



Informatica® Multidomain MDM  
10.3

# Data Director Migration Guide

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# Preface

Welcome to the *Multidomain MDM Data Director Migration Guide*. This guide walks you through migrating your Informatica Data Director applications from subject areas to business entities.

Before Multidomain MDM version 10.0, you configured Data Director with subject areas. As of version 10.0, you can choose to configure Data Director with business entities. This guide covers the main differences between the subject areas and business entities, how to migrate applications from subject areas to business entities, and how to update workflows.

This guide is intended for MDM administrators or anyone else who is responsible for managing applications for Data Director (IDD applications).

## Informatica Resources

### Informatica Network

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

As a member, you can:

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- Review your support cases.
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### Informatica Knowledge Base

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

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

## Informatica Documentation

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## Informatica Product Availability Matrixes

Product Availability Matrixes (PAMs) indicate the versions of operating systems, databases, and other types of data sources and targets that a product release supports. If you are an Informatica Network member, you can access PAMs at

<https://network.informatica.com/community/informatica-network/product-availability-matrixes>.

## Informatica Velocity

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

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

If you have questions, comments, or ideas about Informatica Velocity, contact Informatica Professional Services at [ips@informatica.com](mailto:ips@informatica.com).

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

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<http://www.informatica.com/us/services-and-training/support-services/global-support-centers>.

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

# CHAPTER 1

## Introduction

This chapter includes the following topics:

- [Overview, 7](#)
- [Benefits of Business Entities, 7](#)

## Overview

Use this guide if you have applications for Informatica Data Director (also called IDD applications) that are based on subject areas. Recall that a subject area is an implementation of a core entity, such as Person. The subject area organizes and relates the base objects in the MDM Operational Reference Store to one another in a three-level tree structure, which makes it easier to manage the data as a unit.

In version 10.0 and later, Data Director was modernized. As part of that effort, the data structure changed from subject areas to business entities. A business entity also represents a core entity, but the business entity organizes and relates the base objects in a tree structure with unlimited depth. Business entities support an enhanced user interface, REST API calls, and the ActiveVOS workflow engine for business process workflows.

Review this guide to understand the benefits and differences that come with the business entity data structure. The migration to business entities is optional, but highly recommended. If you choose to migrate an application, follow the instructions to convert to business entities and update workflows.

**Note:** If an application with subject areas has extensive customization and user exits, carefully weight the pros and cons before beginning a migration.

## Benefits of Business Entities

Business entities offer the following benefits over subject areas:

### **Integrated business entity services**

A business entity service is a set of operations that run MDM Hub code to create, update, delete, and search for records in a business entity. You can develop a custom user interface that can run Java code or JavaScript code to make business entity service calls.

By using business entity services, which are generated directly from the BE data model, you can hide the complexity of the MDM Hub table structure from end users.

**Configurable user interface**

You can design user interface layouts that can contain standard and custom components, such as a Twitter feed. Business analysts can easily create layouts targeted at specific user roles.

**Ability to merge child records**

With subject areas, you cannot merge child records. With business entities, you can merge child records that are at the same descendant level.

**Business entity views**

Business entity views represent a condensed version of a business entity. You can simplify integration with existing systems by using business entity views to create a view that matches your existing processes.

**Integration with Data as a Service (DaaS) providers**

You can augment your business entity data with data from third-party data providers. You can integrate with DaaS providers to access data that is reliable, accurate, and complete.

**Unlimited nesting of descendant records**

A subject area can include descendant records up to the grandchild level. Business entity models can have an unlimited depth of descendant records.

**Improved user interface**

The Entity 360 framework screens (also called E360 views) are cleaner, more colorful, and more intuitive.

**Simplified and enhanced data search**

A full-text search on business entities retrieves data faster than a faceted search on subject areas.



## CHAPTER 2

# Comparison Between Business Entities and Subject Areas

This chapter includes the following topics:

- [Summary of Differences, 9](#)
- [Data Structures, 10](#)
- [Configuration Tool, 10](#)
- [Impact on Data Director, 11](#)

## Summary of Differences

There are a few differences in functionality between business entities and subject areas.

The following table summarizes the differences:

Subject Area	Business Entity
Configured through the IDD Configuration Manager	Configured through the Provisioning tool
User exits	Does not support user exits. Instead, use external services and call them from internal business entity services.
Import master data	Not available
Mask data	You can create views linked to user roles, and omit or include sensitive fields as required. In addition, Dynamic Data Masking (DDM) is integrated with the MDM Hub. You configure DDM through the Hub Console.
Tree unmerge and linear unmerge	Tree unmerge only
Jaspersoft reports	Jaspersoft reports work in a <b>Home</b> page only if it is the only component in the <b>Home</b> page.

# Data Structures

The data structure for business entities differs from subject areas. In both cases, the data structures represent core entities with importance to your organization, such as Person or Location.

## Subject Area Data Structure

In the subject area structure, data is organized around subject areas and aggregated into subject area groups. For example, a subject area can be a Person. You configure relationships within subject areas that are based on the relationships that exist between base objects in the Hub Store. You configure lookups in a physical lookup base object table, and Data Director uses metadata or configuration files to populate the lookup values. For information about subject area configuration, see the *Multidomain MDM Data Director Implementation Guide*.

## Business Entity Data Structure

In the business entity data structure, data is organized around business entities. A business entity is a tree of nodes, where each node corresponds to a base object table in the MDM Hub. Each field corresponds to a column of a base object table in the MDM Hub. A business entity is based upon a root node. The root node is synonymous with the business entity. For example, a business entity with a Person root node is considered to be a Person business entity.

After the root node is established, you can use the Provisioning tool to create child nodes that have a one-to-one or one-to-many relationship with their parent nodes. You can also use the Provisioning tool to configure reference entities, which are business entities that are associated with lookup base objects. For information about the Provisioning tool, see the *Multidomain MDM Provisioning Tool Guide*.

# Configuration Tool

For applications with subject areas, you use the IDD Configuration Manager to configure an application. For applications with business entities, you use the Provisioning tool to configure an application.

## IDD Configuration Manager

The IDD Configuration Manager is a web-based utility used to add, change, and manage IDD applications that are based on subject areas. An IDD application consists of an XML configuration file, resource bundles, help files, and other components. A complete IDD application can be imported or exported as a ZIP file containing all of these components.

