HP Asset Manager

Software version: 5.20

Integration with software distribution and configuration management tools

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Table of Contents

Introduction 11

What is the scope of Asset Manager's integration with software distribution and configuration management tools? 11
Who is this intended for? 12
What are the contents of this guide 12
How to read this guide 13
Conventions used in this guide 14

I. Integration with HP Client Automation 15

Chapter 1. Overview 17

Overview 17
Terminology 19
Deployment process 19
Interactions between objects 24

Chapter 2. Implementing required components 25

Required components 25
Optional components 31

Chapter 3. Creating and updating reference information 37

Computers 37
User accounts 39
Computer groups 40
Domains 41
Media 42
Software packages 43

Chapter 4. Add or remove software, grant or remove the right to use a software application 45

Add or remove software 45
Grant or remove the rights to use a software application 49
Transmitting a software installation or removal work order to HP Client Automation 52
Check the transmission of a software installation or removal work order to HP Client Automation 52
Check the execution of a deployment work order by HP Client Automation 53
Transmitting and executing a work order to grant or remove rights to use software to HP Client Automation 53
Check the transmission and execution of a work order to grant or remove rights to use software to HP Client Automation 54

II. Integration with other software distribution tools 55

Chapter 5. Adapting the HP Client Automation integration to another software distribution tool 57

Adapting the process 57
Adapting HP Connect-It scenarios 57
Adapting Asset Manager Automated Process Manager modules 58

III. Appendixes 59

A. Glossary 61

Deployment work order (Job) 61
Deployment task (Job) 62
User account (User account) 62
Domain (Domain) 62
Computer groups (Group of devices) 63
Media (Service) 63
Software package 64
Named entitlement (Policy) 65

B. References 67

Menus, navigation bar links and tabs 67
Toolbar icons 73
Interface options 73
Tables 74
Dependencies between tables 75
Itemized lists 76
Calculated fields 77
Counters 77
Actions and wizards 78
Asset Manager Automated Process Manager modules 79
System data and **Line-of-business data** 79
Reports 80
API 80
Views 80
Other documentation 80
Workflow schemes 81

Index 85

List of Figures

1.1. Steps of the deployment process 20
1.2. Data interactions during the deployment process 24

List of Tables

2.1. Integration with HP Client Automation - required user license . . 26
B.1. Menus and tabs 67
B.2. Menus and tabs (for the integration with HP Client Automation) 69
B.3. Tables 74
B.4. Dependencies between tables 75
B.5. Itemized lists (integration with HP Client Automation) 76
B.6. Calculated fields (integration with HP Client Automation) 77
B.7. Actions and wizards 78
B.8. Workflow schemes - list 82

Introduction

What is the scope of Asset Manager's integration with software distribution and configuration management tools?

When the software distribution and configuration management tool is HP Client Automation:

1. Asset Manager is used to **pilot** HP Client Automation by creating deployment work orders.

   Note:

   A deployment work order:

   - Adds or removes software to/from a selection of target computers
   - Assigns or removes rights to use software to/from IT equipment, computer groups, domains or user accounts

2. HP Client Automation is used to **execute** the deployment work orders created in Asset Manager.

You can integrate Asset Manager with other tools if you adapt the standard processes and components to the tool.

Who is this intended for?

The functionality explained in this guide is intended for members of the IT team who are responsible for software distribution.

What are the contents of this guide

Section Integration with HP Client Automation

Chapter Overview

This chapter provides an overview of the Asset Manager and HP Client Automation integration;: Description of the software add/remove process, how user rights to software are granted or removed, license rights check, list of the main tables used during these processes.

Chapter Implementing required components

This chapter explains how to implement the components required to integrate Asset Manager with HP Client Automation: Asset Manager, HP Client Automation, inventory tool, HP Connect-It, Asset Manager Web, Java J2SDK, Asset Manager Automated Process Manager and software license check module.

Chapter Creating and updating reference information

This chapter explains how to create and update reference information: Computers, user accounts, computer groups, domains, software packages and media.

Chapter Add or remove software, grant or remove the right to use a software application

This chapter explains how to add or remove software, grant or remove the right to use a software application: creating, transmitting, executing and checking deployment work orders.

Section Integration with other software distribution tools

Chapter Adapting the HP Client Automation integration to another software distribution tool

This chapter explains how to modify the standard process used to integrate Asset Manager with other software distribution tools and, consequently, how to adapt the HP Connect-It scenarios.

Section Appendixes

Appendix Glossary

The glossary provides a definition of key terms used in the integration of Asset Manager with the software distribution tools.

Appendix References

This appendix provides reference information on the integration of Asset Manager with the software distribution tools.

How to read this guide

The following are different ways of using this guide, depending on your profile. The example used is for HP Client Automation.

Person responsible for HP Client Automation integration

1. Chapter Overview [page 17]
2. Chapter Implementing required components [page 25]

Person responsible for updating reference information

1. Chapter Overview [page 17]
2. Chapter Creating and updating reference information [page 37]

Person responsible for administering software applications

1. Chapter Overview [page 17]
2. Chapter Add or remove software, grant or remove the right to use a software application [page 45]

Person responsible for customizing HP Client Automation integration

1. Chapter Overview [page 17]
2. Chapter Implementing required components [page 25]
3. Chapter Creating and updating reference information [page 37]
4. Appendix Glossary [page 61]
5. Chapter Add or remove software, grant or remove the right to use a software application [page 45]

Conventions used in this guide

The following is a list of conventions that are used in this guide:

Convention	Description
`Java Script Code`	Example of the code or command
`Fixed width characters`	DOS command, function parameter or data format
...	Portion of omitted code or command
Note: Extra information	Informative note
Important: Be careful...	Important information for the user
Tip: User tip	Tip to help you use the application
Warning: Exercise caution	Extremely important information for the user
Object	Asset Manager interface object: menu, menu entry, tab or button.

The following conventions are also used:

- The steps that we ask you to follow are listed in a defined ordered (in a numbered list). For example:
  1. First step
  2. Second step
  3. Third and last step
- All figures and tables are numbered according to the chapter in which they are found, and the order in which they appear in the chapter. For example, the title of the fourth table of chapter two will be prefixed by **Table 2-4**.

I Integration with HP Client Automation

1 Overview

Overview

This section details the different integration levels between HP Client Automation and Asset Manager.

Reference data synchronization between HP Client Automation and Asset Manager

This part of the integration **synchronizes** reference data between HP Client Automation and Asset Manager.

Data must be synchronized on a regular basis to ensure that Asset Manager and HP Client Automation have the same data.

The following table presents the reference data:

Reference data in HP Client Automation	Equivalent in Asset Manager
Devices: Computers	Records in the **Portfolio items** (amPortfolio) table whose **External identifier** (ExtPfiId) field value is not empty and which are linked to a nature whose **Computer type** (seCPU-Type) field equals **Computer**

Reference data in HP Client Automation	Equivalent in Asset Manager
Persons: users	Records in the **Portfolio items** (amPortfolio) table whose **External identifier** (ExtPfiId) field value is not empty and which are linked to a nature whose **User account** (bUserAccount) field is selected and linked to a user
Groups of devices: Sets made up of devices and groups	Records in the **Portfolio items** (amPortfolio) table whose **External identifier** (ExtPfiId) field value is not empty and which are linked to a nature whose **Computer type** (seCPUType) field equals **Computer groups**
Domains: **Devices**, **user accounts** and **groups of devices** are organized hierarchically as a tree structure whose branches represent **domains**	Records in the **Portfolio items** (amPortfolio) table whose **External identifier** (ExtPfiId) field value is not empty and which are linked to a nature whose **Computer type** (seCPUType) field equals **Domain**
Services : The services define the media that are used to manipulate the different software. HP Client Automation uses services to add or remove software to/from devices or groups of devices.	Records in the **Software installations or utilizations** (amSoftInstall) table linked to a nature whose **Media** (bSetUpMedia) check box is selected and which are linked to a model whose **Configuration management media** (bCMService) check box is selected. Media are grouped as **software packages**.
Policies: Policies are used to grant (positive priority) or refuse (negative priority) access to software by devices, user accounts, groups of devices and domains.	Records in the **Named entitlements** (amEntitlement) table whose **Used for configuration management** (bAutomated) check box is selected
Jobs: Jobs describe software installation or removal work orders	Records in the **Work orders** (amWorkOrder) table linked to a nature whose **Work order type** (seWorkOrderType) field is any value except **Other** and whose **Used for configuration management** (bAutomated) check box is selected. Each work order is associated with a record in the **Deployment tasks** (amCMTargetTask) table.

Creating deployment work orders

This part of the integration creates deployment work orders that describe an operation whose execution will be handled by HP Client Automation:

- Installing software
- Removing software
- Assigning rights to use software

- Removing rights to use software

Wizards in Asset Manager are used to pilot these operations:

1. These wizards create **requests**.
2. Once validated and executed, these requests create **deployment work orders** and, for an installation or removal, **deployment tasks**.
3. The deployment work orders are sent to HP Client Automation as jobs.
4. HP Client Automation executes the jobs.
5. The status of these jobs is propagated to the corresponding work orders in Asset Manager.

Checking license rights

This optional part of the integration implements **license right checks** between HP Client Automation and Asset Manager.

Before performing an installation, HP Client Automation queries the Asset Manager database to determine the status of a license linked with a media related to the service that is used.

If the associated media in Asset Manager has sufficient rights, the installation proceeds normally. Otherwise the installation is denied.

Terminology

In the following sections, HP Client Automation or Asset Manager terminology will be used depending on the context.

