages of issues encountered while generating the business entity and business entity services configuration. The messages indicate if Configuration Manager resolved the issue during the generation process and describes the changes Configuration Manager made to resolve the issue. If Configuration Manager did not fix the issue, note the issue and the suggested action you can take to resolve the issue.
Troubleshooting the Upgrade Process

If the upgrade fails or you encounter issues during the upgrade, use the following information to troubleshoot the problem.

The EAR files do not deploy within the permitted time in JBoss environments.

As you increase the number of Operational Reference Stores, the EAR file deployment time increases. If the EAR file deployment time exceeds the permitted deployment time in JBoss environments, the upgrade fails.

To resolve the issue, increase the permitted deployment time to accommodate the EAR file deployment time. The default permitted deployment time is 600 seconds.

1. Increase the value of the `deploy.wait.time` property in the `build.properties` file in the following directory:
   - On UNIX: `<infamdm installation directory>/hub/server/bin`
   - On Windows: `<infamdm installation directory>\hub\server\bin`

2. Navigate to the following directory:
   - On UNIX: `<JBoss installation directory>/standalone/configuration`
   - On Windows: `<JBoss installation directory>\standalone\configuration`

3. Configure the following code in the `standalone-full.xml` file to increase the timeout value:
   ```xml
   <subsystem xmlns="urn:jboss:domain:deployment-scanner:1.1">
     <deployment-scanner path="deployments" relative-to="jboss.server.base.dir" scan-interval="5000" deployment-timeout="1200"/>
   </subsystem>
   ```

The Hub Server upgrade fails.

To resolve the issue, redeploy the EAR file to retry the Hub Server upgrade.
Note: In JBoss environments, if you manually change the configuration of data sources in the standalone-full.xml file when JBoss is running, you lose the configuration changes when you run the patchinstallSetup script.

1. Navigate to the following directory:
   
   On UNIX. <MDM Hub installation directory>/hub/server
   
   On Windows. <MDM Hub installation directory>\hub\server

2. Run the following command to deploy the Hub Server application and apply changes to the application server configuration.

   Note: If you do not have embedded ActiveVOS in your environment, you do not need to include the ActiveVOS user names and passwords in the command.

   On UNIX

   WebLogic

   patchInstallSetup.sh -Dweblogic.password=<WebLogic password> -
                         -Ddatabase.password=<MDM Hub Master database password> -Davos.username=<ActiveVOS
                         Console username> -Davos.password=<ActiveVOS Console password> -
                         -Davos.jdbc.database.password=<ActiveVOS database password>

   WebSphere with security enabled

   patchInstallSetup.sh -Dwebsphere.password=<WebSphere password> -
                         -Ddatabase.password=<MDM Hub Master database password> -Davos.username=<ActiveVOS
                         Console username> -Davos.password=<ActiveVOS Console password> -
                         -Davos.jdbc.database.password=<ActiveVOS database password>

   WebSphere with security disabled

   patchInstallSetup.sh -Ddatabase.password=<MDM Hub Master database password> -
                         -Davos.username=<ActiveVOS Console username> -Davos.password=<ActiveVOS Console
                         password> -Davos.jdbc.database.password=<ActiveVOS database password>

   JBoss

   patchInstallSetup.sh -Ddatabase.password=<MDM Hub Master database password> -
                         -Davos.username=<ActiveVOS Console username> -Davos.password=<ActiveVOS Console
                         password> -Davos.jdbc.database.password=<ActiveVOS database password>

   Note: On UNIX, if you include an exclamation mark (!) character in the password, you must include a backslash before the exclamation mark (!) character. For example, if the password is "!!cmx!!", enter `!!\cmx\!!`.

   On Windows

   WebLogic

   patchInstallSetup.bat -Dweblogic.password=<WebLogic password> -
                         -Ddatabase.password=<MDM Hub Master database password> -Davos.username=<ActiveVOS
                         Console username> -Davos.password=<ActiveVOS Console password> -
                         -Davos.jdbc.database.password=<ActiveVOS database password>

   WebSphere with security enabled

   patchInstallSetup.bat -Dwebsphere.password=<WebSphere password> -
                         -Ddatabase.password=<MDM Hub Master database password> -Davos.username=<ActiveVOS
                         Console username> -Davos.password=<ActiveVOS Console password> -
                         -Davos.jdbc.database.password=<ActiveVOS database password>

   WebSphere with security disabled

   patchInstallSetup.bat -Ddatabase.password=<MDM Hub Master database password> -
                         -Davos.username=<ActiveVOS Console username> -Davos.password=<ActiveVOS Console
                         password> -Davos.jdbc.database.password=<ActiveVOS database password>
JBoss

`patchInstallsetup.bat -Ddatabase.password=<MDM Hub Master database password> -Davos.username=<ActiveVOS Console username> -Davos.password=<ActiveVOS Console password> -Davos.jdbc.database.password=<ActiveVOS database password>`

The ActiveVOS Console credentials are the same credentials as the administrative user in the application server.

