

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

Document Release Date: March 2009

Software Release Date: March 2009



Legal Notices

Warranty

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

Restricted Rights Legend

Confidential computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Third-Party Web Sites

HP provides links to external third-party Web sites to help you find supplemental information. Site content and availability may change without notice. HP makes no representations or warranties whatsoever as to site content or availability.

Copyright Notices

© Copyright 2005 - 2009 Hewlett-Packard Development Company, L.P.

Trademark Notices

Adobe® and Acrobat® are trademarks of Adobe Systems Incorporated.

Intel®, Pentium®, and Intel® Xeon™ are trademarks of Intel Corporation in the U.S. and other countries.

Java™ is a US trademark of Sun Microsystems, Inc.

Microsoft®, Windows®, Windows NT®, and Windows® XP are U.S registered trademarks of Microsoft Corporation.

Oracle® is a registered US trademark of Oracle Corporation, Redwood City, California.

Unix® is a registered trademark of The Open Group.

Documentation Updates

This guide's title page contains the following identifying information:

- Software Version number, which indicates the software version.
- Document Release Date, which changes each time the document is updated.
- Software Release Date, which indicates the release date of this version of the software.

To check for recent updates, or to verify that you are using the most recent edition of a document, go to:

<http://h20230.www2.hp.com/selfsolve/manuals>

This site requires that you register for an HP Passport and sign-in. To register for an HP Passport ID, go to:

<http://h20229.www2.hp.com/passport-registration.html>

Or click the **New users - please register** link on the HP Passport login page.

You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HP sales representative for details.

Support

You can visit the HP Software Support web site at:

<http://www.hp.com/go/hpsoftwaresupport>

This web site provides contact information and details about the products, services, and support that HP Software offers.

HP Software Support Online provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the HP Software Support web site to:

- Search for knowledge documents of interest
- Submit and track support cases and enhancement requests
- Download software patches
- Manage support contracts
- Look up HP support contacts
- Review information about available services
- Enter into discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract.

To find more information about access levels, go to:

http://h20230.www2.hp.com/new_access_levels.jsp

To register for an HP Passport ID, go to:

<http://h20229.www2.hp.com/passport-registration.html>

Table of Contents

Chapter 1: Data Dependency and Mapping Inventory (DDMi) Integration by Federation7

- Overview.....8
- Integration Technology.....8
- Replicate DDMi Data to UCMDB.....10
- Configuration Parameters18

Table of Contents

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.

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.

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 Data Dependency and Mapping Inventory (DDMi) 2.20 or later
------------------------	--