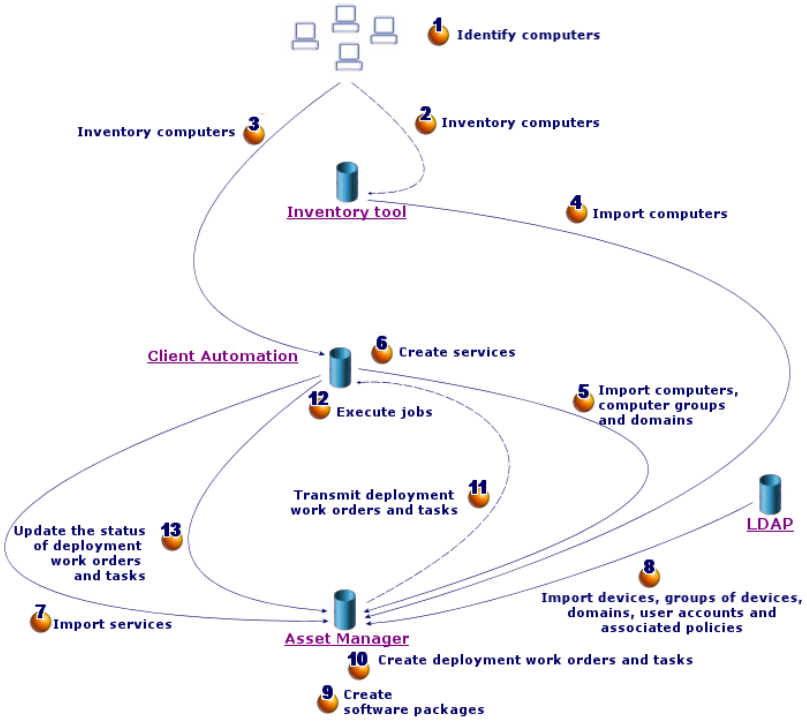
The following table shows how the two terminologies match:

HP Client Automation element	Asset Manager element
Device	Computer
User account	User account
Group of devices	Computer group
Domain	Domain
Service	Media
Policy	Named entitlement
Job	Work order or deployment task

Deployment process

The process is presented below:

Figure 1.1. Steps of the deployment process



Inventory

▸ Steps 1, 2, 3 and 4 of figure Steps of the deployment process [page 20].

During this optional phase network hardware is inventoried.

Possible inventory tools are HP Discovery and Dependency Mapping Inventory or HP Client Automation's Inventory Manager (IM) component.

This phase helps complete the hardware information in the Asset Manager database.

This phase is organized as follows:

1. Inventory all network hardware via the inventory tool. Generally, this tool stores all collected information in its own database.
2. Import inventoried data into the Asset Manager production database using the HP Connect-It scenarios.

Replicating reference data

▶ Steps 5, 6, 7 and 8 of figure Steps of the deployment process [page 20].

In this phase, data required for the deployment process is prepared.

This phase in mandatory but can be done in any order with the optional inventory phase.

Its goal is to synchronize data between HP Client Automation and/or an LDAP directory and Asset Manager so that they have the same references.

To carry out this phase, reference information must be collected from the HP Client Automation database and imported into the Asset Manager production database using HP Connect-It scenarios.

The reference data is the data that is present in section Overview [page 17]:

- Devices
- User accounts
- Groups of devices
- Domains
- Services
- Policies

The HP Client Automation component can access the data through different means:

- **Internal database**: HP Client Automation has its own database containing the reference data.

  Managed entities (devices, user accounts, groups of devices and domains) are organized in the same way as for an LDAP directory.

  Data imported into the Asset Manager database represents devices, groups of devices, domains, users accounts and services.

  The import is done using HP Connect-It scenarios which connect to HP Client Automation via Web services.

  The Web services query the internal database and return data requested by HP Connect-It. HP Connect-It then transmits the information to the Asset Manager database.
- **External LDAP directory**: HP Client Automation can connect to an LDAP directory to manage the configurations of clients listed in the directory. The reference data mentioned above is stored in the directory except for services which can only be accessed via the internal database.

  When an LDAP directory is used, data stored in it is retrieved via one of the HP Connect-It scenarios. The scenario connects directly to the directory's source and propagates relevant information in the Asset Manager production database.

In both cases, this phase is primarily based on the replication of reference data which allows the Asset Manager and HP Client Automation systems to communicate on the same basis:

Data	HP Client Automation identifier	Table of the Asset Manager identifier	Asset Manager identifier
Computer	DistinguishName (DN)	Portfolio items (amPortfolio)	External identifier (ExtPfiId)
User account	DistinguishName (DN)	Portfolio items (amPortfolio)	External identifier (ExtPfiId)
		amEmplDept (Employees and departments)	Bar code (BarCode)
Computer group	DistinguishName (DN)	Portfolio items (amPortfolio)	External identifier (ExtPfiId)
Domain	DN of each synchronized entry	Portfolio items (amPortfolio)	External identifier (ExtPfiId)
	For example, for a computer whose DN is **cn=client1,cn=demo,cn=hp,cn=com**, the **demo**, **hp** and **com** domains will be created in the Asset Manager database with **cn=demo,cn=hp,cn=com**, **cn=hp,cn=com** and **cn=com** identifiers, respectively.		
Service	Path composed of its domain, class and instance (DCI)	Portfolio items (amPortfolio)	Code (Code)

Software installation/removal, assignment/removal of software user rights

Steps 9, 10, 11, 12 and 13 of figure Steps of the deployment process [page 20].

When the reference data is synchronized between Asset Manager and HP Client Automation you can perform two types of operations from Asset Manager:

- Request that software be added to or removed from one or more computers.
- Assign or remove the right to use software to/from IT equipment, user accounts, computer groups and domains.

Both of these operations are carried out via wizards.

Adding and removing software

1. The wizards let you identify the software to install by selecting media.
2. The wizards let you identify the target computers.
3. The wizards create a request.
4. The request must be validated (manually or following a workflow scheme).
5. The request must be executed manually (**Execute** button).

   The execution creates a deployment work order and deployment tasks.

6 One of the HP Connect-It scenarios transmits the deployment work orders to HP Client Automation.
7 HP Client Automation adds or removes the software.
8 A HP Connect-It scenario updates the status of the deployment work orders and deployment tasks in the Asset Manager database.

Note:

The wizards do not create new software installations in the Asset Manager database nor do they mark the software installations as having been removed from the computers.

This task is executed by HP Connect-It scenarios which import inventory information gathered by external tools.

Granting or removing the right to use software

1 The wizards let you identify the software to authorize or refuse by selecting media.
2 The wizards are used to identify computers, user accounts, computer groups and domains for which rights to use software are granted or removed.
3 The wizards create or delete the named entitlement.
4 The wizards create a request.
5 The request must be validated (manually or following a workflow scheme).
6 The request must be executed manually (**Execute** button).

   Execution creates a deployment work order (but not a deployment task).
7 One of the HP Connect-It scenarios transmits the deployment work orders to HP Client Automation.
8 HP Client Automation assigns or removes named entitlement rights (policies).
9 A HP Connect-It scenario updates the status of the deployment work orders and deployment tasks in the Asset Manager database.

Checking license rights compliance

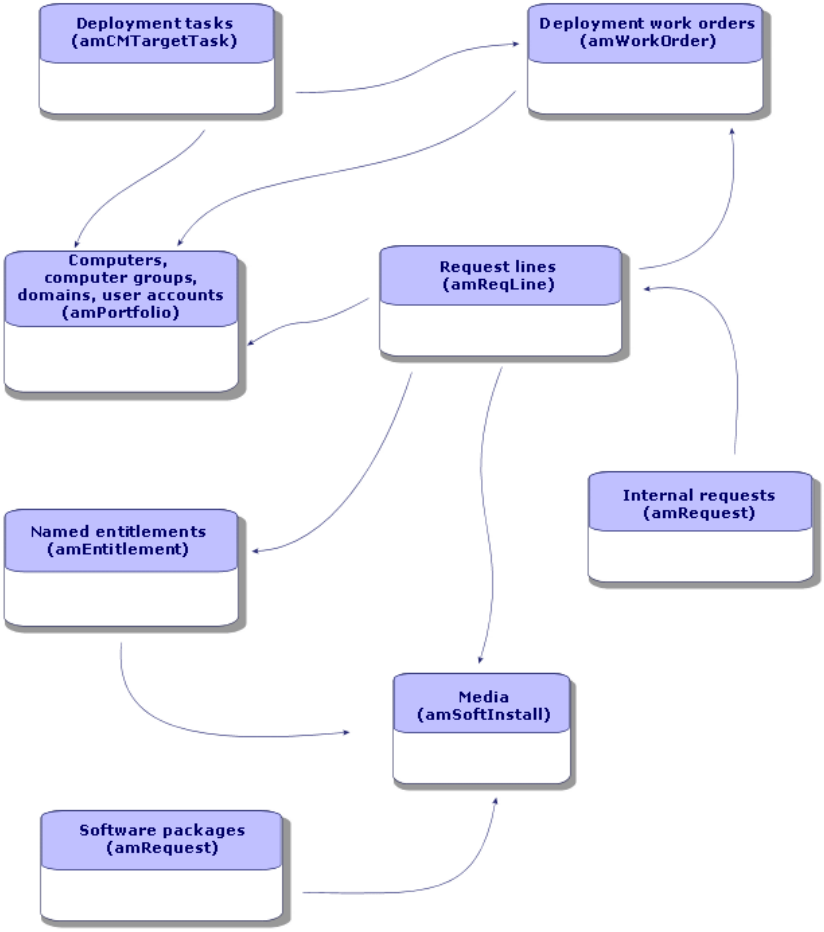
For details of the License rights compliance module, see License rights compliance module [page 33]

Interactions between objects

The following diagram presents the different data interactions that occur during the deployment process and that were introduced in the previous sections.

> Note:
>
> This graphic does not exactly reflect the structure of the Asset Manager database

Figure 1.2. Data interactions during the deployment process



2 Implementing required components

As was presented in the Overview [page 17] chapter, certain phases of the task deployment process are mandatory, whereas others are optional.

The same is true for the components that need to be implemented.

Required components

Asset Manager

Installing Asset Manager

The following applications from the Asset Manager suite must be installed:

Which application?	Which machine?	Purpose?
Windows or Web client	1 or more user stations	Create software packages and deployment work orders, approve requests.

To learn how to install these components: ▸ Asset Manager **Installation and upgrade** guide.

Create the Asset Manager production database

The Asset Manager production database must have already been created.

To learn how to create your production database: ▸ Asset Manager **Administration** guide, chapter **Creating, modifying and deleting an Asset Manager database**.

Install the required license

Your Asset Manager user license (defined in HP AutoPass License Management Tool) must give you access to the following modules:

Table 2.1. Integration with HP Client Automation - required user license

Marketing name	Name displayed by the **Action/ Activate database...** menu (Asset Manager Application Designer)	Name displayed by HP AutoPass	To access what objects?
Base	Admin (Administration)		Workflow schemes
AM Asset Portfolio	ITAM (ITAM module)	Asset Portfolio ServiceCatalog	Internal requests
AM Asset Portfolio	OVCM (OVCM Integration with Client Automation)	OVCM	Computers, computer groups, user accounts, domains, media, software packages and deployment work orders
AM Software Asset Management	SAM (Software Asset Management option)	SAM	**Manage software...** (sysSamLauncher) wizard (**Portfolio management/ IT/ Software Asset Management/ Manage software...** link on the navigation bar).