The IDD Configuration Manager does not expose all available configuration options. To configure some functionality, such as custom components, you must export and edit the XML configuration file directly, before you import the file back into the IDD Configuration Manager.

For more information about the IDD Configuration Manager, see the *Multidomain MDM Data Director Implementation Guide*.

## Provisioning tool

The Provisioning tool is a web-based utility that you use to create and manage business entities and the related IDD applications. You can use the Provisioning tool to define business entity models, tasks, and transformations, and design the user interface for Data Director.

You can define and design the following items:

- Business entities
- Business entity views

- Reference entities
- Relationships
- Transformations
- Task configurations
- Extensions, such as SOAP services
- User interface components
- User interface layouts

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

## Impact on Data Director

Data Director has new modes, views, and search functionality.

## Modes for Informatica Data Director

Data Director now has three modes. After you upgrade the Multidomain MDM software, Data Director continues to display the application based on subject areas. After you migrate an application to business entities, you can switch to the E360 views and features.

The following table describes the different modes:

Mode	Description	User Interface
Legacy Mode	<p>If you do not migrate your application to the business entities, use the Legacy mode. You continue to see the legacy views and functionality for subject areas.</p> <p>You continue to use the IDD Configuration Manager to manage your applications.</p> <p><b>Note:</b> If your legacy IDD application includes workflows, you must generate the business entity schema as a requirement for Data Director to manage the workflow tasks. However, you continue to use subject areas. You have not migrated to business entities.</p>	<p>The Legacy mode displays the following interface elements:</p> <ul style="list-style-type: none"><li>- <b>New</b> tab, which opens the <b>New</b> window with subject areas</li><li>- <b>Home</b> page</li><li>- <b>Data</b> tab with the following temporary interfaces:<ul style="list-style-type: none"><li>- Subject area record views to edit and manage records</li><li>- Search tabs with search queries and search query results</li><li>- Task tabs to manage tasks</li></ul></li><li>- Links to the <b>Data</b> view from menus on other views</li><li>- Custom tabs, if configured</li></ul>
E360 Mode	<p>If you migrate to business entities, select the E360 mode. Business users can use the E360 views and functionality for business entities.</p> <p>You use the Provisioning tool to manage your migrated applications.</p> <p><b>Note:</b> The E360 mode is the default mode for new customers. New customers start with business entities and the E360 views.</p>	<p>Displays the following interface elements:</p> <ul style="list-style-type: none"><li>- <b>New</b> tab, which opens the <b>New</b> window with business entities</li><li>- <b>Home</b> page, which you design</li><li>- <b>Task Manager</b> tab to manage tasks</li><li>- <b>Search</b> tab with search results</li><li>- Entity tabs to edit and manage business entity records. Entity tabs appear when you add a new business entity record or open a business entity record from search results. The label on the tab is dynamic, based on the action that opens the workspace.</li><li>- Links to the <b>Business Entity</b> view from menus on other views</li><li>- Custom tabs, if configured</li></ul>
Hybrid Mode	<p>If you migrate to business entities, but you want to access to all the views and features for both subject areas and business entities, use the Hybrid mode.</p> <p><b>Caution:</b> If you need to make a change to the schema while in Hybrid mode, you must make the change twice: first in the IDD Configuration Manager and again in the Provisioning tool. Informatica recommends that you use the Hybrid mode only on a temporary basis.</p>	<p>Displays all the interface elements from the Legacy mode and the E360 mode.</p>

This document assumes that you are migrating to the E360 mode. If you want to use the Legacy mode or the Hybrid mode, see [“IDD Modes FAQs” on page 33](#) before you begin the migration.

## Views

The views for business entities (called E360 views) are similar to the views for subject areas (called legacy views). In some cases, the E360 views have different behavior or offer some enhancements.

**Note:** In comparing the views, we assume that you are already familiar with the behavior of the legacy views.

The following table describes the similarities between the views and then highlights how the E360 views are different:

Legacy Views for Subject Areas	E360 Views for Business Entities	Similarities Between the Views	Differences for the E360 Views
Data View	Business Entity	Both views display master data for the selected business entity.	In the Business Entity view, you can add related social information, such as the entity's Twitter feed. You can also add helpful components, such as a component that displays similar business entities. You can configure more than one Business Entity view, and add the custom views to the Views list.
XREF View	Cross-reference Records	Both views display the cross-reference records that contain data from the source systems. You can create the best version of the truth.	The Cross-reference Records view includes all levels of descendant records.
Matches View	Matching Records	Both views display records that satisfied a match rule.	In the Matching Records view, users can match and merge descendant records. Users can also run a smart search to find and add similar records. You cannot manually override a value in the Matching Records view.
History View	History	Both views display data events in chronological order.	In the E360 version of the History view, the events appear in a vertical chronology, and data change event details appear in a panel to the right.
Effective Periods View	Timeline	Both views display information about data events with effective periods along a timeline.	n/a

Legacy Views for Subject Areas	E360 Views for Business Entities	Similarities Between the Views	Differences for the E360 Views
Hierarchy View	Hierarchy	Both views display relationships for a selected business entity.	The E360 version of the Hierarchy view does not permit the following actions: <ul style="list-style-type: none"> <li>- Finding a duplicate entity. Use a Business Entity view with the Similar Records component, or use the Matching Records.</li> <li>- Initiating a merge. Use the Matching Records view for this task.</li> <li>- Sharing a bookmark URL. You can still share an image of a hierarchy.</li> </ul>
Custom record views	n/a	No custom views.	You can create custom record views to replace any of the standard views. You can add the names of the custom views to the Views list in the IDD application.

## Search

With subject areas, you use search queries to find master records. With business entities, you can use a smart search or search queries to find master records. In all cases, search results are restricted based on data filters.

### Search Queries

You create a search query to search selected fields for specified field values. First you select fields from the subject area that you want to search. For each field, you enter a value that you want to search for within the field.

### Smart Search

You identify the fields that you want to be searchable. In the IDD application, users can type their search term in a Search box. The search runs on the fields that you marked as searchable in the business entity. Based on the user role permissions and the selected business entities, the results include records from the business entities that the user can access. Search is often faster than search queries.