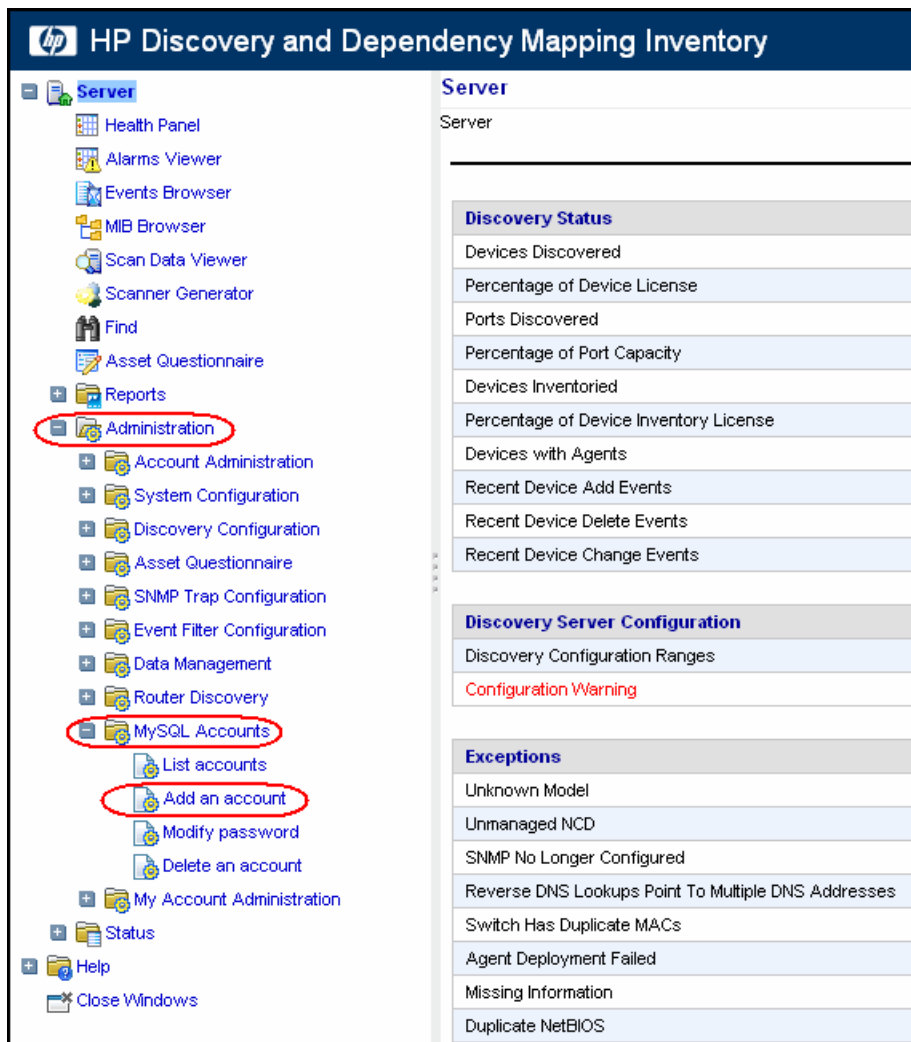
Integration Technology

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.

Server - Add an account

[Server](#) > [Admin](#) > [MySQL Accounts](#) > Add

Use this command to add a new MySQL account.

Enter an account name and password, and then click **Add Account**.

Account names must be 3-16 characters long. Any letters in the account name *must* be lower case (a-z).

Account name:

Password:

Password (again):

- 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:

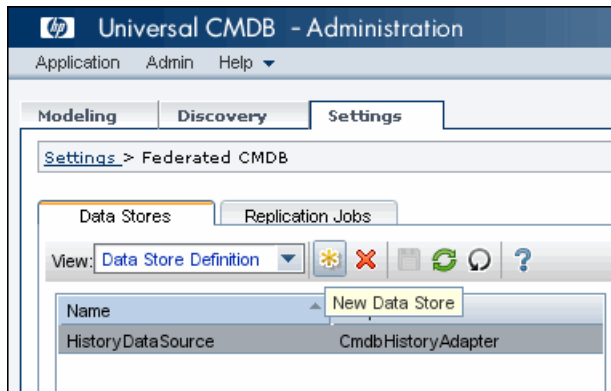
- Identify changes from DDMi to update the federated CI database as CIs change.

- 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**.

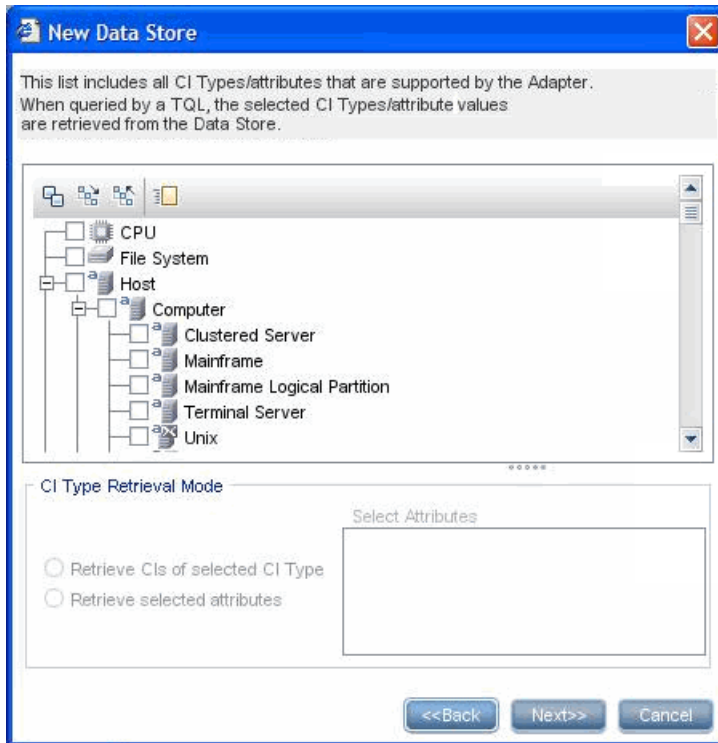


- 2 Click the **New Data Store** button to add a new data store.

The New Data Store dialog opens.

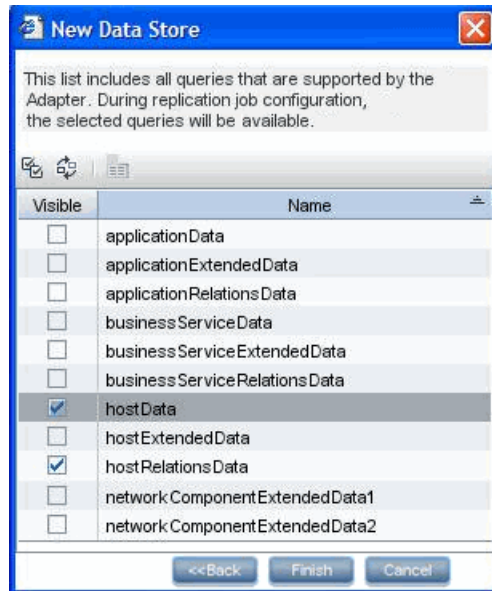


- 3 Enter the required details. The host name should contain your DDMi server. No other changes are necessary.
- 4 Click **Next**.