To find out how to obtain and install an HP AutoPass License Key file: ▸ Asset Manager **Administration** guide, chapter, chapter **Installing License Keys**.

Activate required modules if you are accessing the database with a Windows client

You must activate the following modules (**File/ Activate modules** menu):

- HP CA integration
- Portfolio
- Administration
- Software assets

> Note:
> Each of these modules is activated by default for Web clients.

Insert external data into the Asset Manager database

You must insert predefined data required by this module.

Several data types must be imported into the Asset Manager production database (notably, actions and calculated fields).

Importing the Line-of-business data when you create the database

Follow the instructions in the **Administration** guide, chapter **Creating, modifying and deleting an Asset Manager database/ Creating the database structure with Asset Manager Application Designer**.

On the **Data to import** page, select the **HP Client Automation integration - Line-of-business data** option.

Importing the Line-of-business data into an existing database

Proceed in the following manner:

1. Execute Asset Manager Application Designer.
2. Select the **File/ Open** menu item.
3. Select the **Open database description file - create new database** option.
4. Select the `gbbase.xml` file which is located in the `config` sub-folder of the Asset Manager installation folder.
5. Start the database creation wizard (**Action/ Create database** menu).
6. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons):

   Generate SQL script / Create database page:

Fields	Value
Database	Select the connection to the database into which you wish to import the line-of-business data.
Creation	Import line-of-business data.
Use advanced creation options	Do not select this option.

   Creation parameters page:

Fields	Value
Password	Enter the administrator's password. Note: The Asset Manager database administrator is the record in the **Employees and departments** (amEmplDept) table for which the **Name** (Name) field is set to **Admin**. The database connection login is stored in the **User name** (UserLogin) field. The administration name is **Admin**. The password is stored in the **Password** field (LoginPassword).

Data to import page:

Fields	Value
Available data	Select the option **HP Client Automation integration - Line-of-business data**.
Stop import if error	Select this option for the import to stop if a problem is encountered.
Log file	Full name of the file to which all import operations, including errors and warnings, are logged.

7 Execute the options defined using the wizard (**Finish** button).

Configuring the approval workflow scheme.

The **Validate software installation or removal requests** (OVCM_REQ_APPR) workflow scheme defines an approval process for software installation or removal requests.

By default it is configured to automatically validate each request.

Depending on your needs and request approval policy, it can be configured to use a more rigorous workflow process.

In this case, the **Start** activity and its event must not be modified but everything else can be reconfigured.

To learn how to configure the workflow schema: ▸ Asset Manager **Advanced Use** guide, chapter **Workflow**.

HP Client Automation

Install HP Client Automation

In order to use the HP Client Automation software distribution and entitlement module, the following HP Client Automation components must be installed and configured in your environment:

- HP OVCM Configuration Server
- Management Portal (RMP) and its web services (RMP WS)
- HP OVCM Messaging Server

To learn how to install and configure HP Client Automation components: ▶ HP Client Automation **Essentials**, **Configuration Server**, **Management Portal** and **Messaging Server** guides.

HP Connect-It

Install HP Connect-It

▶ HP Connect-It **User's guide**, chapter **Installation**.

Configure HP Connect-It scenarios

You will need to configure the following HP Connect-It scenarios that are located in `<Full path to the HP Connect-It installation folder>\scenario\hpovcm\cm<HP Client Automation version number>ac52`:

HP Connect-It scenario	Transferred data	Source database	Target database
ws_groups_devices.scn	Identification information for devices, groups of devices and their domains	HP Client Automation	Asset Manager
ws_services.scn	Services	HP Client Automation	Asset Manager
ws_jobs.scn	Deployment work orders to add or remove software	Asset Manager	HP Client Automation
ws_policies.scn	Deployment work orders to assign or remove rights to use software	Asset Manager	HP Client Automation
ws_status.scn	Status of Jobs	HP Client Automation	Asset Manager

HP Connect-It scenario	Transferred data	Source database	Target database
ldap_directory_service_all.scn	Identification information for devices, groups of devices, user accounts and their domains, and existing policies for these entities	External LDAP directory, such as Novell Directory Service, used by HP Client Automation	Asset Manager
ldap_active_directory_all.scn	Identification information for devices, groups of devices, user accounts and their domains, and existing policies for these entities	External LDAP directory, such as Microsoft Active Directory, used by HP Client Automation	Asset Manager

Note:

HP Connect-It 4.00 includes scenarios that support integration with HP Client Automation 5.0x and scenarios that support integration with HP Client Automation 5.1x .

Several configuration types must or can be used **for each** of the scenarios:

- Connector configuration
- Schedule configuration
- Mapping configuration

Four connectors are used by each of the scenarios:

- Asset Manager
- Management Portal
- LDAP

For information on how to configure connectors, refer to the HP Connect-It **Connectors** guide.

Some scenarios may need to have their mappings tailored to the operating system on which they are run:

1. `ws_jobs.scn`: A mapping in this scenario uses a counter defined in an external file.

   This file must be read-writable and the mapping must have the correct path to access it.

   To do this, open the `Create_Temporary_Group` mapping and on the **Additional script** tab check that the `path_counter_file` variable contains the full path to the `cmac_counter.txt` file (`<Full path to the HP Connect-It installation folder>\scenario\hpovcm\cm<HP Client Automation version number>ac52\cpt\`).

2 `ldap_directory_service_all.scn` and `ldap_active_directory_all.scn`: These scenarios are based on standard LDAP directories.

   If some classes of the objects that were retrieved by the scenarios have been customized, their mapping may need to be modified so that the correct information is replicated in Asset Manager.

Scheduling the execution of the scenarios

Execution of each scenario can be scheduled in one of two ways:

- By defining a scheduler in HP Connect-It
- By defining a scheduled module in Asset Manager Automated Process Manager.

In the first case, refer to the ▸ HP Connect-It **User's guide**, chapter **Implementing an integration scenario**.

In the second case, follow the instructions below for each of the scenarios to schedule:

1 Start Asset Manager Automated Process Manager and connect to the production database.
2 Select the **Tools/ Configure modules** menu.
3 Click **New**.
4 Enter a name, description and the following command:

```
"$connectit_exedir$/conitsvc.exe" -once -wpplog '$connectit_exedir$/../
scenario/hpovcm/cm<HP Client Automation version number>ac52/XXX.scn' -d
c:AssetCenter.SERVER=$cnx$ -dc:AssetCenter.LOGIN=$login$ -dc:AssetCente
r.TEXTPASSWORD=$pwd$
```

   where **XXX** represents the name of the scenario to schedule.
5 Schedule execution as needed.
6 Click **Create**.

Optional components

Inventory tool

An inventory tool can be installed in the production environment to inventory network elements and retrieve information used to populate the Asset Manager database.

Multiple inventory tools are available. We recommend the following:

- HP Discovery and Dependency Mapping Inventory

To learn how to install and configure HP Discovery and Dependency Mapping Inventory: ▶ HP Discovery and Dependency Mapping Inventory **Installation and Initial Setup** guide.

- HP Client Automation Inventory Manager (IM).

  To learn how to install and configure the HP Client Automation IM module: ▶ HP Client Automation **Inventory Manager** guide.

Asset Manager Automated Process Manager

Configure and activate Asset Manager Automated Process Manager modules

If Asset Manager Automated Process Manager is used to manage scenario schedules, new modules will need to be created and configured.

▶ To do this, please refer to section Configure HP Connect-It scenarios [page 29]

Asset Manager Web Service

Installing Asset Manager Web Service

You need Asset Manager Web Service installed in several cases, most notably:

- If you want to let Asset Manager users access the production database via a Web client.
- If you want to implement a compliance module on the HP Client Automation server in order to check license rights. The HP Client Automation server can then query the Asset Manager production database via the Asset Manager Web Service

To learn how to install and configure Asset Manager Web Service: ▶ Asset Manager **Installation and upgrade** guide, chapter **Installing, configuring and uninstalling Asset Manager Web**.

Java J2SE v 5.0 JDK

Install Java J2SE v 5.0 JDK

If you want to implement a compliance module on the HP Client Automation server, Java J2SE v 5.0 JDK must be installed in order to handle calls to the Asset Manager Web services.

To learn how to install Java J2SE v 5.0 JDK: ▶ Sun Microsystems web page http://java.sun.com/javase/downloads/index_jdk5.jsp about Java J2SE v 5.0 JDK

> **Warning:**
> The path to the Java J2SE v 5.0 JDK installation folder must not contain any spaces.

License rights compliance module

Implementing the **License rights compliance** module

Introduction

The license rights compliance module is optional in the software distribution and entitlement process. If implemented, it enables HP Client Automation to query the Asset Manager database via the Asset Manager Asset Manager Web Service in order to check software license rights before installing software on clients.

The tasks involved in implementing the module and configuring related components are explained in the following procedures.

Enabling HP Client Automation to access Web services

This section explains how to extract binary components on the HP Client Automation server, thus enabling HP Client Automation to access Asset Manager Web services. These binaries are part of the Asset Manager 5.11 delivery.

1. Logon to the server where HP Client Automation is installed
2. Stop the HP OVCM Portal
3. Stop the HP OVCM Configuration Server
4. Copy the following files:
   - Copy `<Asset Manager installation folder>\integrations\amca\ac_verify.tcl` to the `<HP Client Automation installation folder>\ConfigurationServer\lib` folder
   - Copy `<Asset Manager installation folder>\integrations\amca\am-ca-52.jar` to the `<HP Client Automation installation folder>\ConfigurationServer\lib\libjava` folder
5. Copy all the `.jar` files from `<Asset Manager installation folder>\lib` and paste them to the `<HP Client Automation installation folder>ConfigurationServer\lib\libjava` folder
6. Edit the file `ac.verify.tcl` and specify:
   - The **LOGIN** that Asset Manager Web Service uses to connect to the Asset Manager database.

- The **PASSWORD** variable using the password corresponding to the Asset Manager login.

> Note:
>
> The file `ac_verify.tcl` is used to call Asset Manager Web Service which verify if the number of rights is sufficient for a given application, and then retrieves the return code.

- The **HOST** variable using the name of the host on which Asset Manager Web Service are installed
- The **PORT** variable using the host port that Asset Manager Web Service use to communicate

> Note:
>
> The file `ac.verify.tcl` is used to call Asset Manager Web Service which verify if the number of rights is sufficient for a given application, and then retrieves the return code.

> Warning:
>
> To implement the license rights compliance module, a password must be assigned to the user. The password must not be empty.