## CHAPTER 3

# Migrating IDD Applications

This chapter includes the following topics:

- [Overview, 15](#)
- [Prerequisites, 16](#)
- [Prepare the ORS and the IDD Application, 16](#)
- [Change the Mode for IDD, 17](#)
- [Generate the Business Entity Schema, 17](#)
- [Log in to the Provisioning Tool, 18](#)
- [Create an Application for Data Director, 18](#)
- [Review the Generated Business Entity Schema, 20](#)
- [Enable Smart Search, 21](#)
- [Design a Home Page, 21](#)
- [Next Steps, 23](#)

## Overview

This procedure assumes that, after you migrate to the business entity data model, you want to configure the IDD application to use E360 mode.

**Note:** If you want to use the Legacy mode or the Hybrid mode, see [“IDD Modes FAQs” on page 33](#) before you begin the migration.

Before you begin, ensure that you have the prerequisite software configured.

## Prerequisites

Before you migrate to business entities and the E360 views, configure the software to support smart search and business process management (BPM) workflows. The software is installed as part of the installation or upgrade process. You need to ensure the software is configured correctly.

The following table lists the prerequisite software and tells you where to find the configuration instructions:

Software	Description	Instructions
Apache Solr and Apache ZooKeeper	The MDM Hub uses Apache Solr to perform smart searches, that is, full text searches on selected fields in the master data. Apache Solr is an open-source enterprise search application. SolrCloud uses a cluster of Solr servers to provide distributed indexing and search. Apache ZooKeeper is a centralized service that synchronizes searches across multiple Solr servers.	For information about configuring smart search, see the <i>Multidomain MDM Configuration Guide</i>
ActiveVOS	Required when you want to use BPM workflows with the BE data model. The MDM Hub uses ActiveVOS to run BPM workflows and to create review tasks. When you upgrade, install ActiveVOS as part of the Hub Server upgrade process, and select the BE ActiveVOS workflow adapter as a workflow engine in the MDM Hub Console.	For information about installing and configuring ActiveVOS, see the <i>Multidomain MDM Upgrade Guide</i> or the <i>Multidomain MDM Installation Guide</i> , as applicable.

## Prepare the ORS and the IDD Application

Ensure that your Operational Reference Store (ORS) and the IDD application meet the requirements for business entities.

The following table describes the requirements:

Area of Impact	Requirement	Description
Hierarchy entity base object	Foreign key relationships must map to a CODE column	If a foreign key maps to another type of column, remap it to a CODE column.
Subject area names	No underscores or other special characters in names	If some subject area names contain the underscore character or special characters, rename the subject areas to remove the underscore.
Validation	The IDD application based on subject areas must be valid.	In the IDD Configuration Manager, validate the IDD application and resolve any errors.



# Change the Mode for IDD

After you upgrade the Multidomain MDM software, if you open an IDD application based on subject areas, by default you see the legacy views and search query feature. After you migrate, you can enable the E360 mode to see the E360 views and the smart search box.

To change the mode for IDD, you set properties in the MDM Hub Server properties file and the Process Server properties file.

1. Navigate to the following directory:  
`<MDM Hub installation directory>/hub/server/resources`
2. Open the `cmxserver.properties` file.
3. Set the properties to reflect the views that you want to show in the migrated IDD application.

The following table lists the properties and the before and after settings:

Properties	Before = Legacy Mode	After = E360 Mode
<code>cmx.dataview.enabled</code>	true	false
<code>cmx.e360.view.enabled</code>	false	true
<code>cmx.e360.match_xref.view.enabled</code>	false	true
<code>cmx.ss.enabled</code>	false	true

4. Navigate to the following directory:  
`<MDM Hub installation directory>/hub/cleanse/resources`
5. Open the `cmxcleanse.properties` file.
6. Set the `cmx.ss.enabled` property to match the value that you set in [3](#).
7. After you save the changes to the properties files, restart the application server.

# Generate the Business Entity Schema

You use the IDD Configuration Manager to generate the business entity schema.

During the generation process, the MDM Hub performs the following migrations:

- Creates a business entity for each subject area
- Converts lookups to reference entities
- Migrates relationships

The process saves the business entity schema in the C\_REPOS\_CO\_CS\_CONFIG repository table.

1. Log into the IDD Configuration Manager.
2. Select the application to migrate.
3. In the **Applications** screen, click **Generate Business Entity Schema**.

A message confirms that the schema was created. You can view the generated schema in the Provisioning tool.

# Log in to the Provisioning Tool

You use the Provisioning tool to view and enhance the schema.

1. Open a new browser tab and use the same IP address and port number that you use for the IDD Configuration Manager:

<IP address>:<port>/provisioning/

2. Enter the same user credentials that you use for the IDD Configuration Manager.

## Create an Application for Data Director

Each Operational Reference Store (ORS) database can have one application. In the Provisioning tool, create an application that is based on the same ORS as the legacy application. For convenience, you might want to give it the same name as the legacy application.

**Note:** If you plan to use Hybrid mode, you must ensure that the E360 application name is the same as the legacy application name.

1. In the Provisioning tool, from the **Database** list, select the database with which you want to associate the application.
2. Click **Configuration > Application Editor**.  
The **Applications** page appears.
3. Click **Create**.
4. In the application properties panel, specify the following properties:

Property	Description
Name	Name of the application that appears in the Applications panel.
Display Name	Name of the application that appears in Data Director.
Source System	Source system with which you want to associate the application.
Session timeout (minutes)	Time in minutes to wait before an idle Data Director session can time out.
Display Default Record Views	Enables the default record views. The names of the default record views appear in the <b>View</b> list in Data Director.
Smart search	Enables the <b>Search</b> menu option in the Data Director navigation bar.