The ActiveVOS database credentials are the same credentials that were used to run the create_bpm script.

The Process Server upgrade fails in a WebLogic environment.

When you upgrade the Process Server in a WebLogic environment, the upgrade might fail with the following error:

Unable to start application, deployment error msg:
weblogic.management.ManagementException: [Deployer:149196] Rejecting start request for application siperian-mrm-cleanse.ear because stop request is running for the application.

To resolve the issue, use the WebLogic Administrative Console to manually deploy the siperian-mrm-cleanse.ear file, and then restart the application server.

The Process Server upgrade fails.

To resolve the issue, redeploy the EAR file to retry the Process Server upgrade.

Note: If you manually change the configuration of data sources in the standalone-full.xml file when JBoss is running, you lose the configuration changes when you run the `patchInstallSetup` script.

1. Navigate to the following directory:
   - On UNIX. `<MDM Hub installation directory>/hub/cleanse`
   - On Windows. `<MDM Hub installation directory>\hub\cleanse`

2. Run the following command to deploy the Process Server application and apply changes to the application server configuration.

   **On UNIX**
   
   **WebLogic**
   ```bash
   patchInstallSetup.sh -Dweblogic.password=<WebLogic password> -Ddatabase.password=<your database password>
   ```
   
   **WebSphere**
   ```bash
   patchInstallSetup.sh -Ddatabase.password=<your database password>
   ```
   
   **JBoss**
   ```bash
   patchInstallsetup.sh -Ddatabase.password=<your database password>
   ```

   **On Windows**
   
   **WebLogic**
   ```bash
   patchInstallSetup.bat -Dweblogic.password=<WebLogic password> -Ddatabase.password=<your database password>
   ```
   
   **WebSphere**
   ```bash
   patchInstallSetup.bat -Ddatabase.password=<your database password>
   ```
   
   **JBoss**
   ```bash
   patchInstallsetup.bat -Ddatabase.password=<your database password>
   ```
Run the following command to grant the required permissions:

dbms_java.grant_permission('SYS:java.net.SocketPermission', 'connect,resolve');

Run the following command to confirm that the Java classes are loaded in Oracle:

select dbms_java.longname(object_name), status from user_objects where object_type='JAVA CLASS';

To troubleshoot the Informatica platform installation if it was not successful, see the following Knowledge Base article: https://kb.informatica.com/faq/7/Pages/14/306938.aspx?myk=KB%20306938.

When I upgrade an Operational Reference Store, Oracle generates error ORA-20005.

If you encounter error ORA-20005 when you run sip_ant updatethsdatabase, perform the following steps:

1. Run the following command to grant the required permissions:

   ```
   exec
dbms_java.grant_permission('ORS_USER','SYS:java.net.SocketPermission','connect,resolve');
   ```

2. Run the following command to confirm that the Java classes are loaded in Oracle:

   ```
   select dbms_java.longname(object_name), status from user_objects where object_type='JAVA CLASS';
   ```

3. If the classes are not loaded, run the following command to reload the classes:

   ```
   loadjava -verbose -force -resolve -oracleresolver -user &ors_home/
   &ors_passw@&tns_name siperian-cleansecaller.jar
   loadjava -verbose -force -resolve -oracleresolver -user &ors_home/
   &ors_passw@&tns_name siperian-dbutil.jar
   ```

The Hub Store upgrade fails.

You cannot rerun the Hub Store upgrade on a partially upgraded schema. If the upgrade fails, restore the database from a full backup, and then rerun the Hub Store upgrade.

If the Hub Store upgrade fails because column names contain reserved words, contact Informatica Global Customer Support for scripts to migrate the data to renamed columns.

After upgrading from a non-English locale, some tables are in English and some are in the language of the locale.