7 Copy the file `<Asset Manager installation folder>\integrations\amca\setup.tcl` to the following folder: `<HP Client Automation installation folder>\ConfigurationServer\bin`.

8 Run the `setup.tcl` file located in the folder using the following command lines:

```
cd <HP Client Automation installation folder>\ConfigurationServer\bin
```

```
vdkit setup.tcl -host <host> -user <user> -pass <password>
```

9 Copy the file `<Asset Manager installation folder>\integrations\amca\setup.tcl` to the following folder: `<HP Client Automation installation folder>\ConfigurationServer\bin`.

10 Run the `setup.tcl` file located in the folder using the following command lines:

```
cd <HP Client Automation installation folder>\ConfigurationServer\bin
```

```
nvdkit setup.tcl -host <Host of HP OVCM Configuration Server> -user <Ad
min user that has access to HP OVCM Configuration Server > -pass <Passw
ord of the Admin user that has access to HP OVCM Configuration Server >
```

Note:

This `setup.tcl` file configures HP OVCM Configuration Server to run the `ac_verify.tcl` file.

11 Restart the services for the HP OVCM Configuration Server, HP OVCM Messaging Server and HP OVCM Portal

Prerequisites of the License rights compliance module

In order for the license rights compliance check to operate correctly for a given media, the following conditions must be met:

- The media is part of a software package
- The software package has at least one request line linked to a software installation model
- The software installation model is included by at least one software counter (**Scope of the installations or utilizations to be counted** (SoftInstQuery) link)

Process used to check compliancy

Once the License rights compliance module is implemented, before installing software HP Client Automation uses the class **com.hp.amca.CheckLicenses** contained in the archive **amca.jar** to query Asset Manager via Asset Manager Asset Manager Web Service. It checks if there are sufficient license rights, using the following query parameters:

```
<code> -u <login> -w <password> -h <host> -p <port> -t <tag>
```

These parameters are populated as follows :

- **code**: **Code** (Code) field of the portfolio item that describes the media
- **login**: Login that Asset Manager Web Service uses to connect to the Asset Manager database
- **password**: Password associated with the login that Asset Manager Web Service uses to connect to the Asset Manager database
- **host**: Asset Manager Web Service host
- **port**: Port to access Asset Manager Web Service

If an error occurs during the query (for example, no portfolio item found, incorrect login or password), the value **4** is returned with an error message.

If no error occurs during the query, the value **0** is returned, and the next step proceeds. Also, if there are insufficient license rights, the **No available license for: <Portfolio item code>** is also returned.

To find out if there are sufficient rights, the Web service searches for the portfolio item that corresponds to the media and tests the value of the **The service has sufficient license rights** (OVCMServiceHasEnoughLicense) calculated field.

License rights are sufficient if the **The media has sufficient license rights** (OVCMServiceHasEnoughLicense) calculated field of the media has the value **Yes**.

To determine its value, the calculated field does the following check:

1. It searches for the software package that contains the media corresponding to the service. It then examines what software installation models are part of the software packages. The software installation models are linked to the software package through the **Lines** (ReqLines) link in the **Composition** tab
2. It searches the software counters in which the software installation models are present.

   It only retains the software counters for which the **Is part of corporate software management** (bFamily) checkbox is checked
3. The value is set to **Yes** if for all identified software counters the field **Compliance** has a value equal or greater than **1**. The value is also set to **Yes** if no counter is found following the previous path

If there are insufficient license rights, the calculated field will be set to **No**. The message

```
No available license for: <Media code>
```

is also returned.

3 Creating and updating reference information

The following reference information must be present in the Asset Manager production database before a deployment work order can be created and executed:

- Computers [page 37]
- User accounts [page 39]
- Computer groups [page 40]
- Domains [page 41]
- Media [page 42]
- Software packages [page 43]

This chapter explains how to enter the reference information.

Computers

Why and where do the computers need to be referenced?

To ensure that software is distributed to a target computer properly, the computer must be identified in the same manner in:

- The **Asset Manager database**. This enables the computer to be referenced by deployment tasks created in Asset Manager
- The **HP Client Automation database**. This enables the computer to be referenced by work orders exported to HP Client Automation.

- The **computer itself**. This enables the computer to be found when the job is executed by HP Client Automation.

How are computers imported?

Two possibilities exist:

- Computers on the network have already been inventoried by an inventory tool and the Asset Manager database has been populated with their details via a data integration.
- The computers on the network have not been inventoried thus they are not referenced at all in the Asset Manager database.

Computers are imported (creation or update) via HP Connect-It scenarios (`ws_groups_devices.scn`, `ldap_active_directory_all.scn` and `ldap_directory_service_all.scn`). What follows is the reconciliation method that reflects the two types of use cases:

1. First reconciliation: Done using the computer's MAC address.

   If the computer already exists in the database and its MAC address has been populated (via an inventory), the scenario completes the information and adds the computer's DN.
2. Second reconciliation: If the MAC address is unknown, the scenario tries using the full name of the computers.

   If a computer is found using this key, the DN is added to its list of information.
3. Third reconciliation: If the two first reconciliations failed, the scenario tries using the computer's DN. This may mean that the computer was entered into the production database without a MAC address.

   If no match is found using the 3 reconciliation methods, the scenario will consider that the computer does not yet exist in Asset Manager and will create it, including the DN which is replicated (see the reference data chapter, section Replicating reference data [page 21]).

How to identify computers in the Asset Manager database which have been imported from HP Client Automation

When a computer is imported from HP Client Automation, a record is created in the **Portfolio items** (amPortfolio) table whose **External identifier** (ExtPfiId) field value holds the DN from the HP Client Automation database. It is linked to a nature whose **Type of equipment** (seCPUType) field equals **Computer**.

User accounts

Why and where do user accounts need to be referenced?

An LDAP directory defines the user account entity.

HP Client Automation can then define policies for these user accounts in order to authorize or refuse access to software.

In order for a user account to be managed in the software distribution and entitlement process, it must be identified in the same manner in:

- The **Asset Manager database**. This enables the user account to be referenced by scheduled tasks created in Asset Manager
- The **HP Client Automation database**. This enables the user account to be referenced by the work orders exported to HP Client Automation
- The **user account itself**. This enables the user account to be found when the job is executed by HP Client Automation

How are user accounts imported?

User accounts are imported by HP Connect-It scenarios (`ldap_active_directory_all.scn` and `ldap_directory_service_all.scn`) which use a DN based reconciliation method. If the object does not already exist, they create two types of information:

1. A portfolio item corresponding to the user account, linked to a model, itself linked to a nature whose **User account** (bUserAccount) option is checked
2. An associated user

These two objects have the DN in their identifier field (see the Replicating reference data [page 21] section of the reference data chapter).

How can a user account be identified in the Asset Manager database?

A user account is a record in the **Portfolio items** (amPortfolio) table whose **External identifier** (ExtPfiId) field value is not empty and which is linked to a nature whose **User account** (bUserAccount) field is selected and linked to a user.

Computer groups

Why and where do the computer groups need to be referenced?

Computer groups define sets of entities which can be computers or computer groups.

Entities can be grouped by common characteristics. Doing this will optimize software distribution and entitlement.

In order for a computer group to be managed in the deployment process, it must be identified in the same manner in:

- The **Asset Manager database**. This enables the computer group to be referenced by the tasks created in Asset Manager
- The **HP Client Automation database**. This enables the computer group to be referenced by the work orders exported to HP Client Automation

How are computer groups imported?

Computer groups are imported by HP Connect-It scenarios (`ws_groups_devices.scn`, `ldap_active_directory_all.scn` and `ldap_directory_service_all.scn`) which use a DN based reconciliation method. If the object does not already exist, they create a computer linked to a nature whose `Type of equipment` (seCPUType) field equals **Computer group**.

Its members are added to it when they are replicated and establish a client-resource relationship whose **Dependency type** (CRType) link equals **Belongs to group**.

The portfolio item model is different depending on its origin:

- **LDAP Group**, if it is from an LDAP directory
- **Group for configuration management**, if it is from the internal HP Client Automation database.

Both models have a nature whose **Type of equipment** (seCPUType) field equals **Computer group**.

▶ Replicating reference data [page 21].

How is a computer group identified in the Asset Manager database?

A computer group is a record in the **Portfolio items** (amPortfolio) table whose **External identifier** (ExtPfiId) field value is not empty and which is linked to

a nature whose **Type of equipment** (seCPUType) field equals **Computer group**.

Domains

Why and where do the domains need to be referenced?

Domains group sets of entities (also called entries) which can be computers, user accounts and computer groups that share the same name space. For instance, **hp.com** is a domain.

Domains define a hierarchy.

They are present in an LDAP directory and in the HP Client Automation internal database which enables policies to be assigned to them.

They must be referenced in the same manner in:

- The **Asset Manager database**. This enables the computer to be referenced by scheduled tasks created in Asset Manager
- The **HP Client Automation database**. This enables the computer to be referenced by work orders exported to HP Client Automation

How are domains imported?

Domains are imported via HP Connect-It scenarios (`ws_groups_devices.scn`, `ldap_active_directory_all.scn` and `ldap_directory_service_all.scn`) when each entry is replicated.

A domain is represented by:

- A portfolio item associated with an asset
- An entry in the computers table linked to the portfolio item

The portfolio item model is linked to a nature whose **Type of equipment** (seCPUType) field equals **Domain**.

The identifiers of these two associated objects are reconstructed from the DN of its entry via the following method:

If a computer whose DN is **cn=client1,cn=demo,cn=hp,cn=com** is replicated, the **demo**, **hp** and **com** domains will be created with the **cn=demo,cn=hp,cn=com**, **cn=hp,cn=com** and **cn=com** values for the **External identifier** (ExtPfiId) field.

▶ Replicating reference data [page 21].

How is a domain identified in the Asset Manager database?

A domain is a record in the **Portfolio items** (amPortfolio) table whose **External identifier** (ExtPfiId) field value is not empty and which is linked to a nature whose **Type of equipment** (seCPUType) field equals **Domain**.

Media

Why and where do media need to be referenced?

Before a job can be created and executed, a service must be able to be assigned to it.

Services are defined in their entirety in HP Client Automation.

As these jobs are created in Asset Manager as work order deployments and services as media, media must be able to be selected in the Asset Manager database.

Also, part of the information concerning the services must be exported from the HP Client Automation database to the media in the Asset Manager database.

How are services imported?

Services are imported via a HP Connect-It scenario (`ws_services.scn`) whose reconciliation method is based on the DCI.

