# HP Universal CMDB

for the Windows and Solaris operating systems

Software Version: 8.01

# HP Universal CMDB–Data Dependency and Mapping Inventory (DDMi) Integration Guide

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Software Release Date: March 2009

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# 1

# Data Dependency and Mapping Inventory (DDMi) Integration by Federation

This chapter includes the main concepts, tasks, and reference information for DDMi integration with HP Universal CMDB (UCMDB) using the federation mechanism.

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**Note:** To obtain the field package for the HP Universal CMDB integration with Data Dependency and Mapping Inventory, together with its documentation, contact HP Software Support.

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**This chapter includes:**


**Concepts**

- Overview on page 8
- Integration Technology on page 8

**Tasks**

- Replicate DDMi Data to UCMDB on page 10

**Reference**

- Configuration Parameters on page 18

# Overview

This chapter describes how to integrate DDMi with UCMDB. Using a federated adapter, integration involves data synchronization by replicating devices, topology, and hierarchy of a customer storage infrastructure in the UCMDB database (CMDB). This enables change management and impact analysis across all business services mapped in UCMDB from a storage point of view.

The CMDB is populated with DDMi CIs as follows:

- Where all the key attributes of an existing CI in the CMDB are identical to those of an imported DDMi CI, the attributes are updated by the reconciliation mechanism. For details see Chapter 8, "The Software Element CIT," in "Discovery and Dependency Mapping Content."
- Where at least one key attribute of an existing CI in the CMDB is different from the one imported from the DDMi database, a new CI is added to the CMDB.

## Environments

| | |
|---|---|
| Supported Environments | **HP Universal CMDB (UCMDB)** 7.5.1 or later<br>**Data Dependency and Mapping Inventory (DDMi)** 2.20 or later |

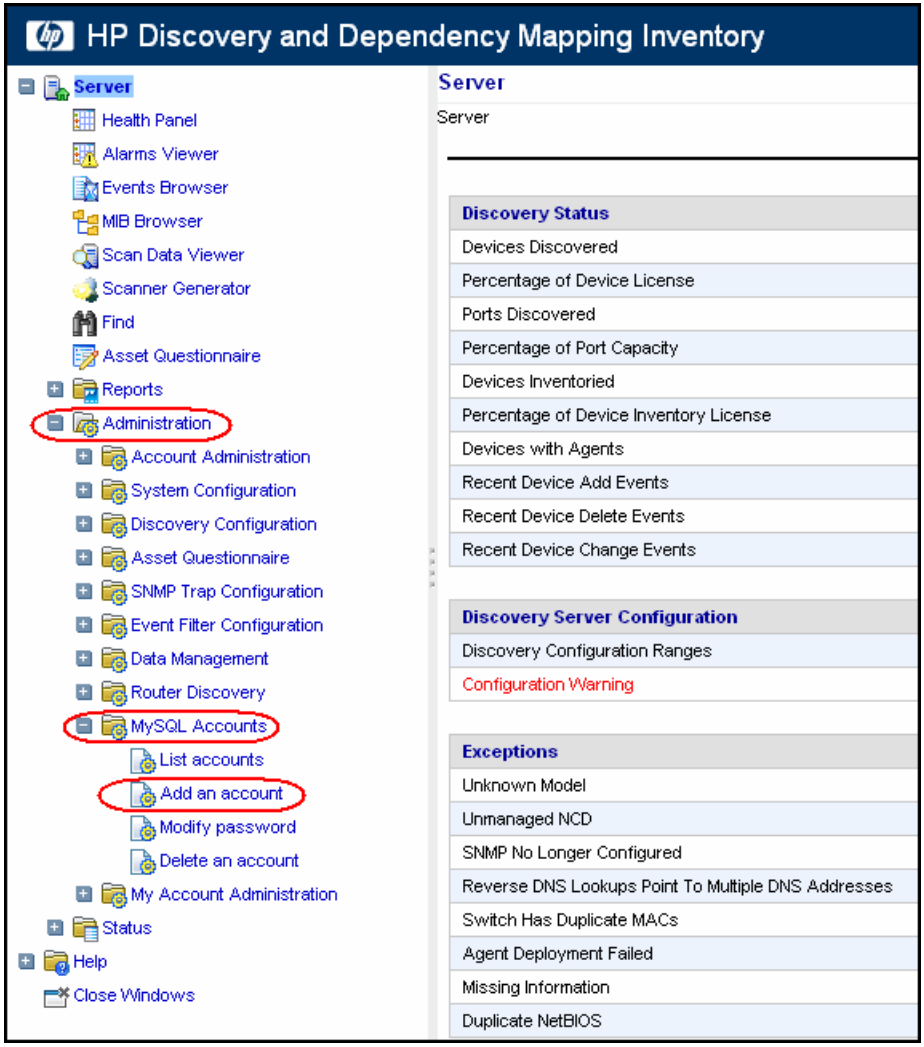
# Integration Technology

The trigger CI for the DDMi integration is called **IP**. It encompasses all the IPs in UCMDB. DDMi integration is activated against the IPs using the **IT Universe Manager**.

