Asset Manager

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Windows® and Linux® operating systems

Software Assets

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Part I: Overview

Chapter 1: Introduction

Who is the Software assets module intended for?

The **Software assets** module is intended for organizations that want to manage, control and protect their software assets at each phase of their life cycle.

What does the Software assets module do?

The **Software assets** module is generally used by people who:

- Populate the software contracts database
- Populate the software licenses database (acquisition of rights to use software applications)
- Populate the installations database (consumption of rights to use software applications)
- Monitor that installations comply with licenses
- Manage the software portfolio (installations, updates)

Chapter 2: Software Asset Management: The Stakes

Why should businesses implement software asset management? 2

Benefits of effective Software Asset Management 3

Understanding existing license types 4

Implementing software asset management 4

How Asset Manager helps you manage software assets 6

Why should businesses implement software asset management?

Because of their intangible nature, software assets are more loosely managed than tangible assets.

> **Note:** It is estimated that only 10% of all businesses have implemented an effective software asset management program.

Nonetheless, software assets generate a large part of IT expenses in each of the following fields:

- Acquisition
- Installation
- Support
- Maintenance
- Utilization

> **Note:** In most organizations the percentage of the IT budget used to procure software assets increases year after year.
>
> In general, software asset procurement represents 18 to 37 percent of the IT budget.

Most organizations do NOT know:

- What software is installed
- Where the software is installed
- If the software installation is compliant with licensing rights

Without this information, organizations are running severe risks:

- Illegally using software by having too few license rights
- Overspending by purchasing licenses for software that is not installed or used

  > **Note:** Most organizations purchase too many licenses by about 10 to 15 percent.

- Being incapable of evaluating and organizing software updates

More information about effective software asset management and the stakes involved can be found on the Business Software Alliance (BSA) web site:

http://www.bsa.org.

Benefits of effective Software Asset Management

Managing software assets effectively can benefit your organization in several ways:

- Know who is using what software at any time
- Know which software installations are no longer used and reassign license rights to other users instead of acquiring more rights
- Improve negotiations with your suppliers using the knowledge of your organization's current software situation and its desired evolution
- Target updates with increased precision
- Eliminate illegal installations
- Ensure that workstations receive the updates that they need and for which they qualify
- Reduce the risk of fines paid for illegal software installations
- Produce on-demand reports of your organization's software installations during unscheduled audits

> **Note:** Most organizations that implement an effective software asset management program reduce software procurement expenses by 25%.

Understanding existing license types

In practice, each software publisher implements its own licensing policy.

However, it is possible to define the main license types.

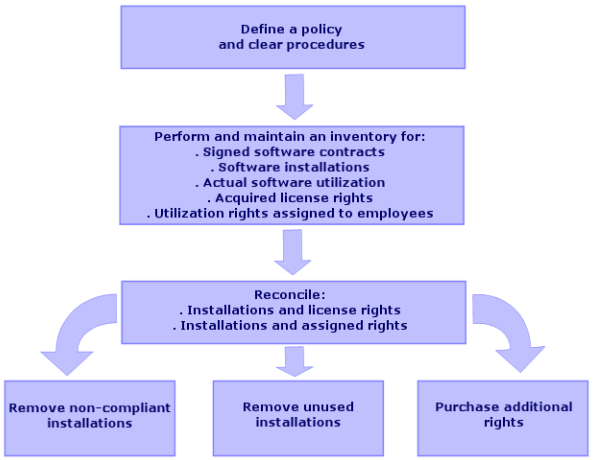
Implementing software asset management

Implementing software asset management involves implementing procedures and tools to manage, control and protect software assets at each phase of their life cycle.

Managing software assets is not an aggregate of ad hoc operations. It is a continued, permanent effort.

Implementing software asset management is done in several stages:

Managing software assets



1. Define a software policy and clear procedures:
   - Reaffirm your drive to be compliant with legislation while continuing to meet the best usefulness/economy ratio for the organization
   - Centralize software procurement
   - Define a validation procedure for software purchase requests
   - Define a list of certified software
   - Select reliable vendors

- Collect and maintain original copies of purchased software in a **Definitive Hardware Store** (protected access) (licenses, manuals, CDs, registration cards, invoices, and so on).

2. Inventory installed software and meter actual utilization.
   The most effective way to do this is by using automated inventory tools.
   HPE Discovery and Dependency Mapping Inventory can do this for you for your entire IT structure.
   This task can be performed by a service provider.
   Next, transfer the inventoried data to the Asset Manager database where you will be able to implement all required software asset management tasks.
   Once the initial inventory has been performed, update it at regular intervals.
3. Collect information on the software installation rights that you have acquired (licenses, contracts, invoices, entitlements).
   Two types of rights exist:
   - License: A license grants the right to install a software application published by a third-party. Owning a license makes you compliant with the law.
   - Entitlement: An entitlement grants employees the right to install a software application. Waiting for an entitlement before installing an application makes employees compliant with your internal policies.

   Store this information in the Asset Manager database (licenses, contracts).
   Once this has been done, update the Asset Manager database each time a license is acquired or an entitlement changes.
   Using Asset Manager's **Procurement** module is an effective way to manage license acquisitions. And doing so will increase the reliability of your data.
4. Reconcile installations with acquired rights (licenses) and granted rights (entitlements).
   For each software application, one of three situations can occur:
   - If the number of installations exceeds the number of license rights: Remove the excess installations or purchase more license rights. Metering actual software utilization will help you make a decision.
   - If the number of license rights exceeds the number of installations: Do not purchase new license rights. Save the unused license rights for future use.
   - If an application has been installed but no entitlement has been granted: Remove the non-compliant installation or grant the entitlement

How Asset Manager helps you manage software assets

Asset Manager's **Software assets** module empowers you to handle every aspect of your software asset management program.

This module is entirely integrated with other Asset Manager modules and, in particular, with the following modules:

- Portfolio
- Contracts
- Procurement

Asset Manager is also integrated with HPE Discovery and Dependency Mapping Inventory, which automatically discovers and inventories software.

Using the **Software assets** module you can:

- Manage license contracts
  - Contract validation process
  - Create new contracts
  - Modify existing contracts
- Describe licenses acquired from third party companies
- Describe internal assignments of rights
- Describe the software installations
- Describe actual software utilization
- Reconcile licenses and installations
  - Compare licenses and installations
  - Compare entitlements and installations
  - Process irregularities taking into account actual utilization
- View reports and charts

A wizard guides you through these tasks (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).

Chapter 3: Licenses, entitlements, installations, utilizations and contracts

Managing a software application means managing its corresponding license agreements, entitlements, installations/utilizations and any related contracts.

Main concepts

This section presents the main concepts that are used in software asset management.

Software installation/utilization

Software installations/utilizations are represented in the database by portfolio items.

When the software is physically installed on a computer, it can be declared as a component of the computer.

When the software does not require being physically installed, it can be associated with its user.

Utilization that is defined here should not be confused with **actual utilization** which reflects the frequency with which a software application is used.

Software license

A software license is an asset that describes the user rights (number of possible installations, number of database accesses, and so on).

For example: A license that grants 1000 accesses to an Asset Manager database.

The contractual aspects of the license are described at the contract level.

License right

The software counters count off license rights and compare them with counted installations/utilizations.

Software counter

A software counter is used to reconcile a rights count with an installations/utilizations count.

These counts can be grouped together (by user, by cost center, and so on).

A counter enables you to:

- Verify compliance with a software provider,
- Verify compliance with internal policies.

Counters can easily be used to count other things than software.

Named entitlements

Software counters count rights and installations/utilizations

For rights, it is often possible to use a simple query to identify the records to be used as the basis of the count (For example: All employees in the accounting department).

However, it is not always possible to define a simple query. (For example: When the records to be used do not have a common denominator).

In this case, we need to define a named entitlement in which the records to be selected are listed one by one.

Normalization of inventoried models

Normalizing inventoried models consists of mapping software installation models from inventory databases to a limited number of software installation models in Asset Manager.

Doing this provides you with a simple and effective way of organizing and structuring software installations.

ITIL

ITIL (Information Technology Infrastructure Library) is an IT service management methodology.

This methodology comprises a library of tried and tested best practices.

A number of organizations provides ITIL training and certification as well as consultancy services.

Link between installations/utilizations and licenses

> **Note:**
>
> **Installation** means the software is physically installed on the computer (individual workstation or server).
>
> **Utilization** means the user can access and use the software without installing it. For example, this is the case for application services which can be accessed via an Internet browser.
>
> **Actual utilization** of a software application is the amount of real utilization of an application that can be measured for a given user.

Installation means the software is physically installed on the computer (individual workstation or server).

Utilization means the user can access and use the software without installing it. For example, this is the case for application services which can be accessed via an Internet browser.

Actual utilization of a software application is the amount of real utilization of an application that can be measured for a given user.

You have the choice of two approaches:

- **Directly linking licenses with their installations/utilizations.**
  This requires detailed tracking in the field and in the Asset Manager database.
  When using this approach, start by creating the licenses, then create the installations/utilizations and link them back to the corresponding license.

- **Keep licenses separate from installations/utilizations.**
  Even if this does not appear to be the most rigorous method, it is often the most realistic as software is most often installed from a CD-ROM or a server, regardless of the location of the license authorizing you to use it.
  When using this approach, create the licenses as and when they are acquired. Create the installations separately as and when you make them or when they are inventoried via an automatic network scan.
  Using software counters, you can reconcile licenses with installations/utilizations, even if there is not a direct link between them.

Tables concerned by software asset management

In Asset Manager the following tables are used for software asset management:

Tables

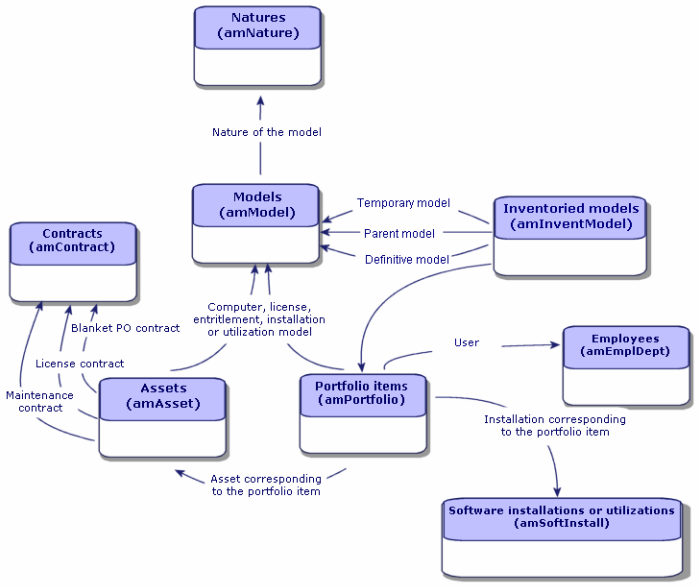
Table	Use
Natures (amNature)	Create natures of: • Licenses • Installations/utilizations • Contracts
Models (amModel)	Create models of: • Licenses • Installations/utilizations • Contracts
Inventoried models (amInventModel)	Mapping between installations/utilizations models from automatic inventory tools and models in the Asset Manager database
Portfolio items (amPortfolio)	Create instances: • Licenses • Installations/utilizations
Assets (amAsset)	Each time a portfolio item corresponding to the following items is created, a corresponding record is created in the Assets table: • All licenses.

Tables, continued

Table	Use
	• Installations and utilizations when they are associated with a model, itself associated with a nature whose **Management constraint** field (seMgtConstraint) is set to **Asset tag** or **Unique asset tag** (**Portfolio** guide, chapter **Overview**, section **Three management types**).
Software installations (amSoftInstall)	Each time a portfolio item corresponding to a software installation/utilization is created, a corresponding record is created in the Software Installations table.
License type (amLicType)	This table contains different license types. It is linked to the models table (amModel), to the assets table (amAsset) and to the software counters table (amSoftLicCounter).
Software counters (amSoftLicCounter)	Counters enable you to make sure you are in compliance with the software provider and you own internal policies. Counters compare the number of installations/utilizations with the number of license rights.
Workflow schemes (amWfScheme)	This table contains workflow schemes that automate certain tasks linked to software license management.
Actions (amAction)	This table holds details of "wizards" that automate certain tasks linked to software license management.
Contracts (amContract)	This table enables you to create: • Acquisition contracts (linked to licenses) or maintenance contracts (generally linked to installations and sometimes to licenses) when necessary. • Microsoft Select type master lease contracts. • ASP type contracts.

> **Note:** The contracts are used to describe agreements you have with software providers. Creating a contract is optional except for **ASP** agreements, which must be described by a contract.
>
> You must create a portfolio item for each license acquired (whether it be due to a license contract or not).

Physical data model



Management types

As for other assets and portfolio items, you must choose a management type for licenses and installations/utilizations.

Their management type will depend on their importance and the way in which you choose to describe them:

- Individual management for expensive and indispensable software (Asset Manager, SAP, for example).
  Portfolio guide, chapter **Portfolio items**, section **Assets**.
- Collective management for low-cost software that you purchase in large quantities (File compression software, for example).
  Portfolio guide, chapter **Portfolio items**, section **Batches**.
- Undifferentiated management for free software for which you only want to know the number of its users (RealPlayer type multimedia software, for example).
  Portfolio guide, chapter **Portfolio items**, section **Untracked batches**.

Software assets module: Order of implementation

1. Create the software license contracts (License contract management)
2. Create the software licenses(Software license management)
3. Create the named entitlements (Software entitlement management)
4. Create and/or import the software installations/utilizations (Software installations and utilizations management)
5. Check compliance of installations/utilizations with respect to licenses (Monitoring license compliance of installations)
6. Analyze the situation of your company (Viewing reports and charts)

How to create records

The recommended method of creating records for contracts, licenses, entitlements, installations/utilizations and software counters is by using the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).

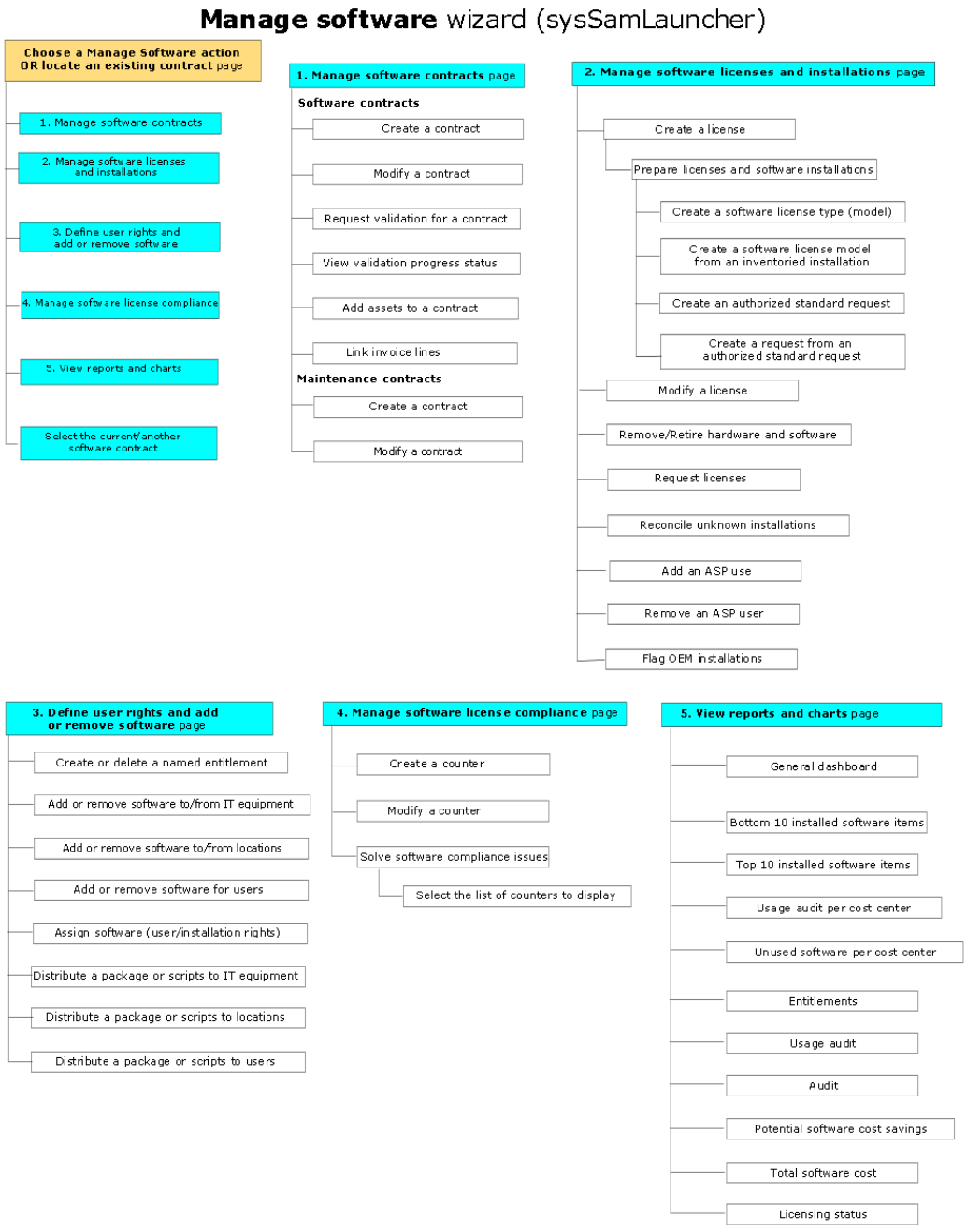
This wizard gives you step-by-step guidance in creating the records.We recommend that you use the wizard to create records, especially when you start using the **Software assets** module.

> **Note:**
>
> We recommend that you use the wizard to create records, especially when you start using the **Software assets** module.
>
> Once you are familiar with this module, you can also use the links on the navigation bar to directly access records in a given table (for example, the **Asset lifecycle/ Software Asset Management/ Software counters** link).

Manage Software wizard structure (sysSamLauncher)

This section provides an overview of the top-level page structure of the **Manage software** wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).

This wizard includes many features on its own pages for managing software contracts, licenses and installations, and compliance, as well as links that launch other wizards.


Manage software wizard (sysSamLauncher)
Choose a Manage Software action OR locate an existing contract page
1. Manage software contracts
2. Manage software licenses and installations
3. Define user rights and add or remove software
4. Manage software license compliance
5. View reports and charts
Select the current/another software contract
1. Manage software contracts page
Software contracts
Create a contract
Modify a contract
Request validation for a contract
View validation progress status
Add assets to a contract
Link invoice lines
Maintenance contracts
Create a contract
Modify a contract
2. Manage software licenses and installations page
Create a license
Prepare licenses and software installations
Create a software license type (model)
Create a software license model from an inventoried installation
Create an authorized standard request
Create a request from an authorized standard request
Modify a license
Remove/Retire hardware and software
Request licenses
Reconcile unknown installations
Add an ASP use
Remove an ASP user
Flag OEM installations
3. Define user rights and add or remove software page
Create or delete a named entitlement
Add or remove software to/from IT equipment
Add or remove software to/from locations
Add or remove software for users
Assign software (user/installation rights)
Distribute a package or scripts to IT equipment
Distribute a package or scripts to locations
Distribute a package or scripts to users
4. Manage software license compliance page
Create a counter
Modify a counter
Solve software compliance issues
Select the list of counters to display
5. View reports and charts page
General dashboard
Bottom 10 installed software items
Top 10 installed software items
Usage audit per cost center
Unused software per cost center
Entitlements
Usage audit
Audit
Potential software cost savings
Total software cost
Licensing status

Part II: Using the **Software assets** module

Chapter 4: Preliminary tasks

This chapter explains the configuration needed to use the **Software assets** module.

Insert the appropriate license in the Asset Manager database

Make sure your Asset Manager license allows access to the following modules:

- Portfolio
- Contracts
- Software assets

Windows client: Activate required modules

1. Start the Asset Manager Windows client.
2. Activate the following modules (**File/ Manage modules** menu):
   - Portfolio
   - Contracts
   - Software assets

Import the line-of-business data into your existing database

In order to use the **Software assets** module with a database, you must import a specific set of line-of-business data.

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**, section **Creating the database structure with Asset Manager Application Designer**.

On the page **Data to import**, select:

- Software Asset Management - Line-of-business data
- Contracts - Line-of-business data

Importing the Line-of-business into an existing database

1. Start Asset Manager Application Designer.
2. Select the **File/ Open** menu item.
3. Select the **Open database description file - create new database** option.
4. Validate (**OK** button).
5. Select the **gbbase.xml** file, which is located in the **config** sub-folder of the Asset Manager installation folder (in general: **C:\Program Files\HPE\Asset Manager 9.61 xx**).
6. Open the file (**Open** button).
7. Start the database creation wizard (**Action/ Create database** menu).
8. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons):

Fields	Value
Generate SQL script / Create database page	
Database	Select the connection to the database into which you wish to import the line-of-business data. (If you select an existing database, it will be modified.)

Fields	Value
Creation	Import line-of-business data.
Use advanced creation options	Do not select this option
Creation parameters page	
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 in 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	
Available data	Select: ◦ Software Asset Management - Line-of-business data ◦ Contracts - 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.

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

To learn more about installing Asset Manager

Refer to the **Installation and upgrade** guide.

Chapter 5: License contract management

This section explains how to manage license contracts with Asset Manager.

License contracts are used to describe the terms and conditions negotiated with software providers and vendors.

> **Note:** License contracts are not to be confused with the actual licenses themselves (which are portfolio items that describe acquired license rights).
>
> The counters use licenses and not contracts as the basis to reconcile acquired and consumed rights.

Creating a license contract

This section explains how to create a new contract.

Method 1: Using the Manage software wizard (sysSamLauncher)

1. Collect together the contract signed with software providers and vendors.
2. Start the **Manage software** wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
3. On the **Choose a Manage Software action...** page, select the **Manage software contracts** option.
4. Click **Next**.
5. On the **Manage software contracts** page, click **Create a contract** in the **Software contracts** section.
6. This starts the **Create a software contract** (sysSamCreateSoftContract) wizard.
   Populate the wizard according to your needs.
   Click **Finish** to validate all parameters of the contract.
   The **Create a software contract** wizard creates the contract.

Method 2: Using the menus

1. Collect together the contract signed with software providers.
2. Display the contracts (**Asset lifecycle/ Supplier contract management/ Contracts** link on the navigation bar).
3. Click**New** to add a new record.
4. Populate in particular the following fields and links:

Field or link	Description
Type (seType)	◦ **Master lease**: If there is a master lease with the software vendor ◦ **License**: For the license contract strictly speaking ◦ **Insurance**: For support contracts, upgrades, software assurance, and so on.
General tab	
Attached to (Parent)	To link a license contract to a master lease or an insurance contract to a license contract
Licenses tab	
License contract type (seLicenseType)	Specifies the license type
Tab list (**Licenses** (Licenses) link)	Assets describing the license rights acquired in a license contract

Selecting the current contract in the Manage software wizard (sysSamLauncher)

This section explains how to associate a contract by default with the **Manage software** wizard.

The default contract is taken into account by some of the other wizards that are triggered by the **Manage software** wizard.

> **Note:** The selected contract remains associated with the wizard, even if you exit the wizard.

> The current contract is associated with the Asset Manager database login and is therefore different for each login.

1. Start the **Manage software** wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, click **Select the another current software contract**.
3. This starts the **Select the current software contract** (sysSamGetEnv) wizard.
   Populate the wizard according to your needs.
   Click **OK** to validate the contract selection.

In this guide, **current contract** will refer to the current contract associated with the **Manage software** wizard for a given login to the Asset Manager database.

Automating contract validation

This section explains how contract validation is automated by Asset Manager and how to configure and implement this.

Overview

The system data belonging to the **Software assets** module contains a workflow entitled **Contract validation** (sysSam_CNTR_APPR).

This workflow schema automates the validation of license contracts.

The following is a description of this workflow scheme:

License contract validation - Contract validation workflow scheme

<table>
<tr><td>Events that trigger the workflow scheme</td><td colspan="3">The workflow scheme starts if one of the following events occurs:
Record added to the Contracts (amContract) table.
Updated Contracts (amContract) table, Status (Status) field.</td></tr>
<tr><td rowspan="2">Conditions required for the workflow to continue running</td><td colspan="3">The workflow scheme continues running if the following fields are set to the following values:</td></tr>
<tr><td>Table name</td><td>Field name</td><td>Field value</td></tr>
<tr><td></td><td>Contracts (amContract)</td><td>Status (Status)</td><td>SAM_WORKFLOW</td></tr>
</table>

License contract validation - Contract validation workflow scheme, continued

	Contracts (amContract)	**Contract status** (seStatus)	**Awaiting approval** (13) or **Awaiting approval for renewal** (33)
Is Asset Manager Automated Process Manager required to trigger and run the workflow scheme?	No		
Simplified description of the workflow scheme	1. The workflow scheme creates a budgetary validation request assigned to a group that is selected by the workflow scheme. This validation request is shown by a workflow activity assigned to the group supervisor. This workflow activity is visible to all members of the group. A message is also sent to the group supervisor. 2. If this validation request is accepted by one of the budgetary validation group members, the workflow creates a validation request for the **Billing approval**, **Legal approval**, **Financial approval** and **Technical approval** groups. These validation requests are each shown by a workflow activity assigned to the group supervisor. These workflow activities are visible to all members of the corresponding group. A message is also sent to the supervisor of each group. 3. If the four validation requests are approved, the contract supervisor receives a message. 4. If the contract is refused by one or more of the validation groups, a message informs the contract supervisor who can choose to leave the contract as-is, or to make changes and resubmit it for validation.		

