

Informatica® Multidomain MDM 10.4

## Release Guide

Informatica Multidomain MDM Release Guide 10.4 June 2020

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### Preface

Read the Informatica Multidomain MDM Release Guide to learn about new features and enhancements, behavior changes between versions, and support changes. The Release Guide also includes information about tasks that you might need to complete after you upgrade from a previous version.

### Informatica Resources

Informatica provides you with a range of product resources through the Informatica Network and other online portals. Use the resources to get the most from your Informatica products and solutions and to learn from other Informatica users and subject matter experts.

### Informatica Network

The Informatica Network is the gateway to many resources, including the Informatica Knowledge Base and Informatica Global Customer Support. To enter the Informatica Network, visit <a href="https://network.informatica.com">https://network.informatica.com</a>.

As an Informatica Network member, you have the following options:

- Search the Knowledge Base for product resources.
- · View product availability information.
- · Create and 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 find product resources such as how-to articles, best practices, video tutorials, and answers to frequently asked questions.

To search the Knowledge Base, visit <a href="https://search.informatica.com">https://search.informatica.com</a>. If you have questions, comments, or ideas about the Knowledge Base, contact the Informatica Knowledge Base team at <a href="https://ksearch.informatica.com">KB\_Feedback@informatica.com</a>.

### Informatica Documentation

Use the Informatica Documentation Portal to explore an extensive library of documentation for current and recent product releases. To explore the Documentation Portal, visit <a href="https://docs.informatica.com">https://docs.informatica.com</a>.

### Informatica Product Availability Matrices

Product Availability Matrices (PAMs) indicate the versions of the operating systems, databases, and types of data sources and targets that a product release supports. You can browse the Informatica 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>.

### Informatica Velocity

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

You can find Informatica Velocity resources at <a href="http://velocity.informatica.com">http://velocity.informatica.com</a>. If you have questions, comments, or ideas about Informatica Velocity, contact Informatica Professional Services at <a href="mailto:ips@informatica.com">ips@informatica.com</a>.

### Informatica Marketplace

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

### Informatica Global Customer Support

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

To find your local Informatica Global Customer Support telephone number, visit the Informatica website at the following link:

https://www.informatica.com/services-and-training/customer-success-services/contact-us.html.

To find online support resources on the Informatica Network, visit <a href="https://network.informatica.com">https://network.informatica.com</a> and select the eSupport option.

### Part I: Version 10.4

This part contains the following chapter:

• Notices, New Features, and Changes (10.4), 11

### CHAPTER 1

# Notices, New Features, and Changes (10.4)

This chapter includes the following topics:

- Notices (10.4), 11
- New Features (10.4), 13
- Changes (10.4), 22

### Notices (10.4)

### **Support Changes**

This section describes the support changes in version 10.4.

#### Dropped Support for Search with Apache Solr

Effective in version 10.4, Informatica dropped support for search with Apache Solr. If you are using search with Apache Solr, you must start using search with Elasticsearch.

For more information about search with Elasticsearch, see the *Multidomain MDM Version 10.4 Configuration Guide* and the *Multidomain MDM Version 10.4 Upgrading From <Version>* guide.

#### **Dropped Support for Operating Systems**

Effective in version 10.4, Informatica dropped support for the Oracle Solaris and the HP-UX operating systems. If you are using Oracle Solaris or HP-UX, Informatica requires you to use a supported operating system.

For information about supported operating systems, see the Product Availability Matrix on the Informatica Network: https://network.informatica.com/community/informatica-network/product-availability-matrices

#### Deprecated Support for Adobe Flash Player

Effective in version 10.4, support for Adobe Flash Player is deprecated. Adobe announced that it would end support for Flash Player at the end of 2020.

If you use Data Director with subject areas that requires Adobe Flash Player, Informatica recommends that you migrate to Data Director with business entities.

For information about migrating to Data Director with business entities, see the *Multidomain MDM Version* 10.4 Data Director Migration Guide.

#### Deprecated Support for Data Director with Subject Areas

Support for Data Director with subject areas is deprecated. Informatica intends to drop support for Data Director with subject areas in a future release.

If you are using Data Director with subject areas, Informatica recommends that you migrate to Data Director with business entities.

If you are a new customer, do not use Data Director with subject areas. You must use Data Director with business entities.

For information about migrating to Data Director with business entities, see the *Multidomain MDM Version* 10.4 Data Director Migration Guide.

### Deprecated Support for Informatica Platform Staging

Effective in version 10.4, support for Informatica platform staging that uses the Data Integration Service is deprecated. Informatica intends to drop support for Informatica platform staging in a future release.

You can use Informatica Data Integration and Informatica Data Quality to directly load data into the MDM Hub staging tables. This requires you to manually synchronize changes to the staging tables with the Informatica Data Integration and Informatica Data Quality repositories.

#### Deprecated Support for Blowfish Encryption

Effective in version 10.4, support for Blowfish encryption is deprecated. Informatica intends to drop support for Blowfish encryption in a future release.

Blowfish encryption is replaced by a secure certificate-based encryption mechanism. The certificates are generated during the installation and upgrade process.

If you are using Blowfish with APIs to decrypt database passwords, Informatica recommends that you update your APIs to use the certificate-based encryption mechanism.

### Deferred Support for Zero Downtime (ZDT) Upgrade

Effective in version 10.3 HotFix 3, Zero Downtime (ZDT) upgrade is deferred and is unavailable because of the changes to the mode of authentication for Multidomain MDM.

Informatica intends to reinstate upgrade with ZDT in an upcoming release. If you purchased the ZDT module, we recommend that you wait for ZDT to become available before you upgrade. For more information, contact Informatica Global Customer Support.

### New Features (10.4)

### **Hierarchy Relationships**

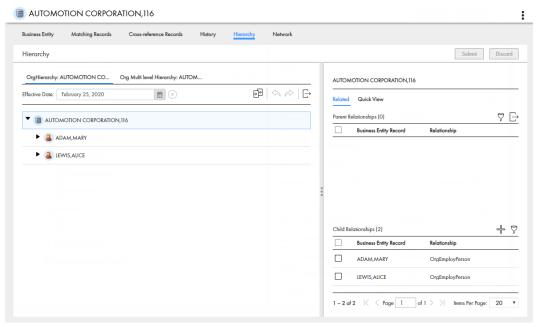
In the Provisioning tool, you can create hierarchy relationships to define hierarchical relationships between business entities. Then you use the hierarchy relationships defined between business entities to configure hierarchy relationships between records in Data Director.

In Data Director, use the **Hierarchy** view to view, create, and manage hierarchy relationships for a record. You can view the relationships in a hierarchy for an effective date. Or, you can compare the current hierarchy with a version of the hierarchy at an effective date or history date. You can also export the hierarchy.

In the Provisioning tool, you can configure tasks and triggers to ensure changes to hierarchies in Data Director move through an approval workflow. Then in Data Director, when you send your changes for approval, reviewers can compare your changes with the saved hierarchy.

In the Provisioning tool, you can also configure the **Quick View** tab for the **Hierarchy** view. Then in Data Director, you can use the tab to view the details of a record in the hierarchy.

The following image shows the **Hierarchy** view in Data Director:



You can also access hierarchy relationships by using REST APIs.

For upgrading customers with relationships in Hierarchy Manager in the Hub Console, use the Provisioning tool to copy the relationships, and then create them as hierarchy relationships or network relationships. Then revert the entity base objects to base objects. After you revert the base objects, you can create new hierarchy relationships or network relationships in the Provisioning tool.

For more information, see the Informatica Multidomain MDM Version 10.4 Upgrade Guide, Informatica Multidomain MDM Version 10.4 Provisioning Tool Guide, Informatica Multidomain MDM Version 10.4 Data Director User Guide, and Informatica Multidomain MDM Version 10.4 Business Entity Services Guide.

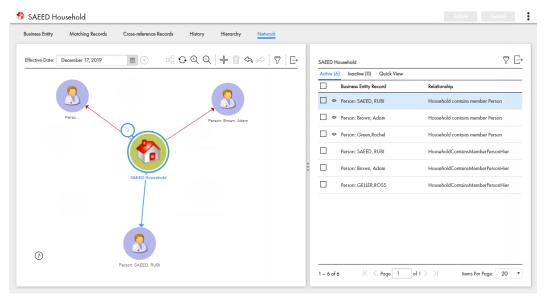
### **Network Relationships**

In the Provisioning tool, you can create network relationships to define relationships between related business entities. Then you use the network relationships defined between business entities to configure network relationships between records in Data Director.

In Data Director, use the **Network** view to view, create, and manage the network of relationships for a record. You can view the relationships in a network for an effective date. Or, you can show or hide relationships in the network. You can also export the network graph.

In the Provisioning tool, you can configure the **Quick View** tab for the **Network** view. Then in Data Director, you can use the tab to view the details of a record in the network.

The following image shows the **Network** view in Data Director:



You can also access network relationships by using REST APIs.

For upgrading customers with relationships in Hierarchy Manager in the Hub Console, use the Provisioning tool to copy the relationships, and then create them as hierarchy relationships or network relationships. Then revert the entity base objects to base objects. After you revert the base objects, you can create new hierarchy relationships or network relationships in the Provisioning tool.

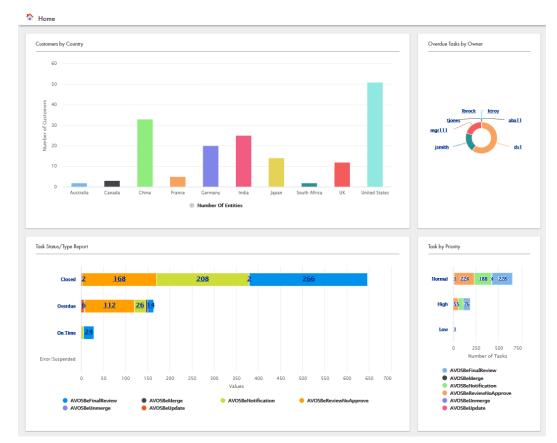
For more information, see the Informatica Multidomain MDM Version 10.4 Provisioning Tool Guide, Informatica Multidomain MDM Version 10.4 Data Director User Guide, and Informatica Multidomain MDM Version 10.4 Business Entity Services Guide.

### **Chart Component**

In the Provisioning tool, you can create Chart components. Chart components display a graphical representation of data about business entity records, tasks, or any other types of information you collect about your master data.

When you create Chart components, you configure the appearance of the chart and the type of chart that you want to display. You populate your chart with data collected from default reports or custom reports. You can filter and group the report data used in charts. You can also link data in a chart to a drilldown chart or another interface in Data Director, such as the **Query** tab, **Search** tab, or Task Manager.

When you design custom Home page layouts or additional page layouts, you can add Chart components. When users view your custom Home page or additional pages in Data Director, your charts appear.



The following image shows a sample Home page with Chart components:

You can also interact with default reports and create custom reports by using REST APIs.

For more information, see the Informatica Multidomain MDM Version 10.4 Provisioning Tool Guide, Informatica Multidomain MDM Version 10.4 Data Director User Guide, and Informatica Multidomain MDM Version 10.4 Business Entity Services Guide.

### Creating Match Rule Sets in the Provisioning Tool

You can use the Provisioning tool to create match rule sets based on a sample data set and the match training.

During the match training process, review a few matched pairs from the sample data set and confirm whether the pairs match. After the review, the match engine creates a match rule set with a confidence score. If the match confidence score is low, retrain the match engine until you get a high match confidence score.

For more information about creating match rule sets in the Provisioning tool, see the *Multidomain MDM Provisioning Tool Guide*.

### Manage Multiple Tasks

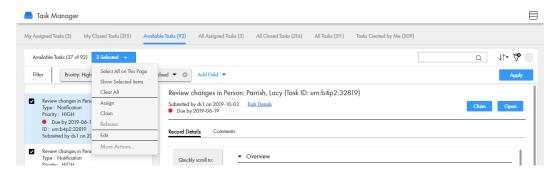
In Data Director, you can perform task administration actions to manage tasks. You can assign, claim, release, or edit multiple tasks. You can also take actions on multiple tasks, such as approve, reject, or disclaim.

The task administration actions that you can perform depend on your role. All users can manage tasks available to their user role. Users assigned the Task Administrator role can manage all tasks. The Task

Administrator role is a new role that you can create and assign to users in the MDM Hub, and then enable in the Provisioning tool.

You can use filters or search to find the tasks that you want to manage. For example, you might want to find high priority tasks related to the John Smith record.

The following image shows an example of the Task Manager and the task administration actions that you can perform:



You can also manage tasks by using REST APIs. To find tasks to manage, you can use the query search parameter with the List Tasks API.

For more information, see the Informatica Multidomain MDM Version 10.4 Data Director User Guide, Informatica Multidomain MDM Version 10.4 Provisioning Tool Guide, and Informatica Multidomain MDM Version 10.4 Business Entity Services Guide.

### Find and Replace Values Across Multiple Records

In Data Director, you can find and replace multiple values across records. For example, you want to replace all records that do not have the gender identity recorded. You find the records and replace it with the correct gender. The find and replace operation triggers a review workflow and creates an approve task. A user with privileges must approve the task.

Your user role requires the Find-Replace privilege to perform a bulk edit. After you replace multiple values, view your jobs and download the bulk edit summary report.

You can also find and replace values across records by using REST APIs.