You also need to create a specific MySQL user (unless it already exists) in the DDMi interface.

**To add a MySQL user in DDMi:**

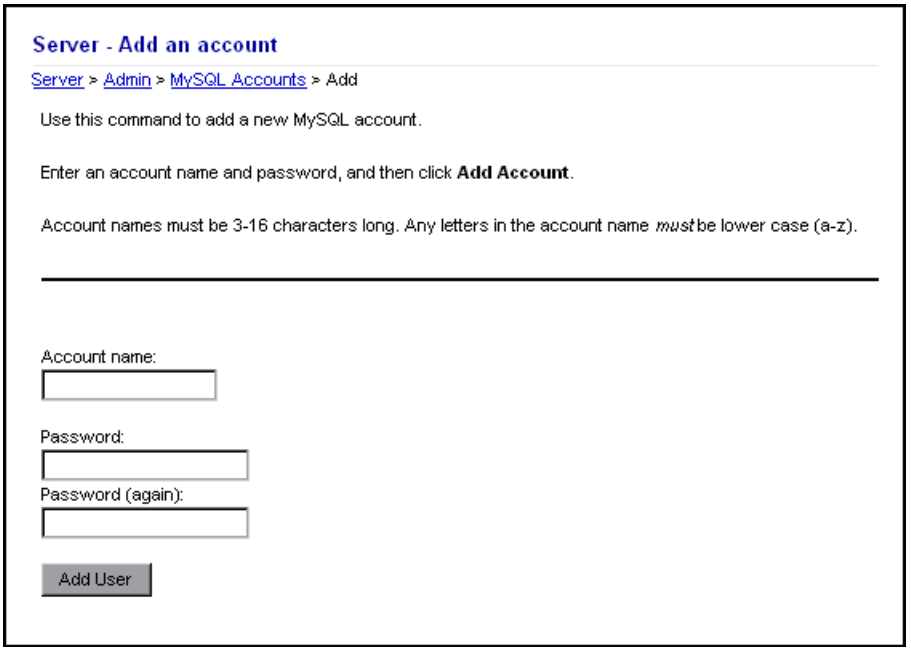
**1** Start the DDMi application.




**2** Expand the Administration folder in the left-hand navigation tree.

**3** Expand the **MySQL Accounts** folder.

**4** Click the **Add an account** icon to add an account.




**5** Enter your user name and password information and click **Add User**.

## Replicate DDMi Data to UCMDB

The data from DDMi is synchronized to UCMDB using internal replication technology. For more information, see *Model Management*.

### DDMi Database Adapter

The DDMi database adapter is based on the generic database adapter and includes a DDMi plug-in to support the following DDMi features:

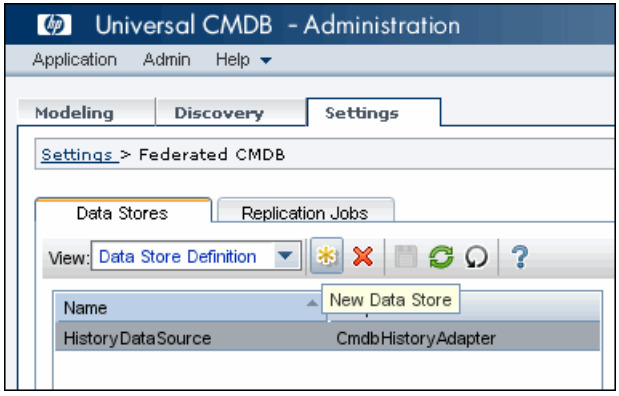
- Identify changes from DDMi to update the federated CI database as CIs change.

➤ Implement **Remove** in DDMi. When a CI is removed, the RMi adapter changes the status attribute to identify its removal. The DDMi database adapter then removes the CI.

The DDMi database adapter must be defined as a source adapter.