If your Hub Store database environment is set to a non-English locale, you must change the character set to Unicode before you run the upgrade scripts to upgrade the MDM Hub Master Database and Operational Reference Stores. During the upgrade, all table metadata is translated to English with a translation key. If you did not select a Unicode character set, only some tables are translated.

The Hub Console fails to launch in a JBoss environment

In JBoss environments, if the JBoss application server does not restart, you cannot launch the Hub Console. The MDM Hub generates an error to indicate that the repository layer did not initialize.

To resolve the issue, run the following code in a batch file to restart JBoss:

```
rmdir C:\<JBoss installation directory>\standalone\tmp \s /q
mkdir C:\<JBoss installation directory>\standalone\tmp
C:\<JBoss installation directory>\bin\standalone.bat -c standalone-full.xml -b 0.0.0.0
```}

Hub Console fails to launch in a DB2 environment

In an MDM Hub environment with DB2 datasources, the Hub Console fails to launch with the following errors:

SIP-03070: SIP-10318: Couldn't get users due to data access error.
This issue is caused by a mismatch in the case used for the administrative user name in the MDM Hub and in the application server. For example, the MDM Hub has the administrative user DB2ADMIN (uppercase) while the application server has db2admin (lowercase).

To resolve the issue, ensure that the user name in the application server exactly matches the user name in the MDM Hub.

**Note:** To avoid issues related to case-sensitivity, Informatica recommends using all uppercase letters when defining user names for DB2.

For example, if you are using WebSphere, set the user name in the WebSphere Console.

1. Open the WebSphere Console.
2. Navigate to **Resources > Data sources > siperian-cmx_system-ds > Custom properties**.
3. In the User field, type in **uppercase**: DB2ADMIN
4. In the Password field, type the password for this user.
5. Click **Apply**, and then click **Save**.
6. Restart WebSphere.
7. Launch the Hub Console and log in.

In IDD, users cannot use the legacy Data View to view records that are based on subject areas. The default page to view records in IDD is the Entity View that is based on business entities.

To use the legacy Data View, set `dataview.enabled` to `true` in the `cmxserver.properties` file.

For more information, see the following How-to article: *Migrating IDD Applications to the Business Entity Data Model*.

**IDD can fail with the error SIP-BV-11500.**

IDD can fail with the following error: **SIP-BV-11500 Fatal Error Operational Reference Store localhost-orcl-MDM_SAMPLE does not have a workflow engine configured. Each Operational Reference Store must have a workflow engine configured for use with the IDD even if workflow will not be used.**

To resolve this issue, ensure that the primary workflow adapter is configured.

For more information, see the following KB article: [https://kb.informatica.com/solution/23/Pages/55/381456.aspx?myk=381456](https://kb.informatica.com/solution/23/Pages/55/381456.aspx?myk=381456).

When you validate the metadata, an error states that the object exists in the metadata but not in the database.

When you use the Repository Manager to fix the issue, the following error occurs: **ORA-00955 Name is already used by an existing object.**

To resolve the issue, ensure that the correct privileges for the proxy role are granted for the tables that encounter the error. Refer to a table that does not encounter the error to get the list of permissions that are required.

**When match tokens are generated, an error occurs.**

In environments where the application server runs in a Windows environment, an error occurs stating that the class `ssa.ssaname3.jssan3cl` cannot be initialized when you generate match tokens.
To resolve this issue, install Visual C++ Redistributable for Visual Studio 2015 on the Process Server that performs name search and record matching for the MDM Hub.

After you upgrade in a Microsoft SQL Server environment on a WebLogic application server, you cannot log in to the Hub Console.

A null pointer exception occurs when you log in to the Hub Console.

To resolve the issue, comment out the drop commands, create schema commands, and any role commands in the `xa_install.sql` script located in `<Microsoft SQL Server installation directory>\sqljdbc_4.0\enu\xa`. Run the script, and then restart the application server.

The upgrade component `patchInstallSetup` fails when you install the Hub Server on a WebSphere Application Server.

To resolve the issue, open the file `<WebSphere profile home>/properties/soap.client.props` and increase `com.ibm.SOAP.requestTimeout`, and then restart the WebSphere server profile. Run `patchInstallSetup.bat` again.

The `entity360view.ear` file fails to deploy when you upgrade the Hub Server in IBM AIX environments.