Property	Description
Queries	Enables the <b>Query</b> menu option in the Data Director navigation bar.
Queries dialog in application	<p>This option appears when you enable both the <b>Smart search</b> and the <b>Queries</b> options. Enable the <b>Queries dialog in application</b> option to allow the use of queries to search for records within a record view, such as <b>Matching Records</b> or while using a component, such as <b>Related Records</b>. By default, the search menu option is available.</p> <p><b>Note:</b> Both the <b>Query</b> and the <b>Search</b> menu options appear in the Data Director navigation bar.</p>

5. Click **Apply**.  
The application properties are saved to the temporary workspace.
6. To display the results of a search or query, configure the business entity view that you want to use.  
**Note:** If you use the Apache Solr search engine, skip this step.
  - a. In the tree view panel, click the **Search Configuration** node.
  - b. In the application properties panel, for each business entity, select the business entity view for the search or query results.  
If you do not select a business entity view, the search or query results contain the full business entity.
  - c. Click **Apply**.  
The search or query results configuration is saved to the temporary workspace.
7. Optionally, to configure the business entities within the application, in the tree view panel, click the **Business Entities** node.
  - a. To create a configuration for a business entity within the application, click **Create**.
  - b. In the **Properties** panel, select the business entity you want to configure and specify the following business entity properties:

Property	Description
Visible	Specifies whether the business entity is visible from the <b>New</b> tab when users create records.

8. Click **Apply**.  
The application that you created appears in the **Tree View** panel and in the **Applications** panel.
9. Publish the changes to the MDM Hub.
  - a. Click **Publish**.  
A change confirmation dialog box appears that prompts you to confirm the changes.
  - b. Review the changes, and click **Confirm**.  
A validation process runs on the application. A confirmation dialog box appears that prompts you to publish the changes.
  - c. Click one of the following buttons:
    - **Publish**. Saves the changes to the MDM Hub.

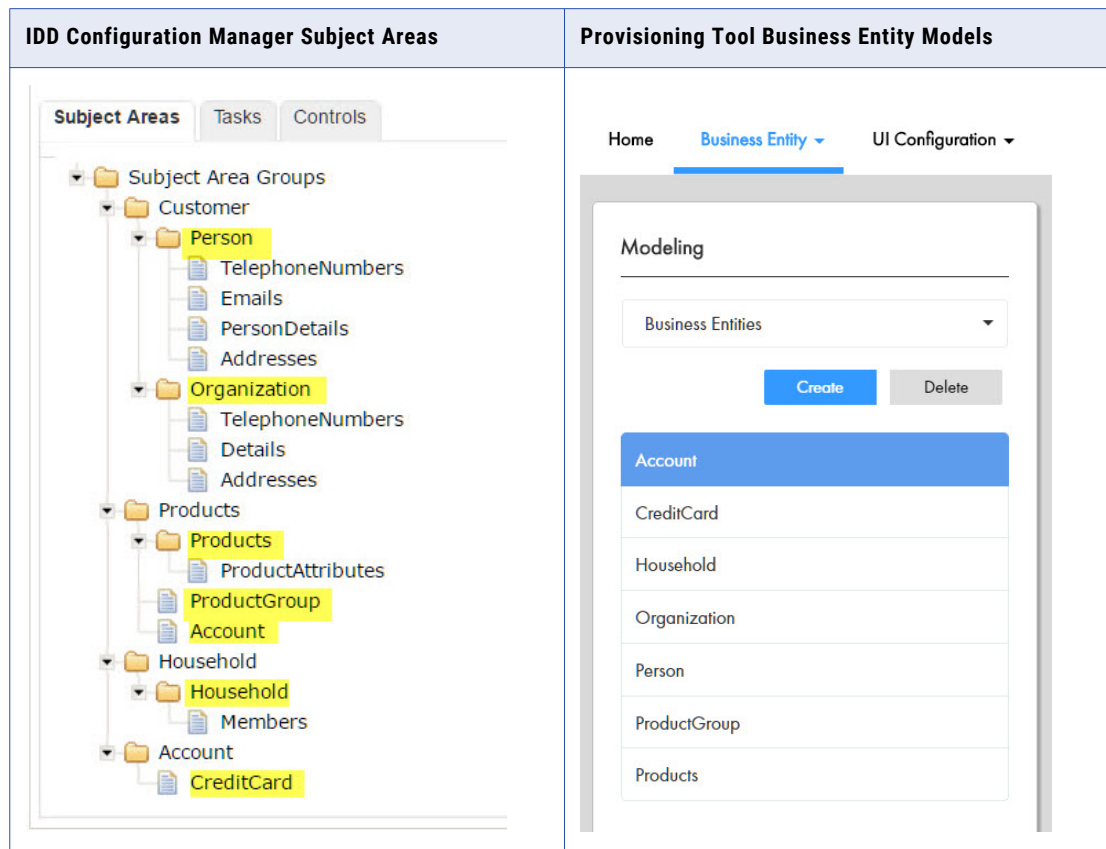
- **No.** The changes remain in the temporary workspace.

## Review the Generated Business Entity Schema

You use the Provisioning tool to view and enhance the schema in a user-friendly interface.

1. In the Provisioning tool, select the E360 application for the database.
2. Click **Business Entity > Modeling**.
3. Select **Business Entities** from the drop-down list.

The following images show the original list of subject areas and the generated list of business entity models:



4. To see the lookups, select **Reference Entities** from the drop-down list.
5. To see the relationships, select **Relationships** from the drop-down list.

# Enable Smart Search

To enable smart search, open a business entity and select the fields that you want to be searchable. When you are done, run the **Initially index Smart Search data** batch job from the MDM Hub Console.

**Caution:** Do not mark the rowidObject field as searchable. The business entity data model does not support searches on the rowidObject field.

Run the batch job on all business entities.

1. In the Provisioning tool, click **Business Entity > Modeling**, and select **Business Entities**.
2. Click a business entity.  
The business entity opens.
3. In the business entity panel, expand the **Field** folder.  
All the fields are displayed
4. For each field that you want to be searchable, select the field and click **Searchable** in the Properties panel.
5. After you identify the searchable fields in the business entity models, click **Publish**.  
**Attention:** You must publish the searchable fields to the database. If you do not publish the changes, the next step fails because there are no searchable fields to index.
6. In the MDM Hub Console, run the **Initially index Smart Search data** batch job on the business entity models that contain searchable fields:
  - a. Log in the Hub Console and select the Operational Reference Store database.
  - b. In the **Utilities** workbench, click **Batch Viewer**.
  - c. Select **Group By Procedure Type**.
  - d. Find **Initially index Smart Search data**.
  - e. Select each business entity model and click **Execute Batch**.  
The index batch jobs run.**Tip:** Alternatively, you can create a batch group, add all the index jobs for the business entity models that you want to index, and then run the batch group.