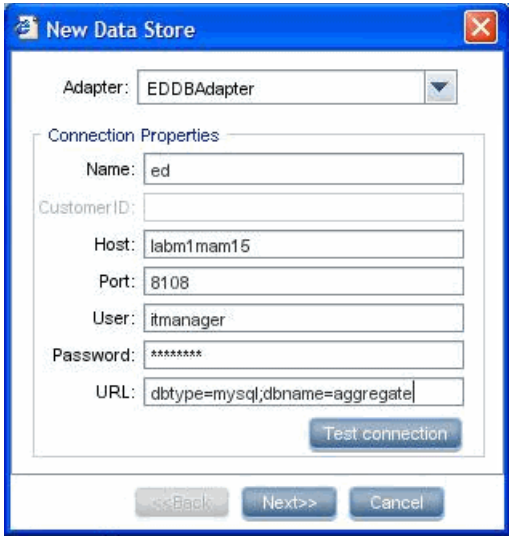
**To define the DDMi database as a source adapter:**

**1** In UCMDB application navigate to **Settings** > **Federated CMDB**.



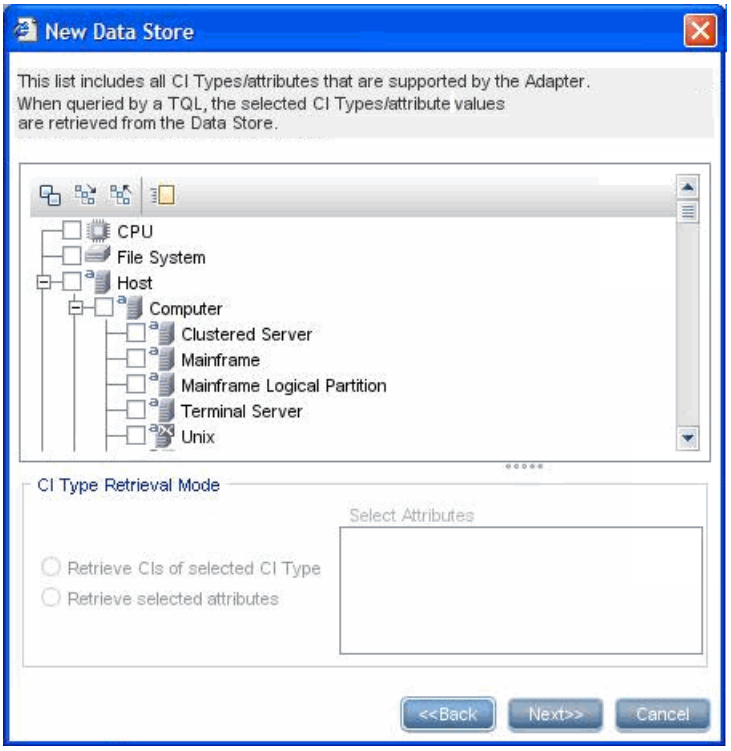

**2** Click the **New Data Store** button to add a new data store.

The New Data Store dialog opens.



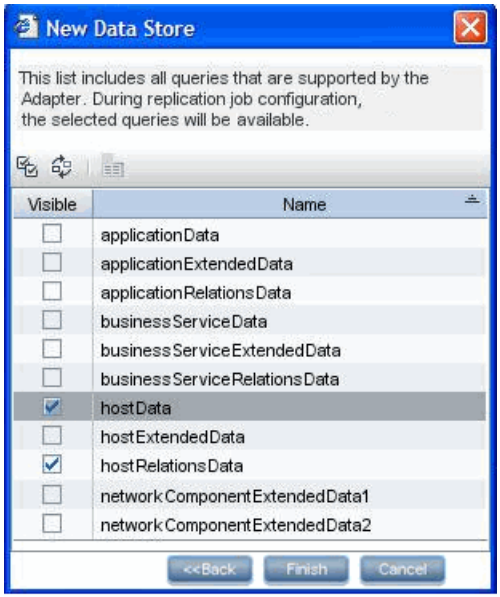
**3** Enter the required details. The host name should contain your DDMi server. No other changes are necessary.

**4** Click **Next.**




**5** Click **Next.**

**6** The New Data Store window shows CITs supported by adapter. Click **Next**.




**7** The New Data Store window shows the queries supported by adapter. Select the following queries:

- desktopData
- desktopRelationsData
- hostData
- hostRelationsData
- networkData1
- networkData2
- networkRelationsData
- printerData

  For query details, see “DDMi Database Adapter Configuration” on page 18.