For more information, see the *Informatica Multidomain MDM Version 10.4 Data Director User Guide*, and *Informatica Multidomain MDM Version 10.4 Business Entity Services Guide*.

### Import New Records

In Data Director, you can import new data and relationships in bulk from an Excel or a CSV source file. Data Director uses artificial intelligence to identify and map the source file fields to the best target fields. After you import or update data, use the **My Jobs** feature to view and download the import summary report.

You can also import new data and relationships in bulk using REST API's.

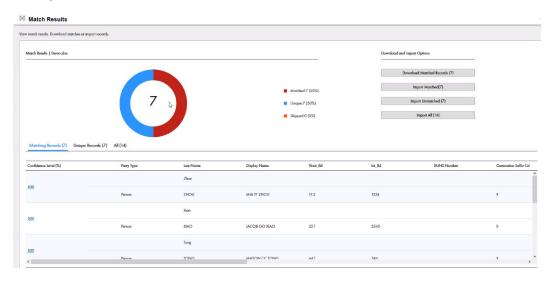
For more information, see the *Informatica Multidomain MDM Version 10.4 Data Director User Guide*, and *Informatica Multidomain MDM Version 10.4 Business Entity Services Guide*.

### Matching New Records with Existing Records

In Data Director, you can compare records that you import with existing records. The match process identifies matched and unmatched records. You can import the unmatched records, delete the records or import all records.

After you import the file, Data Director generates match results that display the matched, unique, skipped, and all records. You can review the results to determine the records you want to import or download.

The following image shows an example of the Match Results after you import new records and compare with existing records:



You can also match imported records by using REST APIs.

For more information, see the *Informatica Multidomain MDM Version 10.4 Data Director User Guide*, and *Informatica Multidomain MDM Version 10.4 Business Entity Services Guide*.

### Triggering Task Review Process

You can configure tasks to trigger a review workflow when users update and import new records. The workflow is reviewed by a user role with privileges, such as, a manager. Use the Provisioning tool to configure a review workflow.

### **Update Records**

When users update records in Data Director, the change triggers a review process. If you agree with the changes, you can approve the updates to the records.

You can configure the maximum number of records that users can update to trigger a review workflow. For example, you set the number of records to trigger a workflow to ten. When a user updates ten records or less, a review workflow triggers. If a user attempts to update more than ten records, the review workflow does not trigger and displays an error message.

For more information, see the Informatica Multidomain MDM Version 10.4 Data Director User Guide.

#### Import New Records

When users import a file with new records in Data Director, the change triggers a review process. If you agree with the changes, you can approve the new records.

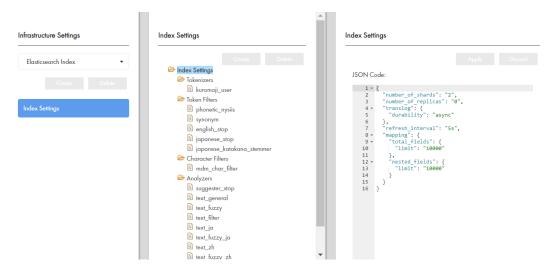
You can configure the maximum number of new records that users can import to trigger a workflow. For example, you set the number of new records to trigger a workflow to five. When a user imports five records or less, a review workflow triggers. If a user attempts to import more than five records, the review workflow does not trigger and displays an error message.

For more information, see the Informatica Multidomain MDM Version 10.4 Data Director User Guide.

### **Custom Elasticsearch Index Settings**

If the Elasticsearch index settings that Informatica provides does not meet your requirements, use the Provisioning tool to create custom Elasticsearch index settings. You can configure custom analyzers, tokenizers, token filters, and character filters for the Elasticsearch index.

The following image shows the **Infrastructure Settings** page with the **Index Settings** tree view and the JSON code for the Index Settings node:



For more information about the Elasticsearch index settings, see the *Multidomain MDM Version 10.4 Provisioning Tool Guide* and the *Multidomain MDM Version 10.4 Configuration Guide*.

### Search Filter Display

Use the Provisioning tool to configure search filters and the order in which these appear in the Data Director **Search** page. You can configure the search filters and the display order for specific applications and the associated business entities.

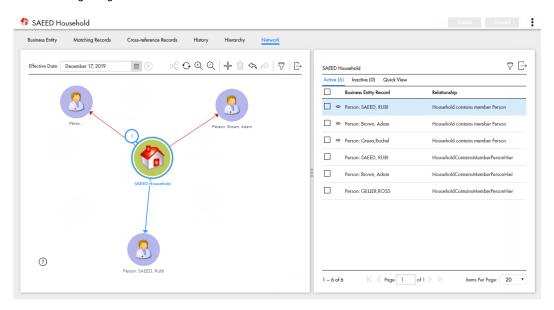
If you upgrade from an earlier version, the filters appear in the same order as they appeared in the existing application configuration. After the upgrade, you can choose to change the display order for the search filters.

For more information about configuring search, see the *Multidomain MDM Version 10.4 Provisioning Tool Guide*.

### Icons and Colors for Business Entities, Records, and Relationships

When you model business entities in the Provisioning tool, you can configure the color and icon used to represent the business entity in Data Director. You can also configure the icon used to represent the business entity record. When you define hierarchy relationships or network relationships, you can define the color of relationships. In Data Director, your color and icon configurations appear when you interact with records or when you view relationships in the **Hierarchy** view and **Network** view.

The following image shows the **Network** view with an icon for the SAEED Household:

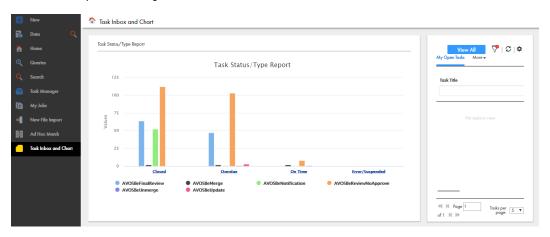


### **Additional Pages**

You can use the Provisioning tool to create additional page layouts in the Layout Designer that provide access to more information that users need. For example, you might design an additional page with primary, secondary and custom components to assist users in accessing more charts or external web applications.

When you create an additional page layout, you specify the purpose and access. For example, you might design an additional page with a task inbox and chart for a manager user role.

The following image shows an example additional page in Data Director with the **Task Inbox** component and the **Chart** component configured:



For more information about creating and updating additional pages, see the *Multidomain MDM Version 10.4 Provisioning Tool Guide*.

### Hyperlinks in Business Entity Views

In Data Director, the business entity views can display some types of text as hyperlinks. To display text in the business entity fields as hyperlinks, use the Provisioning tool and configure the fields in the business entity models.

The following types of text in the business entity fields can appear as hyperlinks:

- Web URL
- File URI
- FTP link
- · Email address

For more information about configuring hyperlinks, see the *Multidomain MDM Version 10.4 Provisioning Tool Guide*.

### Installer Enhancements

The Multidomain MDM installer is updated to enhance user experience.

The installer includes the following enhancements:

- · Revised user interface text to simplify the installation process
- New and revised help text to help understand and provide the correct field values
- New window, **Configure server details for the Hub Console**, where you can specify the server details that the Hub Console requires to connect to the Hub Server machine

### **Hub Server Properties**

You can use the following Hub Server properties to control the run-time behavior of the MDM Hub.

Configure the Hub Server properties in the cmxserver.properties file.

The following table describes the Hub Server properties introduced in 10.4:

Hub Server Property	Description
cmx.server.be-import.task-limit	Specifies the maximum number of records users can import for the task approval workflow to trigger. For example, if you set the property to cmx.server.be-import.task-limit=10000 a task approval workflow triggers when a user imports up to ten thousand records. If a user attempts to import more than ten thousand records, the task approval workflow does not trigger and displays an error.
cmx.server.find-replace.record-limit	Specifies the maximum number of records users can find and replace in a bulk operation. For example, if you set the property to cmx.server.find-replace.record-limit=10000 users can find and replace up to a maximum of ten thousand records.

Hub Server Property	Description
cmx.server.find-replace.task-limit	Specifies the maximum number of replaced records that trigger the task approval workflow. For example, if you set the propertycmx.server.find-replace.task-limit=500 a task approval workflow triggers when a user replaces up to five hundred records. If a user attempts to replace more than five hundred records, an error displays.
cmx.server.find-replace.entity-record-limit	Specifies the maximum number of records users can copy from the Smart search screen to the Find and Replace screen. For example, if you set the propertycmx.server.find-replace.entity-record-limit=1000 users can copy up to ten thousand records from the Smart search screen to the Find and Replace screen. If a user attempts to copy more than ten thousand records, an error displays.
cmx.file_import.job_group.ttl	Specifies the maximum time a file import job group is stored by the MDM Hub before it is deleted. You must add a suffix after the value. The following are the suffix options: day, hour, min or sec. For example, if you set the property cmx.file_import.job_group.ttl=180day the import job group is saved in MDM Hub for one hundred and eighty days.
cmx.file_import.job_group_control.ttl	Specifies the maximum time a file import job group control log is stored in the MDM Hub before it is deleted. The following are the suffix options: day, hour, min or sec. For example, if you set the property cmx.file_import.job_group_control.ttl=30day the import job group control log is saved in MDM Hub for thirty days.
cmx.file_import.mapping.temp.ttl	Specifies the maximum time to save a file import mapping in the MDM Hub temporary storage before it is deleted. The following are the suffix options: day, hour, min or sec. For example, if you set the property cmx.file_import.mapping.temp.ttl=20min the import job mapping is saved in MDM Hub for twenty minutes.
cmx.file_import.mapping.system.ttl	Specifies the maximum time to save a file import mapping in the MDM Hub permanent storage before it is deleted. The following are the suffix options: day, hour, min or sec. For example, if you set the property cmx.file_import.mapping.system.ttl=20day the import job mapping is saved in MDM Hub for twenty days.
activevos.jndi	Optional. Must be added manually. Specifies the JNDI lookup string to connect report services to ActiveVOS. The default JNDI lookup string is <code>java:/jdbc/ActiveVOS</code> . If you edited the ActiveVOS EAR files to customize the JNDI lookup string, use this property to specify the custom JNDI lookup string.
cmx.match.training.confidence.threshold	Optional. Specifies the minimum match confidence score required to create a match rule set in the Provisioning tool.
cmx.match.training.data.encoding	Optional. Configures encoding for match training in the Provisioning tool.

Hub Server Property	Description
cmx.server.hierarchy.max-search-depth	Maximum depth searched when you use hierarchy REST APIs to find a hierarchy path. Default value is 100.
cmx.server.hierarchy.max-search-width	Maximum width of the searched hierarchy to include when you use the hierarchy REST APIs to export. Default value is 1000000.
com.informatica.mdm.bulk.relationship.changes.limit	Maximum number of changes in a request when you use the bulk task administration REST APIs. Default value is 1000.
cmx.task.search.records.return	Controls the Elasticsearch pagination when users search for tasks in the Task Manager of Data Director with business entities. Default is 1000.
com.informatica.mdm.sifapi.xref.edit.sys0.only	Specifies whether to create edit cross-reference records through all source systems including the Admin source system.

For more information about setting Hub Server properties, see the *Multidomain MDM Version 10.4 Configuration Guide*.

### **Process Server Property**

Use the Process Server property com.informatica.mdm.sifapi.xref.edit.sys0.only to specify whether to create edit cross-reference records through all source systems including the Admin source system. Configure the property in the cmxcleanse.properties file.

For more information about setting the Process Server property, see the *Informatica Multidomain MDM Version 10.4 Configuration Guide*.

### Changes (10.4)

### Elasticsearch Installer

Effective in version 10.4, the Multidomain MDM installer package does not include the Elasticsearch installer. You must download the supported version of the Elasticsearch installer from the Elastic website.

Previously, the Elasticsearch installer was included in the Multidomain MDM installer package.

### **Application Editor**

Effective in version 10.4, the Applications page in the Provisioning tool is enhanced. The business entity views that you configure to display search results, appear under **Search Configuration** in the tree view. After business entity views are configured for search results, you can expand and collapse the **Search Configuration** node.

Previously, all the business entity views that you configured to display search results were listed in the properties panel and not in the tree view panel.

**Upgrade Note:** If you upgrade from an earlier version, the business entity views that you configured to display search results now appear under the **Search Configuration** node.

### Searchable Field Options

Effective in version 10.4, the Provisioning tool no longer includes the **Searchable** field options, **Language** and **Fuzzy**, for business entity fields. To configure fuzzy search and the language of the search strings, configure Elasticsearch analyzers.

Previously, you could configure fuzzy search and the language of the search strings as **Searchable** field options.

For more information about the **Searchable** field options and Elasticsearch analyzers, see the *Multidomain MDM Version 10.4 Provisioning Tool Guide*.

### Search Query Results Options

Effective in version 10.4, you can configure search query results to show or hide pending records.

Previously, you could not hide pending records that appeared in search query results.

For more information about search query results, see the Multidomain MDM Version 10.4 Data Director User Guide.

### **Hub Console Launch**

Effective in version 10.4, the Hub Console is downloaded to the client desktop as a JAR file. The Hub Console URL and your user credentials remain the same.

Previously, the Hub Console was downloaded to the client desktop as a Java Web Start application. Oracle no longer supports Java Web Start.

### **Communication Protocol**

Effective in version 10.4, the MDM environment no longer supports EJB protocols. You must use the HTTP or HTTPS protocol for communication between the Hub Server and the Data Director screens based on the Entity 360 Framework.