Configuring how the budgetary validation group is selected

By default, to select the appropriate budgetary validation group, the workflow scheme proceeds as follows:

1. It looks for all groups linked to the contract (**Contracts** tab in the employee group detail).
2. It selects the employee groups whose **Barcode** (BarCode) field begins with **STRBUDGET**.

3. If no employee group is found, it assigns the request validation to the group whose **Barcode** (BarCode) field is set to **sysSam_CNTR_BUD**.

Before you can use the **Contract validation** workflow scheme, you must perform the following operations:

1. Display the groups (**Organization management/ Operations/ Employee groups** link).
2. For each contract validated by a specific group:
   a. Click **New** to create a new group or display the detail of an existing group.
   b. Make sure that the following fields and links have the appropriate values:

Field or link	Value
Bar code (code)	A name starting with **STRBUDGET**.
Supervisor (Supervisor)	The person designated by this link receives a message when a workflow activity for the contract validation request is created by the **Contract validation** workflow. The person also reviews these workflow activities.
Composition tab	
Tab list (**Members** (Members) link)	The members of the group view the workflow activities for the contract validation request created by the **Contract validation** workflow and can accept or reject validation requests.
Contracts tab	
Tab list (**Contracts** (Contracts) link)	Add the contracts that are validated from a budgetary standpoint by the group.

> **Note:** In order for this system to work, a contract to validate must only be included in one single group for which the **Barcode** (BarCode) field starts with **STRBUDGET**.

3. For contracts to be validated using the default group:
   a. Display the detail of the **Budgetary approval** group whose **Barcode** (BarCode) field is set to **sysSam_CNTR_BUD**.
   b. Make sure that the following fields and links have the appropriate values:

Field or link	Value
Supervisor (Supervisor)	The person designated by this link receives a message when a workflow activity for the contract validation request is created by the **Contract validation** workflow. The person also views these workflow activities.
Composition tab	
Tab list (**Members** (Members) link)	The members of the group view the workflow activities for the contract validation requests created by the **Contract validation** workflow and can accept or reject the validation requests.

> **Note:** In order for this group to be used for a given contract, this contract must not be included in a group whose **Barcode** (BarCode) field begins with **STRBUDGET**.

Configuring the other validation groups

The other validations are handled by the following validation groups:

- **Billing approval** (sysSam_CNTR_BILL)
- **Legal approval** (sysSam_CNTR_JURI)
- **Financial approval** (sysSam_CNTR_FINA)
- **Technical approval** (sysSam_CNTR_OPER)

You must define these groups as follows:

1. Display the groups (**Organization management/ Operations/ Employee groups** link).
2. Display the details of these groups one after the other.
3. Populate the following fields and links:

Field or link	Value
Supervisor (Supervisor)	The person designated by this link receives a message when a workflow activity for the contract validation request is created by the **Contract validation** workflow. The person also reviews these workflow activities.
Composition tab	

Field or link	Value
Tab list (**Members** (Members) link)	The members of the group view the workflow activities for the contract validation requests created by the **Contract validation** workflow and can accept or reject the validation requests.

Customize the Contract validation workflow scheme

> **Note:** This operation can only be performed by using the Windows client.

This **Contract validation** is only an example.

It is more than likely that you will need to tailor it to suit your own validation processes, in the following areas in particular:

- Validation types to perform (budgetary, financial, technical, and so on)
- The way in which validators are selected (named user, calculated user, named group, calculated group)

Here is how, for example, you can change the way in which the financial validation group is selected, so that it is deduced and not simply named:

1. Display the workflow schemes (**Administration/ Workflow/ Workflow schemes** link on the navigation bar).
2. Select the **Contract validation** (sysSam_CNTR_APPR) scheme.
3. Display the detail of the **Contract validation: Financial** (SAM_APPR_CNTR_FINA) activity (shortcut menu **Detail of activity** on the **Contract validation: Financial** box).
4. Display the **Parameters** tab.
5. Display the detail of the **Assignee** link (click on the magnifier)
6. Modify the following fields and links:

Field or link	Value
Context (ContextTable)	Contracts (amContract)
Type (seType)	Calculated group

Script (memScript)	`Const STR<Validation type>="CNTR<Validation type>"`
	`RetVal=amDbGetLong("SELECT g.lGroupId FROM amRelEmplGrpCntr r, amEmplGroup g WHERE r.lGroupId=g.lGroupId AND r.lCntrId="& [lCntrId] & " AND g.BarCode LIKE '" & STR<Validation type> & "%'")`
	`if RetVal=0 Then RetVal=amDbGetLong("SELECT lGroupId FROM amEmplGroup WHERE BarCode ='sysSam_CNTR_<Validation type>'")`
	by replacing the **<Validation type>** variable with **FINA**.
	Tip
	If you wish to customize how another validation group type is selected, you can use the same script, and replace **<Validation type>** with another value:
	◦ Billing approval: **BILL**
	◦ Legal approval: **LEGA**
	◦ Technical approval: **OPER**

7. Save the modifications and close the detail of the workflow role by clicking **Close**.
8. Close the detail of the activity by clicking **Close**.
9. Close the detail of the workflow scheme by clicking **Close**.
10. Display the groups (**Organization management/ Operations/ Employee groups** link).
11. For the contracts that are validated by a specific group:
    a. Click **New** to create a new group or display the detail of an existing group.
    b. Make sure that the following fields and links have the appropriate values:

Field or link	Value
Bar code (code)	A name starting with **CNTR<Validation type>**, where **<Validation type>** is the value defined in the validation group selection script; In this example: **FINA**.
Supervisor (Supervisor)	The person designated by this link receives a message when a workflow activity for the contract validation request is created by the **Contract validation** workflow. The person also reviews these workflow activities.
Composition tab	
Tab list (**Members** (Members) link)	The members of the group view the workflow activities for the contract validation requests created by the **Contract validation** workflow and can accept or reject the validation requests.
Contracts tab	
Tab list (**Contracts** (Contracts) link)	Add that contracts that are validated from a financial standpoint by the group.

12. For contracts to be validated using a named group:
    a. Display the detail of the group whose **Barcode** (BarCode) field is set to **sysSam_CNTR_FINA**.
    b. Make sure that the following fields and links have the appropriate values:

Field or link	Value
Supervisor (Supervisor)	The person designated by this link receives a message when a workflow activity for the contract validation request is created by the **Contract validation** workflow. The person also reviews these workflow activities.
Composition tab	
Tab list (**Members** (Members) link)	The members of the group view the workflow activities for the contract validation requests created by the **Contract validation** workflow.

> **Note:** In order for this group to be used for a given contract, this contract must not be included in a group whose **Barcode** (BarCode) field begins with **CNTRFINA**.

Requesting validation for the current contract

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, check that the wizard is accessing the current contract and select the **Manage software contracts** option.
3. Click **Next**.
4. On the **Manage software contracts** page, click **Request validation for a contract**.
5. This starts the **Request validation for a contract** (sysSamReqContractApproval) wizard. Click **Finish** to validate the contract validation request.

This wizard modifies the following fields and links of the current contract:

Field name	Field value
Status (Status)	SAM_WORKFLOW
Contract status (seStatus)	Awaiting approval

These modifications trigger the **Contract validation** (sysSam_CNTR_APPR) workflow for the current contract (Overview.)

Viewing the validation progress status of the current contract

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, check that the current contract in the wizard is the contract for which you want to check the validation process and select the **Manage software contracts** option.
3. Click **Next**.
4. On the **Manage software contracts** page, click **View validation progress status**.

5. This displays a screen showing the progress of the **Contract validation** (sysSam_CNTR_APPR) workflow (Overview).

Accepting or refusing a contract validation request

For each requested validation, the **Contract validation** workflow scheme creates a workflow activity.

These workflow activities are assigned to the group supervisor in charge of the different validations.

A workflow scheme is visible to the supervisor and the members of the group to which the task is assigned.

To accept or refuse a validation request:

1. Connect to the Asset Manager database with the supervisor login or the one of a group member.
2. Display current tasks (**Asset lifecycle/ Infrastructure management/ My workflow tasks** link on the navigation bar).
3. Select the task corresponding to the validation request.
4. Take a look at the workflow task.
5. Click either **Validate the contract** or **Refuse the contract**.

Restarting a contract validation cycle

If a contract is refused, the workflow scheme sends a message to the contract supervisor.

To make a decision on how to process the contract:

1. Connect to the Asset Manager database with the contract supervisor login.
2. Display the messages (**Administration/ System/ My messages** link on the navigation bar).
3. In the detail of the refusal notification message, click **Ref. obj.** to consult the contract detail.
4. Modify the contract.
5. Display current tasks (**Asset lifecycle/ Infrastructure management/ My workflow tasks** link on the navigation bar).
6. Select the task corresponding to the validation refusal

7. Take a look at the workflow task.
8. Click **Yes** to restart the validation circuit or **No** to quit the process.

When you click **Yes**, the workflow activity modifies the following fields and links in the contract being validated:

Field name	Field value
Status (Status)	SAM_WORKFLOW
Contract status (seStatus)	Awaiting approval

These modifications trigger the **Contract validation** (sysSam_CNTR_APPR) workflow for the current contract (Overview.)

Modifying a license contract

This section explains how to modify an existing contract.

Method 1: Using the Manage software wizard (sysSamLauncher)

1. Start the **Manage software** wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select the **Manage software contracts** option.
3. Click **Next**.
4. On the **Manage software contracts** page, click **Modify a contract** in the **Software contracts** section.
5. This starts the **Create a software contract** (sysSamCreateSoftContract) wizard.
   Populate the wizard according to your needs.
   Click **Finish** to validate all parameters of the contract.
   The wizard modifies the contract.

Method 2: Using the menus

1. Display the contracts (**Asset lifecycle/ Supplier contract management/ Contracts** link on the navigation bar).
2. Select the contract to be modified.
3. Modify the contract.
4. Click **Modify** (Windows client) or **Save** (Web client) to validate the modifications.

Associating a new maintenance contract to a license contract

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select the **Manage software contracts** option.
3. Click **Next**.
4. On the **Manage software contracts** page, click **Create a contract** in the **Maintenance contracts** section.
5. This starts the **Create a contract** wizard (BstCntrCreateContract).
   Populate the pages in the wizard.
   Click **Finish** to validate what you entered.
   The **Create a software contract** wizard creates the maintenance contract and links it to the current contract.

Modifying a maintenance contract associated with the current contract

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, check that the current contract in the wizard is the license contract for which you want to modify the maintenance contract that is associated with it. Then select the **Manage software contracts** option.
3. Click **Next**.
4. On the **Choose a Manage Software action...** page, click **Modify a contract** in the **Maintenance contracts** section.
5. This displays the list of maintenance contracts associated with the current contract.
   Modify the associated contracts.
   Click **Modify** (Windows client) or **Save** (Web client) to validate the modifications.

Adding assets to the current contract

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, check that the wizard is associated with the current contract to which you want to add assets. Then select the **Manage software contracts** option.
3. Click **Next**.
4. On the **Manage software contracts** page, click **Add assets to a contract**.
5. This displays the list of records in the **Assets** (amAsset) tab that are not already linked to the current contract.
6. Select one or more assets.
7. Populate the other pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons).

8. Click **Finish** to validate what you entered.
   This links the assets to the current contract (visible on the **Assets** tab in the contract detail and **Contracts** tab in the asset detail).
9. Click **OK** to exit the wizard.

Link invoice lines to the current contract

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, check that the wizard is associated with the current contract to which you want to add invoice lines. Then select the **Manage software contracts** option.
3. Click **Next**.
4. On the **Manage software contracts** page, click **Link invoice lines**.
5. This starts the **Link invoice lines to the contract** (sysSamLinkInvoices2Cntr) wizard.
6. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons).
7. Click **Finish** to validate what you entered.
   This links the invoice lines to the current contract (**Associated contract** (CntrInvLine) link of the invoice lines).
8. Click **OK** to exit the wizard.

Chapter 6: Software license management

A software license is a portfolio item (**Portfolio** guide, chapter **Portfolio items**). Just like for any other portfolio item, you can choose an individual, collective or undifferentiated management for this item.

Create a software license nature

1. Display the natures (**Portfolio management/ Asset configurations/ Natures** link on the navigation bar).
2. Click **New**.
3. Populate in particular the following fields and links:

Field	Value
Also create (seOverflowTbl)	Nothing
License (bSoftLicense)	Yes

> **Note:** You will note that you only need to create one nature.
>
> It can be used to create all license models.

For more information about natures, refer to the **Portfolio** guide, chapter **Portfolio items**, section **Natures**.

Create a software license model

Method 1: Using the Manage software wizard (sysSamLauncher) 36
Method 2: Using the menus 36

Method 1: Using the Manage software wizard (sysSamLauncher)

Create a software license

Method 2: Using the menus

1. Display the models (**Portfolio management/ Asset configurations/ Models** link on the navigation bar).
2. Click **New**.
3. Populate in particular the following fields and links:

Field or link	Comment on the value
General tab	
Nature (Nature)	Nature for which the **Also create** (seOverflowTbl) field is set to **Nothing** and the **Software license** option is selected

Create a software license type

1. Display the **License types** (amLicType) table (**Asset lifecycle/ Software Asset Management/ License types** link on the navigation bar).
2. Click **New**.
3. Check the **May be selected (models, assets, counters)** (bSelectable) box.

   > **Note:** If you do not check this box the record that is created can only be used as a hierarchy group for the table and cannot be selected as a license type.

Create a software license

Method 1: Using the Manage software wizard (sysSamLauncher) 37
Method 2: Using the menus 38

Method 1: Using the Manage software wizard (sysSamLauncher)

1. Start the **Manage software** wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select the **Manage software licenses and installations** option.
3. Click **Next**.
4. On the **Manage software licenses and installations** page, click the **Create a license** button.
5. This starts the **Create a new software license** (sysSamCreateLicpfi) wizard.
   Populate the wizard according to your needs.
   In particular, if there is not yet an appropriate model to create the software license, click **Prepare licenses and software installations** on the **Create a new software license** page.
   This starts the **Prepare licenses and software installations** (sysSamLicenseProcess) wizard.
   Click one of the following two buttons:
   - **Create a software license type (model)**: This starts the wizard **Create a software license type (model)** (sysSamCreateLicModel).
     This wizard is used to create a software license model from an existing model (**amModel** table) or from a catalog product (**amCatProduct** table).
   - **Create a software license model from an inventoried installation**: This starts the **Create a software license model from installations** (sysSamCreateLicModFromInst) wizard.
     This wizard is used to create a software license model from inventoried installations.
6. Click **Finish** to Validate all parameters.
   The wizard creates the license.

Method 2: Using the menus

1. Display the portfolio items (**Asset lifecycle/ Infrastructure management/ Portfolio items** link on the navigation bar).
2. Create a portfolio item based on an appropriate model.
3. Populate the **License** tab in particular.

Modify a software license

Method 1: Using the Manage software wizard (sysSamLauncher) 38
Method 2: Using the menus 39

Method 1: Using the Manage software wizard (sysSamLauncher)

1. Start the **Manage software** wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select the **Manage software licenses and installations** option.
3. Click **Next**.
4. On the **Manage software licenses and installations** page, click the **Modify a license** button.
5. Triggers the **Modify a software license** (sysSamModifyLicpfi) wizard.
6. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons).
7. Click **Finish** to validate all parameters.
   The wizard modifies the license.
8. Click **OK** to exit the wizard.

Method 2: Using the menus

1. Display the portfolio items (**Asset lifecycle/ Infrastructure management/ Portfolio items** link on the navigation bar).
2. Select the license to modify and modify it.
3. Click **Modify** (Windows client) or **Save** (Web client) to validate the modifications.

Request new software licenses

Method 1: Using the Manage software wizard (sysSamLauncher) 39
Method 2: Using the menus 40

Method 1: Using the Manage software wizard (sysSamLauncher)

1. Connect to the database using the login of the user associated to the named entitlement.
2. Start the **Manage software** wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
3. On the **Choose a Manage Software action...** page, select the **Manage software licenses and installations** option.
4. Click **Next**.
5. On the **Manage software licenses and installations** page, click the **Request licenses** button. This starts the **Request software licenses** (sysSamCreateLicReq) wizard.
6. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons).
   In particular, if there is not yet an appropriate model to create the software license, click **Prepare licenses and software installations** on the **Create a new software license** page.
   This starts the **Prepare licenses and software installations** (sysSamLicenseProcess) wizard.
   Click one of the following two buttons:

- **Create a software license type (model)**: This starts the wizard **Create a software license type (model)** (sysSamCreateLicModel).
  This wizard is used to create a software license model from an existing model (**amModel** table) or from a catalog product (**amCatProduct** table).
- **Create a software license model from an inventoried installation**: This starts the **Create a software license model from installations** (sysSamCreateLicModFromInst) wizard.
  This wizard is used to create a software license model from inventoried installations.

7. Click **Finish** to validate all parameters.
   The wizard creates the request.
8. Click **OK** to exit the wizard.

Method 2: Using the menus

1. Display the internal requests (**Asset lifecycle/ Infrastructure management/ Internal requests** link on the navigation bar).
2. Click **New**.

Retiring a license

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select the **Manage software licenses and installations** option.
3. Click **Next**.
4. In the **Manage software licenses and installations** page, click the **Remove/Retire hardware and software** button.
5. This starts the **Retire portfolio items** (AstRetire) wizard.
   Populate the wizard according to your needs.
   Click **Finish** to validate all parameters.
   The wizard executes the defined tasks.

Chapter 7: Software entitlement management

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Create a named entitlement for a license

This section explains how to create a new named entitlement that assigns license rights to designated users or computers.

Method 1: Using the Manage software wizard (sysSamLauncher)

1. Start the **Manage software** wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select **Define user rights and add or remove software**.
3. Click **Next**.
4. On the **Define user rights and add or remove software** page, click **Assign software (user/installation rights)**.
   This starts the **Assign software** (sysSamEntitleUserOrItem) wizard.
5. On the first page (**What action would you like to execute?**), select the **Add a named entitlement** option.
6. Populate the rest of the wizard according to your needs.
7. Validate all parameters (**Finish** button).
8. Exit the wizard (**OK** button).

Method 2: Using the menus

1. Display the named entitlements (**Organization management/ Operations/ Named entitlements** link on the navigation bar).
2. Click **New**.

Modifying named entitlements for licenses

This section explains how to modify a named entitlement that assigns license rights to designated users or computers.

Method 1: Using the Manage software wizard (sysSamLauncher)

1. Start the **Manage software** wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select **Define user rights and add or remove software**.
3. Click **Next**.
4. On the **Define user rights and add or remove software** page, click **Assign software (user/installation rights)**.
   This starts the **Assign software** (sysSamEntitleUserOrItem) wizard.
5. On the first page (**What action would you like to execute?**), select the **Modify a named entitlement** option.
6. Populate the rest of the wizard according to your needs.
7. Validate all parameters (**Finish** button).
8. Exit the wizard (**OK** button).

Method 2: Using the menus

1. Display the named entitlements (**Organization management/ Operations/ Named entitlements** link on the navigation bar).
2. Select the entitlement to modify.
3. Modify the selected entitlement.
4. Click **Modify** (Windows client) or **Save** (Web client) to save the modifications.

Deleting a named entitlements for a license

This section explains how to delete a named entitlement that assigns license rights to designated users or computers.

1. Display the named entitlements (**Organization management/ Operations/ Named entitlements** link on the navigation bar).
2. Select the entitlement to delete.
3. Click **Delete**.

Chapter 8: Software installations and utilizations management

The **software installations** table (amSoftInstall) contains all software installations. These software installations can be described in two different ways in the database:

- By being linked with a portfolio item that has the same model.
  As a portfolio item is created, these software installations can be described with more detail. For example, they can be linked with business services.
  However, creating a portfolio item for each software installation can considerably increase the size of the database and, thus, hinder performance.
- By not being linked with any portfolio item.
  Having this type of installation reduces the load on the **Portfolio item** (amPortfolio) table and helps avoid any performance issues.

Create installations/utilizations automatically

The most effective and reliable way to represent the status of your installations/utilizations is to use automatic network inventory tools such as HPE Discovery and Dependency Mapping Inventory.

> **Note:** You can, of course, use other inventory tools. You must make the required changes to the HPE Connect-It scenarios and the Asset Manager Automated Process Manager modules for them to work with your inventory software.

Using such tools, you can identify the installations by computer and then transfer this information to the Asset Manager database.

> **Tip:** All software installations imported by this process are not linked with a portfolio item (the **Do not link the installation with a portfolio item** box is checked).
>
> If you decide to link portfolio items to the imported software installations at a later date, read paragraph After creating the installation/utilization.

Configure your environment to import the results from a database obtained with HPE Discovery and Dependency Mapping Inventory

1. Perform a software inventory using HPE Discovery and Dependency Mapping Inventory. Use the version specified in the HPE Connect-It Support Matrix that ships with Asset Manager 9.61.
2. Install HPE Connect-It in the version as provided with Asset Manager 9.61.
3. Start HPE Connect-It.
4. Open the scenario **ddmiam_swnorm.scn** (located in the **scenario\ed\ddmi<HPE Discovery and Dependency Mapping Inventory version number>\ddmi<HPE Discovery and Dependency Mapping Inventory version number>am<Asset Manager version number>** sub-folder of the HPE Connect-It installation folder) (**File/ Open** menu).
   For example: **C:\Program Files\HPE\Connect-It <Version number> <language>\scenario\ed\ddmi77am94**.
5. Configure the **Discovery and Dependency Mapping Inventory** connector (select the connector in the scenario diagram, **Configure connector** shortcut menu).
   On the **Select a connection type** wizard page, select a connection type and then populate the related pages in the wizard.
6. Configure the **Asset Management** connector (select the connector in the scenario scheme, shortcut menu **Configure connector**).
   Populate the **Define the connection parameters** page of the configuration wizard.
7. Save your modifications and then exit HPE Connect-It.
8. Start Asset Manager Automated Process Manager.
9. Connect to the Asset Manager database (**File/Connect to database**).
10. Display the modules (**Tools/ Configure modules** menu).
11. Select the **Update software normalization information using DDMI (Discovery and Dependency Mapping Inventory) results** module (DDMISyncSoftwareNormalization).
12. Select the **Enabled** option.

13. Modify the **User data item** field as follows:

    ```
    "$connectit_exedir$/conitsvc.exe" -once -wpplog '$connectit_
    exedir$/../scenario/ed/ddmi77/ddmi77am$version$/ddmiam_swnorm.scn' -dc:'Asset
    Management.SERVER'=$cnx$ -dc:'Asset Management.LOGIN'=$login$ -dc:'Asset
    Management.TEXTPASSWORD'=$pwd$
    ```

    Replace the number **77** with the version number of HPE Discovery and Dependency Mapping Inventory that is installed on your station.

14. Define the frequency of the **Update software normalization information using DDMI (Discovery and Dependency Mapping Inventory) results** module (**Verification schedules** frame.)
15. Save your modifications (**Modify** button).
16. Exit Asset Manager Automated Process Manager.

Configure the Model normalization (sysSam_ ModelNorm) group

This group is used to assign workflow schemes from the **Model normalization: 'amInventModel' added** (sysIvtExtModelNew) (If a new record is created in the Inventoried models (amInventModel) table or if an existing record in the Inventoried models table is linked for the first time to a software installation).

To define who can handle the workflow tasks:

1. Display the groups (**Organization management/ Operations/ Employee groups** link).
2. Display the **Model normalization** (sysSam_ModelNorm) group.
3. Populate at the least the following links:

Field or link	Comment
Supervisor (Supervisor)	The person designated by this link views the tasks created by the **Model normalization: 'amInventModel' added** workflow scheme.
Composition tab	
Members (Members)	The members of the group view the workflow schemes created by the **Model normalization: 'amInventModel' added** workflow.

Importing the inventory database obtained by HPE Discovery and Dependency Mapping Inventory

Importing the inventory database

Asset Manager Automated Process Manager, when running in the background with the appropriate modules activated, automatically imports the information from the HPE Discovery and Dependency Mapping Inventory inventory database.