## Design a Home Page

Use the Layout Designer to design the **Home** page for an IDD application with business entities. In the **Home** page, add components, such as a task inbox, charts, social media feeds, and other external resources.

In some cases, you need to design the components before you can add them to the **Home** page. For more information about components and layouts, see the *Multidomain MDM Provisioning Tool Guide*.

1. In the Provisioning tool, click **Configuration > Layout Designer**.  
The **Layout Designer** appears.
2. Click **Create > Home Page Layout**.  
The **Properties** page appears.

- Specify the following properties:

Property	Description
Layout Name	Label for the layout that you design. After you design and publish the layout, the layout name appears in the <b>Layout Categories</b> panel.
Layout ID	Label used for generating a system ID.
Description	Optional. A meaningful description to identify the layout.

- Click **Next**.

The **User Roles** page appears.

- Select the user roles that can access the **Home** page.

The user roles that appear on the **User Roles** page are configured in the MDM Hub.

- Click **Next**.

The **Template** page appears.

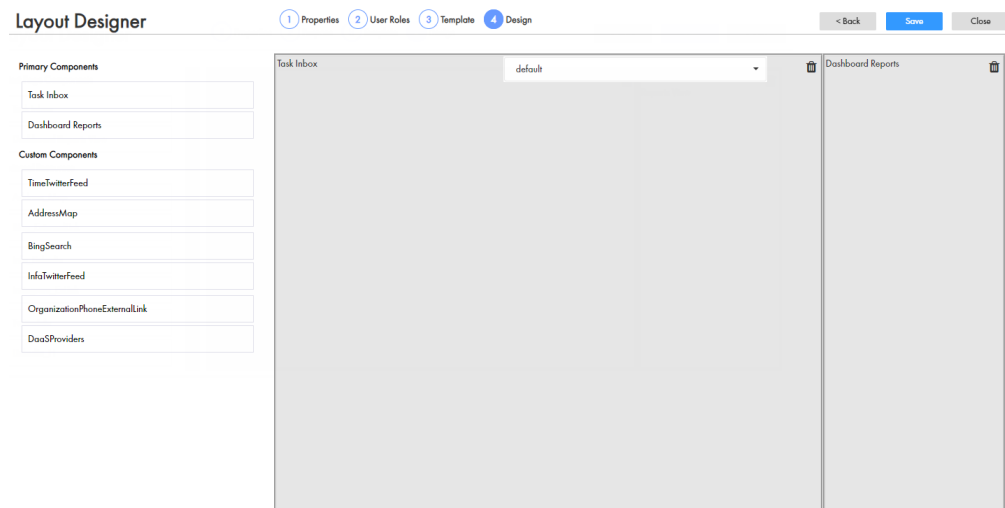
- Select a template that supports how users will interact with the **Home** page, and click **Next**.

The **Design** page appears.

- Drag the components that you want in the **Home** page layout into the workspace.

For example, drag the **Task Inbox** and the **Dashboard Reports** components into the workspace.

The following image shows the **Design** page with the **Task Inbox** component and the **Dashboard Reports** component in the workspace:



- Click **Save**.

The changes are saved to the temporary workspace.

- Publish the changes to the MDM Hub.

- Click **Publish**.

A change confirmation dialog box appears that prompts you to confirm the changes.

- Review the changes, and click **Confirm**.

A validation process runs on the application. A confirmation dialog box appears that prompts you to publish the changes.

- c. Click one of the following buttons:
- **Publish.** Saves the changes to the MDM Hub.
  - **No.** The changes remain in the temporary workspace.

## Next Steps

If you are implementing the BPM workflow and tasks, the last mandatory step is to set up the ActiveVOS workflow adapter, define task triggers, and process existing tasks. See the next section.

In future, you use the Provisioning tool to update and customize your application.

You can customize the E360 application in the following ways:

- Design Entity view components and layouts
- Configure cleanse transformations
- Create business entity views that contain a subset of fields
- Create new business entity models
- Add extensions for services, such as third party data providers

For more information about customizing an E360 application, see *Multidomain MDM Provisioning Tool Guide*.

For more information about how the functionality in IDD Configuration Manager maps to the Provisioning tool, see [“Migration FAQs” on page 32](#).

## CHAPTER 4

# Migrating Workflow Adapters

This chapter includes the following topics:

- [Overview, 24](#)
- [Update the IDD Configuration for the Siperian Workflow Adapter, 25](#)
- [Configure Task Assignment for Siperian Workflow Adapter, 26](#)
- [Configure Tasks, 26](#)
- [Setting the Primary and Secondary Workflow Adapters, 27](#)
- [Processing Existing ActiveVOS Tasks, 27](#)

## Overview

When you migrate an application to business entities, you must migrate from the Siperian or SA ActiveVOS workflow adapter to the BE ActiveVOS workflow adapter.

The BE ActiveVOS workflow adapter uses the BE ActiveVOS workflows. The BE ActiveVOS workflows operate on business entities. Some screens, such as the Matching Records view, require the BE ActiveVOS workflows to support child entity merges.

The MDM Hub supports a primary workflow adapter and a secondary workflow adapter. The secondary adapter allows you to process existing tasks with the old workflow adapter while you migrate to the BE ActiveVOS workflow adapter. When you migrate workflow adapters, set the BE ActiveVOS workflow adapter as the primary adapter.

Data Director launches the appropriate screens to process tasks. For example, if an unmerge task is created prior to migration, the legacy XREF view is launched when the task is processed.



# Update the IDD Configuration for the Siperian Workflow Adapter

To view Siperian workflow adapter tasks in Task Manager, update the task configuration in the Informatica Data Director configuration file.

1. Update the Siperian BPM task type configuration.

- Change `defaultApproval="true"` to `defaultApproval="false"`.
- Set `creationType` to `NONE`.