To set the communication protocol, use the -De360.connection.channel Java option.

For more information about JVM settings, see the *Multidomain MDM Version 10.4 Installation Guide* and *Multidomain MDM Version 10.4 Upgrade Guide*.

### External Business Entity Services Calls and Applications

Effective in version 10.4, Multidomain MDM uses certificate-based authentication to authenticate external business entity services calls and applications. You need to configure a trusted application user for external calls and applications. Also, EJB is not supported for external calls. You must use the HTTP communication protocol instead.

Previously, you could use user credentials for the authentication of external calls and applications and base the external calls and applications on EJB.

**Upgrade Note:** If you used the BESExternalCall sample code and the libraries included in the Resource Kit to implement custom business entity services and applications, upgrade your external calls and applications.

For more information about certificate-based authentication and application users, see the *Multidomain MDM Version 10.4 Security Guide*. For information about upgrading your external calls and applications, see the *Multidomain MDM Version 10.4 Upgrade Guide*.

### Unmerge

Effective in version 10.4, you can configure Multidomain MDM to create edit cross-reference records for source systems other than the Admin source system. After this configuration, edit cross-reference records are created during PUT calls for all source systems. A cross-reference record does not unmerge if all the other cross-reference records for the base object are edit cross-reference records, which are the result of PUT calls.

Previously, edit cross-reference records were created only for the Admin source system. If PUT updates came from source systems other than the Admin source system, a cross-reference record was unmerged even though all the other cross-reference records for that base object were the result of PUT calls. This was because MDM did not identify these cross-reference records that were the result of PUT calls as edit cross-reference records.

### **Obsolete Hub Server Properties**

Effective in version 10.4, the Hub Server properties that were required for Java Web Start and the Solr engine are obsolete.

The following Hub Server properties are obsolete because Java Web Start is not required to launch the Hub Console:

- cmx.appserver.jnlp.protocol
- · cmx.web.console.session.download.timeout
- jnlp.initial-heap-size
- jnlp.max-heap-size

The following Hub Server properties are obsolete because Solr is not supported:

- · cmx.ss.engine
- cmx.ss.dirtyIndex.disable

If an obsolete property remains in the properties file after you upgrade, the property is ignored. You can safely remove the property from the file.

### **Obsolete Process Server Properties**

Effective in version 10.4, the following Process Server properties are obsolete because Solr is not supported:

- cmx.ss.engine
- solr.allowAdminConsole
- pingSolrOnStartup
- zookeeper.tickTime
- search.provisioning.maxshards
- facet.infacount

If an obsolete property remains in the properties file after you upgrade, the property is ignored. You can safely remove the property from the file.

### **REST APIs**

Effective in version 10.4, the MDM Hub uses Swagger to list all the REST web services with URLs and parameters..

Previously, the MDM Hub used Web Application Description Language (WADL) to list all the REST URLs and parameters.

For more information about the REST APIs, see the *Informatica Multidomain MDM Business Entity Services Guide*.

### Part II: Version 10.3

This part contains the following chapters:

- New Features and Changes (10.3 HotFix 2), 27
- New Features and Changes (10.3 HotFix 1), 31
- New Features and Changes (10.3), 38

### CHAPTER 2

# New Features and Changes (10.3 HotFix 2)

This chapter includes the following topics:

- New Features (10.3 HotFix 2), 27
- Changes (10.3 HotFix 2), 28

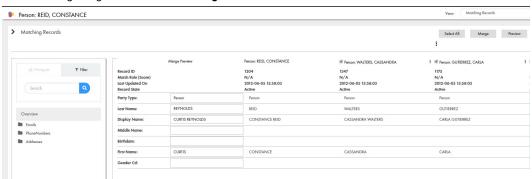
### New Features (10.3 HotFix 2)

This section describes new features in version 10.3 HotFix 2.

### Select Multiple Records in the Matching Records View

In the Matching Records view, you can click the Select All button to select multiple records.

The following image shows the Matching Records view with the Select All button:

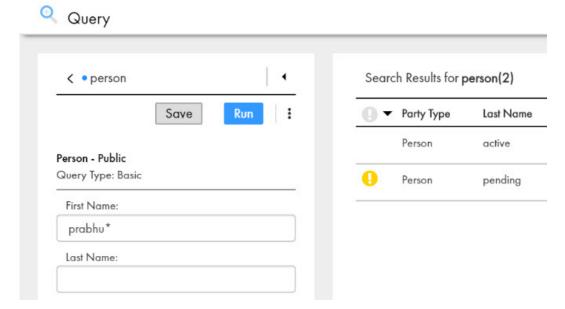


Previously, in the Matching Records view, you had to select one record at a time.

### Pending Records Icon in the Search Results

When you perform a search in Data Director (Entity 360), the search results display active and pending records. An icon displays next to all pending records. You can sort all pending records.

The following image shows the pending record icon next to records with pending status:



Previously, Data Director (Entity 360) displayed all active and pending records together and you could not sort records.

### Informatica Address Doctor Version 5.16

Informatica MDM Multidomain Edition supports Informatica AddressDoctor version 5.16.

### Changes (10.3 HotFix 2)

### **Enhanced Read Database Cleanse Function**

The Read Database cleanse function supports concurrent data mapping when the process server is configured to run in a multi-threaded environment.

### **Query Search with Special Characters**

You can perform a query search with special characters. The search results display all records that contain special characters. Use the special characters at the beginning, end or in between the query search string. For example, if you want to search for James, you can specify Ja\$@! or !\$%ES.

### SSL Connection to Oracle Databases

Connections to the Oracle database are secured with a Secure Socket Layer (SSL).

In the c repos database.connect url table, configure the following connection URL:

```
jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCPS) (HOST=localhost) (PORT=2484))
(CONNECT DATA=(SERVICE NAME=orcl)))
```

In previous releases, you configured the <code>c\_repos\_database.connect\_url</code> table, with the following connection URL:

```
jdbc:oracle:thin:@localhost:1521:orcl
```

### Smart Search Stores Latest Search Entity

You can use smart search to filter records and select a business entity in a user login session. When you login to a new user session, the search results display the filter value of the previous login session.

### Java Virtual Machine Settings

To connect Data Director and Entity 360 applications to the MDM Hub Server, configure the Java Virtual Machine (JVM) by setting the following Java options:

#### **Fully Qualified Domain Name**

If your environment uses the HTTPS communication protocol and the security certificate is issued to a Fully Qualified Domain Name (FQDN), configure the Java Virtual Machine (JVM) by setting the following Java option:

#### -De360.mdm.host

Specify the FQDN displayed in the security certificate.

#### Connection Protocol

For the Entity 360 application to connect to the MDM Hub Server, configure the Java Virtual Machine (JVM) by setting the following Java options:

#### -De360.connection.channel

Specifies the communication protocol the Entity 360 application uses to communicate with the MDM Hub Server. Specify whether the communication protocol to use is EJB, HTTP or HTTPS. Default is - De360.connection.channel=http. Ensure you set the supporting application server host property - De360.connection.channel=http. Ensure you set the supporting application server host property - De360.mdm.host and application server port property -De360.mdm.port to the default values.

You must set the following application server host and port Java options:

#### -De360.mdm.host

Entity 360 application server host. Specify the host used by the Java option.

#### -De360.mdm.port

Entity 360 application server port. To avoid conflicts, it is recommended to use the default port for the JVM

For more information about JVM settings, see the *Informatica Multidomain MDM Version 10.3 HotFix 2 Installation Guide* and *Informatica Multidomain MDM Version 10.3 HotFix 2 Upgrade Guide*.

### **Data Encryption**

Effective in version 10.3 HotFix 2, encrypted match columns can securely participate in fuzzy match and fuzzy search operations. Configure the match fields required for these operations in the data encryption properties file.

Previously, encrypted match columns did not participate in fuzzy match operations.

For more information, see the Informatica Multidomain MDM Version 10.3 HotFix 2 Configuration Guide.

### CHAPTER 3

# New Features and Changes (10.3 HotFix 1)

#### This chapter includes the following topics:

- Oracle Database 18c Support, 31
- Red Hat JBoss Enterprise Application Platform 7.1 Support, 31
- IBM WebSphere Version 9.0 Fix Pack 10 Support, 32
- Red Hat OpenJDK 8 Support for JBoss, 32
- Informatica ActiveVOS Version 9.2.4.5 Support, 32
- Date Format, 32
- Copy a Business Entity or Business Entity View, 33
- Custom Task Action Messages, 34
- Provisioning Tool Performance Enhancement, 34
- Message Trigger Enhancement, 34
- · Save Handler User Exit Enhancement, 34
- Hub Server Properties, 35
- Global Properties, 35
- Java Virtual Machine Settings for Smart Search with Solr (for JBoss), 36
- Changes (10.3 HotFix1), 36

### Oracle Database 18c Support

Oracle Database 18c is supported for Multidomain MDM 10.3 HotFix 1.

## Red Hat JBoss Enterprise Application Platform 7.1 Support

You must deploy Multidomain MDM on Red Hat JBoss Enterprise Application Platform (EAP) 7.1. The end of maintenance support by Red Hat for JBoss EAP 6.x is June 2019. Informatica recommends that you upgrade

to JBoss EAP 7.1 and Multidomain MDM 10.3 HotFix 1 for continued support, bug fixes, and security patches from Red Hat. Multidomain MDM 10.3 HotFix 1 does not support JBoss EAP versions earlier than 7.1.

### IBM WebSphere Version 9.0 Fix Pack 10 Support

You must deploy Multidomain MDM on IBM WebSphere Application Server Version 9.0 Fix Pack 10. Multidomain MDM 10.3 HotFix 1 does not support WebSphere versions earlier than 9.0 Fix Pack 10.

### Red Hat OpenJDK 8 Support for JBoss

You can run Multidomain MDM 10.3 HotFix 1 on Red Hat OpenJDK 8 in a JBoss application server environment.

Read the Product Availability Matrix (PAM) for information about the supported platforms for Red Hat OpenJDK 8. You can access PAMs at

https://network.informatica.com/community/informatica-network/product-availability-matrices.

### Informatica ActiveVOS Version 9.2.4.5 Support

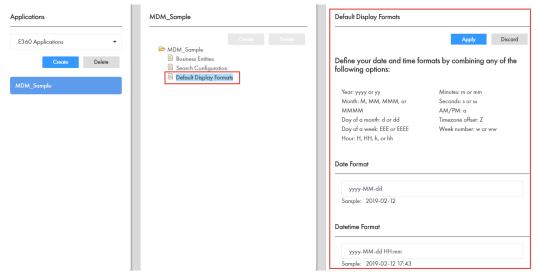
Informatica ActiveVOS 9.2.4.5 is supported for Multidomain MDM 10.3 HotFix 1.

### **Date Format**

You can use the Application Editor in the Provisioning tool to configure the default date format used by the Data Director application. Also, you can configure the display format as Date or Datetime for specific date

fields in the business entity and reference entity model. The configured date formats appear in all the record views.

The following image shows the date format fields in **Default Display Formats** panel of the **Applications** page:



Previously, to configure the default date format, you created a bundleE360.properties file that contained the default date format property.

For more information, see the Informatica Multidomain MDM Version 10.3 HotFix 1 Provisioning Tool Guide.

### Copy a Business Entity or Business Entity View

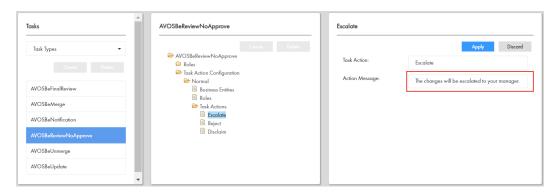
You can copy a business entity or a business entity view and save it with a unique name. The copy inherits the entire model from the original business entity or business entity view. In the copy, you can add, edit, and remove fields from the model as required.

For more information about copying business entities and business entity views, see the *Informatica Multidomain MDM Version 10.3 HotFix 1 Provisioning Tool Guide*.

### **Custom Task Action Messages**

You can customize the messages that appear when tasks are triggered in Data Director. You can also localize the messages.

The following image shows the Action Message field with a custom message:



For more information about configuring and localizing custom task action messages, see the *Multidomain MDM Version 10.3 HotFix 1 Provisioning Tool Guide*.

### **Provisioning Tool Performance Enhancement**

The performance of the Provisioning tool is enhanced by improving the response time. Changes made in the Provisioning tool are saved and published within a minute.

### Message Trigger Enhancement

When a cross-reference record is restored, the MDM Hub can trigger a message to be placed in the JMS message queues. To set up message triggers for an event that restores a cross-reference record, use the Schema Manager. In the **Events** section of the **Message Triggers** page, select **Restore**, which is the new event included in the section.

For more information, see the MDM Multidomain Edition Version 10.3 HotFix 1 Configuration Guide.

### Save Handler User Exit Enhancement

In Save Handler user exits, you can use the <code>getChangedChildren</code> method to return modified or added child or grandchild records in a specified base object.

The user exit returns all records that were added, deleted, or updated. You can select the type of changes returned by the user exit. For example, the user exit can return a combination of removed and updated children records.

### **Hub Server Properties**

You can use the following Hub Server properties to control the run-time behavior of the MDM Hub.

Configure the Hub Server properties in the cmxserver.properties file.