What is imported from the inventory database

The inventory database contains all the inventoried computers.

To each inventoried computer is attached the components (screen, printer, and so on) and the identified software.

Result of the import in the Asset Manager database

A portfolio item is created for each computer and each computer component, and a record is created in the software installations table for each software application that is identified on the computer.

All software installations imported during the model normalization process do not have a linked portfolio item with the same model (the **Do not link the installation with a portfolio item** (bCompact) box is checked). Consequently, no portfolio item with the same model linked to these software installations is created.

Let's now take a closer look at software.

For every inventoried software item:

1. HPE Connect-It searches in Asset Manager if a record already exists in the **Inventoried models** (amInventModel) table for which the **Key** (InventoryKey) field is the concatenation of:
   - the string **PDI|**
   - the **applicationdata.application.versionid** field value from the inventory database record to import

   If such a record is not found, HPE Connect-It:

- Creates the record.
- Populates the **Temporary model** (ModelTmp) link with the unknown software installation model.

  > **Note:** Most organizations that implement an effective software asset management program reduce software procurement expenses by 25%.

  Note

  The unknown software installation model corresponds to the record in the **Model** (amModel) table whose **Barcode** (BarCode) field is set to **sysUNKNOWN_SOFT** and whose **Name** (Name) field equals **Unknown software installation**.

If it exists, HPE Connect-It updates the record.

> **Note:** The line-of-business data from the **Software assets** module populates the **Inventoried models** (amInventModel) table with the models that correspond to the HPE Discovery and Dependency Mapping Inventory version given in the HPE Connect-It Support Matrix that ships with Asset Manager 9.61.
>
> These temporary models are not associated to the records in the **Model** (amModel) table so that only the installation models that are available in your portfolio are created. The creation of models that corresponds to the inventoried models is automated (If a new record is created in the Inventoried models (amInventModel) table or if an existing record in the Inventoried models table is linked for the first time to a software installation.)

2. HPE Connect-It searches in the Asset Manager database if there already is a record in the **Software installations or utilizations** (amSoftInstall) table:
   - Linked to a computer on which the software was identified
   - Whose **Installation folder** (folder) field is set to the value of the **SWSubComponents.SWVersion.Version_ID** field of the record to import
   - Linked to the record in the **Inventoried Models** (amInventModel) table whose **Key** (InventoryKey) field results from the concatenation of the **PDI** string and the **SWSubComponents.SWVersion.Version_ID** field value.

   If such a record is not found, HPE Connect-It:
   - Creates the record
   - Populates the **Models** (amModel) link with the unknown software installation model.

     > **Note:** The unknown software installation model corresponds to the record in the **Model** (amModel) table whose **Barcode** (BarCode) field is set to **sysUNKNOWN_SOFT** and whose **Name** (Name) field equals **Unknown software installation model**.

   If it exists, HPE Connect-It updates the record.

Automatic mechanisms triggered by the import

If a new record is created in the Inventoried models (amInventModel) table or if an existing record in the Inventoried models table is linked for the first time to a software installation

The **Model normalization: 'amInventModel' adds** (sysIvtExtModelNew) workflow is automatically triggered in the following cases:

- When HPE Connect-It adds a record to the **Inventoried models** (amInventModel) table
- When HPE Connect-It creates a software installation associated with an existing record in the **Inventoried models** table that is not yet associated with a record in the **Models** (amModel) table.
- When HPE Connect-It associates an existing software installation with an already existing record in the **Inventoried models** table that is not yet associated with a record in the **Models** (amModel) table.

In the first case, this workflow creates a workflow task assigned to the **Model normalization** (sysSam_ModelNorm) group.

This workflow task asks you to manually map the **Inventoried models** record to a **Model** (amModel) record.

To perform the workflow task:

1. Connect to the Asset Manager database using the supervisor login or a **Model normalization** (sysSam_ModelNorm) group member login:
   - Windows client: **File/ Connect to database** menu.
   - Web client: Click the Logout icon at the upper right to disconnect, then reconnect.
2. Display current tasks (**Asset lifecycle/ Infrastructure management/ My workflow tasks** link on the navigation bar).
3. Select the task.

4. Click the **Wizard** button.
   Asset Manager starts the **Reconcile unknown installations with known software installations** (sysSamNormalizeModels) wizard.
5. Populate the **Definitive model** link.
6. Click **OK**.
   Asset Manager associates the record in the **Inventoried models** table with the record in the **Models** table.
   This automatically triggers the **Normalize models: 'amInventModel' resolved** (sysIvtExtModelEnd) workflow scheme.
   This workflow scheme triggers the **Propagate the resolution of an inventoried model** (SYS_RES_MOD_ACT01) action.
   This action:
   a. Searches all software installations linked to the record in the **Inventoried models** table that was resolved.
   b. Links every software installation that was found to the record in the **Models** table associated with the record in the **Inventoried models** table.

In both of the other cases, this workflow scheme triggers the **Create a model from an inventoried model automatically** (sysSamCreateModelFinal).

This action:

1. Creates a new record in the **Models** table using the following fields from the **Inventoried models** table:
   - **Brand** (BrandName)
   - **Model** (ModelName)
   - **Parent model** (ModelParent)

   This model is linked to the nature as the parent model.
2. Links the software installation to a record in the **Models** table that was associated to the record in the **Inventoried Models** table.

Flagging software missing from the last computer inventory

This section explains how Asset Manager automates the flagging of software installations/utilizations missing from the last computer inventory.

This task is performed by the workflow **Detection of software missing from last scan** (BST_SAM20).

This workflow scheme is part of the line-of-business data of the **Software assets** module.

Inventory import - Detection of software missing from last scan workflow scheme

Events that trigger the workflow	Modification of the **Computers** (amComputer) table, **Last software scan** (dtSoftScan) field.
Execution conditions of the workflow scheme	No conditions
Is Asset Manager Automated Process Manager required to trigger and run the workflow scheme?	No
Simplified description of the workflow scheme	The workflow scheme triggers the **Missing software assignment** (BstSamMissingSoftware) action. This action looks at each software installation/utilization associated with the computer. If the **Inventory date** (dtInvent) field of an installation/utilization is older than the **Last software scan** (dtSoftScan) of the computer, then the action updates the **Assignment** (seAssignment) field of the installation/utilization by setting it to **Missing**.

Creating installations/utilizations manually

> **Caution:** Creating installations/utilizations manually can prove to be tedious and unreliable:
>
> - Tedious, because of the large numbers involved.
> - Unreliable, because you rarely have control over what is installed.

The creation of a software installation generates a record in the **Software installations** (amSoftInstall) table and, if necessary, a record in the **Portfolio items** (amPortfolio) table (**Portfolio** guide, chapter **Portfolio items**). Just like for any other portfolio item, you can choose an individual, collective or undifferentiated management for this item.

Creating a software installation/utilization nature

1. Display the natures (**Portfolio management/ Asset configurations/ Natures** link on the navigation bar).
2. Click **New**.
3. Populate in particular the following fields and links:

Field	Value
Create (seBasis)	Portfolio item
Also create (seOverflowTbl)	Software installations or utilizations (amSoftInstall)

For more information about natures, refer to the **Portfolio** guide, chapter **Portfolio items**, section **Natures**.

Creating software installation/utilization model

1. Display the models (**Portfolio management/ Asset configurations/ Models** link on the navigation bar).
2. Click **New**.
3. Populate in particular the following fields and links:

Field or link	Comment on the value
General tab	
Nature (Nature)	Nature whose **Also create** field (seOverflowTbl) is set to **Software installations or utilizations** (amSoftInstall).
Software inst. tab	
Useful fields and links	The values of the fields in the tab will be inherited by all the software installations/utilizations created referencing this model.
Do not link the installation with a portfolio item (bCompact)	Check this box if you do not want to create a linked portfolio item with the same model each time a software installation is created from this model.

Field or link	Comment on the value
	Method 2: Create an installation via the Software installations table **Note** This option is only taken into account when software installations are created. No changes are made to the installations that have already been created when you check or uncheck this box. Whether they are linked to a portfolio item or not remains unchanged.

Manually creating a software installation/utilization

Method 1: Create an installation from Portfolio items

1. Display the **Portfolio items** (**Asset lifecycle/ Infrastructure management/ Portfolio items** link on the navigation bar).
2. Click **New**.
3. Populate in particular the following fields and links:

Field or link	Comment on the value
Model (Model)	A model linked to a nature whose **Also create** field (seOverflowTbl) is set to **Software installations or utilizations** (amSoftInstall).
Software inst. tab	
No of points (lUseCount)	For certain licenses, the software installation/utilization corresponds to the consumption of a certain number of points. Example: A Microsoft Select license indicates that installing Microsoft Word corresponds to the consumption of 3 points. Thus, 100 of these such installations corresponds to 300 points. The number of points to be counted for each installation is specified in the **No of points** field (lUseCount). When you use software installation counters (Practical case 1d: Take into account effective software usage), you can specify if the installation count should also count the number of points related to each installation/utilization.

Field or link	Comment on the value
Utilization tab	
Last use (dtLastUse)	The **Utilization** tab in the software installation/utilization detail gives information on how the software is used. Among the fields in this tab, the **Last use** field (dtLastUse) may be used by software counters (Practical case 1b: Limit the scope of the counter to a given department): At the level of the counter, you specify whether the installation/utilization count takes the last use date into account.

Information entered in the **Software inst.** tab of the model used for the software installation are reused by the record that is created.

Each time a record corresponding to a software installation/utilization is created in the portfolio item's table, a corresponding record is automatically created in the software installations table. This table is an overflow table (**Portfolio** guide, chapter **Overview**, section **Overflow tables**.

Click the **Portfolio management/ Asset configurations/ Software installations** link on the navigation bar to access the software installations table.

The record created in the software installations table reuses the information for the record that was created in the portfolio items table (**Asset lifecycle/ Infrastructure management/ Portfolio items** link on the navigation bar).

Method 2: Create an installation via the Software installations table

1. Display the **Software installations** (**Portfolio management/ Asset configurations/ Software installations** link on the navigation bar).
2. Click **New**.
3. Populate in particular the following fields and links:

Field or link	Comment on the value
General tab	
Model	A model linked to a nature whose **Also create** field (seOverflowTbl) is set to

Field or link	Comment on the value
(Model)	**Software installations or utilizations** (amSoftInstall).
Software inst. tab	
No of points (lUseCount)	For certain licenses, the software installation/utilization corresponds to the consumption of a certain number of points. For example: A Microsoft Select license indicates that installing Microsoft Word corresponds to the consumption of 3 points. Thus, 100 of these such installations corresponds to 300 points. The number of points to be counted for each installation is specified in the **No of points** field (lUseCount). When you use software installation counters (Practical case 1d: Take into account effective software usage), you can specify if the installation count should also count the number of points related to each installation/utilization.
Utilization tab	
Last use (dtLastUse)	The **Utilization** tab in the software installation/utilization detail gives information on how the software is used. Among the fields in this tab, the **Last use** field (dtLastUse) may be used by software counters (Practical case 1b: Limit the scope of the counter to a given department): At the level of the counter, you specify whether the installation/utilization count takes the last use date into account.

- If the model that you specified in the **Model** (Model) field requires that a portfolio item with the same model be created and linked to the installation/utilization (the **Do not link the installation with a portfolio item** (bCompact) field is not checked in the model's detail), then a record that corresponds to the installation is created in the **Portfolio items** table when the installation/utilization is created in the **Software installations** table.
  This portfolio item describes the installation/utilization in more detail.
- If the model that you specified in the **Model** (Model) field does not require that a portfolio item with the same model be created and linked to the software installation (the **Do not link the installation with a portfolio item** (bCompact) field is checked in the model's detail), then no record is created in the portfolio items table when the installation/utilization is created.
  If you decide to link a portfolio item to this installation at a later date, please read paragraph Link/unlink an installation to/from a portfolio item.

Link/unlink an installation to/from a portfolio item

Linking an installation/utilization with a portfolio item with the same model adds more detail to the installation/utilization (for example: linking a software installation with business services).

Not linking a portfolio item with an installation/utilization reduces the amount of data in the **Portfolio items** (amPortfolio) table and reduces the risk of performance issues which could arise because of the link between the **Software installations** (amSoftInstall) table and the **Portfolio items** (amPortfolio) table.

When creating the installation/utilization

Link a portfolio item with an installation using the same model

1. Check that the model (**Portfolio management/ Asset configurations/ Models** link on the navigation bar) used by the installation/utilization requires that a portfolio item linked to the software installation be created (the **Do not link the installation with a portfolio item** (bCompact) box on the **Software inst.** tab should not be checked).
2. Create an installation/utilization as described in paragraph Manually creating a software installation/utilization (you can use method 1 or 2 indifferently).
3. You should see that a record has been created in the **Portfolio items** table (**Asset lifecycle/ Infrastructure management/ Portfolio items** link on the navigation bar) and in the **Software installations** table (**Portfolio management/ Asset configurations/ Software installations** link on the navigation bar).
   These two records describe the same installation/utilization. The portfolio item is used to describe the installation/utilization in more detail.

Create an installation without a linked portfolio item

1. Check that the model (**Portfolio management/ Asset configurations/ Models** link on the navigation bar) used by the installation/utilization does not require that a portfolio item linked to the software installation be created (the **Do not link the installation with a portfolio item** (bCompact) box on the **Software inst.** tab should be checked).
2. Create an installation/utilization as described in paragraph Method 2: Create an installation via the Software installations table.
3. You can check that no record corresponding to this software installation was created in the **Portfolio items** table (**Asset lifecycle/ Infrastructure management/ Portfolio items** link on the navigation bar).

After creating the installation/utilization

If you want to add a link between a software installation and a portfolio item using the same model and/or if you want to delete a portfolio item that is linked with a software installation:

1. Start the Asset Manager Windows client.

   > **Caution:** You should not run the wizard described in this process under the Web client because the performance would be too low on a large amount of records (more than 100 records).

2. Start the **Link/unlink an installation to/from a portfolio item...** (sysCompactInstall) wizard (**Portfolio management/ User actions/ Link/unlink an installation to/from a portfolio item...** link on the navigation bar).
3. In the first list:
   a. Select the software installations from which you want to unlink the existing portfolio item.
   b. Optionally check the **Also unlink all software installations with the same model from their portfolio item (the portfolio item will be deleted)** box.
   c. Click **Schedule selected installations for unlinking**.
4. In the second list:
   a. Select the software installations to which you want to link a portfolio item.
   b. Optionally check the **Create a portfolio item for each software installation with same**

model and link it to the software installation box.

c. Click **Schedule selected installations for linking**.

5. Software installations to which you want to link a portfolio item and from which you want to unlink an existing portfolio item are displayed in the third list.
   Click **Next**.
6. The wizard displays a summary.
   Click **Finish**.

If you requested that a portfolio item be created and linked to the software installation, then this portfolio item completes the record's information in the **Software installations** table (amSoftInstall).

If you requested that a portfolio item be unlinked from the software installation, then the link between the installation and the portfolio item is deleted and the portfolio item is deleted from the database.

Sending an automatic message when an unauthorized installation occurs

This section explains how to send an automatic notification when a user makes an unauthorized installation/ utilization.

This task is performed by the **Installation not authorized** (BST_SAM03) workflow scheme.

Main features of the Installation not authorized workflow scheme

This workflow scheme is part of the line-of-business data of the **Software assets** module.

License control - Installation not authorized workflow scheme

Parameter	Description
Events that trigger the workflow	Creation of a new installation/utilization
Execution conditions of the workflow scheme	PortfolioItem.Model.seAuthorization = 2
Is Asset Manager Automated Process Manager required to trigger	No

License control - Installation not authorized workflow scheme, continued

Parameter	Description
and run the workflow scheme?	
Simplified description of the workflow scheme	A message is sent to the person designated by the **Mail to administrator concerning unauthorized installation** (BstSamUnauthinstallation_found) action. By default, this person corresponds to the record in the **Employees and departments** (amEmplDept) table for which the **Name** (Name) field is set to **Admin**. The message is sent to the address given in the **EMail** (EMail) field.

Defining which installations/utilizations are not authorized

1. Display the models (**Portfolio management/ Asset configurations/ Models** link on the navigation bar).
2. Display the model to not authorize.
3. Modify the following fields and links:

Field or link	Value
Software inst. tab	
Authorization (seAuthorization)	Non authorized

Selecting another recipient, changing the subject or body of the warning message

1. Display the actions (**Administration/ Actions** link on the navigation bar).
2. Display the action **Mail to administrator concerning unauthorized installation** (BstSamUnauthinstallation_found).
3. Modify the following fields and links:

Field or link
Messaging tab
To (MsgTo)
Subject (Subject)
Message (memMsgText)

Defining the recipient address for the notification message

1. Display the Employees and departments (**Organization management/ Organization/ Employees and departments** link on the navigation bar).
2. Display the recipient of the action **Mail to administrator concerning unauthorized installation** (BstSamUnauthinstallation_found).
3. Modify the **EMail** (EMail) field.

Retiring an installation/utilization

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. In the **Choose a Manage Software action...** page, select the **Manage software licenses and installations** option.
3. Click **Next**.
4. In the **Manage software licenses and installations** page, click the **Remove/Retire hardware and software** button.
5. This starts the **Retire portfolio items** (AstRetire) wizard.
   Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons).
6. Click **Finish** to validate all parameters.

The wizard creates the request.

7. Click **OK** to exit the wizard.

Reconcile unknown installations

This task consists of associating inventoried models with a definitive model if this is not already the case.

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select the **Manage software licenses and installations** option.
3. Click **Next**.
4. In the **Manage software licenses and installations** page, click the **Reconcile unknown installations** button.
5. This starts the **Reconcile unknown installations with known software installations** (sysSamNormalizeModels) wizard.
   Populate the wizard according to your needs.
6. Validate all parameters (**Finish** button).
   The wizard associates the records in the **Inventoried models** table with the record in the **Models** table:
   This automatically triggers the **Normalize models: 'amInventModel' resolved** (sysSamExtModelEnd) workflow scheme.
   This workflow scheme triggers the **Propagate reconciliation of external model** (SYS_RES_MOD_ACT01) action.
   This action:
   a. Searches all the portfolio items linked to the record in the **Inventoried models** table that was resolved.
   b. Links every portfolio item that was found to the record in the **Models** table associated with the record in the **Inventoried models** table.
7. Click **OK** to exit the wizard.

Flagging installations as OEM installations

The purpose of this action is to flag installations that you may use without having to acquire a specific license.

Such installations are named "OEM" installations because the license is granted directly by the software provider to the vendor of the hardware you bought.

This is case, for example, when you purchase a computer: Computers often ship with pre-installed software that you may legally use without having to acquire a specific license separately.

Flagging consists of setting the **Installation type** (seType) field to **OEM installation** for OEM installations.

This enables you to exclude OEM installations from calculations made by the counters.

> **Caution:** In order for OEM installations to be excluded from installation counts, you must modify the query associated with the **Scope of the installations or utilizations to be counted** (SoftInstQuery) link of the counter as appropriate.
>
> For example, if the query that does not exclude OEM installations is:
>
> ```
> Model.ModelRef = 'PC1 - PowerPoint - Installation'
> ```
>
> change it to:
>
> ```
> (Model.ModelRef = 'PC1 - PowerPoint - Installation')
> AND (SoftInstall.seType <> 2)
> ```

To flag an OEM installation:

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. Make sure that the current contract is the OEM contract to which you want to link the software installations.
3. On the **Choose a Manage Software action...** page, select the **Manage software licenses and installations** option.
4. Click **Next**.
5. In the **Manage software licenses and installations** page, click the **Flag OEM installations** button.

6. This starts the **Flag OEM installations** (sysSamFlagOEMInst) wizard.
   Populate the wizard according to your needs.
7. Click **Finish** to validate all parameters.
   The wizard sets the **Installation type** (seType) field to **OEM installation** for the selected installations.
8. Click **OK** to exit the wizard.

Adding a user to the current ASP contract

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, check that the ASP contract is selected as the current contract and select the **Manage software licenses and installations** option.
3. Click **Next**.
4. In the **Manage software licenses and installations** page, click the **Add an ASP user...** button.
5. This starts the **Add an ASP user** wizard (sysSamAddAspUsers2Cntr).
6. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons).
7. Validate what you entered (**Finish** button.)
   This links the selected users to the current ASP contract (**Employees** tab of the contract detail).
8. Exit the wizard (**OK** button).

Contracts guide, part II **Utilization**, chapter **Day-to-day management of ASP contracts**, section **Managing user accounts/ Processes/ Creating a user account**.

Removing a user from the current ASP contract

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. In the **Choose a Manage Software action...** page, check that the ASP contract is selected as the current contract and select the **Manage software licenses and installations** option.
3. Click **Next**.

4. On the **Manage software licenses and installations** page, click the **Remove an ASP user...** button.
5. This starts the **Remove an ASP user** wizard (sysSamDelAspUsersFromCntr).
6. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons).
7. Click **Finish** to validate all parameters.
   This removes the selected users from the current ASP contract (**Employees** tab of the contract detail).
8. Click **OK** to exit the wizard.

Contracts guide, part II **Utilization**, chapter **Day-to-day management of ASP contracts**, section **Managing user accounts/ Processes/ Deleting a user account**.

Chapter 9: Monitoring license compliance of installations

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Objectives of software control

Software control aims to check compliance:

- With software providers
- With your internal policies

Using software counters

Software control is achieved using the software counters.

Software counters are used to reconcile a license rights and entitlements count with an installations/utilizations count.

Effective software utilization can be taken into account.

These counts can be grouped by records of a table of your choice (by employee or cost center, for instance).

Manage software compliance on a global scale

Asset Manager lets you manage counters on a global scale.

To include a counter in corporate software management, the **Is part of corporate software management** (bFamily) option must be enabled.

A given software license model and a given software installation/utilization model can only be counted in one global compliance management counter at a time.

Doing so ensures that rights, entitlements, installations and utilizations are counted only once by the global compliance management counters.

Counters whose **Is part of corporate software management** (bFamily) option is cleared can reference license and installation/utilization models that are already included in other counters.

Using wizards to create and modify counters

A counter can be created and modified with or without a wizard

To modify a counter using a wizard, it must be created using a wizard and only modified using a wizard.

Counters that are maintained by wizards have their **Edit the counter using the wizards** (bAutomated) option enabled.

A corporate software management counter must be created and modified by wizards.

Wizards simplify counter creation and modification.

Link between counters, licenses and installations/utilizations

The definition of counters is extremely flexible.

You can adapt them to:

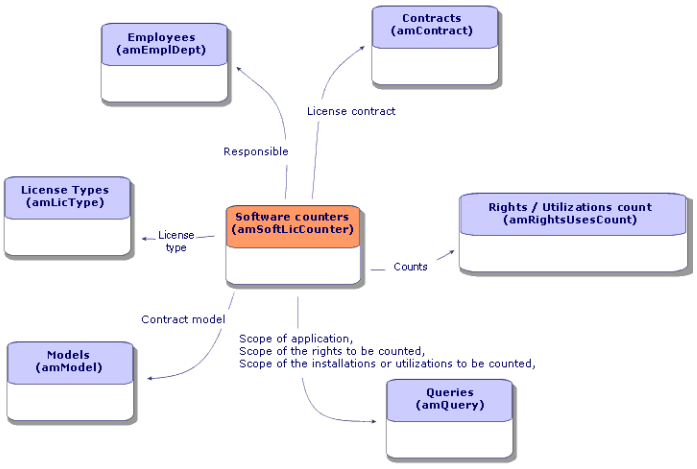
- the way in which you describe licenses and installations/utilizations (there are numerous different ways of doing this)
- the way in which you want to analyze the data (by employee, by site, and so on)

> **Tip:** You can use the counters for other purposes than for software rights and installations/utilizations.

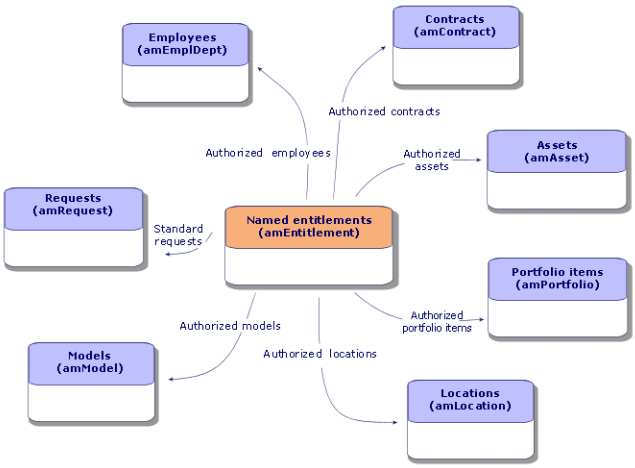
These guidelines for constructing counters do not cover all the different possibilities.