Services are imported as a software installation linked to a model corresponding to the replicated service type, which itself is linked to a nature whose **Media** (bSetUpMedia) option is selected.

Since the information is not available in HP Client Automation, the description of the software applications that can be installed by the media must be added in order to enable the licenses associated with them to be managed.

Each media can be linked to a software package (see below in this chapter).

▸ Replicating reference data [page 21].

How is a configuration management media identified in the Asset Manager database?

A configuration management media is a portfolio item linked to a model whose **Configuration management media** (bCMService) check box is selected and to a nature whose **Media** (bSetUpMedia) check box is selected.

Software packages

Why and where do the software packages need to be created?

Software packages are created in their entirety in Asset Manager.

They enable media which reference the same software entity to be grouped.

For example, the **MS Office** software package includes the **MS Word** and **MS Excel** media, etc.

How are software packages created?

1. Start the Asset Manager Windows or Web client.
2. Connect to your production database.
3. Display the software packages (**Portfolio management/ IT/ DML/ Software packages** link on the navigation bar).
4. Create a new software package (**New** button).

   Note:

   This adds a record to the **Requests** (amRequest) table.

   The **Req. status** (seStatus) field is set to **Standard request** and the **Software package** (bSoftPackage) check box is selected. This determines that the standard request corresponds to a software package.

5. If the software package is part of the DML, select **DML** in the **Certification** field.

   This criterion is taken into account by the wizards that create the deployment tasks: It is used to distinguish **Software packages** from **Authorized software packages**.
6. On the **Composition** tab, add the request lines that will be taken into account in the procurement cycle.
7. Populate all required fields and save the software package.

   Tip:

   Do not populate the **Media** tab at this stage.

   ▸ How to link media that have not yet been linked to a software package [page 44]

How to link media that have not yet been linked to a software package

1. Start the Asset Manager Windows or Web client.
2. Connect to your production database.
3. Start the **Link media to a software package...** wizard (sysOVCMReconcilingDSLRefMedia) (**Portfolio management/ IT/ Deployments and releases/ Link media to a software package...** link on the navigation bar).
4. Provide the information on each of the pages of the wizard and then click finish.

Note:

The list of media is taken into account by the wizards that create deployment tasks: This lets you find the software package to which a given media belongs.

4 Add or remove software, grant or remove the right to use a software application

Asset Manager is used to pilot the addition or removal of software as well as the assignment or removal of the right to use software.

This is done by creating requests via Asset Manager wizards.

Once validated and executed, these requests create deployment work orders and, for assignment or removal of rights to use software, deployment tasks.

These deployment work orders and tasks are transmitted to HP Client Automation as jobs via HP Connect-It scenarios.

HP Client Automation executes the jobs.

The job transmission and execution results are automatically sent to Asset Manager via HP Connect-It scenarios. This updates the deployment work orders and tasks.

Add or remove software

There are several ways to add or remove software.

This section explains the different methods.

Add or remove software to/from locations

1. Start the Asset Manager Windows or Web client.
2. Connect to your production database.

3 Start the **Manage software...** (sysSamLauncher) wizard (**Portfolio management/ IT/ Software Asset Management/ Manage software...** link on the navigation bar).

4 On the **Choose a Manage Software action...** page, select **Define user rights and add or remove software**.

5 Click **Next**.

6 On the **Define user rights and add or remove software** page, click **Add or remove software to/from locations**.

This starts the **Add or remove software to/from locations** (sysOVCMLocations) wizard.

7 Provide the information on each of the pages of the wizard and then click finish.

8 Exit the wizard (**OK** button).

9 The wizard creates an internal request with the information that was provided.

The deployment work order is only created in Asset Manager if the request is validated (if the **Req. status** (seStatus) field is set to **Validated**).

▶ Configuring the approval workflow scheme. [page 28].

Once the request is validated, the lines of the request must be generated:

1 Display the request's detail (**Portfolio management/ Extended portfolio/ Internal requests** link on the navigation bar).

2 Click **Generate**.

3 Select the request line to generate, then click **Finish**.

4 The wizard creates the corresponding deployment work order and the associated deployment tasks.

5 Close the wizard (**OK** button).

The deployment work orders can be accessed via the **Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Deployment work orders** link on the navigation bar.

For an explanation of executing requests that do not involve a receivable Purchase line, ▶ Asset Manager **Procurement** guide, part **General overview**, chapter **Receiving executing, creating, and returning**, section **Procedures/ Executing a request.**

Add or remove software for users

1 Start the Asset Manager Windows or Web client.

2 Connect to your production database.

3 Start the **Manage software...** (sysSamLauncher) wizard (**Portfolio management/ IT/ Software Asset Management/ Manage software...** link on the navigation bar).

4 On the **Choose a Manage Software action...** page, select **Define user rights and add or remove software**.

5 Click **Next**.

6 On the **Define user rights and add or remove software** page, click **Add or remove software for users**.

This starts the **Add or remove software for users...** (sysOVCMLocations) wizard.

7 Provide the information on each of the pages of the wizard and then click finish.

8 Exit the wizard (**OK** button).

9 The wizard creates an internal request with the information that was provided.

The deployment work order is only created in Asset Manager if the request is validated (if the **Req. status** (seStatus) field is set to **Validated**).

▶ Configuring the approval workflow scheme. [page 28].

Once the request is validated, the lines of the request must be generated:

1 Display the request's detail (**Portfolio management/ Extended portfolio/ Internal requests** link on the navigation bar).

2 Click **Generate**.

3 Select the line to generate, then exit the wizard.

4 The wizard creates the corresponding deployment work order and the associated deployment tasks.

5 Close the wizard (**OK** button).

The deployment work orders can be accessed via the **Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Deployment work orders** link on the navigation bar.

Add or remove software to/from IT equipment

1 Start the Asset Manager Windows or Web client.

2 Connect to your production database.

3 Start the **Manage software...** (sysSamLauncher) wizard (**Portfolio management/ IT/ Software Asset Management/ Manage software...** link on the navigation bar).

4 On the **Choose a Manage Software action.. .** page, select **Define user rights and add or remove software**.

5 Click **Next**.

6 On the **Define user rights and add or remove software** page, click **Add or remove software to/from IT Equipment**.

This starts the **Add or remove software to/from IT equipment...** (sysOVCMGeneric) wizard.

7 Provide the information on each of the pages of the wizard and then click finish.

8 Exit the wizard (**OK** button).

9 The wizard creates an internal request with the information that was provided.

The deployment work order is only created in Asset Manager if the request is validated (if the **Req. status** (seStatus) field is set to **Validated**).

▶ Configuring the approval workflow scheme. [page 28].

Once the request is validated, the lines of the request must be generated:

1 Display the request's detail (**Portfolio management/ Extended portfolio/ Internal requests** link on the navigation bar).

2 Windows client: Click **Generate**.

Web client: Select **Generate** from the **Contextual actions** drop-down list.

3 Select the line to generate, then exit the wizard.

4 The wizard creates the corresponding deployment work order and the associated deployment tasks.

5 Close the wizard (**OK** button).

The deployment work orders can be accessed via the **Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Deployment work orders** link on the navigation bar.

Remove software from a computer

1 Start the Asset Manager Windows or Web client.

2 Connect to your production database.

3 Display the computers (**Portfolio management/ IT/ IT equipment/ IT equipment** link on the navigation bar).

4 Select the computer.

5 Windows client: Click the **Remove** button.

Web client: Select **Remove** from the **Contextual actions** drop-down list.

This starts the **Remove software from a computer...** (sysOVCMRemoveSoftFromCpu) wizard.

6 Provide the information on each of the pages of the wizard and then click finish.

7 Exit the wizard (**OK** button).

8 The wizard creates an internal request with the information that was provided.

The deployment work order is only created in Asset Manager if the request is validated (if the **Req. status** (seStatus) field is set to **Validated**).

▶ Configuring the approval workflow scheme. [page 28].

Once the request is validated, the lines of the request must be executed:

1 Display the request's detail (**Portfolio management/ Extended portfolio/ Internal requests** link on the navigation bar).

2 Windows client: Click **Execute**.

Web client: Select **Execute** from the **Contextual actions** drop-down list.

3 Select the line to execute, then exit the wizard.

4 The wizard creates the corresponding deployment work order and the associated deployment tasks.

5 Close the wizard (**OK** button).

The deployment work orders can be accessed via the **Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Deployment work orders** link on the navigation bar.

Grant or remove the rights to use a software application

Grant or remove the rights to use a software application

1 Start the Asset Manager Windows or Web client.

2 Connect to your production database.

3 Start the **Create or delete a named entitlement...** (sysSamLauncher) wizard (**Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Create or delete a named entitlement...** link on the navigation bar).

4 Provide the information on each of the pages of the wizard and then click finish.

5 Exit the wizard (**OK** button).

6 Using the information which was provided, the wizard creates an internal request and a named entitlement for each target entity.

The **Purpose** (ReqPurpose) field of each request has the value **Create a named entitlement for the media: 'XXX'** or **Delete a named entitlement for the media: 'XXX'**.

The **Name** (Name) field of each named entitlement that is created has the value **Media 'XXX"**.

Once the request is validated (the **Req. status** (seStatus) field is set to **Validated**) the lines of the request must be executed in order to create the deployment work order and submit it to HP Client Automation:

1 Display the request's detail (**Portfolio management/ Extended portfolio/ Internal requests** link on the navigation bar).
2 Click **Execute**.
3 Select the line to execute, then exit the wizard.
4 The wizard creates the corresponding work order.
5 Close the wizard (**OK** button).

Tip:

To increase user friendliness in the Windows client, customize the automated named entitlements screen by creating a virtual hierarchy.

For example, you can group the entitlements by media:

1 Open the screen and right click the **Media** field.
2 Select **Group by this field** from the shortcut menu.

The list is sorted by media, each media defines a level in the hierarchy.

The named entitlements can be accessed via the **Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Named entitlements** link, and the associated work orders via the **Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Deployment work orders** link on the navigation bar.

Note:

When rights are assigned to use a software application, you can force the deployment of media to the selected target computers and groups.

To do this check **Also add the software** or **Also remove the software** on the last page of the wizard.

In this case, the action creates a deployment task that follows the same process as the one described in this chapter.

Remove rights to use software

1. Start the Asset Manager Windows or Web client.
2. Connect to your production database.
3. Display the named entitlements (**Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Named entitlements** link on the navigation bar).
4. Select the named entitlement to remove.
5. Windows client: Click **Del. Req.**.