#### com.siperian.dsapp.mde.common.idd2cocs.Many2ManyChild.name.version

Must be added manually. During an upgrade from a version before 10.3, when MDM administrators generate the business entity schema, the uppercase characters in some child-level subject area names change to lowercase. To preserve the case, set the property to 10.2.

#### cmx.server.put.autopopulate.missing.user.columns.bo.list

Must be added manually. Set the property when the Nullable property is disabled for the base object columns.

When the Nullable property is disabled for columns, if a record is updated in Data Director or during a SIF PUT operation, a cross-reference record is created with values only for the updated fields. All the other cross-reference record fields, including the fields that must not be null, have null values. During the best version of the truth (BVT) calculation for the record, null values can be the winner for fields that must not be null, and an error occurs.

To ensure that the BVT calculation takes into account the fields that must not be null, set the property value to a comma-separated list of the names of base objects that have columns with the Nullable property disabled. When the property is set, the MDM Hub updates the null values in the cross-reference record with values from the associated base object. This ensures that during BVT calculation, null values are not the winner for fields that must not be null.

#### cmx.server.enrichcopager.thread\_pool

Must be added manually. Sets the number of threads the EnrichCoPager property uses from the thread pool to perform parallel ReadCO operations. Default is 30. If you set the number of threads to 1, the property is disabled.

#### cmx.server.enrichcopager.min\_rec\_for\_multithreading

Must be added manually. Sets the minimum number of records to return before the EnrichCoPager property uses multithreading. Default is 2.

For more information about setting Hub Server properties, see the *Informatica Multidomain MDM Version 10.3 HotFix 1 Configuration Guide*.

### **Global Properties**

You can use the following global property to control the run-time behavior of the Informatica Data Director application:

#### deleteMovedRelInExplorerView

Determines whether to delete the old relationship when you create a new relationship in Hierarchy Manager explorer view. Set to false to give the relationship an end date.

For more information, see the *Informatica Multidomain MDM Version 10.3 HotFix 1 Informatica Data Director Implementation Guide*.

## Java Virtual Machine Settings for Smart Search with Solr (for JBoss)

If you want to configure smart search with Solr for the MDM Hub that you deploy in a JBoss environment, configure the Java Virtual Machine (JVM) by setting the Java options for smart search.

Set the following Java options for smart search:

#### -Dmdm.ps.zk.node

Required if you want to use smart search with Solr. Set this Java option on the JVM for the Process Server that is intended to be the ZooKeeper server. Set to true.

#### -Dmdm.ps.search.node

Required if you want to use smart search with Solr. Set this Java option on the JVMs for the Process Servers that will have search processing enabled and function as Solr servers. Set it to true.

#### -Dsearch.service.port

Required if you want to use smart search with Solr. Required if you want to install multiple Process Servers on the same machine but on different JVMs and enable smart search on all the Process Servers on the machine. This Java option specifies the port used by the JVM for the search service. To avoid port conflicts, use the default port for the JVM of one Process Server, and set this Java option to the relevant port numbers for the JVMs of the remaining Process Servers.

For more information about JVM settings, see the *Informatica Multidomain MDM Version 10.3 HotFix 1 Installation Guide* and *Informatica Multidomain MDM Version 10.3 HotFix 1 Upgrade Guide*.

### Changes (10.3 HotFix1)

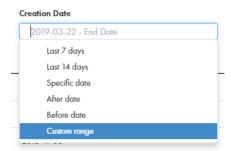
### Task Inbox

Effective in version 10.3 HotFix 1, you can filter tasks in the task inbox based on creation date.

You can select one of the following creation date options from the list:

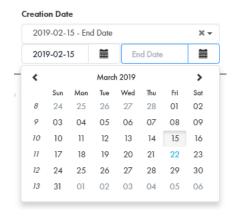
- Last 7 days
- · Last 14 days
- · Specific date
- After date
- Before date
- · Custom range

The following image shows the Creation Date filter options:



To filter tasks based on a date range, use the **Custom range** option.

The following image shows the Custom range filter option with the start of the range set to 2019-02-15:



Previously, the filter option for the Creation Date column was disabled.

# **Related Records Component**

Effective in version 10.3 HotFix 1, in the Provisioning tool, a single Related Records component replaces both the Related Records (Edit Mode) and Related Records (View Mode) components. In the new Related Records component, you can configure whether records open in view mode or edit mode. You can also configure whether the relationship direction is honored.

Previously, you had to chose which component to use. Only the Related Records (Edit Mode) component was configurable. The Related Records (View Mode) component was the default, but it was not configurable and it ignored the relationship direction.

For more information about configuring the Related Records component, see the *Multidomain MDM Version* 10.3 HotFix 1 Provisioning Tool Guide.

# Resource Kit Change

In the Resource Kit, the AssignUsersToDatabase script supports uppercase characters in user names.

Previously, the tool enforced lowercase characters only.

# CHAPTER 4

# New Features and Changes (10.3)

This chapter includes the following topics:

- MDM Multidomain Edition is now Multidomain MDM, 38
- · New Features for Data Director with Business Entities, 38
- · New Features for Data Director with Subject Areas, 46
- Hub Server Properties Introduced in Version 10.3, 47
- Process Server Properties Introduced in Version 10.3, 48
- Global Properties, 49
- Changes (10.3), 49

# MDM Multidomain Edition is now Multidomain MDM

Effective in version 10.3, the product name has changed to Informatica Multidomain MDM.

# New Features for Data Director with Business Entities

This release of Multidomain MDM includes the following new features for Data Director with business entities.

# Search and Queries for Business Entities

You can configure Data Director to allow users to find business entity records either by using queries or search. Also, you can configure the use of queries or search for manually adding records to record views. Use the Provisioning tool to configure Data Director.

### Queries

You can now use queries to perform the following tasks:

- Use queries to find records. You can create, save, and edit queries.
- · Use wildcards to search for records.

- Perform a fuzzy search or an exact search. You can configure whether the results of a query are case sensitive or not.
- Configure a basic query or an extended query to find records that contain the query values. The basic
  queries use simple text comparisons to find records. Extended queries use matching logic and matchenabled attributes to find records.
- . Export the current or all the columns in a query result to a CSV file.
- Customize the guery results to display the columns that you want to view.
- Use the Provisioning tool to configure the views that you want to use for displaying the query results.

For more information, see the *Multidomain MDM Version 10.3 Data Director User Guide* and the *Multidomain MDM Version 10.3 Provisioning Tool Guide*.

### Search

You can now use search to perform the following tasks:

- · Use wildcards to search for records.
- Perform a fuzzy search or an exact search. The results of an exact search are not case sensitive.
- Export the current or all the columns in a search result to a CSV file.
- Customize the search results to display the columns that you want to view.
- Use the Provisioning tool to configure the views that you want to use for displaying the search results.

For more information, see the *Multidomain MDM Version 10.3 Data Director User Guide* and the *Multidomain MDM Version 10.3 Provisioning Tool Guide*.

# Updated Look and Feel for Data Director

Data Director uses a navigation bar with vertical tabs. You can now use the **New** tab to add records. The task inbox, Task Manager, and record views are streamlined.

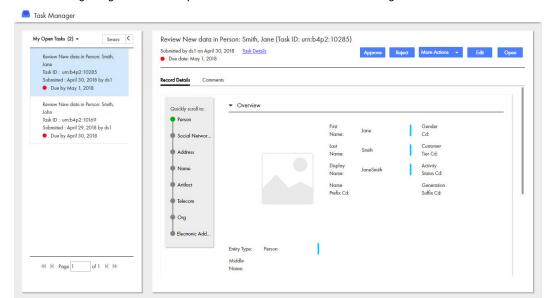
The following image shows the updated look and feel of the navigation bar with an entity tab open:



Previously, Data Director had horizontal tabs. You used the Create menu in the application header.

### Task Manager

The task panel and the review panel appear side-by-side so you can easily manage and view tasks. Also, the **Comments** tab appears in the review panel. You can view all comments about the task in the **Comments** tab.



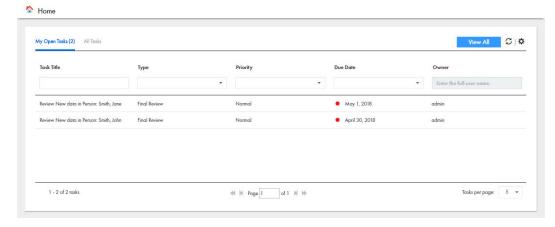
The following image shows the updated look and feel of the Task Manager:

Previously, the task panel appeared above the review panel. Also, comments appeared in the **All Comments** box in the **Task Details** dialog box.

### Task Inbox

The task inbox is streamlined so you can filter and find tasks to work on.

The following image shows the updated look and feel of the task inbox:



For more information, see the Informatica Multidomain MDM Version 10.3 Data Director User Guide.

### Localization of Data Director

In Data Director with business entities, you can display elements of the user interface in any supported language. As the MDM administrator, you can localize metadata, labels, error messages, and lookup tables. Data Director supports the following languages:

- English US
- English UK
- Portuguese

- French
- Spanish
- German
- Russian
- Japanese
- Mandarin
- Korean

### **Localizing Metadata**

You can localize metadata elements of the Data Director user interface to display the language of your choice. Examples of metadata elements are menu names, field names, tasks and business entity names.

To localize metadata, in the Provisioning tool, download the besMetadata.properties zip file and edit the bundle.properties file for the language that you want to display. For example, for French localization, edit the bundle\_fr.properties file. To localize task actions and task types, you must manually edit the values in the besMetadata.propertiesfile by using the taskaction.<action name> format.

### Localizing Label and Error Messages

You can localize labels and error messages of Data Director to display the language of your choice. To localize labels and error messages, you must run the *LocalizationSetup* script from the Resources Toolkit. The script is part of the MDM Hub installation package.

For more information about localizing labels and error messages, see the *Multidomain MDM Version 10.3 Provisioning Tool Guide.* 

### **Localizing Lookup Tables**

All lookup tables support localization. For example, the Gender, Country, and State lookup tables are mapped to the corresponding Gender, Country and State localization lookup tables.

For more information about localizing metadata, labels, error messages, and lookup tables, see the *Multidomain MDM Version 10.3 Provisioning Tool Guide*.

# **Record View Layouts**

You can design custom record view layouts to replace the **Matching Records** view, the **Hierarchy** view, and the **History** view. You can also replace the layouts for review tasks, merge tasks, and unmerge tasks.

To design a custom view, use the Provisioning tool. Create a record view layout, and specify a name, purpose, and users who can access the custom view. Then add components to the layout to build the custom view.

In Data Director, the custom views appear in the **View** list. The custom views for tasks appear in the Task Manager in Data Director.

In the custom record view for merging duplicate records and viewing record history, you can choose to display either the full business entity or a business entity view, which is a subset of fields from the business entity. Previously, these record views were default views and displayed the full business entity.

You can choose to configure the basic **Matching Records** view or the advanced **Matching Records** view for a business entity. The basic **Matching Records** view lets you merge only the duplicate parent records. The advanced **Matching Records** view lets you merge the duplicate parent and child records. You can configure one or both the **Matching Records** views for your application.

Previously, you could only design custom record view layouts to replace the default entity view.

For more information about designing record view layouts, see the *Informatica Multidomain MDM Version* 10.3 Provisioning Tool Guide.

### Hiding the Default Record Views

In the Provisioning tool, you can configure a Data Director application to hide the default record views in the **View** list.

The default record views are enabled by default so that users can view and manage records in Data Director. After you design custom views, you can choose to hide the default record views to reduce confusion for your end users.

Previously, you could not hide the default record views in Data Director.

Note: When you upgrade Multidomain MDM, the View list contains the default record views by default.

For more information about the default record views, see the *Informatica Multidomain MDM Version 10.3 Provisioning Tool Guide*.

# Similar Records Component

You can use the Similar Records component to search for similar records when you create new records. You can decide whether you want to use search or queries to display records in the Similar Records component. You can configure exact or fuzzy queries.

Previously, you could only configure search with the Similar Records component.

For more information about the Similar Records component, see *Multidomain MDM Version 10.3 Provisioning Tool Guide*.

# Matching Records View

The Matching Records view is enhanced to make it easier for you to identify and resolving duplicate records.

The following enhancements are made to the Matching Records view:

You can now perform the following tasks:

- Resolve duplicates using the basic Matching Records view or the advanced Matching Records view. The
  basic Matching Records view lets you merge only the duplicate parent records. The advanced Matching
  Records view lets you merge the duplicate parent and child records. Your can configure Data Director to
  have one or both the Matching Records views.
- Show information that might help you in determining duplicates, such as trust scores, and display only the
  records that you select for merging.
- · View the match rule details for the matching records.
- Use breadcrumbs that are added to the matching records to identify the parent of the records to be merged.
- If duplicate records are missing from the **Matching Records** view, you can manually add the records to the view. To find the records that you want to add, use search or queries.
- · Remove records that you do not want to merge or are not duplicates.
- Queue records for an automatic merge.
- Finalize the best version of the truth by promoting or overriding the values that you think are correct.
- · Before you merge the records, you can preview the result of merging the records.

For more information, see the Multidomain MDM Version 10.3 Data Director User Guide.

### Cross-reference Records View

The **Cross-reference Records** view includes breadcrumbs to help you identify the parent records of a cross-reference record. The last record listed in the breadcrumbs trail is the immediate parent of the record that is open in the **Cross-reference Records** view.