2. Add the task configuration for the ActiveVOS tasks.

The following code sample shows how to configure business entity-based ActiveVOS tasks in the Informatica Data Director configuration file:

```
<tasks includeUnassignedTasks="true">
  <!-- Task Definitions -->
  <taskType taskTypeId="BeMergeTask" name="AVOSBeMerge" displayName="Merge"
    creationType="MERGE" displayType="MERGE">
    <description>Merge two records together.</description>
  </taskType>

  <taskType taskTypeId="BeUnmergeTask" name="AVOSBeUnmerge"
    displayName="Unmerge" creationType="UNMERGE" displayType="UNMERGE">
    <description>Unmerge an XREF record from a Base Object record.
    </description>
  </taskType>

  <taskType taskTypeId="BeOneStepApprovalTask" name="AVOSBeFinalReview"
    displayName="Final review" creationType="NONE" pendingBVT="true">
    <description>Update a record and require the user to go through an
    approval process before completing the task.
    </description>
  </taskType>

  <taskType name="AVOSBeNotification" displayName="Notification"
    creationType="NONE" displayType="NORMAL">
    <description>Notification step in the workflow</description>
  </taskType>

  <taskType taskTypeId="BeTwoStepApprovalTask" name="AVOSBeReviewNoApprove"
    displayName="Review no approve" creationType="NONE" defaultApproval="true"
    pendingBVT="true">
    <description>Update a record and require the user to go through an
    approval process before completing the task.
    </description>
  </taskType>

  <taskType taskTypeId="BeUpdateWithApprovalTask" name="AVOSBeUpdate"
    displayName="Update" creationType="CREATE" pendingBVT="true"
    displayType="NORMAL">
    <description>Update a record and do not require the user to go through an
    approval process before completing the task. The approval step is optional.
    </description>
  </taskType>
</tasks>
```

# Configure Task Assignment for Siperian Workflow Adapter

To configure task assignment for the ActiveVOS workflow adapter based on business entities, use the IDD Configuration Manager to configure task assignment for each subject area. The user can either assign the task directly or allow the Task Manager to assign tasks to users.

1. Log in to the Informatica Data Director Configuration Manager.  
`http://[host]:[port]/bdd/config/`
2. Select the application to update.
3. Click **Edit**.
4. In the Subject Areas tab, select a subject area, and then click **Edit Subject Area**.
5. Click the **Task Assignment** tab, and then click **Add**.
6. From the Task Assignment dialog box, select the task to configure from the Task list.
7. Select the roles and users to which the task can be assigned. Click **OK**.
8. Click **Save**.
9. Click **Generate Business Entity Schema**. Configuration Manager generates the business entity and business entity service configuration.
10. In the MDM Hub, use the Repository Manager to validate the Operational References Store. The Repository Manager validation refreshes the repository data that is cached in the application server.

## Configure Tasks

When you switch to the BE ActiveVOS workflow adapter, use the Provisioning Tool to configure tasks to use the BE ActiveVOS workflows.

You can configure the following task properties in the Provisioning tool:

### Configure the task template

You can configure task templates so that a task is created with specific properties. For example, you can specify that when a trigger launches a workflow, the tasks have a particular title, priority, due date, and task status.

### Configure the workflow triggers

You configure workflow triggers so the appropriate ActiveVOS<sup>®</sup> workflow is launched after certain events in Data Director. You can configure whether users must add comments or attachments when they trigger workflows.

### Configure the task types

You can configure task types so that specific user roles can claim or be assigned tasks. You can create task action configurations for each task type. You can configure whether users must add a comment, attach a file, or reassign tasks when they perform task actions.

# Setting the Primary and Secondary Workflow Adapters

To migrate to the BE ActiveVOS workflow adapter, select the BE ActiveVOS workflow engine as the primary workflow engine. The name of the workflow adapter for business entities is `BE ActiveVOS`. You can process existing tasks with the secondary workflow engine but you cannot create tasks. Do not select the same workflow engine for the primary and secondary workflow engines.

If you have not previously used Multidomain MDM with embedded ActiveVOS, select the `BE ActiveVOS` adapter as the primary workflow adapter. You do not need to select a secondary workflow adapter to process existing tasks.

**Note:** If your Data Director application uses subject areas, continue to use the `Informatica ActiveVOS` adapter as the primary workflow engine.

When you add a workflow engine, it becomes the primary workflow engine and the existing primary workflow engine becomes the secondary workflow engine. If you have an existing secondary workflow engine, the workflow engine is dropped from the Operational Reference Store and the tasks are removed from the task inbox.

1. In the **Configuration** workbench, click **Workflow Manager**.
2. Acquire a write lock.
3. Select the **Workflow Engine** tab, and ensure that the following BE ActiveVOS workflow adapter information is correct:
  - ActiveVOS Server host
  - ActiveVOS Server port
  - username of trusted user
  - password of trusted user
  - protocol for communication between the MDM Hub and the ActiveVOS Server
4. Select the **Operational Reference Store Workflow Mapping** tab.  
The table in the tab contains all the Operational Reference Store databases in the Hub Store.
5. In the **Primary Workflow Engine** column, select the workflow engine for the BE ActiveVOS workflow adapter.
6. In the **Secondary Workflow Engine** column, select a workflow engine.

## Processing Existing ActiveVOS Tasks

### Processing Existing ActiveVOS Tasks Overview

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

The migration script requires that you set some properties. You can add the properties to a build file or you can add them in the command line.

## Running the Migration Script

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

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

1. Create an MDM Hub user that belongs to all roles involved in task management. The out-of-the-box roles are DataSteward, Manager, and SrManager.

The ActiveVOS migration utility requires that you create a user that belongs to all task management roles.

**Note:** After the migration, the tasks are assigned to the same users that the tasks were assigned to before the upgrade.

You can run the script with the properties in a file or with the properties on the command line.

2. To run the script with a properties file, perform the following steps.

- a. Open the following file in a text editor:

```
<MDM Hub installation directory>\hub\server\bin\build.properties
```

- b. Add the following properties to the `build.properties` file.