   Web client: Select **Del. req.** from the **Contextual actions** drop-down list.

   This starts the **Delete named entitlement...** (sysOVCMContextRemoveEntitlement) wizard.
6. Provide the information on each of the pages of the wizard and then click finish.
7. Exit the wizard (**OK** button).
8. Using the information which was provided, the wizard creates and displays an internal request to remove the named entitlement.

   The value of the request's **Purpose** (ReqPurpose) field is **Delete the named entitlement for the media**.

   Once the request is validated (the **Req. status** (seStatus) field is set to **Validated**) the lines of the request must be executed in order to create the deployment task and submit the user rights removal request to HP Client Automation:

   1. Display the request's detail (**Portfolio management/ Extended portfolio/ Internal requests** link on the navigation bar).
   2. Click **Execute**.
   3. Select the line to execute, then exit the wizard.
   4. The wizard creates the corresponding work order.
   5. Close the wizard (**OK** button).

   Tip:

   To increase user friendliness, customize the named entitlements screen by creating a virtual hierarchy.

   For example, you can group the entitlements by media:

   1. Open the screen and right click the **Media** field.
   2. Select **Group by this field** from the shortcut menu.

      The list is sorted by media, each media defines a level in the hierarchy.

   The named entitlements can be accessed via the **Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/**

Named entitlements link, and the associated work orders via the **Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Deployment work orders** link on the navigation bar.

Transmitting a software installation or removal work order to HP Client Automation

Deployment work orders for software installation or removal are transmitted to HP Client Automation by the `ws_jobs.scn` HP Connect-It scenario; but only if, in the work order's detail, the value of the **Transmission status** (amESDTask) field on the **General** tab is **To transmit**.

To automate execution of the scenario: ▶ Configure HP Connect-It scenarios [page 29].

To check this, make sure that one of the deployment work orders created in Asset Manager is present in the HP Client Automation database.

Check the transmission of a software installation or removal work order to HP Client Automation

The transmission status of software installation or removal work orders transmitted to HP Client Automation is updated by HP Connect-It scenario `ws_jobs.scn`.

Update the transmission status automatically

To automate execution of the scenario: ▶ Configure HP Connect-It scenarios [page 29].

Check the transmission status

1. Start the Asset Manager Windows or Web client.
2. Connect to your production database.
3. Display the deployment work orders (**Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Deployment work orders** link on the navigation bar).
4. Select the deployment work order to check.

5 Look at the **Processing state** (JobStatusState) field.

Check the execution of a deployment work order by HP Client Automation

Update the execution status of the jobs

The execution status of jobs executed by HP Client Automation is updated by HP Connect-It scenario `ws_status.scn`.

To automate execution of the scenario: ▶ Configure HP Connect-It scenarios [page 29].

Check the execution status of a deployment work order

1. Start the Asset Manager Windows or Web client.
2. Connect to your production database.
3. Display the deployment work orders (**Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Deployment work orders** link on the navigation bar).
4. Select the deployment work order to check.
5. Look at the **Processing state** (JobStatusState) field.
6. Display the deployment tasks (**Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Deployment tasks** link on the navigation bar).
7. Select the deployment task to check.
8. Look at the **Execution result** (JobStatusCode) and **Processing state** (JobStatusState) fields.

Transmitting and executing a work order to grant or remove rights to use software to HP Client Automation

A work order to grant or remove rights to use software is only transmitted to HP Client Automation by the `ws_policies.scn` HP Connect-It scenario if, in the work order's detail, the value of the **Transmission status** (amESDTask) field is **To transmit**.

Deployment work orders are transmitted to HP Client Automation by the `ws_policies.scn` HP Connect-It scenario.

To automate execution of the scenario: ▶ Configure HP Connect-It scenarios [page 29].

To check this, make sure that one of the transmitted deployment work orders triggered the creation of the policy in the HP Client Automation database.

Check the transmission and execution of a work order to grant or remove rights to use software to HP Client Automation

The transmission and execution status of work orders to grant or remove rights to use software transmitted to HP Client Automation is updated by HP Connect-It scenario `ws_policies.scn`.

Update the transmission status automatically

To automate execution of the scenario: ▶ Configure HP Connect-It scenarios [page 29].

Check the transmission status

1. Start the Asset Manager Windows or Web client.
2. Connect to your production database.
3. Display the deployment work orders (**Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Deployment work orders** link on the navigation bar).
4. Select the deployment work order to check.
5. Look at the **Processing state** (JobStatusState) field.

II Integration with other software distribution tools

5 Adapting the HP Client Automation integration to another software distribution tool

Adapting the process

Examine the process described in section Deployment process [page 19].

Determine which tools will be used in the process to perform the following tasks:

- Identify and inventory the computers
- Distribute the software

Define the new process depending on the answers to these questions.

Adapting HP Connect-It scenarios

The transfer of information between the different tools used in the new process (▶ Adapting the process [page 57]) is handled by HP Connect-It.

HP Connect-It uses the scenarios described in section HP Connect-It [page 29].

Refer to the existing scenarios when creating the scenarios that are adapted to the tools to be used in the new process.

In these scenarios, replace the HP Discovery and Dependency Mapping Inventory connector with connector(s) adapted to the tools that you will use for the new process.

These connectors, depending on the information that they will transfer, must point to the tables in the Asset Manager database that are listed in the Interactions between objects [page 24] section.

For all of these tables you can use the reconciliation key of your choosing.

Adapting Asset Manager Automated Process Manager modules

Asset Manager Automated Process Manager is configured to automatically execute HP Connect-It scenarios to import HP Discovery and Dependency Mapping Inventory inventory data (if you use HP Discovery and Dependency Mapping Inventory for the computer inventory).

If you modify the HP Connect-It scenarios that are used in the software distribution process, check that the Asset Manager Automated Process Manager modules have been correctly adapted.

III Appendixes

A Glossary

The glossary provides definitions of key terms used in the integration of Asset Manager with the software distribution and configuration management tools.

Deployment work order (Job)

A deployment work order describes an operation whose execution will be handled by HP Client Automation.

- Installing software
- Removing software
- Assigning rights to use software
- Removing rights to use software

Deployment work orders are created via wizards in the Asset Manager database, transmitted to HP Client Automation via a HP Connect-It scenario, and updated in the Asset Manager database via a HP Connect-It scenario.

Table in the Asset Manager database that describes these objects

Work orders (amWorkOrder)

Deployment task (Job)

A deployment task completes the description of the deployment work orders by specifying the deployment target.

Deployment tasks are created via wizards in the Asset Manager database and updated in the Asset Manager database via a HP Connect-It scenario.

Table in the Asset Manager database that describes these objects

Deployment tasks (amCMTargetTask)

User account (User account)

User accounts are defined in HP Client Automation or the LDAP tree used by HP Client Automation and are imported into the Asset Manager database using a HP Connect-It scenario.

LDAP accounts can be granted rights to use software via a named entitlement.

Table in the Asset Manager database that describes these objects

Portfolio items (amPortfolio)

Characteristics of these objects in the Asset Manager database

Records in the **Portfolio items** (amPortfolio) table whose **External identifier** (ExtPfiId) field value is not empty and which are linked to a nature whose **User account** (bUserAccount) field is selected and linked to a user

Domain (Domain)

LDAP DNS domain.

Computers, user accounts and computer groups are organized hierarchically as a tree structure whose branches represent domains.

They can only belong to a single domain and are identified uniquely by their name and the list of parent domains (the domain hierarchy to which it is assigned).

Domains are defined in HP Client Automation and are imported into the Asset Manager database using a HP Connect-It script.

Table in the Asset Manager database that describes these objects

Computers (amComputer) and **Portfolio items** (amPortfolio)

Characteristics of these objects in the Asset Manager database

Records in the **Portfolio items** (amPortfolio) table whose **External identifier** (ExtPfiId) field value is not empty and which are linked to a nature whose **Type of equipment** (seCPUType) field equals **Domain**

Computer groups (Group of devices)

Set of computers or groups.

Groups are defined in HP Client Automation and are imported into the Asset Manager database using a HP Connect-It script.

Groups are used to filter computers when you create a deployment work order.

Computer groups can be granted rights to use software via a named entitlement.

Table in the Asset Manager database that describes these objects

Computers (amComputer) and **Portfolio items** (amPortfolio)

Characteristics of these objects in the Asset Manager database

Records in the **Portfolio items** (amPortfolio) table whose **External identifier** (ExtPfiId) field value is not empty and which are linked to a nature whose **Type of equipment** (seCPUType) field equals **Computer groups**

Media (Service)

Parameters and files required to install software.

Media correspond to services defined in HP Client Automation.

They are imported into the Asset Manager database via a HP Connect-It scenario.

Media are grouped as **software packages**.

Table in the Asset Manager database that describes these objects in the Asset Manager database

Software installations or utilizations (amSoftInstall) and **Portfolio items** (amPortfolio)

Object characteristics

Records in the **Software installations or utilizations** (amSoftInstall) table linked to a nature whose **Media** (bSetUpMedia) check box is selected and which are linked to a model whose **Configuration management media** (bCMService) check box is selected.

Software package

Set of media.

A software package is used to group a set of media that references the same software entity.

Software packages are used to filter media when you create a deployment work order.

For example, the **MS Office** software package includes the **MS Word** and **MS Excel** components, etc.

Software packages are defined in Asset Manager.

Table in the Asset Manager database that describes these objects

Requests (amRequest)

Characteristics of these objects in the Asset Manager database

To be considered a software package, the record in the request table must be populated as follows:

- **Req. status** (seStatus): **Standard request**
- **Software package** (bSoftPackage) option selected

Named entitlement (Policy)

Named entitlements let you assign media user rights to user accounts, computers, computer groups and domains.

These named entitlements are created via wizards that can also create deployment work orders in the Asset Manager database.

Deployment work orders are transmitted to HP Client Automation and updated in the Asset Manager database via HP Connect-It scenarios.

Table in the Asset Manager database that describes these objects in the Asset Manager database

Named entitlements (amEntitlement)

Object characteristics

Records in the **Named entitlements** (amEntitlement) table whose **Used for configuration management** (bAutomated) check box is selected.