Main tables linked to counters

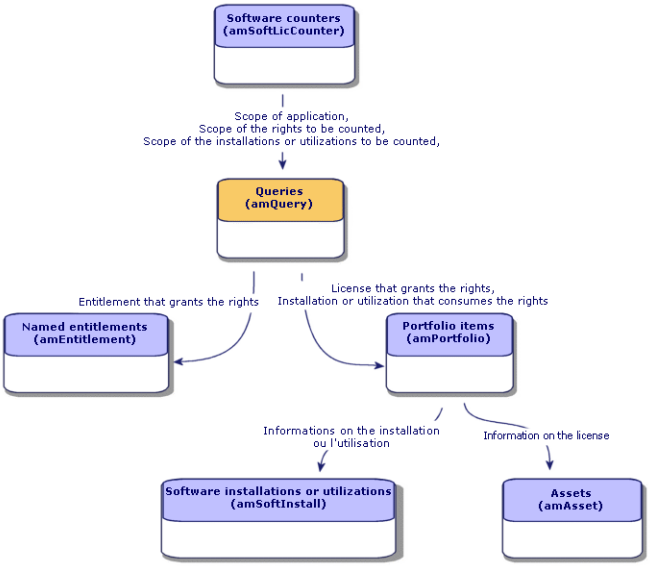
Tables linked to counters



Tables involved in named entitlements



Link between counters, entitlements and portfolio items



You will notice that there is no direct link between the counters and the objects that are counted. Queries are used to establish this link.

This method greatly increases the flexibility of counters. However, it requires appropriate queries to be designed.

Creating software counters

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Method 1: Create a counter using the Create a software license management counter... (sysSamCreateSoftwareCounter) wizard

Prerequisites

The **Create a software license management counter...** wizard requires counter templates to function.

> **Tip:** Several counter templates are included in the line-of-business data in the datakit specific to the **Software assets** module.
>
> (Import the line-of-business data into your existing database).

To start the Create a software license management counter... wizard

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select the **Manage software license compliance** option.
3. Click **Next**.
4. On the **Manage software license compliance** page, click the **Create a counter** button.
5. This starts the **Create a software license management counter...** wizard (sysSamCreateSoftwareCounter).
   Populate the wizard according to your needs.
   Validate the parameters of the counter (**Finish** button).

Method 2: Creating a counter directly

To create a counter directly:

1. Display the counters (**Asset lifecycle/ Software Asset Management/ Software counters** link on the navigation bar).
2. Click **New**.
3. Populate the top half of the detail, and in particular the following fields and links:
   - **Group By** (Context): Select the **Employees and departments** (amEmplDept) table, for example, if you want the **Results** tab to display a count line per employee.
   - **Scope of application** (Definition): Create and select a query if you only want to take into account certain records in the table indicated in the **Group by** field.
4. Check the **Rights count** (bCountLic) box if necessary, and populate the **Rights** tab, with special attention to the following fields and links:
   - **Rights counter context** (LicContext): Select the **Assets (amAsset)** table, for example, if you want to account for license rights.
   - **Scope of the rights to be counted** (LicQuery): Create and select a query to identify the records whose rights you want to count.
   - **Rights -> Group By** link (EntGroupBy): Specify the link from the table specified in the **Rights counter context** field to the table specified in the **Group by** field. For example, from the **Assets (amAsset)** table to the **Employees and departments (amEmplDept)** table, the link can be **PortfolioItem.User**.
   - **License type** (LicType): Select a license type.

     > **Caution:** The **License type** (LicType) is not taken into account in the rights count.
     >
     > Records for which you want to count rights must be defined in the **Scope of the rights to be counted** (LicQuery) field.

   - Populate also the lower part of the tab, which describes the calculation required to obtain the rights count.
5. Check the **Installations/Utilizations count** (bCountInst) box if necessary, and populate the **Installations/Utilizations** tab, with special attention to the following fields and links:
   - **Installation/Utilization counter context** (InstContext): Select, for example, the **Software installations or utilizations (amSoftInstall)** table if you want to account for software installations.

- **Scope of the installations or utilizations to be counted** (SoftInstQuery): Create and select a query to identify the records whose installations/utilizations you wish to count.
- **Installations/Utilizations -> Group By** link (InstGroupBy): Specify the link from the table specified in the **Installation/Utilization counter context** field to the table specified in the **Group by** field. For example, from the **Software installations or utilizations (amSoftInstall)** table to the **Employees and departments (amEmplDept)** table, the link can be **PortfolioItem.Parent.User**.
- **Include usage information** (bUseMetering): Select this option if you want the Last Use date of the installations/utilizations to be taken into account by the counter (**Last use** field (dtLastUse) in the installations/utilizations detail).

  > **Note:** The unused installations/utilizations are not removed from the installations/utilizations count in the following places:
  >
  > - **General** tab of the counter, **Installations/Utilizations count** field (dSoftInstallCount)
  > - **Results** tab of the counter, **No of installations/utilizations** column
  >
  > They are simply accounted for by the follwoing fields:
  >
  > - **General tab of the counter, Unused installations field (dUnusedInstall**
  > - **Results** tab of the counter, **Number of unused installations** field

- **Include usage information** (bUseMetering):
- **Period of non use** (tsUnusedDuration): Select this option to take into account actual software utilization.
- **Definition of unused installations** (UnusedQuery): Create and select a query if you wish to restrict the list of records that may be considered as potentially no longer used.

  > **Note:** The unused installations do not affect the compliance result of the software license counter. It only shows how many unused installations are taken into account during the compliance calculation.

- Populate also the lower part of the tab, which describes the calculation required to obtain the installations/utilizations count.

6. Check the **Entitlements count** (bCountEnt) box if necessary, and populate the **Entitlements** tab, with special attention to the following fields and links:
   - **Entitlements counter context** (EntContext): Select the **Employees and departments (amEmplDept)** table, for example, if you want to assign rights to employees and departments.

- **Scope of the entitlements to be counted** (EntQuery): Create and select a query to identify the records whose rights you want to count.
- **Entitlements -> Group By** link (EntGroupBy): Specify the link from the table specified in the **Entitlements counter context** field to the table specified in the **Group by** field. For example, from the **Employees and departments (amEmplDept)** table to the **Companies (amCompany)** table the link could be **CostCenter.Company**.
- Populate also the lower part of the tab, which describes the calculation required to obtain the entitlements count.

7. Click **Create**.

Interesting reference fields

The information relating to licenses, entitlements and installations/utilizations is found in several places.

The following table suggests fields to be used in the counts:

Counters - Useful fields for counts

Table	Field
Portfolio items (amPortfolio)	**Quantity** (fQty)
Software installations or utilizations (amSoftInstall)	**Counts for** (lUseCount)
Assets (amAsset)	**Rights** (lSoftLicUseRights)

The following table suggests fields to be used to identify utilizations and installations:

Counters - Useful fields for identifying installations/utilizations

Table	Field
Natures (amNature)	**Also create** (seOverflowTbl)
	Name (Name)
Software installations (amSoftInstall)	**Authorization** (seAuthorization)
	Installation type (seType)
	Local/Remote (bLocal)
	Is a software suite component (bSuiteComponent)
Models (amModel)	**Name** (Name)

Counters - Useful fields for identifying installations/utilizations, continued

Table	Field
	System (SoftOS)
	Version level (VersionLevel)
	Technical ref. (ModelRef)

The following table suggests fields to be used to identify a license:

Counters - Useful fields for identifying licenses

Table	Field
Natures (amNature)	**License** (bSoftLicense)
	Name (Name)
Assets (amAsset)	**Installation date** (dInstall)
	License type (LicType)
	Single/Multiple (seSoftLicMulti)
Models (amModel)	**Name** (Name)
	System (SoftOS)
	Version level (VersionLevel)
	Technical ref. (ModelRef)

The following table suggests fields to be used to define an entitlement:

Counters - Useful fields for identifying entitlements

Table	Field
amEntitlement (Named entitlements)	**Code** (Code)
	Name (Name)
Entitlements of the employee (amRelEmplEntitl)	**Employee Id** (lEmplDeptId)
	Entitlement ID (lEntitlId)
Contract entitlements (amRelEntitlContract)	**Contract** (lCntrId)
	Entitlement (lEntitlId)
Entitlements of the location (amRelEntitlLoc)	**Location** (lLocaId)
	Entitlement (lEntitlId)
Entitlements of the portfolio item (amRelEntitlPortf)	**Portfolio item** (lPortfolioItemId)

Counters - Useful fields for identifying entitlements, continued

Table	Field
	Entitlement ID (lEntitlId)
Entitlements (amRelModelEntitl)	**Model ID** (lModelId)
	Entitlement ID (lEntitlId)
Employees and departments (amEmplDept)	**Bar code** (BarCode)
	ID # (IDNo)
Contracts (amContract)	**Reference** (Ref)
Locations (amLocation)	**Bar code** (BarCode)
Portfolio items (amPortfolio)	**Code** (Code)

Modifying software counters

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Counters modified by wizards

Prerequisites

A counter can be modified by a wizard only if it was created by the **Create a software license management counter** (sysSamCreateSoftwareCounter) wizard and if the **Edit the counter using the wizards** (bAutomated) option is enabled.

Method 1: Create a counter using the Create a software license management counter... (sysSamCreateSoftwareCounter) wizard.

To modify a counter

1. Display the **Results of the software counters** page
   - Method 1: Using the **Manage software** wizard (sysSamLauncher)
     i. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
     ii. On the **Choose a Manage Software action...** page, select the **Manage software license compliance** option.
     iii. Click **Next**.
     iv. On the **Manage software license compliance** page, click the **Modify a counter** button.
   - Method 2: Using the Windows client menus
     Click the **Asset lifecycle/ Software Asset Management/ Results of the software counters** menu.
2. Select the counter to be modified.
3. Use the following buttons:
   - **License**: Triggers the **Modify the list of license models to take into account** (sysSamAddLic2Counter) wizard

     > **Note:** A license model will be removed from the upper list box (**License model that can be included in the rights/entitlements count**) after it is added (by clicking **Add**) to the lower one (**License models to include in the installations/utilizations count**). It is added back to the upper list box after it is removed (by clicking **Remove**) from the lower list box.

   - **Installation**: Triggers the **Modify the list of installation models to take into account** (sysSamAddInst2Counter) wizard
   - **Scope**: Triggers the **Define or redefine the counter's scope of application** (sysSamAddScope2Counter) wizard

   > **Note:** These buttons are displayed depending on the value of the following fields in the counter's detail:
   >
   > - **User-rights count** (bCountLic)
   > - **Installation/Utilization counter context** (InstContext)
   > - **Include usage information** (bUseMetering):

Counters modified without the wizard

The following fields and links in a counter's detail can only be modified if the counter's **Edit the counter using the wizards** (bAutomated) option is not enabled.

- **Scope of application** link (definition)
- Fields and links on the **Rights** tab:
- Fields and links on the **Entitlements** tab:
- Fields and links on the **Installations/Utilizations** tab:

To modify a counter without using a wizard:

1. Display the counters (**Asset lifecycle/ Software Asset Management/ Software counters** link on the navigation bar).
2. Select the counter to be modified.
3. Modify the counter.
4. Save the modifications (**Modify** button).

Updating the results of a software counter

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To update the results of a counter

Counters modified by wizards

- **Prerequisites**

A counter can be modified by a wizard only if it was created by the **Create a software license management counter** (sysSamCreateSoftwareCounter) wizard and if the **Edit the counter using the wizards** (bAutomated) option is enabled.

Method 1: Create a counter using the Create a software license management counter... (sysSamCreateSoftwareCounter) wizard.

- **To modify a counter**

1. Display the **Results of the software counters** page
   - Method 1: Using the **Manage software** wizard (sysSamLauncher)
     i. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
     ii. On the **Choose a Manage Software action...** page, select the **Manage software license compliance** option.
     iii. Click **Next**.
     iv. On the **Manage software license compliance** page, click the **Modify a counter** button.
   - Method 2: Using the Windows client menus
     Click the **Asset lifecycle/ Software Asset Management/ Results of the software counters** menu.
2. Select the counter to update.
3. Click **Calculate**.

   Note

   The **Calculate** button starts the action **Refresh the software counter** (sysCoreSoftLicCountCalc). This is seamless for the user.
4. The list at the top displays count totals for all counters.
5. The list at the bottom displays detailed results of the counter that is selected in the list at the top. One line is given per record in the group by table (**Group by** (Context) field) within the limits of the scope defined for the counter (**Scope of the rights to be counted** (Definition) field).

All counter types

To modify a counter without using a wizard:

1. Display the counters (**Asset lifecycle/ Software Asset Management/ Software counters** link on the navigation bar).
2. Select the counter to update.
3. Click **Calculate**.

   > **Note:** The **Calculate** button starts the action **Refresh the software counter**

(sysCoreSoftLicCountCalc). This is seamless for the user.

4. Examine the results on the **General** and **Results** tabs.

Periodical cleaning

Each time you click **Calculate**, you create a record in the **Rights / Utilizations count** table (amRightsUsesCount) for each line displayed in the **Results** tab.

The **Results** tab only shows the results of the last calculation made by clicking the **Calculate** button.

The previous results are not erased, however.

Using these results, you can track the evolution of licenses and installations/utilizations, and use them, for example, to create reports.

We recommend that you periodically delete the records in the **Rights / Utilizations count** table that you no longer require, if the table becomes too large.

Tip: The records that have been generated by the same calculation have the same values in the **Results identifier** (lResultId) and **Count date** (dtCountRequest) fields.

Processing irregularities between installations/utilizations and licenses

This section explains how to achieve software license compliance:

- Ordering missing license rights
- Remove the excess installation/utilizations

Prerequisites

Only corporate software management counters can be used to solve irregularities between installations/utilizations and licenses

To include a counter in corporate software management, the **Is part of corporate software management** (bFamily) option must be enabled.

The **Solve software compliancy issues** (sysSamIdentifyIllegalInstall) wizard uses a work order model whose **Barcode** (BarCode) field equals **SOFTUNINST**.

Make sure this model is present in the database.

Solve the irregularities

1. One of the following methods can be used:
   - Method 1: Using the **Manage software** wizard (sysSamLauncher)
     i. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
     ii. On the **Choose a Manage Software action...** page, select the **Manage software license compliance** option.
     iii. Click **Next**.
     iv. On the **Manage software license compliance** page, click the **Solve software compliance issues** button.
   - Method 2: Using the Windows client menus
     i. Click the **Asset lifecycle/ Software Asset Management/ Results of the software counters** menu.
     ii. Select the counter to solve.
     iii. Click **Solve**.
2. This starts the **Process software irregularities** (sysSamIdentifyIllegalInstall) wizard.
   Select the counter to examine.
   Click **Next** and then follow the instructions in the wizard.
   If you are short of license rights, the wizard enables you to make a license request or to remove the software.
3. Validate the parameters (**Finish** button).
4. Exit the wizard (**OK** button).

Optimizing compliance via software upgrades and license rights transfers

This section is of interest:

1. If you have:
   - Several software applications (or several software versions) that can transfer user rights.
   - And/or software upgrade licenses which allow you to use, provided you possess the licenses from previous versions, more recent versions of the software and do so without acquiring a new software license.
2. And you want to know if you are compliant with your licenses and installations/utilizations by taking into account:
   - Your license rights for a software application.
   - Your rights acquired by software upgrade licenses.
   - Your rights acquired by a more recent version of the software which allow you to use previous versions of the software.

As for software licenses and associated installations/utilizations, the software upgrade licenses count is managed by **software upgrade counters** that are created in the same way as other counters Creating software counters.

In Asset Manager you will need to specify:

- Rights to use previous software versions granted by a license for a given version.
- Rights to use the latest software versions granted by a software upgrade license.

This is also done in the **software counters** and the **software upgrade counters** Specifying transferable user rights in the counters.

The **View linked counters** (sysSamSoftLicLinkedCount) link is used to display the relationships between counters and compliance results.

> **Note:** This wizard does not modify license rights.
>
> The counters only display information, which is gathered dynamically, for you to use to monitor your compliance.

Specifying transferable user rights in the counters

The transfer of user rights is specified in the detail of the counters.

This can be specified when the counters are created or you can modify a counter at a later date.

A differentiation is made between:

- Rights to use previous software versions granted by a license for a given version.
- Rights to use the latest software versions granted by a software upgrade license.

Specifying license rights transfers to previous or more recent software versions

> **Note:** You can only transfer rights to one other counter (from a previous software version) only. However, rights can be transferred to earlier versions by transitivity if rights transfers have been authorized.
>
> For example, if you can
>
> - Transfer software license rights from **SoftApp v4** to **SoftApp v3**
> - Transfer software license rights from **SoftApp v3** to **SoftApp v2**
> - Transfer software license rights from **SoftApp v2** to **SoftApp v1**

Then, by transitivity, you can transfer license rights from **SoftApp v4** to **SoftApp v2** (via **SoftApp v3**) and from **SoftApp v4** to **SoftApp v1** (via **SoftApp v3** and **SoftApp v2**).

- **Prerequisites**

The counter associated with the previous and/or latest version of the software must already exist.

The previous version of the software is the software version to which rights can be transferred from the current version (more recent version).

The latest version of the software is the software version from which rights can be transferred to the current version (older version).

- **Method 1: If you create your software counter using the Create a software license management counter... wizard**

Start and populate the **Create a software license management counter...** (sysSamCreateSoftwareCounter) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Create a software license management counter...** link on the navigation bar). Method 1: Create a counter using the Create a software license management counter... (sysSamCreateSoftwareCounter) wizard

On the **Select the counter consolidation action to perform** page, select **Link the counter to another counter**.

Then, on the **Select counters to link** page, select the counter for the previous version and/or the counter for the latest version and indicate whether or not rights can be transferred.

- **Method 2: If you create or want to modify your counter manually**

> **Note:** This method lets you only specify license rights transfers to previous software versions.

Select the existing counter or create a counter (**Asset lifecycle/ Software Asset Management/ Software counters** link on the navigation bar) as specified in paragraph Method 2: Creating a counter directly.

Then:

1. On the **Consolidation** tab of the counter's detail:
   a. Check the **Has counter for a previous version** (bHasPreviousCntr) box.
   b. Specify the counter associated with the previous version of the software in the **Counter for the previous version** (Previous) field.
      > **Note:** You do not authorize the transfer of rights at this stage. You only describe links between two versions of the same software.
   c. If you want to authorize the transfer of license rights to previous versions: Check the **Can transfer rights** box (bLicRightsTransfer).
2. Save the modifications.

Specifying rights transfers via license upgrades to more recent software versions

- **Prerequisites**

Counters that are associated with the software version from which and to which you want to perform the upgrade must already exist.

- **Method 1: If you create your software counter using the Create a software license management counter... wizard**

Start and populate the **Create a software license management counter...** (sysSamCreateSoftwareCounter) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Create a software license management counter...** link on the navigation bar). Method 1: Create a counter using the Create a software license management counter... (sysSamCreateSoftwareCounter) wizard

On the **Select the counter consolidation action to perform** page, select **Declare the counter as a software upgrade counter** and, on the following pages, populate the counters from which and to which the upgrade is performed.

- **Method 2: If you create or want to modify your counter manually**

Select the existing counter or create a counter (**Asset lifecycle/ Software Asset Management/ Software upgrade counters** link on the navigation bar) as specified in the paragraph Method 2: Creating a counter directly.

Then:

1. Note that the **Software upgrade counter** (bLicUpgrade) box is checked.
   This option is used to distinguish the counter from standard software counters.
2. On the **Consolidation** tab of the counter's detail, specify the counter from which and the counter to which you want to perform the upgrade.
3. Save the modifications.

Viewing links between counters that can transfer rights and check compliance

To view the counters that can transfer rights to a given counter:

1. Display the counter's detail (**Asset lifecycle/ Software Asset Management/ Software counters** link on the navigation bar).
2. For the most recent rights counts and rights calculations, click the **Calculate** button to calculate rights and installation data for the selected counter and any counters that are linked to it.
3. Look on the **General** tab to view the compliance check summary.
4. To display the compliance information:
   - Windows client: Click the **Linked counters** button.
   - Web client: Select **Linked counters** from the **Actions...** drop-down list.

   This starts the **View linked counters** wizard (sysSamSoftLicLinkedCount).
   The wizard displays a summary of the different links, if any exist, between this counter and the other counters, and provides the results of the compliance calculations.
   How the View linked counters wizard works

Carrying out the upgrade process

Prerequisites

Before carrying out an upgrade process, you need to:

- Create counters that are associated with the software version from which and to which you want to perform the upgrade Creating software counters.
- Create the associated software upgrade counter Specifying rights transfers via license upgrades to more recent software versions.

Transferring rights per software upgrade

You want to upgrade from a previous software version (V1) to a later version (V2).

You have a counter that is associated with V1, a counter that is associated with V2 and a software upgrade counter that is associated with V1->V2.

Suppose that you have N1 license rights for V1, N2 rights for V2 and Nm upgrade rights associated with counter V1->V2.

Transferring software license rights per upgrade from V1 to V2 consists in taking X rights from V1, associating them with X V1->V2 upgrade rights in order to get X additional rights for V2. Thus, X must be less than N1 and Nm.

After upgrading the software, you have N1-X rights for V1, N2+X rights for V2 and Nm-X upgrade rights associated with counter V1->V2 remain.

- In the **Maximum consolidated rights count** (How the View linked counters wizard works), it is understood that the N1 license rights can be taken from V1 (or Nm rights if Nm < N1) and transferred to V2. Whether or not certain license rights are already being used by V1 is not taken into consideration and the transferable rights count is performed regardless of whether or not V1 becomes non-compliant.
- In the **Consolidated rights count** (How the View linked counters wizard works), licenses that are already used for V1 are taken into account to prevent V1 from becoming non-compliant.
  Let N1u be the number of licenses that are used by V1:

- If N1-N1u < Nm: The maximum number of rights that can be transferred to V2 per software upgrade is equal to N1-N1u.
- If N1-N1u > Nm: The maximum number of rights that can be transferred to V2 per software upgrade is equal to Nm.

How the View linked counters wizard works

The calculation rule of the **View linked counters** (sysSamSoftLicLinkedCount) wizard is as follows:

1. Linked counters are calculated to determine rights and software installations for each counter.
2. The software upgrade process is applied (software upgrade counters are used to upgrade rights of source and destination counters to which they are linked). The following rules are applied:
   - The maximum number of rights that can be transferred is equal to the number of rights of the software upgrade counter.
   - The number of transferred rights via the upgrade is limited so that the source remains compliant.
   - Unused rights from the latest versions are, if possible, transferred to previous versions in order to increase the source's number of rights.
3. Compliance is calculated: difference between the number of rights after the upgrade and the number of installations/utilizations.
4. Consolidated compliance is calculated. If possible, license rights are transferred to previous non-compliant versions (without making the latest versions non-compliant).

The results displayed by the wizard are as follows:

1. In the first screen: Summary of the linked counters, rights and installations/utilizations count, and consolidated compliance calculation.

2. In the second screen: This screen is more detailed and displays:
   - The list of linked software counters with the following information:

Column	Description
Rights count	Number of available license rights (direct rights)
Installations/Utilizations count	Number of actual installations/utilizations
Maximum consolidated rights count	Maximum number of available rights by combining the direct rights with the rights which can be obtained via software upgrades (**may make the counters transferring rights non-compliant**) Transferring rights per software upgrade
Consolidated rights count	Number of available rights by combining the direct rights with the rights which can be obtained via software upgrades (**counters transferring rights remain compliant**) Transferring rights per software upgrade **Note** If a source counter does not have a sufficient amount of transferable rights per upgrade process to remain compliant with its installations, the following counters can transfer rights to it to enable the transfer of rights for the upgrade.
Compliance	Difference between the number of rights (after upgrade) (**Consolidated rights count** column) and the number of installations/utilizations.
Consolidated compliance	Compliance after transferring rights, if possible (includes rights that were inherited following upgrades and transfers between versions)

   - The list of software upgrade counters, with the rights and transferred rights count

Actual transfers and/or upgrades are listed in the counter's detail.

The number of actual upgrades also appears in the detail of the software upgrade counters.

> **Tip:** This wizard will help you optimize your software licenses with your installations and show you if you are compliant. It does not modify licenses and license rights.

"Previous mode" software counters

> **Caution:** This section only applies to the Windows client.

In version 4.3.0 of Asset Manager, the counters were fully overhauled.

However, so that you can use the counters you have migrated from previous versions of Asset Manager as-is, "previous mode" counters are supported.

Accessing "previous mode" counters

1. Display the list of screens (**Administration/ List of screens** menu).
2. Click **Screen** on the list header.
3. Search for **Software counters (previous format) (sysOldamSoftLicCounter)**.
4. Open this screen.