# Task Manager

If you have the ActiveVOS abAdmin role assigned, you can see the workflow details of a task in the Task Manager. You can also assign a task that belong to another user of your user group back to the pool so that a different user can claim it.

For more information about the Task Manager, see the *Multidomain MDM Version 10.3 Data Director User Guide*.

### Merge Tasks

The reviewer of a merge task can update the merge task during the review process.

In the review panel, reviewers can perform the following actions that are possible in the **Matching Records** view:

- · Add duplicate records that you want to merge.
- · Remove records that you do not want to merge.
- Finalize the best version of the truth by selecting fields with correct values or by entering the correct values.

For more information about merge tasks, see the "Participating in Review Processes" chapter in the *Multidomain MDM Version 10.3 Data Director User Guide*.

### Attach Files to Records

When you add or edit a record, you can attach files as the child records to the record. Use the Provisioning tool to configure a business entity field with FileAttachment as the data type. You can then use the business entity field to attach files in a Data Director application.

For more information about the FileAttachment data type, see the *Multidomain MDM Version 10.3 Provisioning Tool Guide*.

### Attach Files to Tasks

You can attach files to tasks. When tasks are configured to support attachments, you can attach a file to any task that you can view. Files attached to tasks appear in the task details, and user that can view the task can view the attachment.

For more information about attaching files to tasks, see the *Informatica Multidomain MDM Version 10.3 Data Director User Guide*.

# Comments and Attachments for Tasks

You can configure whether users must add a comment or attachment when they trigger a workflow or perform task actions. To configure the comment and attachment settings, use the Provisioning tool.

Previously, users could add comments to tasks, but you could not require users to add comments.

### **Workflow Triggers**

You can configure a workflow trigger to prompt users for comments, attachments, or both. For example, you can configure the unmerge task trigger so that users must add a comment when they trigger unmerge tasks.

### Task Types

You can configure a task type to prompt users for comments, attachments, or both. You can also allow users to attach files from the **Task Details** dialog box. For example, you can configure review tasks so that reviewers must add a comment and attachment when they reject a proposed change to a business entity record. You can configure merge tasks so that reviewers can attach files when they edit the task details.

For more information about comment and attachment for tasks, see the *Informatica Multidomain MDM Version 10.3 Provisioning Tool Guide*.

# Security for Business Entities

You can apply MDM Hub user roles to manage access to records based on business entities. You can also use data filters to manage access to records based on the values in the fields and user roles. If you want to restrict the values that can be added to a field, you can create a list of default values for the field.

For more information about the security options, see the Multidomain MDM Version 10.3 Provisioning Tool Guide.

### User Roles and Business Entities

A business entity is a data structure with a root base object and child base objects. When you assign user role permissions to base objects and other resources in the MDM Hub Console, the record views in Data Director inherit the permissions. For example, if you grant the read permission to a user role on the base objects, the user has the same access to business entity records.

If you already have permissions assigned to user roles, you do not need to do anything else to enable the security on business entities. After you upgrade, Data Director automatically reflects the results of the user role permissions.

### User Roles and REST APIs

The APIs are enhanced to support MDM Hub user roles. In all cases, a user must have permission to read a record before the other permissions are processed. The user role permissions are inherited by the business entity, and then the field filters can be used to restrict access to records based on the value in a field.

The following REST APIs return the user role privileges in the coperations> element for objects and relationships:

- GetMetadata
- ListMetadata

For information about how security enhancements affect Data Director, see <u>"Security for Business Entities" on page 44</u>.

For details about the API enhancements for security and data filters, see the *Multidomain MDM Version 10.3* Business Entity Services Guide.

### Data Filters with User Roles

You can create data filters on fields in a business entity and assign user roles to those filters. Based on the value in the field within a record, the user might or might not be able to see the entire record. You can also

create filters on nodes to determine whether a user should have access to the parent record when the node is empty.

**Note:** This feature is similar to data security filters for subject areas, however data filters for business entities are case insensitive.

### Tasks with User Roles

User role privileges apply to the workflow tasks that you create for business entities. A user can take an action on tasks for which they have role privileges. For example, a user can take action on a merge task only if their user role includes the merge privilege.

### **Default Values for Business Entities**

You can add default values to fields. In Data Director, a single default value appears in the field. A list of default values appears as a drop-down list.

### User Interface Enhancements for Security

When an MDM administrator creates user role privileges, the privileges affect the Data Director user interface. For example, if a user does not have access to a business entity, that user cannot see the business entity or its records.

The following table summarizes the role privileges for business entities and describes how the privileges affect the behavior of the Data Director user interface:

Business Entity Action	Data Director Behavior
Create records	In the <b>New</b> menu, you can see only the types of business entities for which you have permission to create records.
Read records	You can view the records for the business entities that you have permission to read. Other records are inaccessible.
Update records	In a record view, the <b>Edit</b> button is enabled when you have permission to edit business entity records. Otherwise, the <b>Edit</b> button is not visible.
Delete records	The <b>Delete</b> icon is enabled when you have permission to delete business entity records.
Search for records	When searching for business entities by using smart search, search filters and search results contain only the business entity types that you have permission to view.
Merge and unmerge records	In the <b>Matching Records</b> view, the <b>Merge</b> button and the check boxes at the top of each record are enabled when you have permission to merge and unmerge records. If you add records to the view, the search filters and search results contain records only for the business entities that you have permission to view.

The business entity views inherit the same role privileges as the business entity. For example, if you choose to include a sensitive field in a business entity view, only the users with the role privilege for the record can view or edit it. For information about how user role privileges translate to business entities and business entity views, see the *Multidomain MDM Version 10.3 Provisioning Tool Guide*.

# New Features for Data Director with Subject Areas

This release of Multidomain MDM includes the following new features for Data Director with subject areas.

# Updated Look and Feel for Data Director

Data Director uses a navigation bar with vertical tabs. You can now use the **New** tab to add records. The task inbox and Task Manager are streamlined.

The following image shows the updated look and feel of the navigation bar with the Data tab open:

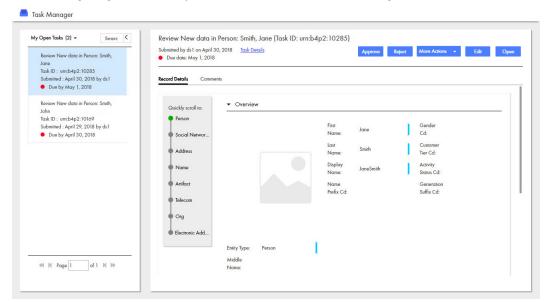


Previously, Data Director had horizontal tabs. You used the Create menu in the application header.

### Task Manager

The task panel and the review panel appear side-by-side so you can easily manage and view tasks. Also, the **Comments** tab appears in the review panel. You can view all comments about the task in the **Comments** tab.

The following image shows the updated look and feel of the Task Manager:

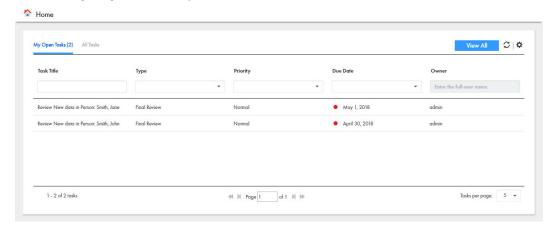


Previously, the task panel appeared above the review panel. Also, comments appeared in the **All Comments** box in the **Task Details** dialog box.

### Task Inbox

The task inbox is streamlined so you can filter and find tasks to work on.

The following image shows the updated look and feel of the task inbox:



For more information, see the Informatica Multidomain MDM Version 10.3 Data Director User Guide.

### Attach Files to Tasks

You can attach files to tasks. When tasks are configured to support attachments, you can attach a file to any task that you can view. Files attached to tasks appear in the task details, and user that can view the task can view the attachment.

For more information about attaching files to tasks, see the *Informatica Multidomain MDM Version 10.3 Data Director User Guide*.

# Hub Server Properties Introduced in Version 10.3

You can use the following Hub Server properties to control the run-time behavior of the MDM Hub.

Configure the Hub Server properties in the cmxserver.properties file.

### cmx.server.selective.bvt.enabled

By default, a Put or Cleanse Put call applies BVT calculations to all fields in a record instead of updating only the fields specified in the SIF request. To specify that the MDM Hub only applies BVT calculation to fields that are part of the SIF request, set this property to true. Default is false.

### cmx.file.allowed\_file\_extensions

Lists the extensions of files that you can attach to a record or task in the Data Director application. By default, you can attach .pdf and .jpg files. When you specify multiple extensions, separate each value by a comma.

For example, cmx.file.allowed file extensions=pdf, jpg, png, txt, zip, exe.

### cmx.file.max\_file\_size\_mb

Specifies the size limit of files that you can attach in the Data Director application.

**Note:** Data Director applications that use the subject area data model have a static size limit of 20 MB. If you specify a size limit greater than 20 MB, Data Director applications that use the subject area data model uphold the static size limit of 20 MB. Data Director applications that use the business entity data model uphold the size limit defined in the cmx.file.max file size mb property.

### cmx.server.attachment.temp.ttl\_minutes

Number of minutes after a file is created in the TEMP storage before it expires. Set to 0 to prevent files from expiring. Default is 60.

#### cmx.ss.engine

Required if you want to use the Elasticsearch engine for search. Manually add the property and set to es.

#### ex.max.conn.per.host

Sets the maximum number of Elasticsearch nodes that you want to connect to the host. Set to the number of Elasticsearch cluster nodes on the host.

#### ex.max.threads

Sets the maximum number of threads that you want the Apache asynchronous non-blocking receiver to use for each node in the Elasticsearch cluster. Default is 1.

Change the value only when suggested by Informatica Global Customer Support.

#### es.index.refresh.interval

Sets the interval, in seconds, for Elasticsearch to commit the changes to the data after an Initially Index Smart Search Data batch job is run. The data is available for search after this time interval. Default is 30.

This property impacts the high indexing volume encountered during initial indexing. Change the value only when suggested by Informatica Global Customer Support.

### ssl.keyStore

Required if you use the HTTPS port of the application server to configure the Hub Server. Manually add the property. Absolute path and file name of the keystore file.

### ssl.keyStore.password

Required if you use the HTTPS port of the application server to configure the Hub Server. Manually add the property. Plain text password for the keystore file.

#### ssl.trustStore

Required if you use the HTTPS port of the application server to configure the Hub Server. Manually add the property. Absolute path and file name of the truststore file.

### ssl.trustStore.password

Required if you use the HTTPS port of the application server to configure the Hub Server. Manually add the property. Plain text password for the truststore file.

For more information about setting Hub Server properties, see the *Multidomain MDM Version 10.3 Configuration Guide*.

# Process Server Properties Introduced in Version 10.3

You can use the following Process Server properties to control the run-time behavior of the MDM Hub.

You can configure the Process Server properties that are related to search with Elasticsearch in the cmxcleanse.properties file.

### cmx.ss.engine

Required if you want to use the Elasticsearch engine for search. Manually add the property and set to es.

### ex.max.conn.per.host

Sets the maximum number of Elasticsearch nodes that you want to connect to the host. Set to the number of Elasticsearch cluster nodes on the host.

### ex.max.conn.per.host

Sets the maximum number of Elasticsearch nodes that you want to connect to the host. Set to the number of Elasticsearch cluster nodes on the host.

#### es.index.refresh.interval

Sets the interval, in seconds, for Elasticsearch to commit the changes to the data after an Initially Index Smart Search Data batch job is run. The data is available for search after this time interval. Default is 30.

This property impacts the high indexing volume encountered during initial indexing. Change the value only when suggested by Informatica Global Customer Support.

For more information about setting the Process Server properties, see the *Multidomain MDM Version 10.3 Configuration Guide*.

# **Global Properties**

You can use the following global properties to control the run-time behavior of the Data Director application:

#### minModalWidth

Determines the minimum width in pixels of the **Search** window. Default is 1100.

# Changes (10.3)

# **Terminology Changes**

The following terms have changed in this version:

New	Explanation	Replaces	Where?
Home page	The customizable dashboard that contains the task inbox and other components.	Start page	Data Director
Record	An instance of a business entity. For example, John Smith is a record, while Person is the business entity.	Business Entity	Data Director
Record views	Any view of one or more records in Data Director.	entity view	Data Director, Provisioning tool

New	Explanation	Replaces	Where?
Record view layout	A Data Director user interface layout that you can design to view and manage records or tasks in Data Director.	entity view layout	Provisioning tool
Search	The keyword search functionality in Data Director. To search for records, you can enter keywords in a search box.	Smart Search	Data Director, Provisioning tool
New tab	A tab in the navigation bar that you can use to create records.	Create menu or Create in Data View menu	Data Director

# Search with Apache Solr is Deprecated

Effective in version 10.3, the search functionality in Data Director that used Apache Solr is deprecated. Informatica will drop support for search with Solr in a future release. You can use search with Elasticsearch to find records in Data Director. Elasticsearch is an open-source, full-text search engine.

You must configure search with Elasticsearch, which is packaged with the MDM Hub installer. You can set up Elasticsearch as a single node cluster or as a multi-node cluster to provide distributed indexing and search. For a smooth transition, the APIs that were supported for search with Apache Solr are supported for search with Elasticsearch.