- 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.

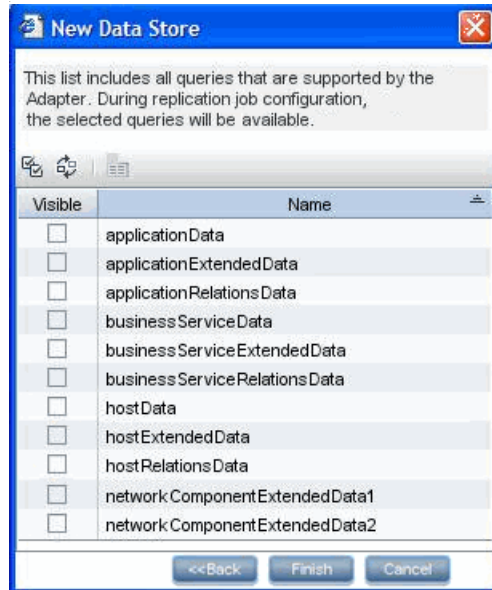


The image shows a 'New Data Store' dialog box with a blue title bar and a close button (X) in the top right corner. The dialog contains the following fields and controls:

- Adapter:** A dropdown menu with 'CmdbRmiAdapter' selected.
- Connection Properties:** A section containing several text input fields:
 - Name:** 'localRmi'
 - CustomerID:** '1'
 - Host:** 'localhost'
 - Port:** (empty)
 - User:** (empty)
 - Password:** (empty)
 - URL:** (empty)
- Test connection:** A button located below the input fields.
- Navigation:** At the bottom of the dialog, there are three buttons: '<<Back', 'Next>>', and 'Cancel'.

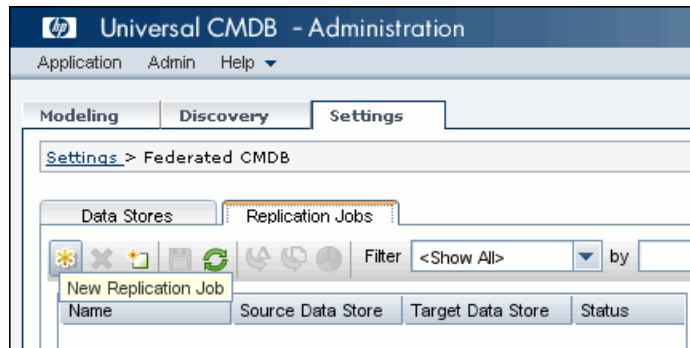
- 3 Enter the required details and click **Next**.
The Queries Supported by Adapter list is displayed.

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.



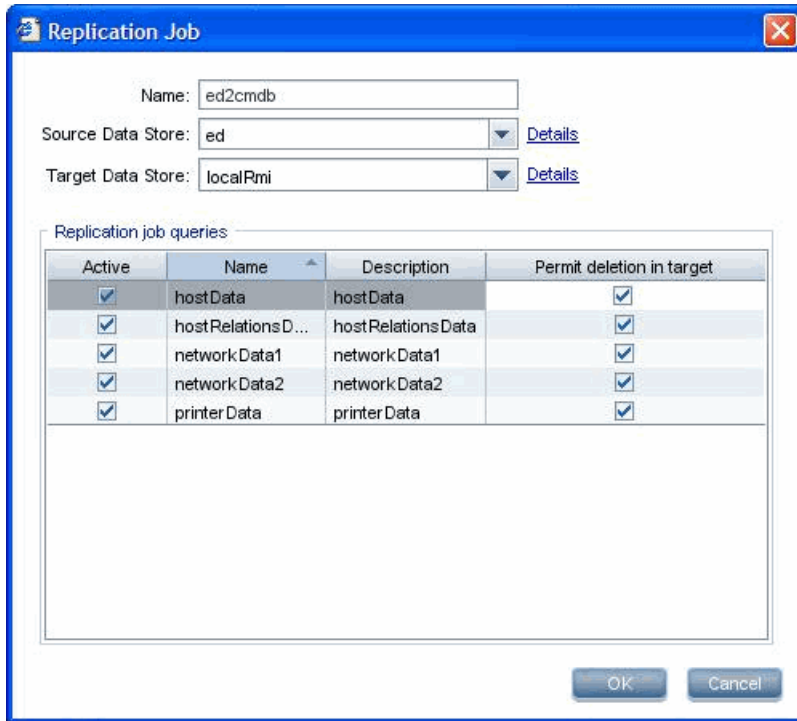
7 Define the replication job as follows:



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 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*.