Information on "previous mode" counters
For information on the "previous mode", refer to the guide **AssetCenter 4.2.0 - Portfolio**, chapter **Software**, section **Software counters**.

Converting "previous mode" counters
When you migrate a database version earlier than 9.4, the counters are imported as-is.

You can carry on using them as they worked before.

If you wish to upgrade them, we recommend creating new counters using the old ones to guide you.

Sending an automatic message in case of license overrun

This section explains how to send automatic notification when software license rights are overrun.

This task is automatically performed by the **No more licenses available** (BST_SAM01) workflow scheme.

This workflow scheme is part of the line-of-business data of the **Software assets** module.

Import the line-of-business data into your existing database.

The following is a description of this workflow scheme:

License control - No more licenses available workflow scheme

Parameter	Description
Events that trigger the workflow	Creation of a new counter
	Or modification of one of following fields in the **Software counters** (amSoftLicCounter) table: • No of rights (lLicUseRights) • No of install. (lSoftInstallCount) • Rights count (dLicUseRights) • Installations/Utilizations count (dSoftInstallCount)
Execution conditions of the workflow scheme	(lSoftInstallCount > lLicUseRights) OR (dSoftInstallCount > dLicUseRights)
Is Asset Manager Automated Process Manager required to trigger and run the workflow scheme?	No
Simplified description of the workflow scheme	A message is sent to the person designated by the action **Mail to administrator concerning licenses overrun** (BstSamLicenses_exceeded). By default, this person corresponds to the record in the **Employees and departments** (amEmplDept) table for which the **Name** (Name) field is set to **Admin**. The message is sent to the address specified in the **E-mail** (EMail) field of the designated employee.

To select another recipient, modify the body or subject of the warning message:

1. Display the actions (**Administration/ Actions** link on the navigation bar).
2. Display the action **Mail to administrator concerning licenses overrun** (BstSamLicenses_ exceeded).
3. Modify the following fields and links:

Field or link
Messaging tab
To (MsgTo)
Subject (Subject)
Message (memMsgText)

To define the recipient address for the notification message:

1. Display the Employees and departments (**Organization management/ Organization/ Employees** link on the navigation bar).
2. Display the recipient of the action **Mail to administrator concerning licenses overrun** (BstSamLicenses_exceeded).
3. Modify the **EMail** (EMail) field.

Automate periodical calculation of the software counters

This section explains how to automatically recalculate all the counters on a regular basis.

This task is performed by the **Periodic verification of licenses** (BST_SAM02) workflow.

Main features of the Periodic verification of licenses workflow scheme

This workflow scheme is part of the line-of-business data of the **Software assets** module.

Import the line-of-business data into your existing database.

License control - Periodic verification of licenses workflow scheme

Parameter	Description
Triggering of the workflow scheme	According to the frequency defined by the calendar of the initial event in the workflow scheme
Is Asset Manager Automated Process Manager required to trigger and run the workflow scheme?	Yes
Simplified description of the workflow scheme	The workflow scheme executes the action **Calculate all software installations** (BstSamComputeAllLicAndInstall), which recalculates all counters.

Configuring Asset Manager Automated Process Manager

Asset Manager Automated Process Manager tests whether the **Periodic verification of licenses** workflow should be triggered using the information given in the calendar of the initial event of the **Periodic verification of licenses** workflow scheme.

To make sure Asset Manager Automated Process Manager performs this task:

1. Start Asset Manager Automated Process Manager.
2. Connect to the Asset Manager database (**File/ Connect to database** menu).
3. Display the modules (**Tools/ Configure modules** menu).
4. Select the **Execute workflow rules for execution group 'SYS_SAM'** (WkGroupSYS_SAM) module.
5. Define the triggering calendar for the module (**Verification schedules** frame).

Executing Asset Manager Automated Process Manager as background task

Asset Manager Automated Process Manager must be executed as a background task in order for the **Execute workflow rules for execution group 'SYS_SAM'** module to be executed periodically.

Consequences of recalculating counters

When recalculating counters, the following fields in particular are updated:

Field
No of rights (lLicUseRights)
No of install. (lSoftInstallCount)
Rights count (dLicUseRights)

Field
Installations/Utilizations count (dSoftInstallCount)
Entitlements count (dEntCount)

When one of these fields is modified, the **No more licenses available** (BST_SAM01) is triggered (Sending an automatic message in case of license overrun).

Analyze the compliance result

Several compliance analysis tables are designed to help customers understand the license consumption at computer/cluster level. The physical data model of those table are introduced in the *Physical data model Guide* > *SAM*. SLO Best Practice package demonstrates how to interpret the data in these tables, see *SLO Technical Guide* > *Appendix 1. Data model and definition* > *Software counter data model* > *Analysis result tables for consumption details*. Also see *SLO user guide* > *Phase 4. Compliance widgets and reports* > *Using compliance analysis result*.

Practical case 6: Managing SQL Server V2005 licenses and installations with software counters

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Overview

As a practical example of how software counters can be implemented to manage complicated licensing policies, a set of four software counters is provided to provide comprehensive statistics on SQL Server

V2005 licenses and installations, including installations on hosted VMs.

> **Note:** A set of counters and related models for SQL Server V2008 is also provided. If you wish to use the V2008 counters instead or or in addition to the V2005 counters, the information in this section applies equally, except that you should read "V2008" instead of "V2005".

SQL Server V2005 Software counters

The four software counters provided are:

Counter name	Function
SQL Server V2005 Standard CPU (BST_SAM_MSSQL_STDCPU)	Returns totals for installations of MSSQL for each physical CPU on physical computers and VMs for which the **Assignment** (seAssignment) field on **Portfolio items** (amPortfolio) table is set to **In Use** and whose **Valid license models** (InstallLicType) field on the **IT equipment** (amComputer) table is set to **SQL Server V2005 Standard CPU**.
SQL Server V2005 Standard Server (BST_SAM_MSSQL_STDSRV)	Returns totals for installations of MSSQL on physical computers and VMs for which the **Assignment** (seAssignment) field on **Portfolio items** (amPortfolio) table is set to **In Use** and whose **Valid license models** (InstallLicType) field on the **IT equipment** (amComputer) table is set to **SQL Server V2005 Standard Server**.
SQL Server V2005 Enterprise Server (BST_SAM_MSSQL_ENTSRV)	Returns totals for installations of MSSQL on physical computers for which the **Assignment** (seAssignment) field on **Portfolio items** (amPortfolio) table is set to **In Use** and whose **Valid license models** (InstallLicType) field on the **IT equipment** (amComputer) table is set to **SQL Server V2005 Enterprise Server**.
SQL Server V2005 Enterprise CPU (BST_SAM_MSSQL_ENTCPU)	**Note:** MSSQL must be installed on a given physical machine for the counter to be able to return correct figures for installations according to the license policy rule, otherwise it returns totals for installations on VMs hosted on the physical machine whatever the number of physical CPUs that it has. Returns totals for installations of MSSQL for each physical CPU on physical computers and VMs for which the **Assignment** (seAssignment) field on **Portfolio items** (amPortfolio) table is set to **In Use** and whose **Valid license models** (InstallLicType) field on the **IT equipment** (amComputer) table is set to **SQL Server V2005 Enterprise Server** (but with a capped maximum on the number of CPUs).

SQL Server V2005 models

The following new models are provided to support the SQL Server V2005 counters:

- One new installation model: **SQL Server V2005**
  This has a parent of System\Database management system software, and a Nature = **Software installation** (SOFT_INSTALL). This model becomes the definitive model corresponding to inventoried models in HPE Discovery and Dependency Mapping Inventory.
- Four new license models:
  - **SQL Server V2005 Standard Server** (MSSQL2005STDSRV)
  - **SQL Server V2005 Enterprise Server** (MSSQL2005ENTSRV)
  - **SQL Server V2005 Standard CPU** (MSSQL2005STDCPU)
  - **SQL Server V2005 Enterprise CPU** (MSSQL2005ENTCPU)

  These models have a Nature = **Software license** (SOFT_LICENSE). They are used to populate the **Valid license models** (InstallLicType) field on the **IT equipment** (amComputer) table.

SQL Server V2005 queries

A set of standard queries (filters) is provided to return actual records that correspond to the license models:

Query name	SQL name	Table on which the query operates
SQL Server V2005 Enterprise CPU Installations	MSSQL2005ENTSTDLIC	**Software installations or utilizations** (amSoftInstall)
SQL Server V2005 Enterprise CPU Licenses	MSSQL2005ENTCPULIC	**Assets** (amAsset)
SQL Server V2005 Enterprise Server Installations	MSSQL2005ENTSRVINST	**Software installations or utilizations** (amSoftInstall)
SQL Server V2005 Enterprise Server Licenses	MSSQL2005ENTSRVLIC	**Assets** (amAsset)
SQL Server V2005 Standard CPU Licenses	MSSQL2005ENTSTDLIC	**Assets** (amAsset)
SQL Server V2005 Standard CPU Installations	MSSQL2005STDCPUINST	**Software installations or utilizations** (amSoftInstall)

Query name	SQL name	Table on which the query operates
SQL Server V2005 Standard Server Installations	MSSQL2005STDSRVINST	**Software installations or utilizations** (amSoftInstall)
SQL Server V2005 Standard Server Licenses	MSSQL2005STDSRVLIC	**Assets** (amAsset)

Prerequisites

The Software Asset License Module must is activated. The following additional steps are required before you can use the counters described above:

- The SAM line-of-business data must be installed.
  This installs the models, queries and counters listed above.
- The **Valid license models** (InstallLicType) field on the **IT equipment** (amComputer) table must be populated with the model corresponding to the appropriate SQL Server licensing policy, so that the counters correctly calculate totals. A wizard is provided to help you, via the **Install. Types** button of the **IT Equipment** (amComputer) screen.

  > **Note:** The license model assigned to a physical computer also applies to any hosted VMs.

These steps are explained below.

Installing the SAM line-of-business data

For details of the general procedure you need to use to install the enhanced line-of-business data, see Importing the Line-of-business into an existing database. On the **Data to import** page, select the **Software Asset Management** line, and click **Finish**.

When the script has finished, it will confirm that is has sucessfully executed the **sam.lst** script.

Scanning SQL Server V2005 installations with HPE Discovery and Dependency Mapping Inventory

The recommended HPE Connect-It scenario to import SQL Server V2005 installations scanned via HPE Discovery and Dependency Mapping Inventory is **dmiam-swnorm.scn**. This scenario links

installations to the **SQL Server V2005** installation model.

Linking and unlinking license models to computers

For many software applications, the licensing policy can be deduced directly from a software installation scanned on IT equipment, for instance by HPE Discovery and Dependency Mapping Inventory. In the case of SQL Server V2005 installations however, the licensing policy applicable to a given server cannot be deduced from the scanned details, and must be associated manually, so that related counters calculate results correctly. To link models to computers using the wizard provided:

1. Click the **Install. Types** button of the **IT Equipment** (amComputer) screen.

   > **Note:** In fact this button is available on the other **It equipment** screens: **Computers and virtual machines**, **Mobile devices**, and **Virtual machines**, so that you can easily manage links to license models from these types of equipment.

   This button launches the **Associate valid license model with computers...** (sysSAMAddLicInstall2Computers) wizard
2. On the **Select licensing policies** page, select the licensing models to apply, then click **Next**.

   > **Tip:** To display only those models containing the string **SQL**, enter it in the **Name of the model contains** field, and click **Apply filter**. These will then be visible when you drill down through the model hierarchy.
3. On the **Select the software installation model** page, select the installation model on which you wish to filter IT equipment in which the software is installed, then click **Next**.

   > **Tip:** To display only those models containing the string **SQL**, enter it in the **Name of the model contains** field, and click **Apply filter**.
4. To select the equipment type(s) to include in the filter, check them on the **Select additional filters to apply to IT equipment** page. You must eselct at least one type, for instance **Computers**. Use the **Filter on** toggle to select either IT equipment that already has at least one of the associated license models, or IT equipment that does not yet have any associated license models. Click **Next**.
5. The **Select IT equipment to associate with licensing policies** page presents the results of the filters defined on the preceding pages. You can select a subset here, to which you will associate models on the next page. Click **Next**.
6. On the **Link It equipment to licensing policies** page, you can link or unlink equipment to license models.

- To link equipment and models, select them from the top two lists, and click **Link selected IT equipment to selected license models**.
- To unlink equipment and models, select entries from the bottom lists, and click **Unlink IT equipment from license models for the selected entries**.

Click **Finish.**.
Message will confirm the succesful linking and unlinking.

Using the SQL Server V2005 counters

The SQL Server V2005 counters function like other software counters. You can access them from the **Asset lifecycle/ Software Asset Management/ Software counters** link on the navigation bar.

1. Select the counter that you wish to update.
2. Click **Calculate**.
3. Examine the results on the **General** and **Results** tabs.

For further details of using software counters, see section To update the results of a counter

Using the SQL Server V2005 queries

The SQL Server V2005 queries function like other standard queries. You can access and if necessary customize them from the **Tools/ Queries...** link on the menu bar in the Windows client.

To execute a query manually:

1. Select the table on which the query operates:
   Asset lifecycle/ Infrastructure management/ Assets, or **Portfolio management/ Asset configurations/ Software installations** from the navigation bar.
2. Right-click to display the contextual menu, and select **Query filter**.
3. In the **Condition** field, select one of the queries that apply to the displayed table.
4. Click the (**Start search**) button.

You can also use the **AmQueryExec()** function to call a query in AQL code, for instance as part of a report or wizard. For details, see the **Programmers' reference** guide, **Alphabetical reference/ AmQueryExec()** section.

Chapter 10: Viewing reports and charts

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Displaying the dashboard

Method 1: Using the Manage software wizard (sysSamLauncher)

1. Start the **Manage software** wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select the **View reports and charts** option.
3. Click **Next**.
4. In the **Create reports and charts** page, click the **General dashboard** button.

Method 2: Using the links on the navigation bar

Click the **Asset lifecycle/Software Asset Management/Dashboards/ Software dashboard** link on the navigation bar.

Customizing the dashboard

To modify the list of reports that make up the dashboard:

1. Display the actions (**Administration/ Actions** link on the navigation bar).
2. Select the action **Software dashboard** (BstSamDashBoard).
3. Select the **Indicators** tab.
4. Modify the list of statistics and reports in the dashboard.
5. Save the modifications (**Modify** button).

Displaying a report on software

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Method 1: Using the Manage software wizard (sysSamLauncher)

1. Start the **Manage software** wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select the **View reports and charts** option.
3. Click **Next**.
4. In the **Create reports and charts** page, click the button corresponding to the report of your choice.

Method 2: Using the menus

> **Note:** This operation can only be performed by using the Windows client.

1. Display the reports (**Administration / Reporting/ Reports** link on the navigation bar).
2. If the **Domain** column is not displayed in the list:
   a. Right click within the list.
   b. Select **Utilities/ Configure list** from the shortcut menu.
   c. Add the **Domain** (Domain) link to the columns in the list.
   d. Click **OK**.
3. Sort the list on the **Domain** column.
4. Reports that are part of the **Software assets** module can be selected via the option paths **/Asset lifecycle/Software Asset Management/Reports/** or **/Portfolio management/Asset configurations/Reports/**.

Part III: Practical cases

Chapter 11: Practical cases

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General information and prerequisites

- **General information**
  The practical cases demonstrate how to manage software assets with Asset Manager.

Each practical case concentrates on a particular aspect of software control.

To ensure that the practical cases work correctly, make sure you carry out each step in full and follow the order shown. Only essential fields and links are mentioned. You may have a look at the other fields and links by yourself.

- **Prerequisites**
  To execute the practical cases, you must first:

1. Connect to the Asset Manager demonstration database using the **Admin** login (the corresponding password is empty).
2. If you are using the Windows client: Enable, at minimum, the **Portfolio**, **Software assets**, **Procurement**, **Financials**, **Contracts** and **Administration** modules using the **File/ Manage modules** menu.
3. Import line-of-business data from the **Software assets** module.
   Import the line-of-business data into your existing database.

Practical case 1: Create required items

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Create the natures 102

Presentation

This practical case explains how to create the items to be used in the practical cases that will follow.

Create the natures

1. Display the natures (**Portfolio management/ Asset configurations/ Natures** link on the navigation bar).
2. Create three new records. (For each, start by clicking **New**. Then populate the fields and links as shown in one of the following tables. Then click **Create**.)

Field or link	Value
Name (Name)	PC1 - Computer
General tab	
Create (seBasis)	Portfolio item
Also create (seOverflowTbl)	Computers (amComputer)
Management constraint (seMgtConstraint)	Unique asset tag
Has software installed (bHasSoftInstall)	Yes

Field or link	Value
Name (Name)	PC1 - License
General tab	
Create (seBasis)	Portfolio item

Field or link	Value
Also create (seOverflowTbl)	(No table)
Management constraint (seMgtConstraint)	Unique asset tag
License (bSoftLicense)	Yes

Field or link	Value
Name (Name)	PC1 - Installation
General tab	
Create (seBasis)	Portfolio item
Also create (seOverflowTbl)	Software installations or utilizations (amSoftInstall)
Management constraint (seMgtConstraint)	Free

Practical case 4: creating a contract license

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Prerequisites

This practical case can only be carried out after practical case 1 has been carried out in full.

Presentation

This practical case explains how to create and modify a license contract.

Scenario

Mr. **PC4 - Seagul** is the MIS at his company's head office.

Mr. **PC4 - Seagul** acquires a license, **PC4 - PowerPoint**, off the global license agreement. He records this license in the Asset Manager database.

At a later stage, Mr. **PC4 - Seagul** signs a global license agreement, **PC4 - Microsoft license contract** with the company **PC4 - Microsoft**.

He creates the contract **PC4 - Microsoft license contract** in the database, then updates it. He also sets up an alarm for the end of term date in order to terminate the contract within the notice period.

Mr. **PC4 - Seagul** reincorporates the license **PC4 - PowerPoint** in the contract **PC4 - Microsoft license contract**, which is designated as a blanket contract.

Since the contract **PC4-001** is linked to a maintenance contract, Mr. **PC4 - Seagul** creates the maintenance contract in the Asset Manager database and links it to the contract **PC4 - Microsoft license contract**.

Main stages of the practical case

1. Creating the contract supervisor
2. Creating the location of the company
3. Creating a file representing the scan of the paper document signed with the supplier
4. Connecting to the database as PC4 - Seagul
5. Creating the reseller for the PC4 - PowerPoint license
6. Create the model for the PC4 - PowerPoint license
7. Creating the asset corresponding to the PC4 - PowerPoint license
8. Creating the contract
9. Modifying the contract PC4-001
10. Examining the contract created and modified by the wizard
11. Creating the action associated to the alarm on the end of contract date
12. Associating an alarm with the end date
13. Triggering the Verify alarms (Alarms) module in Asset Manager Automated Process Manager

14. Reconnecting to the database as PC4 - Seagul
15. Creating the invoice associated to the PC4 - PowerPoint license
16. Add a line to the invoice corresponding to the license PC4 - PowerPoint
17. Linking the invoice line of the license PC4 - PowerPoint - License to the contract PC4-001
18. Associating a maintenance contract with the contract PC4-001
19. Modifying the maintenance contract

Steps to carry out

Creating the contract supervisor

1. Display the employees (**Organization management/ Organization/ Employees** link on the navigation bar).
2. Create the following record (**New** button), by populating the fields and links as shown in the following table:

Field or link	Value
Name (Name)	PC4 - Seagul
General tab	
EMail (EMail)	AM:seagul
Profile tab	
Access type (seLoginClass)	Floating
Status of the user account (seLoginStatus)	Active
User name (UserLogin)	seagul
Password (LoginPassword)	Leave empty.
Administration rights (bAdminRight)	Yes

3. Windows client: Close all windows.

Creating the location of the company

1. Display the locations (**Organization management/ Organization/ Locations** link on the navigation bar).
2. Create the following record (**New** button), by populating the fields and links as shown in the following table:

Field or link	Value
Name (Name)	PC4 - Headquarters
City (City)	PC4 - Paris **Note** If the message **Would you like to add the value 'XXX' to itemized list 'YYY'?** is displayed, click **Yes**.

3. Windows client: Close all windows.

Creating a file representing the scan of the paper document signed with the supplier

1. Start a text editor.
2. Enter the text:

   ```
   This document represents the scanned paper document signed with the supplier.
   ```

3. Save this file as **C:\Temp\Contract.txt**.
4. Exit the text editor.

Connecting to the database as PC4 - Seagul

1. Connect to the database as **PC4 - Seagul**:
   - Windows client: **File/ Connect to database** menu.

- Web client: Click the icon at the upper right to disconnect, then reconnect.

Field	Value
Connection	Connection to the database in which you perform the practical case.
Login	seagul
Password	Leave empty.
Use integrated NT security	No

Creating the reseller for the PC4 - PowerPoint license

1. Display the companies (**Organization management/ Organization/ Companies** link on the navigation bar).
2. Create the following record, by populating the fields and links as shown in the following table:

Field or link	Value
Name (Name)	PC4 - Microsoft

3. Windows client: Close all windows.

Creating the contract

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software...** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select the **Manage software contracts** option.
3. Click **Next**.
4. On the **Manage contracts** page, click the **Create a contract** button.
   This starts the **Create a software contract...** (sysSamCreateSoftContract) wizard.
5. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons):

Field or link	Record
Create a software contract... page	
From scratch	Yes
Determine the contract type page	
Select the type of contract to create	Generic software contracts
Specify information about the contract page	
Contract number	PC4-MSNUM001
Select the supplier (company) for this contract page	
Name	PC4 - Microsoft
New supplier	No
Define supplier's address page	
New contact	Yes
Define a new contact page	
Name	PC4 - Kramer
Title	PC4 - Sales engineer
Define the supplier's location page	
New location	Yes
Define the supplier's location page	
Location name	PC4 - French Subsidiary
City	PC4 - Paris
Define general contract information page	
Internal contract reference (Ref)	PC4-001
Purpose	PC4 - Microsoft license contract
Contract number	PC4-MSREF001
Start	January 1st, 2005
End	December 31, 2005

Field or link	Record
Notice	60 days
Define financial information page	
Nature of payments	None
Define internal company contacts page	
Supervisor	PC4 - Seagul
Notification address	/PC4 - Headquarters/
Specify contractual terms and conditions page	Do not enter anything
Add new documents to the contract page	Do not enter anything
Summary page	
Choose the step you wish to perform after creating the contract	None

6. Validate all the parameters defined with the wizard (**Finish** button).
   The wizard creates the contract, the location of the supplier and the supplier contact.
7. Exit the wizard (**OK** button).
8. Exit the wizard (**Finish** button).

Create the model for the PC4 - PowerPoint license

1. Display the models (**Portfolio management/ Asset configurations/ Models** link on the navigation bar).
2. Create the following record, by populating the fields and links as shown in the following table:

Field or link	Value
Name (Name)	PC4 - PowerPoint - License
Nature (Nature)	PC1 - License

3. Windows client: Close all windows.

Creating the asset corresponding to the PC4 - PowerPoint license

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, click on the **Select the current/another software contract** button.
3. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons):

Field or link	Record
Select your current software contract... page	
Contracts list	Select the **PC4-001 (PC4 - Microsoft license contract) Microsoft standard Pc4 - Seagul, Pc4 - Seagul** contract.

4. Validate all the parameters defined with the wizard (**OK** button).
5. On the **Choose a Manage Software action...** page, select the **Manage software licenses and installations** option.
6. Click **Next**.
7. In the **Manage software licenses and installations** page, click the **Create a license** button. This triggers the **Create a new software license...** (sysSamCreateLicpfi) wizard.
8. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons):

Field or link	Record
Create a new software license page	
Select a license type (model) for this new license from existing software application licenses list:	Select the **PC4 - PowerPoint - License** record
Populate license information page	
Label (Asset tag)	PC4-001
Financial information page	

Field or link	Record
Contracts	PC4-001 (PC4 - Microsoft license contract)
Summary: page	
None	Yes

9. Validate all the parameters defined with the wizard (**Finish** button).
   The wizard creates the license and links it to the contract.

Modifying the contract PC4-001

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software** link on the navigation bar).
2. Make sure that the current contract is **PC4-001**.
   If this is not the case, select it (**Select a contract to work on** button).
3. On the **Choose a Manage Software action...** page, select the **Manage software contracts** option.
4. Click **Next**.
5. In the **Manage software contracts** page, click the **Modify a contract** button.
   This starts the **Create a software contract...** (sysSamCreateSoftContract) wizard.
6. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons):

Field or link	Value
Modify a software contract... page	
Which contract would you like to modify?	Modify the current contract PC4-001
Select the part of the contract you wish to modify page	
Add documents to the contract	Yes
Add new documents to the contract page	
Designation	PC4 - Contract with ISP

Field or link	Value
Full file name	C:\Temp\Contract.txt
Category	PC4 - Scanned contract
Status	Validated
Click **Add to the list**	
Summary page	
Choose the step you wish to perform after creating the contract	None

7. Validate all the parameters defined with the wizard (**Finish** button).
   The wizard adds the document to the contract.
8. Exit the wizard (**OK** button).
9. Exit the wizard (**Finish** button).