### Task Inbox

Effective in version 10.3, you can configure the columns and the filters that you want to view in the task inbox. Use the Provisioning Tool to configure the columns and the filters for the task inbox.

The task inbox contains the following filters:

- My Open Tasks
- · My Closed Tasks
- All Tasks
- · All Unclaimed Tasks
- All Closed Tasks
- All Claimed Tasks

Previously, you could not configure the columns and filters for the task inbox, and the task inbox contained only My Tasks and Available Tasks as the filters.

For more information about configuring the task inbox, see the *Multidomain MDM 10.3 Provisioning Tool Guide*.

# Task Manager

Effective in version 10.3, you can configure the the fields that you want to view in the task panel of the Task Manager. Use the Provisioning Tool to configure the fields for the task panel.

The task panel contains the following filters:

- My Open Tasks
- My Closed Tasks
- All Tasks
- All Unclaimed Tasks
- All Closed Tasks
- · All Claimed Tasks

Previously, the task panel contained only My Tasks and Available Tasks as the filters.

For more information about configuring the Task Manager, see the *Multidomain MDM Version 10.3 Provisioning Tool Guide*.

### Resource Kit

Effective in version 10.3, the following items are removed from the Resource Kit directory and the *Multidomain MDM Resource Kit Guide*:

- WsCodeGenPlugin sample
- · Jaspersoft templates

# Part III: Version 10.2

### This part contains the following chapters:

- New Features and Changes (10.2 HotFix 4), 53
- New Features and Changes (10.2 HotFix 3), 54
- New Features and Changes (10.2 HotFix 2), 56
- New Features and Changes (10.2 HotFix 1), 60
- New Features and Changes (10.2), 66

# CHAPTER 5

# New Features and Changes (10.2 HotFix 4)

This chapter includes the following topics:

- New Features (10.2 HotFix 4), 53
- Changes (10.2 HF4), 53

# New Features (10.2 HotFix 4)

This section describes new features in version 10.2 HotFix 4.

### Informatica ActiveVOS Version 9.2.4.5

Informatica Multidomain MDM version 10.2 HotFix 4 supports Informatica ActiveVOS version 9.2.4.5.

If you upgrade from an earlier version of Multidomain MDM, ensure that you install ActiveVOS version 9.2.4.5.

# Changes (10.2 HF4)

### MDM Multidomain Edition is now Multidomain MDM

Effective in versions 10.2 HotFix 4 and 10.3, the product name has changed to Informatica Multidomain MDM.

# CHAPTER 6

# New Features and Changes (10.2 HotFix 3)

This chapter includes the following topics:

- New Features (10.2 HotFix 3), 54
- Changes (10.2 HotFix 3), 55

# New Features (10.2 HotFix 3)

# Java Virtual Machine Settings for Smart Search

If you want to configure smart search for the MDM Hub, configure the Java Virtual Machine (JVM) by setting the Java options for smart search.

Set the following Java options for smart search:

### -Dmdm.ps.zk.node

Required if you want to use smart search with Solr. Set this Java option on the JVM for the Process Server that is intended to be the ZooKeeper server. Set to true.

### -Dmdm.ps.search.node

Required if you want to use smart search with Solr. Set this Java option on the JVMs for the Process Servers that will have search processing enabled and function as Solr servers. Set it to true.

### -Dsearch.service.port

Required if you want to use smart search with Solr. Required if you want to install multiple Process Servers on the same machine but on different JVMs and enable smart search on all the Process Servers on the machine. This Java option specifies the port used by the JVM for the search service. To avoid port conflicts, use the default port for the JVM of one Process Server, and set this Java option to the relevant port numbers for the JVMs of the remaining Process Servers.

### **REST API Enhancements**

When you use REST APIs to create or update child records, you can add the child records in the same POST request. Previously, you had to make two requests.

When you use REST APIs to add a child record, you can point to a specific parent record. Previously, you could not specify a parent record in the request.

# Message Trigger Enhancement

When a cross-reference record is restored, the MDM Hub can trigger a message to be placed in the JMS message queues. To set up message triggers for an event that restores a cross-reference record, use the Schema Manager. In the **Events** section of the **Message Triggers** page, select **Restore**, which is the new event included in the section.

For more information, see the MDM Multidomain Edition Version 10.2 HotFix 3 Configuration Guide.

# Changes (10.2 HotFix 3)

# Resource Kit Change

In the Resource Kit, the AssignUsersToDatabase script supports uppercase characters in user names.

Previously, the tool enforced lowercase characters only.

# CHAPTER 7

# New Features and Changes (10.2 HotFix 2)

This chapter includes the following topics:

- New Features (10.2 HotFix 2), 56
- Changes (10.2 HotFix 2), 59

# New Features (10.2 HotFix 2)

# Oracle WebLogic Server 12.2.1.3 Support

You can deploy MDM Multidomain Edition on Oracle WebLogic Server 12.2.1.3.

# Oracle WebLogic T3S Protocol Support

You can use the Oracle WebLogic T3S protocol for communications between WebLogic and MDM Multidomain Edition.

For information about setting up WebLogic T3S, see the *Informatica MDM Multidomain Edition Version 10.2 HotFix 2 Security Guide*.

# **Process Server Properties**

You can use the following Process Server properties to control the run-time behavior of the MDM Hub.

Configure the Process Server properties in the  ${\tt cmxcleanse.properties}$  file.

### cmx.server.stripDML.useDeleteInsertLock

Runs tokenization as part of a match job or a tokenization API call when a base object has a large number of records.

### cmx.server.load.nonsmos.sourcesystem.enddate.like.smos

Sets the relationship end-date of a system that is not a State Management Override System (SMOS) to be the same as that of an SMOS.

For more information about setting Hub Server properties, see the *Informatica MDM Multidomain Edition Version 10.2 HotFix 2 Configuration Guide*.

# **Hub Server Properties**

You can use the following Hub Server properties to control the run-time behavior of the MDM Hub.

Configure the Hub Server properties in the cmxserver.properties file.

#### cmx.server.selective.bvt.enabled

By default, a Put or Cleanse Put call applies BVT calculations to all fields in a record instead of updating only the fields specified in the SIF request. To specify that the MDM Hub only applies BVT calculation to fields that are part of the SIF request, set this property to true. Default is false.

### com.informatica.mdm.message.queue.max.bytes.threshold

You can create a maximum limit for messages sent to the message queue. To specify the maximum size in bytes of messages sent to the message queue, set this property. If a message exceeds the specified size, the message is not sent and the message status is set to Failed.

### cmx.server.load.nonsmos.sourcesystem.enddate.like.smos

Sets the relationship end-date of a system that is not a State Management Override System (SMOS) to be the same as that of an SMOS.

### cmx.server.override\_orstitle

When you log in to Informatica Data Director (IDD), the dashboard displays a long title of all the subject areas that have tasks for the current user. To display a preferred default title when you log in to IDD, set the cmx.server.override orstitle property to a preferred title in the cmxserver.properties file.

For example, if you set the property to All Subject Areas, the title appears as Tasks for All Subject Areas onscreen.

### cmx.server.task.grouppotentialmergebyruleid

Specifies that a manual match task that generates multiple matches creates multiple task entries with the same ROWID. You can set the property to false to create one task for each match entry.

For more information about setting Hub Server properties, see the *Informatica MDM Multidomain Edition Version 10.2 HotFix 2 Configuration Guide*.

# **Grouping of Hub Servers and Process Servers**

You can create logical groups of Hub Servers and Process Servers by grouping Java Virtual Machines (JVMs). When you deploy the Hub Server and Process Server applications in a JVM group, all communication between the applications stays within the group. To group JVMs, you assign a group ID to each JVM in the MDM Hub environment.

For more information, see the Informatica MDM Multidomain Edition Version 10.2 HotFix 2 Installation Guide.

# **Global Properties**

You can use the following global properties to control the run-time behavior of the Informatica Data Director application:

### deleteMovedRelInExplorerView

Determines whether to delete the old relationship when you create a new relationship in Hierarchy Manager explorer view. Set to false to give the relationship an end date.

### enableSaveForPeriodDialogForHmRel

Enables the effective period dialog box that appears when you update a Hierarchy Manager-enabled record in IDD. Set to false to disable the effective period dialog box.

#### enableTaskAttachments

Specifies whether users can attach files to tasks when using the legacy views and Informatica BPM (ActiveVOS) Subject Area Workflows with Data Director. Set to true to enable attachments and to show the **File Attachments** section in the **Task Details** dialog box and in the **Create Task** dialog box.

### hideSystemColumnsInResult

Specifies whether the system columns appear in the search results. Set to  ${\tt true}$  to hide the system columns in IDD search results.

#### overrideTextAreaColumnOrder

If you configure a column as a text area in a subject area, the text area column always appears at the bottom of the layout regardless of column order.

Set to false to ensure that text area columns appear in their specified order in a layout. Set to true to ensure that text area columns in a subject area appear at the bottom of the layout regardless of column order.

For more information, see the *Informatica MDM Multidomain Edition Version 10.2 HotFix 2 Informatica Data Director Implementation Guide*.

### Save Handler User Exit Enhancement

In Save Handler user exits, you can use the <code>getChangedChildren</code> method to return modified or added child or grandchild records in a specified base object.

The user exit returns all records that were added, deleted, or updated. You can select the type of changes returned by the user exit. For example, the user exit can return a combination of removed and updated children records.

### **Date Format Enhancement**

You can change the default date format used by the calendar in the Entity 360 framework.

To change the default date format, use a text editor to create a bundleE360.properties file that contains the property DATE\_TIME\_LONG\_FORMAT. Then add the bundleE360.properties file to the following location:

<distribution directory>\hub\server\resources\entityE360

Note: If it does not already exist, create the entityE360 directory.

For more information, see the Informatica MDM Multidomain Edition Version 10.2 HotFix 2 Provisioning Tool Guide.

# Start Workspace Enhancements

To help you prioritize tasks, the Start workspace has a **Create date** column that displays the date a task was created. The Start workspace also has an **Owner** column that displays the current owner of a task.

# **Configuration Automation Tools Enhancements**

You can delete a single user in the MDM Hub Master Database, and synchronize a single user in the LDAP server with the MDM Hub roles.

You can use the following properties to automate user management:

Property	Description
MDM.new.user.email <n></n>	Email address of the user that you want to create.
LDAP.attribute_name.for.user.email	Synchronizes the email address of a user from the LDAP server to the Operational Reference Store.
LDAP.attribute_name.for.username	Synchronizes attributes other than a common name or a user ID from the LDAP server to the Operational Reference Store.
LDAP.strip_slashes_from_usernames	Removes slashes from user names such as Boyd\ to make the synchronization process work.
LDAP.cleanup.before.sync	Removes the users that are assigned in an Operational Reference Store before synchronizing users with roles.

# Changes (10.2 HotFix 2)

### **User Exit Enhancement**

Effective in version 10.2 HotFix 2, you can set effective periods in the Hierarchy Manager user exits.

Previously, you could only set effective periods in the Save Handler user exit.

### **Hub State Indicator is Not Putable**

Effective as of version 10.1 HF2, the system column HUB\_STATE\_IND cannot be set as putable. The change was not announced in that release.

In the *Informatica MDM Multidomain Edition Version 10.2 HF2 Configuration Guide*, the list of exceptions for the property Putable is updated to include HUB\_STATE\_IND.

# CHAPTER 8

# New Features and Changes (10.2 HotFix 1)

This chapter includes the following topics:

- New Features (10.2 HotFix 1), 60
- Changes (10.2 HotFix 1), 64

# New Features (10.2 HotFix 1)

# **History View Enhancements**

Improved the usability of the History view by adding the following record fields:

#### **Last Update Date**

Displays the date the record was most recently updated.

### **Updated By**

Displays the name of the user that updated the record.

Also, the change details in the History view include the first and last names of the user that made the change.

Previously, only the user name that was configured in the Hub Console appeared in the change details. To display more meaningful names in the change details, launch the Hub Console and update the user definitions to include the first and last names.

For more information about configuring users, see the *Informatica MDM Multidomain Edition Version 10.2 HotFix 1 Configuration Guide*.

# Restricting Access to Business Entities

In the Provisioning tool, you can configure IDD applications to have business entities that are not visible to all users within the Entity 360 framework. If you want to hide specific business entities for security reasons, clear the **Visible** check box when you configure a business entity in an IDD application.

Previously, all business entities in an IDD application were visible to all users in the Entity 360 framework.

For more information about configuring IDD applications, see the *Informatica MDM Multidomain Edition* Version 10.2 HotFix 1 Provisioning Tool Guide.

# Populating a Foreign Key Column

In the foreign key column for a business entity, you can browse and select a related business entity from a list of related business entities. The selected business entity must be searchable.

Previously, you had to manually enter the ROWID of a business entity in the foreign key column.

Additionally, when you generate a business entity schema, the Provisioning tool generates business entity lookup fields.

For more information about lookups, see the *Informatica MDM Multidomain Edition Version 10.2 HotFix 1 Provisioning Tool Guide*.

# Performance Optimization of a SearchQuery Request

A SearchQuery request can return results that contain pending data changes to a base object.

Previously, guery results timed out if a base object contained pending changes.

For more information, see the Informatica MDM Multidomain Edition Version 10.2 HotFix 1 Services Integration Framework Guide.