Property	Description
<code>avos.jdbc.database.driver.jar</code>	Path to the JAR file that contains the JDBC driver for ActiveVOS database.  This parameter is populated during the Hub Server installation without the avos prefix in <code>&lt;infamdm installation directory&gt;\conf\avos.install.properties</code> .
<code>avos.jdbc.database.driver.class</code>	JDBC driver class for ActiveVOS database.  This parameter is populated during the Hub Server installation without the avos prefix in <code>&lt;infamdm installation directory&gt;\conf\avos.install.properties</code> .
<code>avos.jdbc.database.url</code>	ActiveVOS database connection URL.  This parameter is populated during the Hub Server installation without the avos prefix in <code>&lt;infamdm installation directory&gt;\conf\avos.install.properties</code> .
<code>avos.jdbc.database.username</code>	ActiveVOS database user name.  This parameter is populated during the Hub Server installation without the avos prefix in <code>&lt;infamdm installation directory&gt;\conf\avos.install.properties</code> .
<code>avos.jdbc.database.password</code>	ActiveVOS database password.
<code>avos.ws.protocol</code>	The protocol for the ActiveVOS server connection. Can be http or https.
<code>avos.ws.host</code>	Host name of the application server where ActiveVOS runs.

Property	Description
avos.ws.port	Port number of the application server connection.
avos.ws.trusted.username	User name of the trusted user. <b>Note:</b> The trusted user is created as part of the Multidomain MDM installation and upgrade process.
avos.ws.trusted.password	Password for the trusted user. <b>Note:</b> The trusted user is created as part of the Multidomain MDM installation and upgrade process.
avos.hub.username	MDM Hub user that belongs to all roles involved in task management. The out-of-the-box roles are DataSteward, Manager, and SrManager.
avos.ws.pagesize	Number of tasks processed in one database transaction and batch-loaded from ActiveVOS.
avos.ws.statuses	Optional. Comma-separated list of ActiveVOS task statuses to be processed. For example, READY or IN_PROGRESS. By default all tasks are processed.

- c. Open a command prompt.
- d. Navigate to the following directory:  

```
<MDM Hub installation directory>/hub/server/bin
```
- e. Run the MDM Hub Master Database upgrade script with the following command:
  - On UNIX. `sip_ant.sh migrate-avos-sa-tasks`
  - On Windows. `sip_ant.bat migrate-avos-sa-tasks`

3. To run the script with the properties on the command line, perform the following steps.

- a. Open a command prompt.
- b. Navigate to the following directory:  

```
<MDM Hub installation directory>/hub/server/bin
```
- c. Run the MDM Hub Master Database upgrade script with the properties in the command. For example, you can run the following command:
  - On UNIX.

```

sip_ant.sh migrate-avos-sa-tasks -Davos.jdbc.database.password=!!cmx!!
-Davos.ws.protocol=http -Davos.ws.host=localhost -Davos.ws.port=8080 -
Davos.ws.pagesize=100
-Davos.ws.trusted.username=avos -Davos.ws.trusted.password=avos -
Davos.hub.username=admin

```
  - On Windows.

```

sip_ant.bat migrate-avos-sa-tasks -Davos.jdbc.database.password=!!cmx!!
-Davos.ws.protocol=http -Davos.ws.host=localhost -Davos.ws.port=8080 -
Davos.ws.pagesize=100
-Davos.ws.trusted.username=avos -Davos.ws.trusted.password=avos -
Davos.hub.username=admin

```

4. Run the script on a regular schedule.

5. After all the tasks for the subject area workflow adapter are processed, you do not need to run the script and you can delete the user.

## CHAPTER 5

# Troubleshooting

This chapter includes the following topic:

- [Troubleshooting, 31](#)

## Troubleshooting

If you face problems when you migrate from the SA data model in IDD to the BE data model in IDD, use the following information to troubleshoot the issue.

### The IDD configuration is invalid

When you generate a business entity schema, sometimes Hierarchy Manager entity base objects do not convert the relationships of Hierarchy Manager-enabled business entities correctly.

To resolve the issue, in the IDD Configuration Manager, edit a subject area with a Hierarchy Manager entity base object. A numeric subtype value indicates an invalid IDD configuration. In the **HM Entity Type** field, select another entity type and then reselect the original entity type until the value in the **Subtype Value** field changes to a nonnumeric value.

### Smart search doesn't work

Verify that you completed the following steps:

1. In the Hub Console, you configured smart search and ZooKeeper. You configured only one Process Server as a ZooKeeper server.
2. You set `cmx.ss.enabled=true` in both the `cmxserver.properties` file and the `cmxcleanse.properties` file.
3. If you use IBM WebSphere, you set `pingSolrOnStartup=true` in the `cmxcleanse.properties` file.
4. In the E360 application, you marked fields as searchable in the business entity models.
5. You published the schema with the searchable fields.
6. From the MDM Hub Console, you ran the search index batch job on all the business entities.

### A review task opens a business entity in a legacy view, but I turned off the legacy views

The task was migrated from the legacy IDD application. When you open the entity from the task, it opens in the view in which it was edited. When all the legacy tasks are closed, the legacy views are no longer used.

## CHAPTER 6

# Frequently Asked Questions

This chapter includes the following topic:

- [Frequently Asked Questions, 32](#)

## Frequently Asked Questions

Here is a collection of the most frequently asked questions about migrating an IDD application to the BE data model.

The list is sorted into the following categories:

- [“Migration FAQs” on page 32](#)
- [“IDD Modes FAQs” on page 33](#)
- [“ActiveVOS FAQs” on page 34](#)

### Migration FAQs

#### Is it mandatory to upgrade to the business entities?

No. Informatica encourages customers to use Data Director with business entities, but Informatica still supports customers who want to use subject areas. However, you must generate a business entity schema for tasks to work.

Furthermore, after you migrate to business entities, Informatica recommends that you avoid using subject areas entirely. It could cause confusion among data stewards and possibly lead to lost changes to data.

#### Can I still use user exits with business entities?

No. User exits do not work with business entities. However, you can create external calls to replace some of the functionality of user exits.

#### Can I still use the task inbox with business entities?

Yes, you can use the task inbox. The task inbox is located in the Task Manager, and can also be added to the **Home** page. The task inbox requires that ActiveVOS is installed and configured.

#### Is there a downside to migrating to business entities?

There is some loss of functionality. For example, it is more difficult to import and export raw data into your system. However, business entities offer multiple benefits, such as integration with other systems and configurable pages and views. For more information, see [“Benefits of Business Entities” on page 7](#) and [“Summary of Differences” on page 9](#).