To resolve the issue, run the `patchInstallSetup.sh` script.
Frequently Asked Questions

Do we need a new license file to upgrade?
Yes. If you are upgrading from a version earlier than 10.2 of MDM Multidomain Edition, you need a new license file.

Can we use database user exits from a pre-10.0 version?
No. Database user exits that run in the database layer are deprecated in version 10.0 and later.

Why do we need to provide the DBA username and password during the upgrade process?
The upgrade process performs actions that require DBA-level permissions, such as granting privileges and creating sequences. The DBA credentials are necessary to allow the upgrade process to perform these actions.

What happens to the existing version of ActiveVOS during the upgrade process?
If you have ActiveVOS installed in your environment and you do an in-place upgrade, the upgrade process will install the latest version of ActiveVOS if your environment does not already have it. To see which version of ActiveVOS is required, see the Product Availability Matrix on Informatica Network: https://network.informatica.com/community/informatica-network/product-availability-matrices/overview

Is it mandatory to install ActiveVOS during the MDM upgrade process in an environment that does not have ActiveVOS installed?
No. During the upgrade process, you are prompted to choose whether you want to install ActiveVOS.

Has the recommended screen resolution for Informatica Data Director changed in this version?
No, the recommended screen resolution has not changed. The recommended screen resolution for Informatica Data Director is 1280 x 1024.
Is it mandatory to enable smart search in version 10.2 or later?
If you have configured business entities and do not have a subject area configuration, you must use smart search. You can only use the legacy search if you have defined subject areas in a legacy Informatica Data Director implementation.

Do we need to upgrade Informatica Data Quality when we upgrade to Informatica MDM Multidomain Edition version 10.2 or later?
Yes, if you use Informatica Data Quality (IDQ) in your environment, you must upgrade to version 10.1 of IDQ. For the system requirements, see the Product Availability Matrix on Informatica Network:

How do we customize MDM Hub security?

Is Java 8 supported?
Yes, Informatica MDM Multidomain Edition version 10.2 supports Java 8. For the system requirements, see the Product Availability Matrix on Informatica Network:

Note: ActiveVOS requires Java 7.

If we do not install the Informatica platform, why is the Informatica platform EAR file deployed?
The Informatica platform EAR is deployed to enable the MDM Hub to communicate with the platform. If the Informatica platform is not installed, the EAR file is deployed as a passive application.

If we migrate to use Informatica platform staging, can we set up delta detection, hard delete detection, and audit trails?
By default, Informatica platform staging does not include support for these features. Build your own customization outside the MDM Hub to provide these functions.
Processing Existing ActiveVOS Tasks

This appendix includes the following topics:

- Processing Existing ActiveVOS Tasks Overview, 101
- Running the Migration Script, 101

Processing Existing ActiveVOS Tasks Overview

To work with ActiveVOS tasks that were created before MDM Multidomain Edition version 10.1, routinely run a migration script to populate the tasks with the required presentation parameters. If you do not run the migration script, the tasks do not appear in the Task Manager. Run the migration script until you process all the tasks that were created before you upgraded to version 10.1.

Running the Migration Script

To work with ActiveVOS tasks that were created before MDM Multidomain Edition version 10.1, run the migration script to populate the tasks with the required presentation parameters. If you do not run the migration script, you cannot see the tasks in the Task Manager. Routinely run the script until all the tasks are complete.

**Note:** To run the script, you can use a properties file. If you do not want to store passwords in a properties file, you can run the script with the properties in the command.

1. Create an MDM Hub super user that belongs to all task management roles.
   
   The ActiveVOS migration utility requires that you create a super user that belongs to all task management roles.
   
   **Note:** After the migration, the tasks are assigned to the same users that the tasks were assigned to before the upgrade.

2. To run the script using a properties file, perform the following steps.
   
   a. Open the following file in a text editor:
      