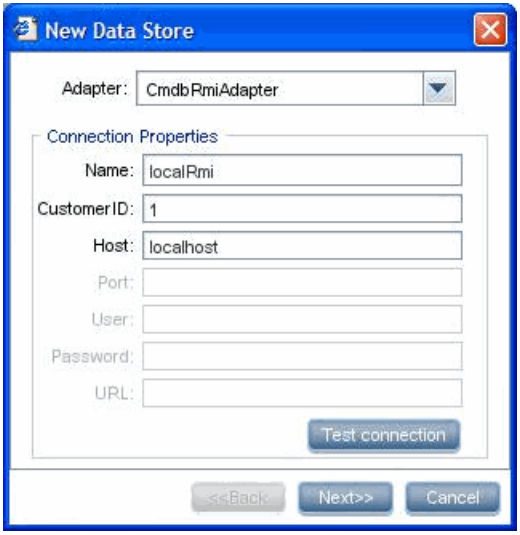
**8** Click **Finish**.

## DDMi to UCMDB Replication

Configure the RMi adapter as the target adapter in the DDMi to UCMDB replication as follows:

**1** In UCMDB application navigate to **Settings** > **Federated CMDB**.

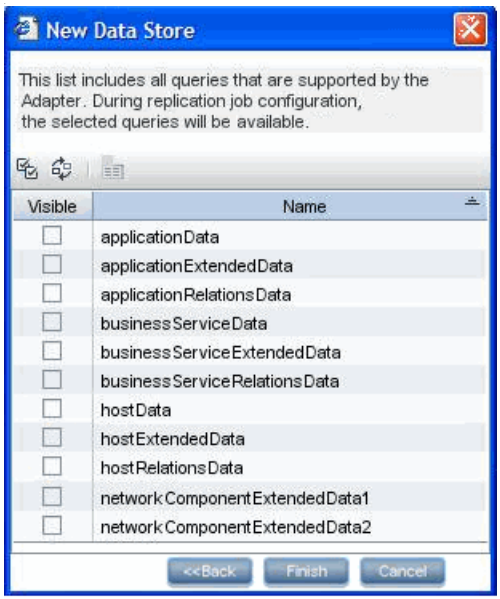
**2** Click the **New Data Store** button to add a new data store.




**3** Enter the required details and click **Next.**

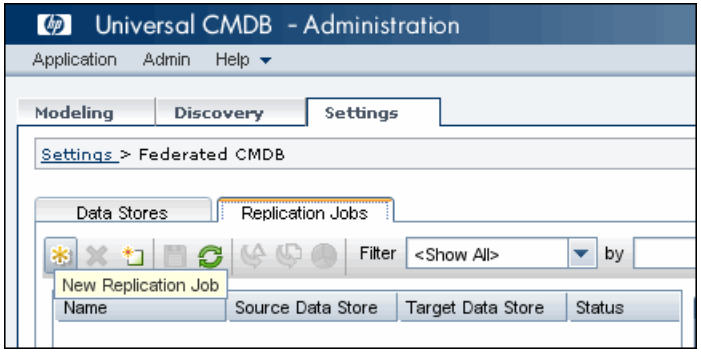
The Queries Supported by Adapter list is displayed.