### Do Repository Manager changelists contain information about business entities?

Yes. When you export a changelist from the Repository Manager in the Hub Console, the changelist contains all the business entity details. You can also import changelists through the Repository Manager.

### Do I need to use ActiveVOS with business entities?

Yes. ActiveVOS is the only supported BPM engine for business entities.

### How do I use the Provisioning tool?

The following table describes some of the common configurations in the IDD Configuration Manager and their equivalencies in the Provisioning tool.

How do I configure..?	IDD Configuration Manager	Provisioning tool
subject area/ business entity	<ol style="list-style-type: none"><li>1. Select an IDD application.</li><li>2. On the Subject Areas tab, click <b>Add Subject Area</b>.</li></ol>	<ol style="list-style-type: none"><li>1. Click <b>Business Entity &gt; Modeling</b>.</li><li>2. Select <b>Business Entities</b>.</li></ol>
lookup/reference entity	<ol style="list-style-type: none"><li>1. In the Hub Console, use the Schema Manager to configure a base object as a lookup base object.</li><li>2. Create a foreign key relationship between a base object and the lookup base object.</li><li>3. IDD uses metadata about the foreign key relationship to populate the lookup values.</li></ol>	<ol style="list-style-type: none"><li>1. Click <b>Business Entity &gt; Modeling</b>.</li><li>2. Select <b>Reference Entities</b>.</li></ol>
relationship	<ol style="list-style-type: none"><li>1. In the Hub Console, use the Schema Manager to configure a relationship between base objects.</li><li>2. IDD creates a relationship within subject areas based on the relationship between associated base objects.</li></ol>	<ol style="list-style-type: none"><li>1. Click <b>Business Entity &gt; Modeling</b>.</li><li>2. Select <b>Relationships</b>.</li></ol>
task	<ol style="list-style-type: none"><li>1. Select an IDD application.</li><li>2. On the Tasks tab, click <b>Add</b>.</li></ol>	<ol style="list-style-type: none"><li>1. Click <b>Business Entity &gt; Tasks</b>.</li><li>2. You can define task templates, task types, and triggers.</li></ol>

## IDD Modes FAQs

### After I upgrade, can I continue to show only the legacy views?

Yes. You do not have to migrate your application to business entities.

After you upgrade, if your application does not include BPM workflows, you do not need to perform any of the steps in this guide.

If your application includes BPM workflows, you must generate the business entity schema. Data Director requires that the schema exist. You can continue to use the same workflow engine. You do not need to change the IDD mode, nor do you need to use the Provisioning tool.

**Note:** In this mode, the features and views that are based on business entities are not available.

To continue to use subject areas, legacy views, and workflow engine, generate the business entity schema:

1. [“Prepare the ORS and the IDD Application” on page 16](#)
2. [“Generate the Business Entity Schema” on page 17](#)

### Can I show the legacy views and the E360 views at the same time?

Yes, you can choose to show both sets of views. This is called the Hybrid mode. For example, you might want to use the Hybrid mode temporarily while you design the **Home** page and record view layouts.

**Caution:** In the Hybrid mode, if you need to make a change to the schema, you must make the change twice: once in the IDD Configuration Manager and again in the Provisioning tool. If you regenerate a schema from the IDD Configuration Manager and publish the changes in the Provisioning tool, any customizations that you made to the migrated elements are overwritten. New elements, such as a business entity model with a different name than a subject area, are preserved because they are not overwritten.

To use the Hybrid mode, perform all the steps in this document. When you change the mode, use the following settings:

Properties	Hybrid Mode
cmx.dataview.enabled	true
cmx.e360.view.enabled	true
cmx.e360.match_xref.view.enabled	true
cmx.ss.enabled	true

In the Provisioning tool, you must create an application with the same name as the legacy IDD application.

## ActiveVOS FAQs

### If I use the Subject Area-based ActiveVOS workflow adapter, which view do I use to create merge and unmerge tasks?

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.

### How do you process existing merge tasks?

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.

### How do you process unmerge tasks?

All unmerge tasks open in the Entity 360 framework Cross-reference Records view, regardless of the `cmx.e360.match_xref.view.enabled` setting.

### How do you process review tasks?

All review tasks are processed in the Entity 360 framework Entity view.

### If I use the business entity ActiveVOS workflow adapter, which task inbox should I use?

Use the Entity 360 framework task inbox when configuring the Informatica Data Director user interface for the **Home** page. If you use the legacy task inbox with the business entity ActiveVOS workflow adapter, an error occurs.

# APPENDIX A

## Glossary

This appendix includes the following topic:

- [Glossary of Terms, 35](#)

## Glossary of Terms

### **business entity**

An entity with significance to an organization. Organizations commonly define business entity types to represent customers, suppliers, employees, products, and accounts. For example, a business entity type might be Person. The customer John Smith is a business entity of type Person.

In the business entity data model of Informatica Data Director, business entities replace subject areas.

### **business entity services**

A set of operations that run MDM Hub code to create, update, delete, and search for base object records in a business entity. You can develop a custom user interface that can run Java code or JavaScript code to make business entity service calls.

### **business entity view**

A view that represents a condensed version of a business entity.

### **Entity 360 framework**

Business entity-based Informatica Data Director (IDD). With the Entity 360 framework enabled, IDD users edit and manage master data from an entity workspace instead of the Data workspace.

### **IDD Configuration Manager**

A web-based utility to add, change, and manage Informatica Data Director applications that are based on the subject area data model.

### **lookup**

In Informatica Data Director, a dropdown list of values from which the application user can choose. Usually, lookup values are defined in a physical lookup base object table with a foreign key between the base object and the lookup base object.

### **Provisioning tool**

A web-based utility to define business entity models, tasks, and transformations, and design the user interface for Informatica Data Director.

In the business entity data model of Informatica Data Director, the Provisioning tool replaces the IDD Configuration Manager.

**reference entity**

A business entity that is associated with a lookup base object.

In the business entity data model of Informatica Data Director, reference entities replace lookups.

**subject area**

In Informatica Data Director, a collection of data that can be treated as a unit from a business perspective.