      ```<MDM Hub installation directory>\hub\server\bin\build.properties```
b. Add the following properties to the build.properties file.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>avos.jdbc.database.driver.jar</td>
<td>Path to the JAR file that contains the JDBC driver for ActiveVOS database. This parameter is populated during the Hub Server installation without the avos prefix in &lt;infamdm installation directory&gt;/conf/avos.install.properties.</td>
</tr>
<tr>
<td>avos.jdbc.database.driver.class</td>
<td>JDBC driver class for ActiveVOS database. This parameter is populated during the Hub Server installation without the avos prefix in &lt;infamdm installation directory&gt;/conf/avos.install.properties.</td>
</tr>
<tr>
<td>avos.jdbc.database.url</td>
<td>ActiveVOS database connection URL. This parameter is populated during the Hub Server installation without the avos prefix in &lt;infamdm installation directory&gt;/conf/avos.install.properties.</td>
</tr>
<tr>
<td>avos.jdbc.database.username</td>
<td>ActiveVOS database user name. This parameter is populated during the Hub Server installation without the avos prefix in &lt;infamdm installation directory&gt;/conf/avos.install.properties.</td>
</tr>
<tr>
<td>avos.jdbc.database.password</td>
<td>ActiveVOS database password.</td>
</tr>
<tr>
<td>avos.ws.protocol</td>
<td>The protocol for the ActiveVOS server connection. Can be http or https.</td>
</tr>
<tr>
<td>avos.ws.host</td>
<td>Host name of the application server where ActiveVOS runs.</td>
</tr>
<tr>
<td>avos.ws.port</td>
<td>Port number of the application server connection.</td>
</tr>
<tr>
<td>avos.ws.trusted.username</td>
<td>User name of the trusted user. <strong>Note</strong>: The trusted user is created as part of the MDM Multidomain Edition installation and upgrade process.</td>
</tr>
<tr>
<td>avos.ws.trusted.password</td>
<td>Password for the trusted user. <strong>Note</strong>: The trusted user is created as part of the MDM Multidomain Edition installation and upgrade process.</td>
</tr>
<tr>
<td>avos.hub.username</td>
<td>MDM Hub super user that belongs to all task management roles.</td>
</tr>
<tr>
<td>avos.ws.pagesize</td>
<td>Number of tasks processed in one database transaction and batch-loaded from ActiveVOS.</td>
</tr>
<tr>
<td>avos.ws.statuses</td>
<td>Optional. Comma-separated list of ActiveVOS task statuses to be processed. For example, READY or IN_PROGRESS. By default all tasks are processed.</td>
</tr>
</tbody>
</table>

c. Open a command prompt.
d. Navigate to the following directory:
   - On UNIX. `<MDM Hub installation directory>/hub/server/bin`
   - On Windows. `<MDM Hub installation directory>/hub\server\bin`
e. Run the MDM Hub Master Database upgrade script with the following command:
   - On UNIX. `sip_ant.sh migrate-avos-sa-tasks`
• On Windows. sip_ant.bat migrate-avos-sa-tasks

3. If you want to run the script with the properties in the command, perform the following steps.
   a. Open a command prompt.
   b. Navigate to the following directory:
      • On UNIX. <MDM Hub installation directory>/hub/server/bin
      • On Windows. <MDM Hub installation directory>\hub\server\bin
   c. Run the MDM Hub Master Database upgrade script with the properties in the command. For example, you can run the following command:
      • On UNIX. sip_ant.sh migrate-avos-sa-tasks -Davos.jdbc.database.password=!!cmx!! -Davos.ws.protocol=http -Davos.ws.host=localhost -Davos.ws.port=8080 -Davos.ws.pagesize=100 -Davos.ws.trusted.username=avos -Davos.ws.trusted.password=avos -Davos.hub.username=admin
      • On Windows. sip_ant.bat migrate-avos-sa-tasks -Davos.jdbc.database.password=!!cmx!! -Davos.ws.protocol=http -Davos.ws.host=localhost -Davos.ws.port=8080 -Davos.ws.pagesize=100 -Davos.ws.trusted.username=avos -Davos.ws.trusted.password=avos -Davos.hub.username=admin

4. Run the script on a regular schedule.

5. After all the tasks for the subject area workflow adapter are processed, you do not need to run the script and you can delete the super user.
This appendix includes the following topic:

- Configuring Metadata Caching (Optional), 104

Configuring Metadata Caching (Optional)

The metadata caches manage items such as data objects, repository objects, and search tokens. The MDM Hub uses Infinispan for metadata caching. Infinispan is installed with the Hub Server. For the caches that are used by the Hub Server, the Infinispan configuration file contains default attribute values.

In version 10.1 and earlier, the MDM Hub used JBoss Cache for metadata caching. After you upgrade from one of these versions, the MDM Hub Server uses the Infinispan configuration file instead of the JBoss Cache configuration file.

If the JBoss Cache configuration file was edited in the previous version of MDM Hub, you might need to edit the Infinispan configuration file. It depends on why the file was edited.