B References

Menus, navigation bar links and tabs

The data used for the Asset Manager integration with HP Client Automation can be accessed using the following menus, tabs, links and fields:

Table B.1. Menus and tabs

Sub-menu	Table the menu gives you access to (label and SQL name)	Tabs specifically designed for the **Software distribution** and **Configuration management** modules	Relevant fields or links (outside of the dedicated tabs)	Use	Section of this guide to consult
Portfolio management/ IT/ IT equipment link on the navigation bar					

Sub-menu	Table the menu gives you access to (label and SQL name)	Tabs specifically designed for the **Software distribution** and **Configuration management** modules	Relevant fields or links (outside of the dedicated tabs)	Use	Section of this guide to consult
Computers	Computers (amComputer)	None	External identifier (ExtPfiId)	Used to reconcile computers, computer groups, user accounts and domains with the software distribution and configuration management tools	How are domains imported? [page 41]
Tools menu					
Actions/ Edit	Actions (amAction)	Distribution	Type (seActionType)	Consult and edit the records in this table.	Actions and wizards [page 78]
Actions/ <Name of action>	Does not apply	Does not apply	Does not apply	Proposes the actions that are either non-contextual or whose contexts are active. Enables you to trigger the selected action.	Actions and wizards [page 78]
Administration menu					

Sub-menu	Table the menu gives you access to (label and SQL name)	Tabs specifically designed for the **Software distribution** and **Configuration management** modules	Relevant fields or links (outside of the dedicated tabs)	Use	Section of this guide to consult
List of screens	Does not apply	Does not apply	Does not apply	Enables you to access tables that are not accessible using the main menus. This task is restricted to the administrator because such tables usually do not have to be modified directly.	

Table B.2. Menus and tabs (for the integration with HP Client Automation)

Sub-menu	Table accessed via the menu (label and SQL name)	Tabs dedicated to the **HP CM integration** module	Relevant fields or links (outside of the dedicated tabs)	Use	Section of this guide to consult
File menu					
Activate modules	Does not apply	Does not apply	Does not apply	Enables you to activate or deactivate the **HP CM integration** module if permitted by your license file. This is the menu to use if you can't see the following menus in your application.	Activate required modules if you are accessing the database with a Windows client [page 26]
Portfolio management link on the navigation bar					

Sub-menu	Table accessed via the menu (label and SQL name)	Tabs dedicated to the **HP CM integration** module	Relevant fields or links (outside of the dedicated tabs)	Use	Section of this guide to consult
Portfolio items	Portfolio items (amPortfolio)	None	External identifier (ExtPfiId)	Identifier used to identify the portfolio item in a third-party software application	
Natures	Natures (amNature)	None	■ Type of equipment (seCPUType) ■ User account (bUserAccount) ■ Media (bSetUpMedia)	Is used to create natures that are used to identify portfolio items that are computer groups, domains, user accounts and media.	■ Computer groups [page 40] ■ Domains [page 41] ■ User accounts [page 39] ■ Media [page 42]
Models	Models (amModel)	None	Configuration management media (bCMService)	Is used to distinguish media that are managed in the Asset Manager integration with HP Client Automation.	Media [page 42]
Portfolio management/ IT/ IT equipment link on the navigation bar					
Computer groups	Client-Resource Relationships table (amClientResource)	None	Update in progress (bUpdate)		
Portfolio management/ Extended portfolio link on the navigation bar					

Sub-menu	Table accessed via the menu (label and SQL name)	Tabs dedicated to the **HP CM integration** module	Relevant fields or links (outside of the dedicated tabs)	Use	Section of this guide to consult
Internal requests	Request lines (amReqLine)	None	■ Software package (UsedCanInstall) ■ Media (UsedMedia) ■ Named entitlement (UsedEntitlement) ■ Add or remove software (bAutomatedJob)	Used to select the media, software package and named entitlement to install, remove, grant or remove.	Add or remove software, grant or remove the right to use a software application [page 45]
Internal requests	Requests (amRequest)	None	Software package (bSoftPackage)	Used to identify standard requests that correspond to a software package	Add or remove software [page 45]
Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration link on the navigation bar					

Sub-menu	Table accessed via the menu (label and SQL name)	Tabs dedicated to the **HP CM integration** module	Relevant fields or links (outside of the dedicated tabs)	Use	Section of this guide to consult
Media	Software installations or utilizations (amSoftInstall)	None	■ Software package (CanInstall) ■ Automatic deployment (bAutomaticDplmt) ■ Available media (bAvailableMedia) ■ Mandatory deployment (bMandatoryDplmt)	Software package that the media is part of.	Media [page 42]
Deployment tasks	Deployment tasks (amCMTargetTask)	All	All	Tasks that are created when you create a software installation or removal request, or when you request that rights to use software be granted or removed.	Add or remove software, grant or remove the right to use a software application [page 45]

Sub-menu	Table accessed via the menu (label and SQL name)	Tabs dedicated to the **HP CM integration** module	Relevant fields or links (outside of the dedicated tabs)	Use	Section of this guide to consult
Named entitlements	Named entitlements (amEntitlement)	None	■ Used for configuration management (bAutomated) ■ Media (UsedMedia) ■ Authorization (seAutoPriority)	Used to specify details about the named entitlements defined for configuration management	Grant or remove the rights to use a software application [page 49]
Deployment work orders	Work orders (amWorkOrder)	None	■ Deployment ID (AutomationID) ■ Information about the deployment (AutoStatusMsg) ■ Computer group (AutoTempGroup)	Work orders that are created when you create a software installation or removal request, or when you request that rights to use software be granted or removed.	Add or remove software, grant or remove the right to use a software application [page 45]

Toolbar icons

No toolbar icons are available for the integration of Asset Manager with HP Client Automation.

Interface options

No interface options are available for the integration of Asset Manager with HP Client Automation.

Tables

The following tables are linked to the integration of Asset Manager with HP Client Automation:

Table B.3. Tables

Label of the table	SQL name of the table	Link on the navigation bar used to access the table	Section of this guide to consult
Tables specifically linked to the integration of Asset Manager with HP Client Automation			
Deployment tasks	amCMTarget-Task	Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Deployment tasks	Add or remove software, grant or remove the right to use a software application [page 45]
Tables indirectly linked to the integration of Asset Manager with HP Client Automation			
Natures	amNature	Portfolio management/ Natures	■ Computer groups [page 40] ■ Domains [page 41] ■ User accounts [page 39] ■ Media [page 42]
Software installations or utilizations	amSoftInstall	Portfolio management/ IT/ Deployments and releases/ Software installation media	Media [page 42]
Portfolio items	amPortfolio	Portfolio management/ Portfolio items	
Models	amModel	Portfolio management/ Models	Media [page 42]
Client-resource relationships	amClientResource	Portfolio management/ IT/ IT equipment/ Computer groups	
Request lines	amReqLine	Portfolio management/ Extended portfolio/ Internal requests	Add or remove software, grant or remove the right to use a software application [page 45]

Label of the table	SQL name of the table	Link on the navigation bar used to access the table	Section of this guide to consult
Requests	amRequest	Portfolio management/ Extended portfolio/ Internal requests	Add or remove software [page 45]
Named entitlements	amEntitlement	Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Named entitlements	Grant or remove the rights to use a software application [page 49]
Work orders	amWorkOrder	Portfolio management/ IT/ Deployments and releases/ HP Client Automation integration/ Deployment work orders	Add or remove software, grant or remove the right to use a software application [page 45]

Dependencies between tables

The integration of Asset Manager with HP Client Automation requires some tables in the Asset Manager database. There are links between these tables. Because of these links, you will find it useful to populate these tables in a certain, defined order.

The order that we propose below is not mandatory: Asset Manager enables you to create missing records in linked tables whenever it is necessary.

The matrix below indicates the recommended order in which you should create your records. It also explains which dependant tables you need to populate.

Secondary tables that are directly linked to the integration of Asset Manager with HP Client Automation have been excluded. These tables are automatically populated when you create records in one of the main tables.

Table B.4. Dependencies between tables

Table (label and SQL name)	Tables to populate beforehand (label and SQL name)
Repository	
Locations (amLocation)	
Employees and departments (amEmplDept)	

Table (label and SQL name)	Tables to populate beforehand (label and SQL name)
Natures (amNature)	▶ **Portfolio** guide, chapter **References**, section **Dependencies between tables**
Models (amModel)	▶ **Portfolio** guide, chapter **References**, section **Dependencies between tables**
Computers (amComputer)	▶ **Portfolio** guide, chapter **References**, section **Dependencies between tables**
Portfolio items (amPortfolio)	▶ **Portfolio** guide, chapter **References**, section **Dependencies between tables**
Software installations or utilizations (amSoftInstall)	▶ **Software assets** guide, chapter **References**, section **Dependencies between tables**
Client-Resource Relationships table (amClientResource)	Computers (amComputer)
Requests (amRequest)	Software installations or utilizations (amSoftInstall)
Request lines (amReqLine)	◆ Requests (amRequest)
Named entitlements (amEntitlement)	■ Computers (amComputer) ■ Portfolio items (amPortfolio)
Deployment of tasks	
Work orders (amWorkOrder)	Models (amModel)
Deployment tasks (amCMTargetTask)	■ Computers (amComputer) ■ Work orders (amWorkOrder)

Itemized lists

Certain fields can be populated by selecting their values from a list. These lists are called itemized lists.

You can access the **Itemized lists** table (amItemizedList) using the **Administration/ Itemized lists** link on the navigation bar.

The integration of Asset Manager with HP Client Automation uses the following itemized lists:

Table B.5. Itemized lists (integration with HP Client Automation)

Identifier of the itemized list	Field populated from the itemized list (label and SQL name)	Table in which the field is found (label and SQL name)
amCMTargetTaskJobStatusCode	Execution result (JobStatusCode)	Deployment tasks (amCMTargetTask)

Identifier of the itemized list	Field populated from the itemized list (label and SQL name)	Table in which the field is found (label and SQL name)
amCMTarget-TaskJob-StatusState	Processing status (JobStatusState)	Deployment tasks (amCMTarget-Task)

For more information on using itemized lists, refer to the **Advanced use** guide, chapter **Itemized lists**.

Calculated fields

The integration of Asset Manager with HP Client Automation uses certain calculated fields.

These calculated fields are used in the default values of certain fields.

You can access the **Calculated fields** (amCalcField) table using the **Administration/ System/ Calculated fields** link on the navigation bar.

The following calculated fields are directly linked to HP Client Automation:

Table B.6. Calculated fields (integration with HP Client Automation)

Title (TextLabel) of the calculated field	SQL name of the calculated field	Label and SQL name of the field that uses the calculated field	Use
The service has sufficient license rights	OVCMServiceHasEnoughLicense	Portfolio items (amPortfolio)	This calculated field is displayed on the portfolio item's **Verify license** page.

Counters

The integration of Asset Manager with HP Client Automation does not use any counter.