Examining the contract created and modified by the wizard

1. Display the contracts (**Asset lifecycle/ Supplier contract management/ Contracts** link on the navigation bar).
2. Display the detail of the **PC4-001** contract (**Reference** (Ref) field).

3. Pay close attention to the following fields and links in particular:

Field or link	Value
Reference (Ref)	PC4-001
Type (seType)	The value **License** is automatically assigned by the wizard without having to select it.
Purpose (Purpose)	PC4 - Microsoft license contract
General tab	
Supervisor (Supervisor)	PC4 - Seagul
Nature (Nature)	Microsoft
Number (ContractNo)	PC4-MSREF001
Company (Company)	PC4 - Microsoft
Start (dStart)	January 1st, 2005
End (dEnd)	December 31, 2005
Notice (tsNotice)	2 months
Contacts tab	
Notification address (NotiffAddress)	/PC4 - Headquarters/
Contact (Contact)	PC4 - Kramer
Documents tab	You will find the document you linked with the wizard.
Licenses tab	You will find the license **PC4 - PowerPoint - License (PC4-001)**.

4. Windows client: Close all windows.

Creating the action associated to the alarm on the end of contract date

1. Display the actions (**Administration/ Actions** link on the navigation bar).
2. Create the following record (**New** button), by populating the fields and links as shown in the following table:

Field or link	Value
Name	PC4 - End of term alarm
Context	Contracts (amContract)
Type	Messaging
Messaging tab	
To	AM:seagul
Subject	Approaching end of term
Message	`The contract [Ref] expires on [dEnd]. Notice period: [tsNotice]`

3. Windows client: Close all windows.

Associating an alarm with the end date

1. Display the contracts (**Asset lifecycle/ Supplier contract management/ Contracts** link on the navigation bar).
2. Display the detail of the **PC4-001** contract (**Reference** (Ref) field).
3. Select the **General** tab.
4. Click the **Alarm** icon to the right of the **End** (dEnd) field.
5. Populate the fields and links shown in the following table:

Field or link	Value
Alarm on	Yes
Trigger	90
Action	PC4 - End of term alarm

6. Save the alarm (**OK** button).
7. Modify the contract (**Modify** button).
8. Windows client: Close all windows.

Triggering the Verify alarms (Alarms) module in Asset Manager Automated Process Manager

1. Start Asset Manager Automated Process Manager (**Start/ Programs/ HPE Software/ Asset Manager 9.61 <language>/ Asset Manager Automated Process Manager** menu in Windows).
2. Connect to the database as **Admin** (**File/ Connect to database** menu):

Field	Value
Connection	Connection to the database in which you perform the practical case.
Login	Admin
Password	Leave empty.
Use this connection in service mode	No

3. Display the actions to trigger (**Action/ Trigger** link).
4. Select the action **Verify alarms**.
5. Execute the selected action (**OK** button).
6. Exit Asset Manager Automated Process Manager (**File/ Exit** menu).

Reconnecting to the database as PC4 - Seagul

1. Enable the Asset Manager client.
2. Reconnect to the database as **PC4 - Seagul**:
   - Windows client: **File/ Connect to database** menu.
   - Web client: Click the icon at the upper right to disconnect, then reconnect.

Field	Value
Connection	Connection to the database in which you perform the practical case.

Field	Value
Login	seagul
Password	Leave empty.
Use integrated NT security	No

Asset Manager displays the following message **You have unread messages. Do you want to read them now?**.

3. Display the unread messages (**Yes** button).
   This triggers the **Read messages** (sysCoreReadMsg) wizard.
4. Click **Next**.
   The wizard displays the detail of the message informing you that a contract is approaching end of term.
5. Display the detail of the contract (**Referenced object** button).
6. Close the contract detail.
7. Exit the wizard (**Finish** button).

Creating the invoice associated to the PC4 - PowerPoint license

1. Display the invoices (**Asset lifecycle/ Procurement lifecycle/ Invoices/ Supplier invoices** link on the navigation bar).
2. Create the following record, by populating the fields and links as shown in the following table:

Field or link	Value
Number (InvoiceNumber)	PC4-001
Supplier (Supplier)	PC4 - Microsoft
General tab	
Purpose (Purpose)	PC4 - PowerPoint - License
Invoice status (seStatus)	Paid

3. Leave the detail of the invoice displayed.

Add a line to the invoice corresponding to the license PC4 - PowerPoint

1. Make sure that the detail of the **PC4-001** invoice is displayed.
2. Select the **Composition** tab.
3. Add the following record (**+** button), by populating the fields and links as shown in the following table:

Field or link	Value
Quantity (fQty)	1
Description (Description)	PC4 - PowerPoint - License

4. Add the line (**Add** button).
5. Modify the invoice (**Modify** button).
6. Windows client: Close all windows.

Linking the invoice line of the license PC4 - PowerPoint - License to the contract PC4-001

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software** link on the navigation bar).
2. Make sure that the current contract is **PC4-001**.
   If this is not the case, select it (**Select a contract to work on** button).
3. In the **Choose a Manage Software action...** page, select the **Manage software contracts** option.
4. Click **Next**.
5. On the **Manage software contracts** wizard page, click the **Link invoice lines** button.
   This starts the **Link invoice lines to the contract** (sysSamLinkInvoices2Cntr) wizard.
6. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons):

Field or link	Record
Link invoice lines to the contract page PC4-001 (PC4 - Microsoft license contract)	
Filter on the contract supplier	Yes
Link invoice lines to the contract... page	
Supplier invoices	Select the invoice **PC4-001 PC4 - Microsoft**
Link invoice lines to the contract... page	
Invoice lines	Select the line **PC4-001 1 PC4 - PowerPoint license 1 0,00**

7. Validate what you entered (**Finish** button.)
   This links the invoice line to the contract.
8. Exit the wizard (**OK** button).
9. Exit the wizard (**Finish** button).
10. Display the contracts (**Asset lifecycle/ Supplier contract management/ Contracts** link on the navigation bar).
11. Select **PC1-004** (**Reference** (Ref) field).
12. Pay close attention to the following fields and links in particular:

Field or link	Value
Invoice lines tab	You will find the invoice line **1 PC4 - PowerPoint license 0,00 /PC4-001/**.

13. Windows client: Close all windows.

Associating a maintenance contract with the contract PC4-001

1. Make sure that you are connected to the database as **PC3 - Seagul**.
2. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software** link on the navigation bar).
3. Make sure that the current contract is **PC4-001**.
   If this is not the case, select it (**Select a contract to work on** button).

4. On the **Choose a Manage Software action...** page, select the **Manage software contracts** option.
5. Click **Next**.
6. On the **Manage contracts** page, click **Create a contract** in the **Maintenance contracts** section. This starts the **Create a contract** wizard (BstCntrCreateContract).
7. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons):

Field or link	Record
You are going to define an maintenance contract linked to software contract PC4-001 page	
Number	PC4-MAINT001
Purpose	Support and upgrades
Start	January 1, 2011
End	November 30, 2011
Linking assets to the maintenance contract	Yes
Link the assets to the contract page	
Date included	January 1, 2011
Planned removal date	November 30, 2011
List of assets	Select the **PC4-001** record (**Asset tag** field).
Create a contract page	
Supervisor	PC4 - Seagul
Notification address	/PC4 - Headquarters/
Create a contract page	Do not enter anything
Contract documentation and notes page	Do not enter anything
Summary page	
Display the contract detail	Yes

8. Validate all the parameters defined with the wizard (**Finish** button).
9. Exit the wizard (**OK** button).
   The wizard creates and displays the maintenance contract.

10. Pay close attention to the following fields and links in particular:

Field or link	Value
Type (seType)	The value **Maintenance** is automatically assigned by the wizard without having to select it.
Purpose (Purpose)	Support and upgrades
General tab	
Attached to (Parent)	The contract is automatically linked to the current contract **PC4-001 (PC4 - Microsoft license contract)**.
Supervisor (Supervisor)	PC4 - Seagul
Number (ContractNo)	PC4-MAINT001
Company (Company)	PC4 - Microsoft
Start (dStart)	January 1, 2011
End (dEnd)	November 30, 2011
Notice (tsNotice)	2 months
Contacts tab	
Notification address (NotiffAddress)	/PC4 - Headquarters/
Contact (Contact)	PC4 - Kramer
Assets tab	You will find **PC4 - PowerPoint - License**.

11. Windows client: Close all windows.

Modifying the maintenance contract

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software** link on the navigation bar).
2. Make sure that the current contract is **PC4-001**.
   If this is not the case, select it (**Select a contract to work on** button).
3. On the **Choose a Manage Software action...** page, select the **Manage software contracts** option.

4. Click **Next**.
5. On the **Manage software contracts** page, click **Modify a contract** in the **Maintenance contracts** section.
6. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons):

Field or link	Record
Modify a maintenance contract page	
Contracts	Select the sub-contract of the **PC4-001** contract
Link the contract to an existing contract	No
Change your contract details page	
End	December 31, 2011

7. Validate all the parameters defined with the wizard (**Finish** button).
   The wizard creates the contract, the location of the supplier and the supplier contact.
8. Exit the wizard (**OK** button).
9. Exit the wizard (**Finish** button).
10. Windows client: Close all windows.

Practical case 3: Managing the validation process of a license contract

Presentation 121
Steps to carry out 122

Presentation

This practical case leads you through the implementation of a full license contract validation procedure.

Scenario

Mr. **PC3 - Hawk**, MIS, wishes to establish a contract between his company and one of its suppliers.

A contract of this sort must be validated from a budgetary standpoint by a group called **PC3 - Budgetary validation**. This group is lead by **PC3 - Azeman**, CFO, and includes Mr. **PC3 - Delmar**, an accountant.

If the contract is validated from a budgetary standpoint, it must also be validated from a legal standpoint by a group called **PC3 - Legal validation**. This group is lead by Mr. **PC3 - Delaney**, legal counsel, and includes Mr. **PC3 - Bertini**, a lawyer.

Validation can be given either by the group leader or by one of its members.

Main stages of the practical case

1. Creating the validators
2. Create the contract (Mr. Pc3 - Hawk)
3. Creating the validation groups
4. Customize the Contract validation (sysSam_CNTR_APPR) workflow scheme
5. Request validation (Mr. Pc3 - Hawk)
6. Refusing budgetary validation for the contract (Mr. Pc3 - Azeman)
7. Modifying the contract and resubmitting it for validation (Mr. Pc3 - Hawk)
8. Validating the contract from a budgetary standpoint (Mr. Pc3 - Delmar)

Steps to carry out

Creating the validators

1. Display the employees (**Organization management/ Organization/ Employees** link on the navigation bar).

2. Create the following records (**New** button), by populating the fields and links as shown in the following tables:

Field or link	Value
Name (Name)	PC3 - Azeman
Title (Title)	CFO **Note** If the message **Would you like to add the value 'XXX' to itemized list 'YYY'?** is displayed, click **Yes**.
General tab	
EMail (EMail)	AM:azeman
Profile tab	
Access type (seLoginClass)	Floating
Status of the user account (seLoginStatus)	Active
User name (UserLogin)	azeman
Password (LoginPassword)	Leave empty.
Administration rights (bAdminRight)	Yes

Field or link	Value
Name (Name)	Pc3 - Delmar
Title (Title)	Accountant **Note** If the message **Would you like to add the value 'XXX' to itemized list 'YYY'?** is displayed, click **Yes**.
General tab	
EMail (EMail)	AM:delmar

Field or link	Value
Profile tab	
Access type (seLoginClass)	Floating
Status of the user account (seLoginStatus)	Active
User name (UserLogin)	delmar
Password (LoginPassword)	Leave empty.
Administration rights (bAdminRight)	Yes

Field or link	Value
Name (Name)	Pc3 - Bertini
Title (Title)	Legal counsel **Note** If the message **Would you like to add the value 'XXX' to itemized list 'YYY'?** is displayed, click **Yes**.
General tab	
EMail (EMail)	AM:bertini
Profile tab	
Access type (seLoginClass)	Floating
Status of the user account (seLoginStatus)	Active
User name (UserLogin)	bertini
Password (LoginPassword)	Leave empty.
Administration rights (bAdminRight)	Yes

Field or link	Value
Name (Name)	Pc3 - Delaney **Note** If the message **Would you like to add the value 'XXX' to itemized list 'YYY'?** is displayed, click **Yes**.
Title (Title)	Lawyer
General tab	
EMail (EMail)	AM:delaney
Profile tab	
Access type (seLoginClass)	Floating
Status of the user account (seLoginStatus)	Active
User name (UserLogin)	delaney
Password (LoginPassword)	Leave empty.
Administration rights (bAdminRight)	Yes

Field or link	Value
Name (Name)	Pc3 - Hawk
Title (Title)	CIO **Note** If the message **Would you like to add the value 'XXX' to itemized list 'YYY'?** is displayed, click **Yes**.
General tab	
EMail (EMail)	AM:hawk
Profile tab	
Access type	Floating

Field or link	Value
(seLoginClass)	
Status of the user account (seLoginStatus)	Active
User name (UserLogin)	hawk
Password (LoginPassword)	Leave empty.
Administration rights (bAdminRight)	Yes

3. Windows client: Close the list of employees (**Close** button).

Create the contract (Mr. Pc3 - Hawk)

1. Connect to the database as **Pc3 - Hawk** CIO:
   - Windows client: **File/ Connect to database** menu.
   - Web client: Click the icon at the upper right to disconnect, then reconnect.

Field	Value
Connection	Connection to the database in which you perform the practical case.
Login	hawk
Password	Leave empty.
Use integrated NT security	No

2. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software** link on the navigation bar).
3. On the **Choose a Manage Software action...** page, select the **Manage software contracts** option.
4. Click **Next**.
5. On the **Manage software contracts** page, click the **Create a contract** button.
   This starts the **Create a software contract** (sysSamCreateSoftContract) wizard.

6. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons. Pages that you do not modify are omitted.):

Field or link	Record
Create a software contract... page	
From scratch	Yes
Determine the contract type page	
Generic software contracts	Yes
Define general contract information page	
Internal contract reference (Ref)	PC3-001
Define financial information page	
Init. payment	10000
Define internal contacts page	
Supervisor	PC3 - Hawk
Summary page	
None	Yes

7. Validate all the parameters defined with the wizard (**Finish** button).
8. Exit the wizard (**OK** button).
9. Exit the wizard (**Finish** button).

Creating the validation groups

1. Display the groups (**Organization management/ Operations/ Employee groups** link).
2. Create the following records (**New** button), by populating the fields and links as shown in the following tables:

Field or link	Value
Name (Name)	PC3 - Budgetary validation
Supervisor (Supervisor)	PC3 - Azeman

Field or link	Value
Bar code (code)	CNTRBUDGET-PC3
Create the new record (click Create) to proceed	
Composition tab	
Members (Members)	Add **PC3 - Delmar**.
Contracts tab	
Contracts (Contracts)	Add **Pc3 - 001**.

Field or link	Value
Name (Name)	PC3 - Legal validation
Supervisor (Supervisor)	PC3 - Delaney
Bar code (code)	CNTRLEGA-PC3
Create the new record (click Create) to proceed	
Composition tab	
Members (Members)	Add **PC3 - Bertini**.
Contracts tab	
Contracts (Contracts)	Add **Pc3 - 001**.

3. Windows client: Close the list of groups (**Close** button).

Customize the Contract validation (sysSam_CNTR_APPR) workflow scheme

> **Note:** This operation can only be performed by using the Windows client.

1. Display the workflow schemes (**Administration/ Workflow/ Workflow schemes** link on the navigation bar).
2. Select the **Contract validation** (sysSam_CNTR_APPR) scheme.
3. Display the **Activities** tab.

4. Delete the **Contract validation: Technical** (SAM_APPR_CNTR_OPER) activity (shortcut menu **Delete** on the **Contract validation: Technical** box).
5. Delete the **Contract validation: Financial** (SAM_APPR_CNTR_FINA) activity (shortcut menu **Delete** on the **Contract validation: Financial** box).
6. Delete the **Contract validation: Billing** (SAM_APPR_CNTR_BILL) activity (shortcut menu **Delete** on the **Contract validation: Billing** box).
7. Display the detail of the **Contract validation: Legal** (SAM_APPR_CNTR_JURI) activity (shortcut menu **Detail of activity** on the **Contract validation: Legal** box).
8. Display the **Parameters** tab.
9. Display the detail of the **Assignee** link (click on the magnifier)
10. Modify the following fields and links:

Field or link	Value
Context (Context Table)	Contracts (amContract)
Type (seType)	Calculated group

Script (memScript)	`Const STRJURI="CNTRJURI"`
	`RetVal=amDbGetLong("SELECT g.lGroupId FROM amRelEmplGrpCntr r, amEmplGroup g WHERE r.lGroupId=g.lGroupId AND r.lCntrId="& [lCntrId] & " AND g.BarCode LIKE '" & STRJURI & "%'")`
	`if RetVal=0 Then RetVal=amDbGetLong("SELECT lGroupId FROM amEmplGroup WHERE BarCode ='sysSam_CNTR_JURI'")`

11. Save the modifications (**Modify** button) and close the detail of the workflow role (**Close** button).
12. Close the detail of the activity (**Close** button).
13. Windows client: Close all windows.

Request validation (Mr. Pc3 - Hawk)

1. If not done so already, connect to the database as **Pc3 - Hawk**, CIO:
   - Windows client: **File/ Connect to database** menu.
   - Web client: Click the icon at the upper right to disconnect, then reconnect.

Field	Value
Connection	Connection to the database in which you perform the practical case.
Login	hawk
Password	Leave empty.
Use integrated NT security	No

2. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software** link on the navigation bar).
3. Make sure that the current contract is **PC3-001**.
   If this is not the case, select it (**Select a contract to work on** button).
4. In the **Choose a Manage Software action...** page, select the **Manage software contracts** option.
5. Click **Next**.
6. Click on the **Request validation for a contract** button.
   This triggers the **Request validation for a contract** (sysSamReqContractApproval) wizard.
7. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons):

Field or link	Record
Request validation for a contract page	
Request validation for a contract	Yes

8. Validate all the parameters defined with the wizard (**Finish** button).
9. Exit the wizard (**OK** button).
10. Exit the wizard (**Finish** button).

Refusing budgetary validation for the contract (Mr. Pc3 - Azeman)

1. Connect to the database as **Pc3 - Azeman** CFO:
   - Windows client: **File/ Connect to database** menu.
   - Web client: Click the icon at the upper right to disconnect, then reconnect.

Field	Value
Connection	Connection to the database in which you perform the practical case.
Login	azeman
Password	Leave empty.
Use integrated NT security	No

2. Asset Manager displays the following message **You have unread messages. Do you want to read them now?**.
3. Display the unread messages (**Yes** button).
   This triggers the **Read messages** (sysCoreReadMsg) wizard.
4. Click **Next**.
   The wizard displays a message to inform you that validation is pending for the contract.
5. Exit the wizard (**Finish** button).
6. Display current tasks (**Asset lifecycle/ Infrastructure management/ My workflow tasks** link on the navigation bar).
7. Select the **Contract validation: Budget** task.
8. Refuse the contract (**Refuse the contract**, then **Modify**).
9. Close the list of tasks (**Close** button).
10. Connect to the database as **Pc3 - Hawk** CIO:
    - Windows client: **File/ Connect to database** menu.
    - Web client: Click the icon at the upper right to disconnect, then reconnect.

Field	Value
Connection	Connection to the database in which you perform the practical case.
Login	hawk
Password	Leave empty.
Use integrated NT security	No

11. Asset Manager displays the following message **You have unread messages. Do you want to read them now?**.
12. Display the unread messages (**Yes** button).
    This triggers the **Read messages** (sysCoreReadMsg) wizard.
13. Click **Next**.
    The wizard displays the detail of the message informing Mr. **Pc3 - Hawk** that the contract has been refused and that the validation circuit may be started once more.
14. Exit the wizard (**Finish** button).

Modifying the contract and resubmitting it for validation (Mr. Pc3 - Hawk)

1. Make sure that you are connected to the database as **Pc3 - Hawk**.
2. Display current tasks (**Asset lifecycle/ Infrastructure management/ My workflow tasks** link on the navigation bar).
3. Select the task **Refused contract to reprocess**.
4. Display the detail of the contract that has just been refused (**Detail** button).
5. Modify the fields and links shown in the following table:

Field or link	Value
General tab	
Init. payment (mIntPay)	3000

6. Save the modifications (**Modify** button).

7. Close the contract detail (**Close** button).
8. Restart the contract validation circuit (click **Yes**, then **Modify**).
9. Close the list of tasks (**Close** button).

Validating the contract from a budgetary standpoint (Mr. Pc3 - Delmar)

1. Connect to the database as **Pc3 - Delmar**, accountant:
   - Windows client: **File/ Connect to database** menu.
   - Web client: Click the icon at the upper right to disconnect, then reconnect.

Field	Value
Connection	Connection to the database in which you perform the practical case.
Login	delmar
Password	Leave empty.
Use integrated NT security	No

2. Asset Manager does not inform you that there is a message because the **Contract validation** workflow scheme only sends a message to the validation group supervisor.
3. Display current tasks (**Asset lifecycle/ Infrastructure management/ My workflow tasks** link on the navigation bar).

   > **Note: Pc3 - Delmas** is able to access the budgetary validation tasks as a member of the **PC3 - Budgetary validation** group.

4. Select the **Contract validation: Budget** task.
5. Accept the contract (Click **Validate the contract**, then **Modify**).
6. Close the list of tasks (**Close** button).

Accepting the contract from a legal standpoint (Mr. Pc3 - Delaney)

1. Connect to the database as **Pc3 - Delaney**, legal counsel:
   - Windows client: **File/ Connect to database** menu.
   - Web client: Click the icon at the upper right to disconnect, then reconnect.

Field	Value
Connection	Connection to the database in which you perform the practical case.
Login	delaney
Password	Leave empty.
Use integrated NT security	No

2. Asset Manager displays the following message **You have unread messages. Do you want to read them now?**.
3. Display the unread messages (**Yes** button).
   This triggers the **Read messages** (sysCoreReadMsg) wizard.
4. Click **Next**.
   The wizard displays a message to inform you that validation is pending for the contract.
5. Exit the wizard (**Finish** button).
6. Display current tasks (**Asset lifecycle/ Infrastructure management/ My workflow tasks** link on the navigation bar).
7. Select the **Contract validation: Legal** task.
8. Accept the contract (Click **Validate the contract**, then **Modify**).
9. Close the list of tasks (**Close** button).

Keeping informed ofs the validation status (Mr. Pc3 - Hawk)

1. Connect to the database as **Pc3 - Hawk** CIO:
   - Windows client: **File/ Connect to database** menu.
   - Web client: Click the icon at the upper right to disconnect, then reconnect.

Field	Value
Connection	Connection to the database in which you perform the practical case.
Login	hawk
Password	Leave empty.
Use integrated NT security	No

2. Asset Manager displays the following message **You have unread messages. Do you want to read them now?**.
3. Display the unread messages (**Yes** button).
   This triggers the **Read messages** (sysCoreReadMsg) wizard.
4. Click **Next**.
   The wizard displays the detail of the message informing you that the contract has been validated.
5. Exit the wizard (**Finish** button).
6. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software** link on the navigation bar).
7. On the **Choose a Manage Software action...** page, select the **Manage software contracts** option.
8. Click **Next**.
9. Click on the **View validation progress status** button.
   This displays the progress status.
   Consult the information available.
10. Close the progress status (**Close** button).
11. Exit the wizard (**Finish** button).

Practical case 1a: Create a simple counter for licenses and installations

Presentation 136
Steps to carry out 137

Presentation

This simplified practical case aims to illustrate the basics of using counters.

Scenario of the practical case:

- The purpose is to examine how the **PowerPoint** application is deployed.
- User rights for **PowerPoint** are recorded as licenses called **PC1 - PowerPoint** in the Portfolio Items table.
  Licenses are directly linked users.
- Installations of **PowerPoint** are recorded as installations called **PC1 - PowerPoint - Installation** in the Portfolio Items table.
  Installations are directly linked to users.
  Each installation consumes 2 license rights.
- The right to use the **PowerPoint** software license is granted to the **PC1 - Marketing** cost center.

Main stages of the practical case:

1. Creating departments and users.
2. Creating a license, installation and computer models.
3. Creating a portfolio item for the computer, the license and the installation.
4. Creating the counter.