**Network policy**

If the JBoss Cache file was edited to work around your organization's network policy, update the Infinispan file and the jgroups* file with the same policy changes.

**Performance**

If the JBoss Cache file was edited to improve cache performance, first try running the MDM Hub with the default Infinispan values. If you experience performance issues, copy the changed values from the JBoss Cache configuration file to the Infinispan configuration file. If you still experience performance issues, familiarize yourself with Infinispan and adjust the values to better suit your environment.
Infinispan Attributes

The following table summarizes default Infinispan attribute values and indicates how the attributes map to the former JBoss attribute:

<table>
<thead>
<tr>
<th>Infinispan Element and Attribute</th>
<th>Default Value</th>
<th>Description</th>
<th>JBoss Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>locking acquire-timeout</td>
<td>60000</td>
<td>Maximum time during which the Hub Server can try to acquire a lock.</td>
<td>lockAcquisitionTimeout</td>
</tr>
<tr>
<td>transaction stop-timeout</td>
<td>30000</td>
<td>When a cache stops, this attribute sets the maximum time that Infinispan waits while the Hub Server finishes remote and local transactions.</td>
<td>sync replTimeout</td>
</tr>
<tr>
<td>transport cluster</td>
<td>cluster</td>
<td>Name for the underlying group communication cluster.</td>
<td>clustering</td>
</tr>
<tr>
<td>transport stack</td>
<td>UDP</td>
<td>Type of configuration: UDP or TCP. The configurations are defined in the jgroups-udp.xml file and the jgroups-tcp.xml file.</td>
<td>jgroupsConfig</td>
</tr>
<tr>
<td>transport node-name</td>
<td>$node$</td>
<td>Name of the current node. The Hub Server sets this attribute. The node-name defaults to a combination of the host name and a random number. The number differentiates multiple nodes on the same host.</td>
<td>--</td>
</tr>
<tr>
<td>transport machine</td>
<td>$machine$</td>
<td>ID of the machine where the node runs. The Hub Server sets this attribute.</td>
<td>--</td>
</tr>
<tr>
<td>expiration lifespan</td>
<td>--</td>
<td>Maximum lifespan of a cache entry in milliseconds. When a cache entry exceeds its lifespan, the entry expires within the cluster. If you need to optimize performance, increase the lifespan for the following caches: DISABLE_WHEN_LOCK, DATA_OBJECTS, and REPOS_OBJECTS. For example, you can increase the lifespan from one hour (3600000) to one day (86400000). Each cache has its own default value for this attribute. To find the default values, open the inifipanConfig.xml file.</td>
<td>eviction timeToLive</td>
</tr>
<tr>
<td>expiration interval</td>
<td>--</td>
<td>Maximum interval for checking the lifespan. If you need to optimize performance, increase the interval for the following caches: DISABLE_WHEN_LOCK, DATA_OBJECTS, and REPOS_OBJECTS. For example, you can increase the interval from five seconds (5000) to five minutes (300000). Each cache has its own default value for this attribute. To find the default values, open the inifipanConfig.xml file.</td>
<td>eviction timeToLive</td>
</tr>
</tbody>
</table>
Editing Infinispan Attributes

To configure metadata caching attributes, edit the `infinispanConfig.xml` file for the Hub Server. For help with the Infinispan configuration, see the Infinispan documentation.

**Note:** The Process Server also has an Infinispan configuration file. The default attribute values should be sufficient, however if you notice issues with the performance of the Process Server, you can fine-tune the attribute values.

1. Navigate to the following directory: `<MDM Hub installation directory>/hub/server/resources`
2. Make a backup copy of the following file: `infinispanConfig.xml`
3. Open the `infinispanConfig.xml` file and find the Infinispan version number, which appears in the `xsi:schemaLocation` attribute.
4. Review the documentation for the Infinispan version.
   **Note:** In the following URLs, substitute the version number wherever the path contains `#.#`.
   - To view the configuration schema, go to the URL that is contained in the `xsi:schemaLocation` attribute in the file.
   - To learn about the attributes, go to [https://docs.jboss.org/infinispan/#.#.x/configdocs/](https://docs.jboss.org/infinispan/#.#.x/configdocs/)
   - To learn about Infinispan, go to [http://infinispan.org/docs/#.#.x/](http://infinispan.org/docs/#.#.x/) and select the "Frequently Asked Questions" link.
5. Edit the file and save it.
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