

HP Universal CMDB

for the Windows and Solaris operating systems

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

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Data Dependency and Mapping Inventory (DDMi) Integration

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

This chapter includes:

Concepts

- Overview on page 7

Tasks

- Discover the DDMi MySQL Database – Workflow/Scenario on page 11

Overview

The DDMi application uses agents installed on each host to discover CIs. This enables integration with UCMDB for data reuse and end-to-end management.

This chapter describes how to integrate UCMDB with DDMi. Integration synchronizes server and desktop CIs (along with Network Resources) via Discovery and Dependency Mapping (DDM) on the MySQL database of DDMi.

Details for discovery of software on active devices is also included in this document. You can configure whether servers, desktops or software CIs should be discovered as well as set the MySQL db UserId, connection port and password. After deploying DDMi, DDM can then be deployed to locate the DDMi integration to identify the job parameters in the Job Properties tab.

Environments

Supported Environments	HP Universal CMDB (UCMDB) 7.5, 8.0 or later. Data Dependency and Mapping Inventory (DDMi) 2.20 or later.
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How the Integration Works

The following SQL query retrieves all actively managed devices of type **Server**, **Workstation**, or both, that are associated with IPs. DDM identifies only devices that have at least one IP since this is the minimum information required to make hosts unique.

```

SELECT Device.Device_ID, DeviceIcon_FunctionClassification, Device_Label,
OperatingSystem_Name, IPv4_Address, IPv4_NetMask, IPv4_DNS, MAC_Address
FROM IPv4
INNER JOIN NMID ipNM ON IPv4_ID = ipNM.Object_ID AND
ipNM.NMID_StatusInAppliance = 'Active'
INNER JOIN Device ON Device_ID = IPv4.DeviceOrPort_ID
LEFT OUTER JOIN OperatingSystem ON Device.OperatingSystem_ID =
OperatingSystem.OperatingSystem_ID
LEFT OUTER JOIN MAC ON MAC.DeviceOrPort_ID = IPv4.DeviceOrPort_ID
INNER JOIN DeviceIcon ON Device.DeviceIcon_ID = DeviceIcon.DeviceIcon_ID AND
DeviceIcon_FunctionClassification IN ('Server')
INNER JOIN NMID ON Device.Device_ID = NMID.Object_ID AND
NMID.NMID_StatusInAppliance = 'Active'
UNION
SELECT Device.Device_ID, DeviceIcon_FunctionClassification, Device_Label,
OperatingSystem_Name, IPv4_Address, IPv4_NetMask, IPv4_DNS, MAC_Address
FROM IPv4
INNER JOIN NMID ipNM ON IPv4_ID = ipNM.Object_ID AND
ipNM.NMID_StatusInAppliance = 'Active'
INNER JOIN Port P ON P.Port_ID = IPv4.DeviceOrPort_ID
INNER JOIN NMID pNM ON Port_ID = pNM.Object_ID AND
pNM.NMID_StatusInAppliance = 'Active'
INNER JOIN Device ON Device.Device_ID = P.Device_ID
LEFT OUTER JOIN OperatingSystem ON Device.OperatingSystem_ID =
OperatingSystem.OperatingSystem_ID
LEFT OUTER JOIN MAC ON MAC.DeviceOrPort_ID = IPv4.DeviceOrPort_ID
INNER JOIN DeviceIcon ON Device.DeviceIcon_ID = DeviceIcon.DeviceIcon_ID AND
DeviceIcon_FunctionClassification IN ('Server')
INNER JOIN NMID ON Device.Device_ID = NMID.Object_ID AND
NMID.NMID_StatusInAppliance = 'Active'

```

By default the Integration-DDMi job attempts to retrieve **Server** devices only. You can customize the default behavior through the Integration-DDMi job parameters to enable retrieval of either desktops or servers. See “Integration-DDMi Job Parameters” on page 12.

DDM can be employed on both **Desktop** or **Workstation** devices.

Note: When deploying the DDMi with UCMDB, you must add the **host_edid** attribute to the host CIT using the **CI Type Manager**.

Once devices are discovered by DDM, all relevant IPs, Network interfaces, Network and installed software CIs are associated with the discovered Host CIT. For IP, Interface, and Network CIs, only the key attributes are discovered and populated. For Host CIs, the only additional **host_os** and **host_osinstalltype** attributes are updated. When the operating system is recognized, the relevant host subclass (Windows, UNIX) should be used instead of the generic Host CIT.

The following software query attempts to find all applications installed on active devices.

```
SELECT SW.Device_ID, SW.SWSubComponent_InstalledDirectory, V.Version_Name,
R.Release_Name, A.Application_Name
FROM Aggregate.NMID
INNER JOIN Aggregate.SWSubComponent SW ON SW.Device_ID = NMID.Object_ID
INNER JOIN Aggregate.Version V ON V.Version_ID = SW.Version_ID
INNER JOIN Aggregate.`Release` R ON R.Release_ID = V.Release_ID
INNER JOIN Aggregate.Application A ON A.Application_ID = R.Application_ID
INNER JOIN Aggregate.Device D ON D.Device_ID = SW.Device_ID
INNER JOIN Aggregate.DeviceIcon DI ON D.DeviceIcon_ID = DI.DeviceIcon_ID AND
DeviceIcon_FunctionClassification IN ('Server')
WHERE NMID.NMID_StatusInAppliance = 'Active'
```

By default DDM attempts to retrieve devices of **Server** CI type. You can customize this default behavior through the pattern parameters to enable retrieval of either desktops or servers. See “Integration-DDMi Job Parameters” on page 12.

Aggregate.'Release'.Release_Name is a path to the **Release_Name** value in the MySQL db. So **Aggregate** is a name of db, **Release** is a table and **Release_Name** is a column. **Naming convention** is rule used when creating **data_name** (such as Installed Software CIT will be UCMDB 7.5 where UCMDB is **Application_Name** and **7.5** is the **Release_Name**).

Once the software is discovered, a new software CI is created using the **Aggregate.Release.Release_Name** + **Aggregate.Application.Application_Name** in the `data_name` attribute of the object.

Note: **Aggregate.Release.Release_Name** is a path to the **Release_Name** value in the MySQL db. So **Aggregate** is a name of db, **Release** is a table and **Release_Name** is a column. **Naming convention** is rule used when creating **data_name** (such as Installed Software CIT will be UCMDB 7.5 where UCMDB is **Application_Name** and 7.5 is the **Release_Name**).

This naming convention is used to prevent possible data loss when several versions of the same software are installed on the same device.

Discover the DDMi MySQL Database

Make sure that the IP of the server running DDMi's MySQL database exists in the UCMDB. You can accomplish this by the various discovery jobs, the most common of which are **Range IPs by ICMP** and **Class C IPS by ICMP**. Alternatively you can manually insert the CI using the **IT Universe Manager**.

The trigger CI for the DDMi integration job is called **IP**. It encompasses all the IPs in the UCMDB. You must manually activate a DDMi integration job against a particular IP using the **IT Universe Manager**. To do this, click **Add CI** and select the required IP from the list.

You will also need to create a specific MySQL user (if one does not already exist) in the DDMi interface.

To add a new MySQL user in DDMi:

- 1** Start the DDMi application UI.
- 2** Expand the Administration folder in the left-hand navigation tree.
- 3** Expand the **MySQL Accounts** folder.

- 4 Click **Add an account**.
- 5 Enter your user name and password information and click **Add User**.

Integration-DDMi Job Parameters

The following table lists the parameters that should be set before activating an Integration DDMi 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, typically 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.