Steps to carry out

Create the departments

1. Display the departments and employees (**Organization management/ Organization/ Departments** link on the navigation bar).
2. Create the following records by populating the fields and links as shown in the following tables:

Field or link	Value
Name (Name)	Pc1 - Marketing

Field or link	Value
Name (Name)	Pc1 - Training

Create the cost centers

1. Display the cost centers (**Asset lifecycle/ IT financial management/ Cost tracking/ Cost centers** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following tables:

Field or link	Value
Label (Title)	PC1 - Marketing

Field or link	Value
Label (Title)	PC1 - Training

Create the employees

1. Display the departments and employees (**Organization management/ Organization/ Employees** link on the navigation bar).
2. Create the following records by populating the fields and links as shown in the following tables:

Field or link	Value
Name (Name)	Pc1 - Doe
Department (Parent)	Pc1 - Marketing
Finances tab	
Cost center (CostCenter)	PC1 - Marketing

Field or link	Value
Name (Name)	Pc1 - Smith
Department (Parent)	Pc1 - Training
Finances tab	
Cost center (CostCenter)	PC1 - Training

Create the models

1. Display the models (**Portfolio management/ Asset configurations/ Models** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following tables:

Field or link	Value
Name (Name)	PC1 - Computer
General tab	
Nature (Nature)	PC1 - Computer

Field or link	Value
Name (Name)	PC1 - PowerPoint - License
General tab	
Nature (Nature)	PC1 - License
Technical ref. (ModelRef)	PC1 - PowerPoint - License
License tab	
License type (LicType)	Per named workstation

Field or link	Value
Name (Name)	PC1 - PowerPoint - Installation
Nature (Nature)	PC1 - Installation
Technical ref. (ModelRef)	PC1 - PowerPoint - Installation

Create the portfolio items

1. Display the portfolio items (**Asset lifecycle/ Infrastructure management/ Portfolio items** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following tables:

Field or link	Value
Model (Model)	PC1 - Computer
General tab	
User (User)	Pc1 - Doe
Cost center (CostCenter)	Pc1 - Marketing

Field or link	Value
Model (Model)	PC1 - PowerPoint - License
General tab	

Field or link	Value
User (User)	Pc1 - Doe
License tab	
Rights (lSoftLicUseRights)	2

Field or link	Value
Model (Model)	PC1 - PowerPoint - Installation
General tab	
Quantity (fQty)	1
User (User)	Pc1 - Doe
Component of (Parent)	Select the **PC1 - Computer** record from the list

3. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software** link on the navigation bar).
4. On the **Choose a Manage Software action...** page, select the **Manage software licenses and installations** option.
5. Click **Next**.
6. On the **Manage software licenses and installations** page, click the **Create a license** button. This triggers the **Create a new software license...** (sysSamCreateLicpfi) wizard. (If no contract is selected, you will be prompted to specify one first.)
7. Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons):

Field or link	Record
Select the software license model to create page	
Select a license type (model) for this new license from existing software application licenses	Select the **PC1 - PowerPoint - License** record
Enter general information about the license page	
Asset tag	PC1-001
Total qty.	1

Field or link	Record
Rights	1
User name	Pc1 - Doe
Enter inancial information about the license page	Do not change
Summary page	
None	None

8. Click **Finish**.
9. Click **OK**.
10. Windows client: Close all windows.

Create the counter

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select the **Manage software license compliance** option.
3. Click **Next**.
4. On the **Manage software license compliance** page, click the **Create a counter** button.
5. Populate the fields and links shown in the following table:

Field, page or link	Record
Select how software installations/utilizations are to be counted page	Select the **Per named workstation** option (under **Commercial/ By Workstation**)
Select a counter template page	
Counter templates	Select the **Installations, entitlements and actual utilization by cost center (per named workstation)** model
Use this counter for global software compliance management	No

Field, page or link	Record
Do not publish in the compliance report	Yes
Select software licenses based on software application type page	Select the **PC1 - PowerPoint - License** model.
Select software installations based on software application type page	Select the **PC1 - PowerPoint - Installation** model.
Define non use criteria page	
Period of non use	0
Select the way entitlements are defined page	Define the list of entitlements
Select cost centers covered by the entitlement page	Select the **PC1 - Marketing** record
Define the counter's scope of application page	
Limit counter's scope of application	No
Enter the other parameters of the counter page	
Counter name	PC1 - PowerPoint - Simple count of licenses and installations
No contract	Yes
Select the counter consolidation action to perform page	
None	Yes
Select task to execute after wizard executes page	Select the **Display/Adjust/Calculate counts** option

6. Click **Finish**.
7. Click **OK**.
8. Examine the **Results of the software counters** window.
   Pay special attention to the **PC1 - Marketing 0 1 2 2** line.
   This cost center is not compliant: The installations use two rights. The cost center has one license right and one entitlement.

Examine the counter created by the wizard

1. Display the counters (**Asset lifecycle/ Software Asset Management/ Software counters** link on the navigation bar).
2. Select the **PC1 - PowerPoint - Simple count of licenses and installations** counter.
3. Examine the top of the screen:
   Group By (Context): This field is set to **Cost centers (amCostCenter)** (this is the default value). You will see in Practical case 1b: Limit the scope of the counter to a given department what this field is used for and how it can be associated to the **Scope of application** (Definition) field.
4. Display the **General** tab: The counts are summarized here.
5. Display the **Rights** tab:
   The wizard has created a query associated with the **Scope of the rights to be counted** (LicQuery) link which is used to identify portfolio items whose model is **PC1 - PowerPoint - License**.
   Rights-calculation mode (seLicCountMode) is set to **Point count**: The counter takes rights points into account.
6. Display the **Entitlements** tab:
   The wizard has created a query associated with the **Scope of the entitlements to be counted** (EntContext) link which is used to identify employees and departments that are associated with the **PC1 - Marketing** cost center.
7. Display the **Installations/Utilizations** tab:
   The wizard has created a query associated with the **Scope of the installations or utilizations to be counted** (SoftInstQuery) link which is used to identify portfolio items whose model is **PC1 - PowerPoint - Installation**.
   Installations/Utilizations calculation mode (seInstallCountMode) is set to **Point count**: The counter takes consumption of rights points into account.

Practical case 1b: Limit the scope of the counter to a given department

Presentation 144
Prerequisites 144
Steps to carry out 144

Presentation

This simplified practical case aims to illustrate the principles of counters, when:

- A scope is defined to filter the records in the table selected by the **Group By** (Context) link.

The scenario of the practical case is identical to practical case 1a, except for the following points:

- For each user in the department **Pc1 - Marketing**, the counter compares the license rights acquired for **PowerPoint** with declared installations.

Main stages of the practical case:

1. The Initial steps correspond to practical case 1a.
2. Modifying the license.
3. Creating the counter.

Prerequisites

This practical case can only be carried out after practical cases 1 and 1a have been carried out in full.

Steps to carry out

Modify the license

1. Display the portfolio items (**Asset lifecycle/ Infrastructure management/ Portfolio items** link on the navigation bar).
2. Select the portfolio item whose model is **PC1 - PowerPoint - License**.
3. Modify the record, by populating the fields and links as shown in the following table:

Field or link	Value
General tab	

Field or link	Value
User (User)	Pc1 - Marketing
License tab	
License type (LicType)	Per installation or utilization

Create the counter

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select the **Manage software license compliance** option.
3. Click **Next**.
4. On the **Manage software license compliance** page, click the **Create a counter** button.
5. Populate the fields and links shown in the following table:

Field or link	Record
Select how software installations/utilizations are to be counted page	Select the **Per installation or utilization** option.
Select a counter template page	
Counter templates	Select the **Installations, entitlements and actual utilization by department/employee (Type: per installations and utilizations)** model
Use this counter for global software compliance management	No
Do not publish in the compliance report	Yes
Select software licenses based on software application type page	Select the **PC1 - PowerPoint - License** model.
Select software installations based on software application type page	Select the **PC1 - PowerPoint - Installation** model.

Field or link	Record
Define non use criteria page	
Period of non use	0
Select the way entitlements are defined page	Define the list of entitlements
Select cost centers covered by the entitlement page	Select the **PC1 - Marketing** record
Define the counter's scope of application page	
Limit counter's scope of application	Yes
Define the counter's scope of application page	
Employees and departments	Select the **Pc1 - Marketing** record
Select entire department	Yes
Enter the other parameters of the counter page	
Counter name	PC1b - PowerPoint installations in the Marketing department
No contract	Yes
Create a software license management counter... page	Select the **Display/Adjust/Calculate counts** option

6. Click **Finish**.
7. Click **OK**.
8. Examine the **Results of the software counters** window.
   Pay special attention to the **PC1 - Marketing 0 1 2 2** line.
   This cost center is not compliant: The installations use two rights. The cost center has one license right and one entitlement.

Practical case 1c: Internal assignment of rights

Presentation 147
Prerequisites 147
Steps to carry out 147

Presentation

This simplified practical case aims to illustrate the principles of counters that use named entitlements.

Scenario of the practical case:

- The purpose is to examine how **PowerPoint** is deployed with regard to the internal entitlement policy of the company.
- Internal user rights for **PowerPoint** are declared in the Named Entitlements table.
- Installations of **PowerPoint** are recorded as installations called **PC1 - PowerPoint - Installation** in the Portfolio Items table.
  Installations are linked to the user's computer.
  Each installation consumes 1 license right.
- For each user listed in the named entitlement **PC1c - Named user rights for PowerPoint**, the counter compares the user rights declared for **PowerPoint** with recorded installations.

Main stages of the practical case:

1. The initial steps are the same as in practical cases 1, 1a and 1b.
2. Creating a named entitlement.
3. Creating the counter.

Prerequisites

This practical case can only be carried out after practical cases 1, 1a and 1b have been carried out in full.

Steps to carry out

Create the models

1. Display the models (**Portfolio management/ Asset configurations/ Models** link on the navigation bar).

2. Create the following records, by populating the fields and links as shown in the following tables:

Field or link	Value
Name (Name)	PC1c - PowerPoint - License
General tab	
Nature (Nature)	PC1 - License
License tab	
License type (LicType)	Per named user

Field or link	Value
Name (Name)	PC1c - PowerPoint - Installation
General tab	
Nature (Nature)	PC1 - Installation

Create the portfolio items

1. Display the portfolio items (**Asset lifecycle/ Infrastructure management/ Portfolio items** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following tables:

Field or link	Value
Model (Model)	PC1c - PowerPoint - License
General tab	
Cost center (CostCenter)	PC1 - Training
License tab	
Rights (ISoftLicUseRights)	1

Field or link	Value
Model (Model)	PC1c - PowerPoint - Installation

Field or link	Value
General tab	
Quantity (fQty)	1
Component of (Parent)	Select the **PC1 - Computer** record from the list

Creating the named entitlement

1. Display the named entitlements (**Organization management/ Operations/ Named entitlements** link on the navigation bar).
2. Create the following record, by populating the fields and links as shown in the following table:

Field or link	Value
Name (Name)	PC1c - Named user rights for PowerPoint
Click **Create** to continue.	
Entitled Employees/Departments tab	
	Pc1 - Doe
	Pc1 - Smith

Creating the counter

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select the **Manage software license compliance** option.
3. Click **Next**.
4. On the **Manage software license compliance** page, click the **Create a counter** button.
5. Populate the fields and links shown in the following table:

Field or link	Record
Select how software installations/utilizations are to be counted page	Select the **Per named user** option.
Select a counter template page	
Counter templates	Select the **Compliance and assignments by cost center (per named user) model**
Use this counter for global software compliance management	No
Do not publish in the compliance report	Yes
Select software licenses based on software application type page	Select the **PC1c - PowerPoint - License** model.
Select software installations based on software application type page	Select the **PC1c - PowerPoint - Installation** model.
Define non use criteria page	Leave the page as is.
Select the way entitlements are defined page	Select a named entitlement
Select named entitlements covered by the entitlement page	Select the **PC1c - Named user rights for PowerPoint** entitlement
Define the counter's scope of application page	
Limit counter's scope of application	No
Enter the other parameters of the counter page	
Counter name	PC1c - Named user rights for PowerPoint
No contract	Yes
Create a software license management counter... page	Select the **Display/Adjust/Calculate counts** option

6. Click **Finish**.
7. Click **OK**.
8. Windows client: Close all windows.

Examine the results of the counter

There is one line for **Pc1 - Marketing** and one for **Pc1 - Training**.

Both cost centers are compliant with your internal policy (entitlements).

The **Pc1 - Marketing** cost center is not license compliant.

Practical case 1d: Take into account effective software usage

Presentation 151
Prerequisites 151
Steps to carry out 152

Presentation

This simple practical case illustrates how the counters work when you take the effective usage of installations/utilizations into account.

The scenario is the same as in practical case 1b, except that the counter takes into account the effective usage of software.

Main stages of the practical case:

1. The initial steps are the same as in practical cases 1, 1a and 1b.
2. Adding information on usage of the installation.
3. Creating the counter.

Prerequisites

This practical case can only be carried out after practical cases 1, 1a and 1b have been carried out in full.

Steps to carry out

Populate usage information for the installation

1. Display the software installations (**Portfolio management/ Asset configurations/ Software installations** link on the navigation bar).
2. Select **PC1 - PowerPoint - Installation**.
3. Modify the record, by populating the fields and links as shown in the following table:

Field	Value
Utilization tab	
Last use (dtLastUse)	Current date and time minus 2 months

Define non use criteria for the counter

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software** link on the navigation bar).
2. On the **Choose a Manage Software action...** page, select the **Manage software license compliance** option.
3. Click **Next**.
4. On the **Manage software license compliance** page, click the **Modify a counter** button.
5. Select the **PC1 - PowerPoint - Simple count of licenses and installations** record.
6. Click the **Installation** button.
7. This triggers the **Modify the list of installation models to take into account...** (sysSamAddInst2Counter) wizard.
8. Populate the fields and links shown in the following table:

Field or link	Record
Modify the list of installation models to take into account page	
Period of non use	1 month
Recalculate the results of the counter after executing the wizard	Yes

9. Click **Finish**.
10. Click **OK**.
11. Examine the upper part of the **Results of the software counters** window for the **PC1 - PowerPoint - Simple count of licenses and installations** counter.
    The **Installations/Utilizations count** field (dSoftInstallCount) is set to **2** as in practical case 1b, but the **Unused installation counts** field (dUnusedInstall) is now set to **2**.
12. Examine the lower part of the **Results of the software counters** window for the **PC1 - PowerPoint - Simple count of licenses and installations** counter.
    There is a line for **PC1 - Marketing**, as for practical case 1b.
    This result shows you that you do not have enough licenses for the number of installation points and that the software is not used by the **Pc1 - Marketing** cost center. If the software is not really used, remove it.

Practical case 5: Transfer license rights

Prerequisites 153
Presentation 154
Steps to follow 155

Prerequisites

This practical case can only be carried out after completing Practical case 1: Create required items.

Presentation

This practical case explains how to transfer license rights and calculate compliance for your software installations.

Scenario

You have 5 licenses for **SoftApp v1**, 20 licenses for **SoftApp v2** and 5 licenses for **SoftApp v3**.

You have 10 installations for **SoftApp v1**, 12 installations for **SoftApp v2** and 8 installations for **SoftApp v3**.

You also have 10 upgrade licenses to upgrade **SoftApp v2** to **SoftApp v3**.

In addition, you can transfer license rights from **SoftApp v3** to **SoftApp v2** and from **SoftApp v2** to **SoftApp v1**.

This is summarized in the following table:

Software	Number of licenses	Number of installations	Can transfer rights to
SoftApp v3	5	10	SoftApp v2
SoftApp v2	20	12	SoftApp v1
SoftApp v1	5	8	
Upgrade SoftApp v2 -> SoftApp v3	10		

You want to optimize your software licenses to find out if you are in compliance with your installations.

Main stages of the practical case

1. Create the software licenses and the software upgrade licenses
2. Create the software installations
3. Create and link the software counters

4. Create a software upgrade counter
5. Launch the wizard to calculate compliance

Steps to follow

Create the software licenses and the software upgrade licenses

1. Start the **Manage software** (sysSamLauncher) wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Manage software** link on the navigation bar).
2. Populate the pages of the wizard as specified in the following table (navigate through the wizard pages using the **Next** and **Previous** buttons):

Page/ section/ field	Value
Choose a Manage Software action... page	
Choose an action	Manage software licenses and installations
Manage software licenses and installations page	
Click **Create a license**	
If you do not have a contract selected, the **Select your current software contract** (sysSamGetEnv) wizard starts. In this case, do not select anything, just click **OK**. This starts the **Create a new software license** (sysSamCreateLicpfi) wizard.	
Create a new software license page	
Do not select anything from the list. Below the list, click **Create a software license type (model)** to create a new model	
This starts the **Prepare licenses and software installations** (sysSamLicenseProcess) wizard.	
Prepare licenses and software installations page	
Click **Create a software license type (model)**	
Select how to create the software license model page	

Page/ section/ field	Value
Select **Create from an existing model** Click **Next**.	
Select the license (model)... page	
Do not select anything and click **Next**.	
Enter general information about the software license model page	
Name	PC5 - SoftApp v3
Software type (Sub-model) of	Software license
Management constraint (Nature)	PC1 - License
Software vendor (Brand)	Hewlett Packard
Click **Next**.	
General information on the software license type page	
License type	Per installation or utilization
Click **Next**.	
Enter general information about the software license page	
Rights	1
Click **Next**.	
Summary page	
Click **Finish**.	
Create a software license type (model)... page	
Click **OK**. Click **OK** again. This exits the **Prepare licenses and software installations** (sysSamLicenseProcess) wizard.	
Select the software license model to create page of the **Create a new software license** (sysSamCreateLicpfi) wizard.	
Select the software model	PC5 - SoftApp v3 (Under **IT and Telecom/ Software/ Software licenses**. Deselect **Only view license types associated with assets on contract...** to see the whole list).

Page/ section/ field	Value
Enter general information about the license page	
Asset tag	PC5 - 001
Total qty.	5
Financial information page	
Click **Next**.	
Summary page	
Click **Finish**. Click **OK**. This exits the **Create a new software license** (sysSamCreateLicpfi) wizard.	

3. This brings you back to the **Manage software licenses and installations** page of the **Manage Software** (sysSamLauncher) wizard as in the previous step.
   Repeat the previous step three times to create the software licenses **PC5 - SoftApp v2** and **PC5 - SoftApp v1**, and the software upgrade licenses **PC5 - SoftApp v2 -> SoftApp v3** by only modifying the following fields for each of the three licenses :

Field	PC5 - SoftApp v2	PC5 - SoftApp v1	PC5 - SoftApp v2 -> SoftApp v3
Name (on the **Enter general information about the software license model** page)	PC5 - SoftApp v2	PC5 - SoftApp v1	PC5 - SoftApp v2 -> SoftApp v3
Asset tag (on the **Enter general information about the license** page)	PC5 - 002	PC5 - 003	PC5 - 004
Total qty. (on the **Enter general information about the license** page)	20	5	10

4. You can now exit the **Manage software** (sysSamLauncher) wizard by clicking **Finish**.

Create the software installations

- **Create the models**

1. Display the models (**Portfolio management/ Asset configurations/ Models** link on the navigation bar).
2. Create three new records by populating the fields and links as shown in the following tables. Click **New** to start, and **Create** to finish, for each record):

Field or link	SQL Name	Value
Name	Name	PC5 - SoftApp v3 installation
General tab		
Nature	Nature	PC1 - Installation

Field or link	SQL Name	Value
Name	Name	PC5 - SoftApp v2 installation
General tab		
Nature	Nature	PC1 - Installation

Field or link	SQL Name	Value
Name	Name	PC5 - SoftApp v1 installation
General tab		
Nature	Nature	PC1 - Installation

- **Create the portfolio items**

1. Display the portfolio items (**Asset lifecycle/ Infrastructure management/ Portfolio items** link on the navigation bar).
2. Create three new records by populating the fields and links as shown in the following tables. Click **New** to start, and **Create** to finish, for each record):

Field or link	SQL Name	Value
Model	Model	PC5 - SoftApp v3 installation
General tab		
Quantity	fQty	10

Field or link	SQL Name	Value
Model	Model	PC5 - SoftApp v2 installation
General tab		
Quantity	fQty	12

Field or link	SQL Name	Value
Model	Model	PC5 - SoftApp v1 installation
General tab		
Quantity	fQty	8

Create and link the software counters

A counter associated with each software license **SoftApp v1**, **SoftApp v2** and **SoftApp v3** needs to be created.

In addition, license rights need to be available for transfer from **SoftApp v3** to **SoftApp v2** and from **SoftApp v2** to **SoftApp v1**.

Use the **Create a software license management counter...** wizard (sysSamCreateSoftwareCounter) to fulfill these needs.

1. Start the **Create a software license management counter...** wizard (**Asset lifecycle/ Software Asset Management/ User actions/ Create a software license management counter...** link on the navigation bar).
2. To create a counter to count PC5 - SoftApp v3 licenses and installations, populate the pages of the wizard as specified in the following table (navigate through the wizard pages using the **Next** and **Previous** buttons):

Field or link	Value
Select how software installations/utilizations are to be counted page	
License type	Per installation or utilization
Select a counter template page	

Field or link	Value
Counter templates	Installations, entitlements and actual utilization by cost center (per installations and utilizations)
Select software licenses based on software application type page	
Software license models	PC5 - SoftApp v3
Select software installations based on software application type page	
Software installations (models)	PC5 - SoftApp v3 installation
Define non use criteria page	
Click **Next**.	
Select the way entitlements are defined page	
Check the **Do not count entitlements** box	
Enter the other parameters of the counter page	
Counter name	PC5 - SoftApp v3 licenses and installations count
Select the counter consolidation action to perform page	
Select **None**	
Create a software license management counter... page	
Select task to execute after wizard executes	Display the counter dashboard
Click **Finish**.	
Click **OK**	

This finishes the wizard and displays the **Software counters**. Display the detail of the counter you just created to see the results of the counts.

3. Create the counter that will be used to count PC5 - SoftApp v2 licenses and installations using the same procedure.
   Start the **Create a software license management counter...** wizard and populate the fields as specified in the following table.:

Field or link	Value
Select how software installations/utilizations are to be counted page	

Field or link	Value
License type	Per installation or utilization
Select a counter template page	
Counter templates	Installations, entitlements and actual utilization by cost center (per installations and utilizations)
Select software licenses based on software application type page	
Software license models	PC5 - SoftApp v2
Select software installations based on software application type page	
Software installations (models)	PC5 - SoftApp v2 installation
Define non use criteria page	
Click **Next**.	
Select the way entitlements are defined page	
Check the **Do not count entitlements** box	
Enter the other parameters of the counter page	
Counter name	PC5 - SoftApp v2 licenses and installations count
Select the counter consolidation action to perform page	
Select **Link the counter to another counter**	
Select counters to link page	
Counter for the next version	PC5 - SoftApp v3 licenses and installations count
Can transfer rights	Check this box
Create a software license management counter... page	
Select task to execute after wizard executes	Display the counter dashboard
Click **Finish**.	
Click **OK**	

This finishes the wizard and displays the **Software counters**. You can display the detail of the counter that you have just created to see the results of the counts and the links between the counters (**Consolidation** tab).

4. Create the counter that will be used to count PC5 - SoftApp v1 licenses and installations using the same procedure.
   Start the **Create a software license management counter...** wizard and populate the fields as specified in the following table.:

Field or link	Value
Select how software installations/utilizations are to be counted page	
License type	Per installation or utilization
Select a counter template page	
Counter templates	Installations, entitlements and actual utilization by cost center (per installations and utilizations)
Select software licenses based on software application type page	
Software license models	PC5 - SoftApp v1
Select software installations based on software application type page	
Software installations (models)	PC5 - SoftApp v1 installation
Define non use criteria page	
Click **Next**.	
Select the way entitlements are defined page	
Check the **Do not count entitlements** box	
Enter the other parameters of the counter page	
Counter name	PC5 - SoftApp v1 licenses and installations count
Select the counter consolidation action to perform page	
Select **Link the counter to another counter**	
Select counters to link page	
Counter for the next version	PC5 - SoftApp v2 licenses and installations count
Can transfer rights	Check this box
Create a software license management counter... page	
Select task to execute after wizard executes	Display the counter dashboard
Click **Finish**.	

Field or link	Value
Click **OK**	

This finishes the wizard and displays the **Software counters**. You can display the detail of the counter that you have just created to see the results of the counts and the links between the counters (**Consolidation** tab).