Actions and wizards

The integration of Asset Manager with HP Client Automation uses actions to automate common tasks.

You can access the **Actions** table (amAction) using the **Administration/ Actions** link on the navigation bar.

For more information on using actions, refer to the **Advanced use** guide, chapter **Actions**.

For more information on script writing, refer to the **Advanced use** guide, chapter **Scripts**.

For more information on using APIs, refer to the **Programmer's reference** guide, chapter **Using the API**.

You can easily filter the actions linked to the Asset Manager integration with HP Client Automation by using a simple filter on the **Domain** field: Search for the **/Portfolio management/IT/Deployments and releases/HP Configuration Management integration/** value.

The actions that are directly linked to the Asset Manager integration with HP Client Automation and that are described in this guide are as follows:

Table B.7. Actions and wizards

Name of action	SQL name of the action	Type of action	Context of the action (SQL name of the table)	Section of this guide to consult
Delete named entitlement...	sysOVCMContextRemoveEntitlement	Wizard	amEntitlement	Remove rights to use software [page 51]
Create or delete a named entitlement...	sysOVCMEntitlement	Wizard	(No table)	Grant or remove the rights to use a software application [page 49]
Add or remove software to/from IT equipment...	sysOVCMGeneric	Wizard	(No table)	Remove software from a computer [page 48]
Add or remove software to/from locations...	sysOVCMLocations	Wizard	(No table)	Add or remove software to/from locations [page 45]
Remove software from the computer...	sysOVCMRemoveSoftFromCpu	Wizard	amComputer	Add or remove software to/from IT equipment [page 47]

Name of action	SQL name of the action	Type of action	Context of the action (SQL name of the table)	Section of this guide to consult
Add or remove software for users...	sysOVCMServices	Wizard	(No table)	Add or remove software for users [page 46]

Asset Manager Automated Process Manager modules

Integration with HP Client Automation

There are no Asset Manager Automated Process Manager modules specifically dedicated to the Asset Manager integration with HP Client Automation.

Tip:

To use Asset Manager Automated Process Manager to automate the triggering of HP Connect-It scenarios, you must create your own HP Connect-It scenarios.

System data and Line-of-business data

Asset Manager is provided with standard data sets.

These data sets are a part of one of the following groups:

- **System data**: data required by the Asset Manager application in order to function properly.
- **Line-of-business data**: Data that can be inserted into your production database at your discretion.

  This data is divided into functional groups.
- **Sample data**: data useful for familiarizing yourself with Asset Manager.

System data specifically linked to the integration of Asset Manager with HP Client Automation

System data involving the integration of Asset Manager with HP Client Automation includes data from the following tables:

- Client-resource relationship types (amCRType)
- Actions (amAction)
- Calculated fields (amCalcField)

System data is automatically included in the Asset Manager demonstration database.

System data is automatically included in your production database when you create it.

Reports

Asset Manager is not supplied with any reports related to the integration of Asset Manager with HP Client Automation.

API

Integration with HP Client Automation

No Asset Manager APIs are linked to the integration of Asset Manager with HP Client Automation.

To obtain a list and description of the APIs concerning the **Software distribution** module, refer to the **Programmer's reference** guide, **Index**, **Available functions - 'Software distribution' module**.

Views

No default view is dedicated to the integration of Asset Manager with HP Client Automation.

Other documentation

This guide only provides information that is directly linked to the integration of Asset Manager with HP Client Automation.

To obtain related information not covered in this guide, we recommend that you read the following documents:

Other documentation - list

The document ...	Covers information relating to...
Installation and upgrade	◆ Installing
User Interface	◆ General interface of the application
Portfolio	■ Managing computers ■ How natures and models work
Software assets	■ Software installations ■ Software counters
Administration	■ Managing itemized lists ■ Using wizards ■ Creating scripts ■ Customizing fields ■ Using
Help on fields and links	◆ Using fields and links in the database
Programmer's Reference	◆ Using APIs
Structure of the database	■ List of tables, fields, links and indexes of the database. ■ Agents automatically triggered by
Core tables	■ Managing locations ■ Managing employees and services ■ Managing features ■ And so on.
Advanced use	■ Using wizards ■ Using calculated fields ■ Managing itemized lists ■ Creating scripts
General online help	◆ Operation of the entire application

Workflow schemes

The integration with HP Client Automation uses a number of workflow schemes to manage certain system processes. Without these, integration will not be successful. They are grouped within the **OVCM** workflow execution group, which needs to be enabled in Asset Manager Automated Process Manager

You can access the **Workflow schemes** table (**amWfScheme**) using the **Administration/ Workflows/ Workflow schemes** link on the navigation bar.

You can easily filter display of the workflow schemes linked to the integration with HP Client Automation by using a simple filter on the **Reference** (Ref) field.

Search for values that start with **OVCM**.

The following workflow schemes are required components of integration with HP Client Automation:

Table B.8. Workflow schemes - list

Name of the workflow scheme	Reference of the workflow scheme	Context of the workflow scheme (SQL name of the table)	Section of this guide to consult
Validate software installation or removal requests	OVCM_REQ_APPR	Requests (amRequest)	Configuring the approval workflow scheme. [page 28]
Create target tasks for the software access authorization and removal work orders	OVCM_TAR_TASK_POL	Work orders (amWorkOrder)	
Create target tasks for the software installation and removal work orders	OVCM_TAR_TASK_JOB	Work orders (amWorkOrder)	
Delete entitlements that are not associated with portfolio items	OVCM_ENT_NO_PFI	Named entitlements (amEntitlement)	
Delete named entitlements that were successfully deleted by the configuration management tool	OVCM_SOFT_ENT	Work orders (amWorkOrder)	
Propagate the 'CPU-Domain' hierarchy to the portfolio items	OVCM_CPU_PFI_PARENT1	Computers (amComputer)	

Name of the workflow scheme	Reference of the workflow scheme	Context of the workflow scheme (SQL name of the table)	Section of this guide to consult
Propagate the domain hierarchy (Computers) to the domains (Portfolio items) - Update the hierarchy of the domains	OVCM_CPU_PARENT2	Computers (amComputer)	
Propagate the domain hierarchy (Portfolio items) to the domain (Computers) - Update the PFI hierarchy	OVCM_PFI_CPU_PARENT2	Portfolio (amPortfolio)	
Propagate the 'PFI-Domain' hierarchy to the computers - Computer creation	OVCM_PFI_CPU_PARENT1	Computers (amComputer)	

For more information on using workflow, refer to the **Advanced use** guide, chapter **Workflow**.

You can create new workflow schemes or customize existing workflow schemes.

Index

A

Actions, 78
Add or remove software, 45
API, 80
Asset Manager
  Installation, 25
  License Keys, 26
  Modules, 26
  Production database, 27 , 25
Asset Manager Application Designer
  Line-of-business data - import
    Existing database, 27
    New database, 27
Asset Manager Automated Process Manager, 79
  Configuration, 32
Asset Manager license, 26
Asset Manager modules, 26
Asset Manager Web Service
  Installation, 32

C

Calculated fields, 77
Computer
  How to reference, 38
  Where to reference them, 37
  Why reference them, 37
Computer group
  Definition, 63
  How to reference, 40
  Where to reference them, 40
  Why reference them, 40
Configuring the approval workflow scheme., 28
Counters, 77
Create software distribution deployment tasks (Asset Manager Automated Process Manager module), 54 , 52

D

Database
  Line-of-business data - import
    Existing database, 27
    New database, 27
Deployment process, 19
Deployment task
  Check transmission to HP Client Automation, 52
  Creating in Asset Manager, 45
    Using wizard, for computers, 48

Using wizard, for locations, 45
Using wizard, for users, 46
Definition, 62
Transmitting to HP Client Automation, 53
Deployment work order
Check transmission to HP Client Automation, 54
Definition, 61
Transmitting to HP Client Automation, 52
Domain
Definition, 62 , 62
How to reference, 41
Where to reference them, 41
Why reference them, 41

E

External data, 27

G

Grant or remove the rights to use a software application, 45
Group of devices
Definition, 63

H

HP Client Automation
Installation, 29 , 29
HP Connect-It
executing scenarios, 31
Installation, 29
HP Connect-It scenario
Configuration, 29

I

Icons, 73
Install
Java J2SE v 5.0 JDK, 32
Installation
Asset Manager, 25
Asset Manager Web, 32
HP Client Automation, 29
HP Connect-It, 29
Interactions between objects, 24
Interface options, 73
Interface - options, 73
Inventory tool, 31
Itemized lists, 76

J

Java J2SE v 5.0 JDK
Installation, 32
Job
Check execution, 53
Definition, 61
Jobs
Updating the status automatically, 53

L

ldap_active_directory_all.scn (HP Connect-It scenario), 41 , 40 , 39 , 38
ldap_directory_service_all.scn (HP Connect-It scenario), 41 , 40 , 39 , 38
License rights compliance module, 33
Line-of-business data, 79 , 27 , 27

M

Manuals, 80
Media
Definition, 63
Where to reference it, 42
Why reference it, 42
Menus, 67

N

Named entitlements, 45
Definition, 65
Navigation bar, 67
Navigation bar links, 67

O

Optional components, 31
Overview, 17

P

Policy

Definition, 65
Production database, 25

R

Reference, 37
Reports, 80
Required components, 25
Rights to use a software application
Granting in Asset Manager, 49
Removing from Asset Manager, 49

S

Scenarios
executing, 31
Service
Definition, 63
How to reference it, 42
Where to reference it, 42
Why reference it, 42
Software package
Definition, 64
Deployment, 45
How to create them, 43
Media
Linking them to a software package, 44
Where to reference them, 43
Why reference them, 43
System data, 79

T

Tables, 74
Dependencies between tables, 75
Tabs, 67
Task status code (Asset Manager field), 53
Task status message (Asset Manager field), 53
Task status state (Asset Manager field), 54 , 53 , 52
Toolbar, 73
Tools, 73

U

User account
Definition, 62 , 62
user accounts
How to reference, 39
Where to reference them, 39
Why reference them, 39

V

Views, 80

W

Wizards, 78
Workflow, 81
Workflow schemes, 81
ws_groups_devices.scn (HP Connect-It scenario), 41 , 40 , 38
ws_jobs.scn (HP Connect-It scenario), 52 , 52 , 52
ws_policies.scn (HP Connect-It scenario), 54 , 54 , 53
ws_services.scn (HP Connect-It scenario), 42
ws_status.scn (HP Connect-It scenario), 53