# **Batch Group Job History**

In the Batch Group tool in the Hub Console, you can specify the number of days of history to process for a batch group job log. By default, logs for batch jobs consider all history, but you can reduce the number of days considered.

To specify the number of days of history to process for a batch group job log, set the cmx.server.jobControl.noOfDays property in the cmxserver.properties file.

For more information, see the *Informatica MDM Multidomain Edition Version 10.2 HotFix 1 Configuration Guide.* 

# Disabling Message Queue Polling

In a multinode environment, you can disable message queue polling for individual nodes. To disable message queue polling, set the mq.data.change.monitor.thread.start property to false in the cmxserver.properties and cmxcleanse.properties files.

You can confirm the operation of message queue polling while in DEBUG mode.

- On nodes where the value of mq.data.change.monitor.thread.start is false, the message Monitoring is disabled appears in the logs.
- On nodes where the value of mq.data.change.monitor.thread.start is true, the message Data changes
  monitoring started appears in the logs.

By default, message queue polling is enabled on all Java virtual machines where an MDM Hub EAR file is deployed. When you use multiple poller threads for data change monitoring and for publishing messages, the messages might not publish in the correct sequence. To control the sequence in which the messages are published, use a single poller thread.

### **Global Properties**

You can use the following global properties to control the run-time behavior of the Informatica Data Director application:

#### bulkexportloadsize

Sets the maximum number of records to load for each thread when you export data to a Microsoft Excel file

### exportusingmultithread

Enables multithreading for data export to a Microsoft Excel file.

#### CompositePagerTotalRecords

Maximum number of ActiveVOS tasks that Informatica Data Director sorts. By default, Informatica Data Director sorts ActiveVOS tasks that are not case sensitive. If there are more than the value of CompositePagerTotalRecords to sort, case-sensitive sorting is database dependent. If the database is Microsoft SQL Server, the sorting is not case sensitive. If the database is Oracle or IBM DB2, the sorting is case sensitive.

### convert2DigitYearTo4Digit

Enables the adjustment of a two-digit year entry to a four-digit year entry.

#### enableCreateBEMenuGrouping

Specifies whether you can define logical groups based on subject areas for the **Create** menu for business entities. The property is required if you have a large number of subject areas.

### expandDropDownListShowFullValue

Enables expansion of the drop-down list in the Search tab for lookup records.

### qrytaskidfromprocessidtotalretry

Number of attempts that Informatica Data Director makes to reload an ActiveVOS task.

### qrytaskidfromprocessidwaitintrvlmillis

Number of milliseconds that Informatica Data Director waits before attempting to reload an ActiveVOS task.

### proactiveMatchResultSort

Configures the sort order in which the potential matches appear in the Informatica Data Director application.

For more information, see the *Informatica MDM Multidomain Edition Version 10.2 HotFix 1 Informatica Data Director Implementation Guide.* 

# **MDM Support Tools**

The MDM Support tools are a collection of tools in the Hub Console. Use the tools to gather configuration information, track user configurations, replicate issues, run system health checks, and simulate matches.

The MDM Support tools contain the following tools:

### Configuration Support Manager (CSM) Tool

The Configuration Support Manager (CSM) tool enables you to generate a CSM report. The report gathers configuration information from the Hub Server, Process server, and database server, which helps to troubleshoot issues.

### **User Migration Tool**

The User Migration tool enables you to create or update multiple MDM Hub user accounts. You can also migrate user accounts and user-to-role assignments from one MDM Hub environment to another.

### **Match Analysis Tool**

The Match Analysis tool assesses issues related to tokenization in the MDM Hub. The tool also provides a health check for the MDM Hub environment.

#### **Match Simulator Tool**

The Match Simulator tool tests undermatching and overmatching scenarios in the MDM Hub. The tool reduces the manual effort involved in troubleshooting matching issues.

For more information about the MDM Support tools, see the *Informatica MDM Multidomain Edition Version* 10.2 HotFix 1 Resource Kit Guide.

# Performance Optimization of a Batch Unmerge Job

During an Unmerge batch job, the MDM Hub optimizes performance of the batch job by limiting BVT calculation of child foreign key records.

Previously, unmerge batch jobs of base objects with a large volume of cross-reference records and multiple child records could fail with an out of memory error message.

# Option to Export a Single Record from Search Results

You can set up privileges for roles to only allow the export of a single record from the Informatica Data Director Search Results page.

Restricting low-level users to export only one record at a time prevents the inadvertent export of entire data sets. To restrict privileges to single record export, use the Roles tool in the Security Access Manager in the Hub Console. Enable the privilege EXPORT\_PROFILE/ExecuteSingleRow for a selected role.

Previously, you could set privileges for roles to either allow export of selected rows or all rows.

For more information about roles and users, see the *Informatica MDM Multidomain Edition Version 10.2 HotFix 1 Configuration Guide*.

# **Business Entity Services Enhancements**

The following business entity services are added to help manage pending merge tasks:

### PendingMerge

Creates a pending merge task in the BPM workflow. Adds or removes \_MTCH records from a pending merge task. Use to update a pending merge task.

### PromoteMerge

Promotes a pending merge task based on the task data from the BPM workflow. Use to find all pending merge tasks for a specific interaction ID.

For more information, see the *Informatica MDM Multidomain Edition Version 10.2 HotFix 1 Business Entity Services Guide*.

# Message ID for Legacy XML JMS Messages

JMS messages in the legacy XML format include a MESSAGE\_ID attribute.

For more information, see the Informatica MDM Multidomain Edition Version 10.2 HotFix 1 Configuration Guide.

# WebSphere Application Server V8.5.5 Fix Pack 11 Support

You can deploy the MDM Multidomain Edition on WebSphere Application Server V8.5.5 Fix Pack 11.

### Informatica AddressDoctor Version 5.10

Informatica MDM Multidomain Edition supports Informatica AddressDoctor version 5.10.

### Internet Protocol Version 6

Informatica MDM Multidomain Edition supports Internet Protocol version 6 (IPv6).

# Changes (10.2 HotFix 1)

# **Proxy Role**

Effective in version 10.2 HotFix 1, the Operational Reference Store that you create contains a proxy role.

Previously, the proxy role had been deprecated. Due to demand, the proxy role has been reinstated.

# Jaspersoft Removed from the Resource Kit

Effective in version 10.2 HotFix 1, Jaspersoft is not included in the MDM Multidomain Edition Resource Kit.

Customers wishing to integrate dashboards into Informatica Data Director are recommended to rather use their corporate business intelligence tool of choice, or to use Highcharts or other charting tools. Any report that can be embedded in an iFrame can be embedded in a start page or Entity360 page in Informatica Data Director.

# Allow Null Update Property

Effective in version 10.2 HotFix 1, all processes that calculate the best version of the truth treat null values the same way. Previously, some processes ignored the **Allow Null Update** property in the staging table and used the **Apply Null Values** property in the base object table.

When a source system contributes a null value for a column, a process refers to the setting of the **Allow Null Update** property for that column in the staging table.

- If the Allow Null Update property is enabled on the column, the process can write the null value to the base object record.
- If the Allow Null Update property is disabled on the column, the process downgrades the trust for the null
  value.

• If a process cannot resolve the setting of the **Allow Null Update** property in a staging table, the process uses the setting for the **Apply Null Values** property in the base object table.

For more information about the **Allow Null Update** property, see the *Informatica MDM Multidomain Edition Version 10.2 HotFix 1 Configuration Guide*.

# BeMDMWorkflow ActiveVOS Project

Effective in version 10.2 HotFix 1, the BeMDMWorkflow project in the Resource Kit has changed to resolve an issue with task inbox filtering.

Previously, the BeMDMWorkflow project in the Resource Kit caused an issue with task inbox filtering.

If you upgrade from an earlier version, redeploy the BeMDMWorkflow project after you upgrade. If you have customized the workflows, use ActiveVOS Designer to add the following code within the TaskFilter complex type in the cs.wsdl file:

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

For more information, see the Informatica MDM Multidomain Edition 10.2 HotFix 1 Upgrade Guide.

# **Obsolete Process Server Properties**

Effective in version 10.2 HotFix 1, the following Process Server properties are obsolete:

Obsolete Property	Change in Behavior for Version 10.2 HotFix 1	
com.informatica.mdm.overrideNullable	When a source system contributes a null value, you cannot override how a process calculates the most trustworthy value. The method that a process uses to handle null values has changed. For more information, see "Allow Null Update Property" on page 64.	
com.informatica.mdm.promoteNullable	When a source system that contributes a null value for a column has multiple staging tables, processes ignore the <b>Allow Null Update</b> property in all the staging tables. Instead, processes use the setting of the <b>Apply Null Values</b> property in the base object record.	

If an obsolete property remains in the properties file after you upgrade, the property is ignored. You can safely remove the property from the file.

# CHAPTER 9

# New Features and Changes (10.2)

This chapter includes the following topics:

- New Features (10.2), 66
- Changes (10.2), 73

# New Features (10.2)

# **Hub Server Properties for Informatica Data Director**

You can add the following property to the cmxserver.properties file to configure Informatica Data Director:

### cmx.e360.match\_xref.view.enabled

Determines if the Entity 360 framework Matching Records view and Cross-reference view appear. If true, the Entity 360 framework view appears. If false, the legacy views appear. During installation, the default is true. During upgrade of existing software, the default is false.

**Note:** The Entity 360 framework Cross-reference view supports tree unmerge. For linear unmerge support, continue to use the legacy Cross-reference view.

# **Password Hashing**

The MDM Hub uses a password hashing method to protect user passwords. The MDM Hub master database stores the user passwords in hashed form. When users log in to the MDM Hub, their request is encrypted with a combination of public and private keys. To authenticate users, the MDM Hub decrypts their request, generates the hash, and compares the value with the hashed value retrieved from the master database.

The hashing algorithm is a concatenation of the password string and multiple randomly generated values. The default algorithm used for password hashing is SHA3. However, you can also configure a custom hashing algorithm. You configure the hashing implementation class during installation of the MDM Hub. Alternatively, you can configure the hashing implementation class through the Hub Server properties in the cmxserver.properties file.

Password hashing replaces Blowfish encryption in the MDM Hub.

For more information about password hashing, see the *Informatica MDM Multidomain Edition Version 10.2* Security Guide and the *Informatica MDM Multidomain Edition Version 10.2 Configuration Guide*.

# **Security Configuration Utility**

The security configuration utility helps you to manage some of the security settings in an MDM Hub implementation. With the utility, you can reset the passwords of MDM Hub users, change the hashing algorithm used in the MDM Hub, and change the certificate provider. You can also use the security configuration utility to update the customer hashing key that is used to create the hashing algorithm.

To get the security configuration utility, contact Informatica Global Customer Support.

# **Provisioning Tool Enhancement**

The user interface of the Provisioning tool is enhanced to facilitate ease of use. The user interface includes simple user input fields that replace complex XML configurations.

For more information about the Provisioning tool, see the *Informatica MDM Multidomain Edition Version 10.2 Provisioning Tool Guide.* 

# **Layout Designer**

You can use the Layout Designer in the Provisioning tool to design layouts for the Informatica Data Director Start page and the Entity views. To design a layout, you select a layout template in the Layout Designer, and then drag and assemble the components that you want in the layout.

For more information about the Layout Designer, see the *Informatica MDM Multidomain Edition Version 10.2 Provisioning Tool Guide.* 

# **DaaS Provider Component**

Use the DaaS Provider component to search an external data service for information about a business entity. You require an existing relationship with the third-party data as a service provider.

# Integration with Data as a Service Providers

You can enrich and augment your business entity data with the data from third-party data providers. You can integrate the MDM Hub with Data as a Service (DaaS) providers to access data that is reliable, accurate, and complete.

Use the Provisioning tool to configure the integration with the DaaS providers. You can specify the business entity fields that you want to populate with the data from the DaaS providers.

In the Informatica Data Director, use the DaaS Providers component to request a DaaS provider for data. You can search for records, compare the results, and select the entities that you want to convert and merge into a business entity record.

For more information about configuring the integration with DaaS providers, see the *Informatica MDM Multidomain Edition Version 10.2 Provisioning Tool Guide*.

# Many-to-Many Relationships

You can use the Provisioning tool to configure many-to-many relationships between business entities. You can add additional attributes associated with a business entity relationship.

In the Informatica Data Director, use the Related Records component to add, edit, and delete relationships for business entities.

For more information about configuring many-to-many relationships, see the *Informatica MDM Multidomain Edition Version 10.2 Provisioning Tool Guide*.

# **External Callouts for Business Entity Services**

You can configure external callouts for business entity services to execute custom logic, validation, and transformation of business entity data. You can configure callouts for specific steps in the business entity services.

For more information about configuring external callouts, see the *Informatica MDM Multidomain Edition* Version 10.2 Provisioning Tool Guide.

### Cross-reference Records View

Use the Cross-reference Records view to establish the best version of the truth for business entities. The view is built on the Entity 360 framework.

Data stewards can use the Cross-reference Records view to examine the lineage of the full business entity, including all child entities, and can now unmerge child records. Data stewards can then make adjustments to ensure the master record genuinely represents the best version of the truth.

If you install MDM Multidomain Edition version 10.2, the view is enabled by default. If you upgrade from a previous version, set the cmx.e360.match\_xref.view.enabled property in the cmxserver.properties file to true to enable the view. The view supports tree unmerge. For linear unmerge support, continue to use the IDD XREF view. During installation, the default is set to true. During upgrade of existing software, the default is set to false.