**4** Click **Next** and **Finish** to close the New Data Store dialog box.




**5** In Queries Supported by adapter click **Next** and **Finish**.

**6** In Setting - Federated CMDB select the **Replication Jobs** tab.

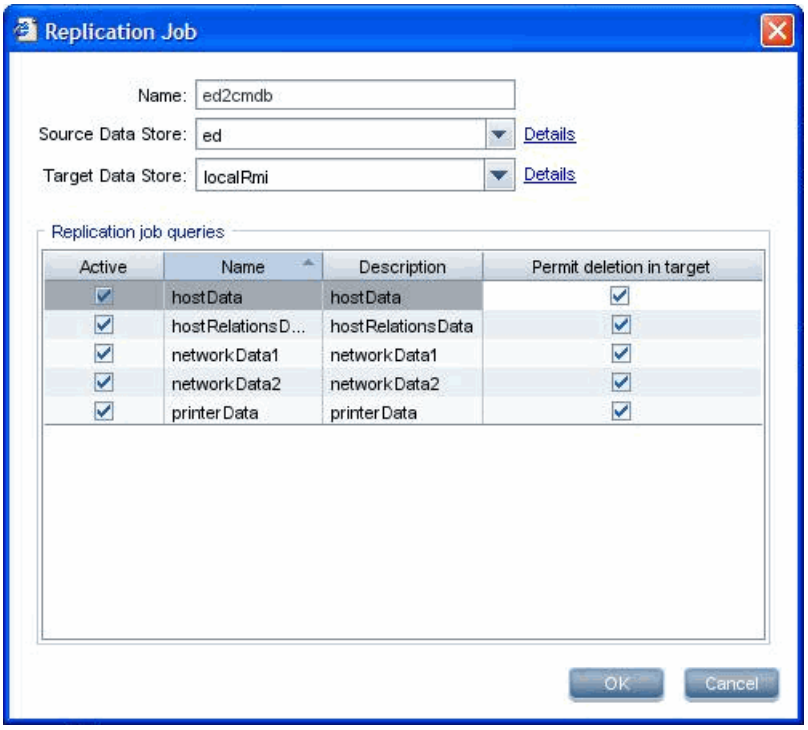



**7** Define the replication job as follows:

**a** Click the **New Replication Job** button to add a new replication job.

**b** Select **DDMi** as the source and **CmdbRmiAdapter** as the target.

The Replication Job dialog box opens.




**c** Complete the entries in the Replication Job dialog box and click **OK**.

**d** Click the **Ad Hoc Full Replication** button to start the replication job.

## Content Changes

As DDMi CIs are added or changed, the CMDB needs to be updated as well.

**To add an attribute to an existing CI type:**

**1** In the file system, navigate to: **hp\UCMDB\UCMDBServer\j2f\fCMDB\CodeBase\DDMiDBAdapter\META-INF\orm.xml**.

**2** Locate the CI type **generic_db_adapter** that was changed and add the new attribute.

For further details on database adapter mapping see *Configuration Examples*.

3 Reload the adapter by navigating to:

**http://[uCMDB server]:8080/jmx-console/HtmlAdaptor?action=inspectMBean&name=Topaz%3Aservice%3DFCmdb+Config+Services.**

4 Select **loadOrReloadCodeBaseForAdapterId** and set the customer ID to 1 and the adapter ID as **DDMiDBAdapter**.

**To add a new CI type:**

1 In the file system navigate to: **hp\UCMDB\UCMDBServer\j2f\fCMDB\CodeBase\DDMiDBAdapter\META-INF\orm.xml/**

2 Map the new CI type by adding a new entity called **generic_db_adapter** as the CI type.

For further details, see *Model Management*.

3 Reload the adapter by navigating to:

**http://[uCMDB server]:8080/jmx-console/HtmlAdaptor?action=inspectMBean&name=Topaz%3Aservice%3DFCmdb+Config+Services**

4 Select **loadOrReloadCodeBaseForAdapterId** and set the customer ID to 1 and the adapter ID as **DDMiDBAdapter**.

5 In UCMDB, navigate to **Settings** > **Federated CMDB**.

6 Edit the DDMi data store to support the new TQL query you created.

7 Edit the DDMi2CMDB replication job to include the new TQL query.

# Configuration Parameters

## Integration-DDMi Job Parameters

The following table lists the parameters that should be set in DDMi before activating a DDMi integration job.

| Name | Value | Description |
|---|---|---|
| Password | | Password for MySQL user as it exists in the DDMi MySQL database. |
| DBName | Aggregate | MySQL database name containing aggregate data<br>**Default value: Aggregate.** |
| Port | 8108 | MySQL listening port. |
| DiscoverServer | 1 | Flag. Defines whether to discover servers (1) or not (0). If software discovery is enabled, this flag also denotes whether software for this device type is enabled. |
| DiscoverSoftware | 1 | Flag. Defines whether to discover software (1) or not (0). |
| UserID | | UserID for MySQL user as it exists in the DDMi MySQL database. |
| DiscoverDesktops | 0 | Flag. Defines whether to discover workstations (1) or not (0). If software discovery is enabled, this flag also denotes whether software for this device type is enabled. |

## DDMi Database Adapter Configuration

The DDMi adapter is based on the generic database adapter and includes the following configuration files:

- **orm.xml.** The OR mapping file in which you map between CMDB classes and database tables.

- **discriminator.properties.** Maps each supported CI type (also used as a discriminator value in **orm.xml**) to a list of possible corresponding values of the discriminator column, **DeviceCategory_ID**.
- **replication_config.txt.** Contains a comma-separated list of non-root CIs and relations types that have a status condition in the DDMi database. This status identifies whether the device is deleted.
- **fixed_values.txt.** Includes a fixed value for the attribute **ip_domain** in the class IP (**DefaultDomain**).

For more information on the adapter configuration see the *Database Adapter Guide*.