For more information, see the *Informatica MDM Multidomain Edition Version 10.2 Informatica Data Director User Guide*.

# **History View**

Use the History view to review changes to the data in chronological order. The view is built on the Entity 360 framework.

The History view displays a chronology of data changes over the lifespan of the business entity. You can view the data that existed in the business entity at any point in time in the chronology. View the data before a data event and after a data event to determine if the event caused an inappropriate data change. A data event is any action that changes the data in a business entity, such as an edit or a merge operation.

For more information, see the *Informatica MDM Multidomain Edition Version 10.2 Informatica Data Director User Guide*.

# **Matching Records View**

Use the Matching Records view to identify and resolve duplicate records. The view is built on the Entity 360 framework.

By default, the Matching Records view contains the target business entity plus any business entities that satisfied a match rule. You can also search for business entities that did not satisfy a match rule, and add those entities to the view.

Compare the root records of the similar business entities and select the ones that you think are duplicates. Then compare the child records and descendant records in the business entities. If you find duplicate sibling records at any level, you can select the records to include in the merge process. Before you start the merge process, you can preview the merged business entity.

**Note:** If you need to override a value, edit the business entity in the Cross-reference Records view. Overrides are not available from the Matching Records view.

If you install MDM Multidomain Edition version 10.2, the view is enabled by default. If you upgrade from a previous version, set the cmx.e360.match\_xref.view.enabled property in the cmxserver.properties file to true to enable the view.

For more information, see the Informatica MDM Multidomain Edition Version 10.2 Informatica Data Director User Guide.

### Merge Cascade for Descendant Records

When you use business entity model, the merge process runs a merge cascade on the child and descendant records.

- At the root level, the merge process merges the data in the root records of the business entities.
- At a child level, when the parent-to-child relationship is a one-to-one relationship, the merge process
  merges the sibling child records. After the merge process handles a child record, it tries to merge each
  level of descendant records using the same merge strategy.
- At any level, when the parent-to-child relationship is a one-to-many relationship, you can select sibling records to merge in the **Matching Records** view.

The merged business entity contains the merged root record, the merged sibling records, and all the child records and descendant records that were not merged.

For more information, see the description of the merge process in the *Informatica MDM Multidomain Edition* Version 10.2 Informatica Data Director User Guide.

### **Timeline View**

You can use the Timeline view to view changes to data over a period of time. The Timeline view is available only to customers who upgraded from the subject area model to the business entity model.

For more information about the Timeline view, see "Investigating Data Change Events for Effective Periods" in the Informatica MDM Multidomain Edition Version 10.2 Informatica Data Director User Guide.

# **Business Entity Services for DaaS**

You can use business entity services to request data from a DaaS provider and create business entity records. You can import business entity data and update changes to the business entity data. Use REST APIs to read, search, import, and update business entity data.

For more information about the REST APIs for DaaS, see the *Informatica MDM Multidomain Edition Version* 10.2 Business Entity Services Guide.

# **Business Entity Services for Managing Relationships**

You can use business entity services to manage business entity relationships. Use REST APIs to create, read, update, and delete relationships between business entities.

For more information about the REST APIs to manage relationships, see the *Informatica MDM Multidomain Edition Version 10.2 Business Entity Services Guide*.

# **Enhancements for Business Entity Services**

With the introduction of the new views based on the Entity 360 framework, the business entity services have been enhanced to support the views and new functionality.

The following table summaries the enhancements to the business entity services:

Business Entity Service	Elements and Attributes	Request	Response
MergeBE	- MERGE element - contentMetadata=MERGE - contentMetadata=BVT	Control how descendant records merge     Specify how to merge descendant records     Specify which record wins in a merge	
PreviewMergeBE	- contentMetadata=[MERGE  BVT] - MERGE element	- Control when descendant records match	
ReadBE	- contentMetadata=BVT - historyDate	Specify which record wins in a merge     Specify the date for which you want to retrieve history data	- Business entity data for the specified date
WriteBE	- MATCH element - MERGE element	Control when descendant records match     Control when descendant records merge	
GetRelated	<ul><li>entityLabel</li><li>relationshipLabel</li><li>entityType</li><li>relationshipType</li></ul>	- Filter by entity label - Filter by relationship label - Filter by comma- separated list of entities - Filter by comma- separated list of relationships	- List of records related to a specified root record based on the relationships configured and the filters applied
ListHistoryEvents	- historyPeriod - granularity	Specify the date range for which you want to retrieve the data     Specify level of detail to group history	Business entity     data for the     specified date     Groups of history     events
GetHistoryEventDetails	- eventID	- Specify ID of the history event	- History event details

# **Extract BVT Versions**

You can get the best version of the truth for a range of effective periods for timeline-enabled base objects. Run the Extract BVT Versions batch job in the Batch Viewer tool in the MDM Hub Console, or run the executeBatchExtractBVTVersions SIF API.

For more information, see the Multidomain MDM Configuration Guide.

# **Dirty Index Indicator**

When you update the searchable field properties, some of the indexes might become outdated and dirty. You can run the Initially Index Smart Search Data batch job to clean the outdated indexes. The Batch Viewer tool of the MDM Hub Console displays a warning icon for a child business entity node when the node requires reindexing.

For more information about the warning icon, see the Multidomain MDM Configuration Guide.

# Sorting the Search Results

When you use the Search Business Entity REST web service, you can sort the search results in the ascending or descending order by multiple fields.

For more information about the Search Business Entity REST web service, see the *Multidomain MDM Provisioning Tool Guide*.

# WebSphere Application Server V8.5.5 Fix Pack 8 Support

You can deploy the MDM Multidomain Edition on WebSphere Application Server V8.5.5 Fix Pack 8.

# Oracle GoldenGate 12 Support

Use Oracle GoldenGate version 12.1.2.1 with MDM Multidomain Edition.

If you have an Oracle environment and upgrade from 9.0.1 or 9.1.0 to a more recent version of MDM Multidomain Edition, you must update the Oracle GoldenGate software. For more information, see the Informatica MDM Multidomain Edition Version 9.7.1 HotFix 7 Upgrading with Zero Downtime Guide.

### **ActiveVOS Database Connection Details**

The ActiveVOS® database connection is validated when you install or upgrade embedded ActiveVOS.

When you install or upgrade embedded ActiveVOS during the MDM Multidomain Edition installation or upgrade, ActiveVOS database connection details are saved in the build.properties file.

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
activevos.b4p.url=http://localhost:9080/active-bpel/services/AeB4PTaskClient-taskOperations
```

### Resource Kit

The BESExternalCall folder contains sample Java code to implement custom logic and validation for business entity services. You can configure external callouts for certain steps in the business entity

execution logic. To use external callouts, you must build the bes-external-call.ear file and deploy it on the application server.

The BESExternalCall folder contains a sample <code>custom-logic-service.wsdl</code> file with the XML Schema Definition (XSD) for the external callouts. Use the WSDL file to understand the external services, operations, methods, and the data types that the service methods exchange. Use the Ant build file, <code>build.xml</code>, in the BESExternalCall folder to build the <code>bes-external-call.ear</code> file.

For more information about configuring and deploying the external web services, see the *Multidomain MDM Provisioning Tool Guide* and the *Multidomain MDM Business Entity Services Guide*.

### **Documentation**

This section describes significant changes to the MDM Multidomain Edition documentation set in version 10.2.

#### Informatica MDM Multidomain Edition Infrastructure Planning Guide - NEW

The Informatica MDM Multidomain Edition Infrastructure Planning Guide contains information required to plan the infrastructure and the architecture of the MDM Hub environment. The guide contains sample installation topologies to help you understand and decide on an installation topology. The guide is intended for use by infrastructure planners, Master Data Management solution architects, and business managers.

### Informatica MDM Multidomain Edition Informatica Data Director User Guide - RESTRUCTURED

The guide has two versions:

- For new customers, the *Informatica MDM Multidomain Edition Informatica Data Director User Guide* describes the views that are based on the Entity 360 framework and the business entity data model.
- For upgrading customers, the Informatica MDM Multidomain Edition Informatica Data Director User Guide (with Legacy Views) contains all the content from the Informatica MDM Multidomain Edition Informatica Data Director User Guide plus the content about the legacy IDD views that are based on the subject area data model.

### Informatica MDM Multidomain Edition Informatica Entity 360 Framework Guide - RETIRED

The Informatica MDM Multidomain Edition Informatica Entity 360 Framework Guide is retired. The Informatica MDM Multidomain Edition Provisioning Tool Guide contains information about the features that were described in this guide.

# Informatica Platform Log

The MDM Hub generates informatica-mdm-platform.log, which stores configuration log messages for Informatica platform processes.

The informatica-mdm-platform.log file appears in the following directory:

<MDM Hub installation directory>/hub/server/logs

# **Changes (10.2)**

### License File

Effective in version 10.2, the license file for MDM Multidomain Edition has been updated.

**Note:** If you upgrade, request the latest license file when you request the software for MDM Multidomain Edition version 10.2.

### Email Address for MDM Hub Users

Effective in version 10.2, MDM Hub users must supply a valid email address. Previously, an email address was optional.

**Note:** If you upgrade, ensure that you associate a valid email address with previously created users in the Hub Console.

For more information about editing supplemental user information, see the *Informatica MDM Multidomain Edition Version 10.2 Security Guide*.

# **Preserving Source System Keys**

Effective in version 10.2, when the option to preserve source system keys is enabled, source system keys are preserved for initial data loads and for all subsequent data loads.

Previously, when the option to preserve source system keys was enabled, source system keys were preserved for initial data loads only.

# Metadata Caching

Effective in version 10.2, the MDM Hub uses Infinispan for metadata caching.

Previously, the MDM Hub used JBoss Cache for metadata caching.

# **Layout Editor**

Effective in version 10.2, in the Provisioning tool, the Layout Editor is replaced by the Layout Designer.

For more information about the Layout Designer, see the *Informatica MDM Multidomain Edition Version 10.2 Provisioning Tool Guide.* 

# Unmerge

Effective in version 10.2, if you configure a role to trigger a task and configure the same role to process the task, an error occurs and the task is not processed.

# Merge Tasks

Effective in version 10.2, a new Matching Records view is available to process merge tasks that use the Business Entity-based

If you use the Subject Area-based ActiveVOS workflow adapter, use the legacy Matches view and the legacy XREF view. Set cmx.e360.match\_xref.view.enabled to false to use these legacy views to create tasks. When you upgrade to version 10.2, cmx.e360.match\_xref.view.enabled is false by default.

Any merge tasks created prior to version 10.2 open in the legacy Match view, regardless of the cmx.e360.match\_xref.view.enabled setting. If you enable the Entity 360 framework, merge tasks that are created in version 10.2 are opened in the Entity 360 framework Matching Records view.

Any merge tasks created prior to version 10.2 open in the legacy Match view. If you enable the Entity 360 framework, merge tasks that are created in version 10.2 are opened in the Entity 360 framework Matching Records view.

### **Transformations**

Effective in version 10.2, you cannot configure the platform transformations to cleanse, standardize, and validate data in business entities.

Previously, you could configure the platform transformations to cleanse, standardize, and validate data in business entities.

If you upgrade from an earlier version, to use the platform transformations that you configured, add an IDQ library in the Cleanse Functions tool of the MDM Hub Console. You can then use the cleanse functions in the library in place of the platform transformations. The cleanse functions in the IDQ library can call the web services associated with the platform transformations.

### Resource Kit

Effective in version 10.2, to help build custom web services and workflows, the Resource Kit contains the following additional files:

- The informatica-bpm-adapter.jar and siperian-server-pkiutil.jar files are additional
   SiperianClient library classes that you can use to build custom web services that interact with the MDM Hub.
- The avossdk.zip file contains the ActiveVOS Orchestration project and an associated library. If you want to develop a workflow for the MDM Hub, import the Orchestration project into ActiveVOS Designer. This creates a template workflow project in which you can implement custom workflows.

For more information, see the Informatica MDM Multidomain Edition Version 10.2 Resource Kit Guide.

# **Business Entities in the Pending State**

Effective in version 10.2, when you run a smart search, the search results include business entities that have records in the pending state. The pending state means that previous changes are going through a review and approval process.

In IDD, in the search results, business entities with pending changes have the prefix [Pending] in the Description field. If you open a pending business entity in a view, a pending icon appears near the business entity name. You cannot update a business entity that is in the pending state.

# MDM App for iPads and iPhones is Deprecated

The Informatica MDM Mobile Multidomain Edition for Apple<sup>®</sup> devices, also known as the MDM app, is deprecated. To make it easier for customers and partners to create mobile MDM sites or apps in a world of device diversity, we are creating responsive interfaces built on modern web standards such as HTML5, Angular.js, and Bootstrap.

# **Business Entity Schema Generation**

Effective in version 10.2, the business entity schema is generated when users click the **Publish** button in the Provisioning tool.

Previously, users had to click the **Generate BES** button to generate the business entity schema before clicking the **Publish** button.

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

# **Proxy Role**

The proxy role is not supported in version 10.2. A proxy role is a pre-defined role that you can use to configure a proxy user. The proxy role has read and execute privileges. You cannot change these privileges.

If you require a proxy role, you must apply 10.2 EBF 2 or 3, or upgrade to 10.2 HotFix 1.