Create a software upgrade counter

1. Display the **Software upgrade counters** (**Asset lifecycle/ Software Asset Management/ Software upgrade counters** link on the navigation bar).
2. Create a new counter (**New** button).
3. Create the following record by populating the fields and links as shown in the following table:

Field or link	SQL Name	Value
Name	Name	PC5 - SoftApp v2 -> SoftApp v3 count
Group by	Context	Cost centers (amCostCenter)
Do not include in the compliance reports	bInternal	Yes (Check this box)
Rights count	bCountLic	Yes (Check this box)
Uncheck all other available check boxes		
Rights tab		
Rights counter context	LicContext	Portfolio items (amPortfolio)
Scope of the rights to be counted	LicQuery	◦ Name: License upgrade counts ◦ **Query** tab: Model.Name = 'PC5 - SoftApp v2 -> SoftApp v3' Create a new query (**New** button in the field's detail) with the following information:
Rights -> Group By link	LicGroupBy	CostCenter
License type	LicType	Per installation or utilization
Consolidation tab		
Upgrade from	UpgFrom	PC5 - SoftApp v2 licenses and installations count

Field or link	SQL Name	Value
Upgrade to	UpgTo	PC5 - SoftApp v3 licenses and installations count

Note: If you have a software upgrade counter model, you can also use the **Create a software license management counter...** wizard (sysSamCreateSoftwareCounter) (**Portfolio management/ IT/ Software Asset Management/ Create a software license management counter...** link on the navigation bar) to create this counter, as in paragraph Create and link the software counters.

Launch the wizard to calculate compliance

1. Display the **Software counters** (**Asset lifecycle/ Software Asset Management/ Software counters** link on the navigation bar).
2. Display, for example, the detail of the **Simple count of PC5 - SoftApp v2 licenses and installations** counter.
3. Click the **Calculate** button. This starts the **Recalculate rights and installations** (sysSamReCalcCounters) wizard for the selected counters and any related counters.
   The results can be seen on the **General** and **Results** tabs.
4. Click the **Linked counters** button to launch the **View linked counters** (sysSamSoftLicLinkedCount) wizard:
   - The first screen summarizes the main information: Rights and installations/utilizations counts, and consolidated compliance.
     This lets you see that you are in compliance with your license rights and your actual installations/utilizations.
   - The second and more detailed screen helps you understand the different transfer and upgrade procedures that were carried out to improve consolidated compliance for the different software applications.
     A table, similar to the following, displays the list of the software counters (the different steps taken to reach these results are detailed below)

Name	Rights count	Installations/Utilizations count	Maximum consolidated rights count	Consolidated rights count	Compliance	Consolidated compliance
PC5 - SoftApp v3 licenses and installations count	5	10	15 5 license rights + 10 license rights obtained per upgrade process	13 5 license rights + 8 license rights obtained per upgrade process while maintaining the compliance of **PC5 - SoftApp v2**	3 13 consolidated rights -10 installations/utilizations	0 3 license rights were transferred to **PC5 - SoftApp v2** then **PC5 - SoftApp v1**
PC5 - SoftApp v2 licenses and installations count	20	12	10 20 license rights - 10 license rights transferred per upgrade process	12 20 license rights - 8 unused license rights transferred to **PC5 - SoftApp v3** per upgrade process	0 12 consolidated rights -12 installations/utilizations	0
PC5 - SoftApp v1 licenses and installations count	5	8	5	5	-3 5 consolidated rights - 8 installations/utilizations	0 3 license rights were transferred from **PC5 - SoftApp**

Name	Rights count	Installations/Utilizations count	Maximum consolidated rights count	Consolidated rights count	Compliance	Consolidated compliance
						v3 to **PC5 - SoftApp v2** then to **PC5 - SoftApp v1**

And the following table (below) presents the list of software upgrade counters:

Name	Upgrade from	Upgrade to	Rights count	Number of transferred rights
PC5 - SoftApp v2 -> SoftApp v3 count	PC5 - SoftApp v2 licenses and installations count	PC5 - SoftApp v3 licenses and installations count	10	8 These 8 rights associated with 8 **PC5 - SoftApp v2** license rights enabled 8 additional rights per upgrade to be provided for **PC5 - SoftApp v3**.

You will see in the last column of the first table (consolidated compliance) that you are in compliance with your installations and license rights.
You will see in the second table that 8 of 10 upgrade rights have been transferred. 2 upgrade rights have not been used.

Practical case 2: Microsoft Select contract

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Presentation

This elaborate practical case demonstrates how to manage a Microsoft Select contract.

Reminders about Microsoft Select 6.0 contracts

- They are intended for medium to large-size companies.
- The are based around a target purchase volume over a period of three years.
  This target covers the total number of licenses that a company intends to purchase in any of the following product groups:
  - Application products
  - System products
  - Server products
- Within each of these groups, the company can organize its purchases to obtain the best rates.
  As not all software has the same value, the Select program does not count licenses but uses a system of license points.
  Additionally, it enables customers to copy software and use these copies automatically if the license points are available.
- There are four pricing levels, which are determined by purchase targets over three years, for each of the three product groups.
- You can opt for purchasing:
  - The license only (L).
    The license, L, entitles you install the full version of a software product.
  - Software Assurance (SA).
    The SA license entitles you to all updates (major, minor, service packs, patches, and so on) for the duration of the Select contract.
  - The license plus Software Assurance (L+SA).

Basic information on the Microsoft Select contract in the practical case

- Start: January 1st, 2003
- End: December 31, 2006
- The main contract is a master contract between your company and Microsoft.
  The master lease is linked to a blanket PO contract which covers acquisition of new licenses in the **Applications** pool. This contract defines in particular the number of points in volume targeted over the 3 year period (1500 points). This contract is also used as a reference for the acquisition of new licenses (which are acquired once and for all).
  The blanket PO contract is linked to a maintenance contract that covers license assurance for the **Applications** pool.
- The company deploys applications within the contract: Excel and Project.

- Before the contract came into effect, the company owned 100 Excel licenses and 10 Project licenses.
  The 100 Excel licenses will be covered by the Select Software Assurance.
  The update of the 10 Project licenses is not covered by the Select contract.
- The company purchases 300 new Excel licenses including Select Software Assurance.
  It also purchases 20 new Project licenses without Software Assurance.

Aspects we want to manage in the practical case

- Ascertain the acquired number of volume points and compare them to the contractual targets (commercial aspects of the contract).
  Calculated fields are used to compare the targeted points with actual acquired points.
- Make sure the number of installations is in compliance with the number of authorized licenses.
  A counter is used to compare installations with purchased licenses.

Main stages of the practical case

1. Creating the natures and models.
2. Creating the contracts.
3. Creating the portfolio items.
4. Creating the catalog references.
5. Creating the requests and orders.
6. Creating the calculated fields.
7. Creating the counter.

Steps to carry out

Create the natures

1. Display the natures (**Portfolio management/ Asset configurations/ Natures** link on the navigation bar).
2. Create four new records, by populating the fields and links as shown in the following tables. For each record, start by clicking **New** and finish by clicking **Create**.

Field or link	Value
Name (Name)	PC2 - Computer
Create (seBasis)	Portfolio item
Also create (seOverflowTbl)	Computers (amComputer)
Management constraint (seMgtConstraint)	Unique asset tag
Has software installed (bHasSoftInstall)	Yes

Field or link	Value
Name (Name)	PC2 - License
Create (seBasis)	Portfolio item
Management constraint (seMgtConstraint)	Asset tag
License (bSoftLicense)	Yes

Field or link	Value
Name (Name)	PC2 - Installation
Create (seBasis)	Portfolio item
Also create (seOverflowTbl)	Software installations or utilizations (amSoftInstall)
Management constraint (seMgtConstraint)	Free

Field or link	Value
Name (Name)	PC2 - Blanket PO contract
Create (seBasis)	Contract
Contract type (seCntrType)	Blanket PO

Create the brands

1. Display the brands (**Portfolio management/ Catalog/ Brands** link on the navigation bar).
2. If it doesn't already exist, create the following record by populating the fields and links as shown in the following table:

Field or link	Value
Name (Name)	Microsoft

Create the units for features

1. Display the units (**Administration / System/ Units** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following table:

Field or link	Value
Name (Name)	Points
Dimension (Dimension)	Count **Note:** If the message **Would you like to add the value 'XXX' to itemized list 'YYY'?** is displayed, click **Yes**.
Symbol (Symbol)	Pts **Note:** If the message **Would you like to add the value 'XXX' to itemized list 'YYY'?** is displayed, click **Yes**.
Conv. coeff. (fConv)	0

Create the features for models and contracts

1. Display the features (**Administration / Features/ Features** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following tables:

Field or link	Value **This feature to be associated with the license models is used to define the number of points obtained each time a license is purchased.**
Title (TextLabel)	PC2SelectPointsL
Input tab	
Input type (seDataType)	Numerical

Field or link	Value **This feature to be associated with the license models is used to define the number of points obtained each time a license is purchased.**
Unit (Unit)	Points

Field or link	Value **This feature to be associated with the license models is used to define the number of Software Assurance points obtained each time a license is purchased during the third year of the contract (with less than one year of Software Assurance left).**
Title (TextLabel)	PC2SelectPointsSA1
Input tab	
Input type (seDataType)	Numerical
Unit (Unit)	Points

Field or link	Value **This feature to be associated with the license models is used to define the number of Software Assurance points obtained each time a license is purchased during the second year of the contract (with 1 to 2 years of Software Assurance left).**
Title (TextLabel)	PC2SelectPointsSA2
Input tab	
Input type (seDataType)	Numerical
Unit (Unit)	Points

Field or link	Value **This feature to be associated with the license models is used to define the number of Software Assurance points obtained each time a license is purchased during the first year of the contract (with 2 to 3 years of Software Assurance left).**
Title (TextLabel)	PC2SelectPointsSA3

Field or link	Value **This feature to be associated with the license models is used to define the number of Software Assurance points obtained each time a license is purchased during the first year of the contract (with 2 to 3 years of Software Assurance left).**
Input tab	
Input type (seDataType)	Numerical
Unit (Unit)	Points

Field or link	Value **This feature to be associated with the blanket PO contract for a given pool is used to define the points target.**
Title (TextLabel)	PC2SelectPointsTarget
Input tab	
Input type (seDataType)	Numerical
Unit (Unit)	Points

Add the parameters to the features

1. Display the features (**Administration / Features/ Features** link on the navigation bar).
2. Select the feature **PC2SelectPointsL**.
3. Display the **Parameters** tab.
4. Add a parameter (**+** button).
5. Populate the fields and links shown in the following table:

Field or link	Value
Table (TableName)	Models (amModel)

6. Proceed in the same way for the features **PC2SelectPointsSA1**, **PC2SelectPointsSA2** and **PC2SelectPointsSA3**.
7. Select the feature **PC2SelectPointsTarget**.

8. Display the **Parameters** tab.
9. Add a parameter (**+** button).
10. Populate the fields and links shown in the following table:

Field or link	Value
Table (TableName)	Contracts (amContract)

Create the models

1. Display the models (**Portfolio management/ Asset configurations/ Models** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following tables:

Field or link	Value
Name (Name)	PC2 - Computer
General tab	
Nature (Nature)	PC2 - Computer

Field or link	Value
Name (Name)	PC2 - Excel - License
Brand (Brand)	Microsoft
General tab	
Nature (Nature)	PC2 - License
Features tab	
PC2SelectPointsL	1
PC2SelectPointsSA1	1
PC2SelectPointsSA2	1
PC2SelectPointsSA3	2

Field or link	Value
Name (Name)	PC2 - Project - License

Field or link	Value
Brand (Brand)	Microsoft
General tab	
Nature (Nature)	PC2 - License
Features tab	
PC2SelectPointsL	4
PC2SelectPointsSA1	2
PC2SelectPointsSA2	4
PC2SelectPointsSA3	6

Field or link	Value
Name (Name)	PC2 - Microsoft Select - Pool
Brand (Brand)	Microsoft
General tab	
Nature (Nature)	PC2 - Blanket PO contract

Field or link	Value
Name (Name)	PC2 - Excel - Installation
Brand (Brand)	Microsoft
General tab	
Nature (Nature)	PC2 - Installation

Create the contracts

1. Display the contracts (**Asset lifecycle/ Supplier contract management/ Contracts** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following tables:

Field or link	Value Main contract.
Reference (Ref)	PC2MSML
Purpose (Purpose)	PC2 - Microsoft Select - Master lease
Type (seType)	Master lease
Contract status (seStatus)	Active
General tab	
Nature of payments (sePayType)	None
Start (dStart)	January 1, 2011
End (dEnd)	December 31, 2011

Field or link	Value Blanket PO contact covering the acquisition of new licenses in the Applications pool.
Reference (Ref)	PC2MSA1
Purpose (Purpose)	PC2 - Microsoft Select - Applications - Acquisitions
Type (seType)	Blanket PO
Model (Model)	PC2 - Microsoft Select - Pool
General tab	
Attached to (Parent)	Select the **PC2MSML (PC2 - Microsoft Select - Master lease)** contract from the list
Nature of payments (sePayType)	None
Start (dStart)	January 1, 2011
End (dEnd)	December 31, 2011
Features tab	
PC2SelectPointsTarget	1500

Field or link	Value **Maintenance contract covering Software Assurance for the licenses in the Applications pool.**
Reference (Ref)	PC2MSA2
Purpose (Purpose)	PC2 - Microsoft Select - Applications - Assurance
Type (seType)	Maintenance
Contract status (seStatus)	Active
General tab	
Attached to (Parent)	Select the **PC2MSA1 (PC2 - Microsoft Select - Applications - Acquisitions)** contract from the list
Nature of payments (sePayType)	Rents
Start (dStart)	January 1, 2011
End (dEnd)	December 31, 2011

Create a cost center

1. Display the cost centers (**Asset lifecycle/ IT financial management/ Cost tracking/ Cost centers** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following table:

Field or link	Value
Label (Title)	PC2 - National Marketing

Create the portfolio items

1. Display the portfolio items (**Asset lifecycle/ Infrastructure management/ Portfolio items** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following tables:

Field or link	Value **Excel licenses acquired before the start of the Select contract.**
Model (Model)	PC2 - Excel - License
General tab	
Quantity (fQty)	100
Cost center (CostCenter)	PC2 - National Marketing
License tab	
Rights (ISoftLicUseRights)	1

Field or link	Value **Project licenses acquired before the start of the Select contract.**
Model (Model)	PC2 - Project - License
General tab	
Quantity (fQty)	10
Cost center (CostCenter)	PC2 - National Marketing
License tab	
Rights (ISoftLicUseRights)	1

Field or link	Value
Model (Model)	PC2 - Computer
General tab	
Cost center (CostCenter)	PC2 - National Marketing

Field or link	Value **An Excel installation made before the start of the Select contract, and which will be covered by the Select Software Assurance.**
Model (Model)	PC2 - Excel - Installation

Field or link	Value An Excel installation made before the start of the Select contract, and which will be covered by the Select Software Assurance.
General tab	
Quantity (fQty)	1
Component of (Parent)	Select the **PC2 - Computer** record from the list
Software inst. tab	
No of points (lUseCount)	1

Create the supplier

1. Display the companies (**Organization management/ Organization/ Companies** link on the navigation bar).
2. If it doesn't already exist, create the following record by populating the fields and links as shown in the following table:

Field or link	Value
Name (Name)	Microsoft

Create the products

1. Create the products (**Portfolio management/ Catalog/ Products** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following tables:

Field or link	Value
Description (Description)	PC2 - Excel - License
Brand (Brand)	Microsoft
General tab	
Model (Model)	PC2 - Excel - License

Field or link	Value
Description (Description)	PC2 - Project - License
Brand (Brand)	Microsoft
General tab	
Model (Model)	PC2 - Project - License

Create the catalog

1. Display the catalogs (**Portfolio management/ Catalog/ Catalogs** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following tables:

Field or link	Value
Name (Name)	Microsoft
Validate the creation of the record (**Create** button)	
Distributors	Add a link to **Microsoft**
Default supplier (DefSuppCat)	Microsoft

Create the references

1. Display the catalogs (**Portfolio management/ Catalog/ Catalog references** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following tables:

Field or link	Value
Catalog (Catalog)	Microsoft
Product (CatProduct)	PC2 - Excel - License
Price (sysCoreCatRefPrice)	200

Field or link	Value
Catalog (Catalog)	Microsoft

Field or link	Value
Product (CatProduct)	PC2 - Project - License
Price (sysCoreCatRefPrice)	800

Create the license and assurance requests from the master lease

1. Display the requests (**Asset lifecycle/ Procurement lifecycle/ Requests/ Purchase requests** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following tables:

Field or link	Value
Purpose (Purpose)	PC2 - License + Excel Software Assurance
Number (PONumber)	PC2-01

Field or link	Value
Purpose (Purpose)	PC2 - Project license
Number (PONumber)	PC2-02

Field or link	Value
Purpose (Purpose)	PC2 - Excel Assurance
Number (PONumber)	PC2-03

Create the request lines for the PC2-01 request

1. Display the requests (**Asset lifecycle/ Procurement lifecycle/ Requests/ Purchase requests** link on the navigation bar).
2. Select request **PC2-01** (**Number** (PONumber) field).
3. Display the **Composition** tab.
4. Add the following request lines by populating the fields and links as shown in the following tables:

Field or link	Value
Contract utilization (bCntrUtilization)	No
Quantity (fQty)	300
Reference (CatalogRef)	Select the **PC2 - Excel - License (Microsoft) - PC2 - Excel - License** record from the list

Tip: To be able to create the following line correctly in the Windows client, you must first have saved the inclusion of the first line of the request using the **Modify** button.

Field or link	Value
Contract utilization (bCntrUtilization)	Yes
Quantity (fQty)	1
Icon to the right of the **Contract requested** (UsedReqLineCntr) field	Click
Drop-down list under the **Quantity** (fQty) field	Contract used
Field to the right of the drop-down list with the **Used contract** value	Select the **PC2MSA2 (PC2 - Microsoft Select - Applications - Assurance)** record from the list
Port. item requested (UsedReqLineAsset)	300 PC2 - Excel - License

Create the request lines for the PC2-02 request

1. Display the requests (**Asset lifecycle/ Procurement lifecycle/ Requests/ Purchase requests** link on the navigation bar).
2. Select request **PC2-02** (**Number** (PONumber) field).
3. Display the **Composition** tab.
4. Add the following request line by populating the fields and links as shown in the following tables:

Field or link	Value
Quantity (fQty)	20
Reference (CatalogRef)	Select the **PC2 - Project - License (Microsoft) - PC2 - Excel - License** record from the list

Create the request lines for the PC2-03 request

1. Display the requests (**Asset lifecycle/ Procurement lifecycle/ Requests/ Purchase requests** link on the navigation bar).
2. Select request **PC2-03** (**Number** (PONumber) field).
3. Display the **Composition** tab.
4. Add the following request line by populating the fields and links as shown in the following tables:

Field or link	Value
Contract utilization (bCntrUtilization)	Yes
Quantity (fQty)	1
Icon to the right of the **Contract requested** (UsedReqLineCntr) field	Click
Drop-down list under the **Quantity** (fQty) field	Contract used
Field to the right of the drop-down list with the **Used contract** value	Select the **PC2MSA2 (PC2 - Microsoft Select - Applications - Assurance)** record from the list
Icon to the right of the **Port. item requested** (UsedReqLineAsset) field	Click
Drop-down list under the drop-down list with the **Used contract** value	Asset used
Field to the right of the drop-down list with the **Asset used** value	Microsoft PC2 - Excel - License

Creating, issuing and receiving the orders PC2-01 and PC2-02

1. Display the requests (**Asset lifecycle/ Procurement lifecycle/ Requests/ Purchase requests** link on the navigation bar).
2. Select request **PC2-01** (**Number** (PONumber) field).
3. Click **Quote**, and then **Finish** and then **OK** to accept the proposed values.

4. In the detail of the purchase order generated from the request:
   a. Populate the fields and links shown in the following table:

Field or link	Value
Number (PONumber)	PC2-01
General tab	
Sent (dtSent)	March 31, 2011

   b. Display the **Composition** tab.
   c. Display the detail of the purchase order line.
   d. In the detail of the order line, display the **Allocation** tab.
   e. Populate the fields and links shown in the following table:

Field or link	Value
Cost center (CostCenter)	PC2 - National Marketing

   f. In the detail of the order line, display the **Financing** tab.
   g. Populate the fields and links shown in the following table:

Field or link	Value
On blanket PO (bUsesBlanketPO)	Yes
Blanket PO contract (BlanketPOCntr)	Select the **PC2MSA1 (PC2 - Microsoft Select - Applications)** record from the list

   h. Save the modifications made to the order (**Modify** button).
5. Click **Issue**, and then **Finish**, and then **OK** to accept the proposed values.
6. Click **Receive**, and then **Finish**, and then **OK** to accept the proposed values.
7. Examine the details of this portfolio item that was created during the reception of the purchase order.
8. Windows client: Close all windows.
9. Display the requests (**Asset lifecycle/ Procurement lifecycle/ Requests/ Purchase requests** link on the navigation bar).
10. Select request **PC2-02** (**Number** (PONumber) field).
11. Click **Quote**, and then **Finish**. Accept the proposed values as they are. Click **OK**.

12. Populate the fields and links shown in the following table:

Field or link	Value
Number (PONumber)	PC2-02
General tab	
Sent (dtSent)	March 31, 2011

13. In the detail of the estimate generated from the request:
    a. Display the **Composition** tab.
    b. Display the detail of the purchase order line.
    c. In the detail of the order line, display the **Allocation** tab.
    d. Populate the fields and links shown in the following table:

Field or link	Value
Cost center (CostCenter)	PC2 - National Marketing

    e. In the detail of the order line, display the **Financing** tab.
    f. Populate the fields and links shown in the following table:

Field or link	Value
On blanket PO (bUsesBlanketPO)	Yes
Blanket PO contract (BlanketPOCntr)	Select the **PC2MSA1 (PC2 - Microsoft Select - Applications)** record from the list

    g. Save the modifications made to the order (**Modify** button).
14. For the estimate that was created from the purchase request, click **Issue**, and then **Finish**. Accept the proposed values as they are. Click **OK**.
15. In the details of the purchase order that was created from the purchase request, click **Receive**, and then **Finish**. Accept the proposed values as they are. Click **OK**.
16. Examine the details of this portfolio item that was created during the reception of the purchase order.
17. Windows client: Close all windows.

Execute the request PC2-03

1. Display the requests (**Asset lifecycle/ Procurement lifecycle/ Requests/ Purchase requests** link on the navigation bar).
2. Select request **PC2-03** (**Number** (PONumber) field).
3. Set the **Req. status** field (seStatus) to **Validated**.
4. Click **Modify**.
5. Click **Execute**, and then **Finish**. Accept the proposed values as they are. Click **OK**.
6. Display the **Composition** tab.
7. Display the detail of the request line **Contract utilization**.
8. Click the magnifier to the right of the field set to **Microsoft PC2 - Excel - License**.
9. Display the **Contracts** tab.
   You will notice that the asset is linked to the contract **PC2MSA2 (PC2 - Microsoft Select - Applications - Assurance)**.
10. Windows client: Close all windows.

Create the calculated fields for the points tracking

1. Display the calculated fields (**Administration/ System/ Calculated fields** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following tables:

   > **Tip:** We recommend copying and pasting the scripts from the **chm** or **pdf** version of the documentation to Asset Manager. (To copy text from the **chm** file, select it then right-click and select **Copy** from the contextual menu.)

Field or link	Value
Label (TextLabel)	PC2 - Select - License Points
SQL name (SQLName)	PC2L
Table	Contracts (amContract)

Field or link	Value
(TableName)	
Field type (seType)	Basic script
Result type (seDataType)	Numeric
Calculated-field script (Script)	RetVal = AmDbGetDouble("SELECT SUM(fQty * CatalogRef.CatProduct.Model.fv_PC2SelectPointsL) FROM amPOrdLine WHERE BlanketPOCntr = " & [lCntrId] & " AND POrder.dtSent >= #" & [dStart] & "# AND POrder.dtSent <= #" & [dEnd] & "#")

Description of the script:

- **RetVal =**: The script returns a value.
- **AmDbGetDouble(...)**: The value returned is a double-precision number (8 bytes).
- **FROM amPOrdLine**: The query searches the **Order lines** table.
- **WHERE BlanketPOCntr = " & [lCntrId] & " AND POrder.dtSent >= #" & [dStart] & "# AND POrder.dtSent <= #" & [dEnd] & "#"**: The records in the **Order lines** table must by linked to the contract by the **Blanket PO contract** (BlanketPOCntr), the order to which the order line belongs must have been issued (link to the **POrder.dtSent** field) after the start of the contract (**dStart** field) and before its end (**dEnd** field).
- **SUM(fQty * CatalogRef.CatProduct.Model.fv_PC2SelectPointsL)**: The query sums (**SUM (...)**) the feature values **fv_PC2SelectPointsL** associated with the product model of the catalog reference of the order line (**CatalogRef.CatProduct.Model.fv_PC2SelectPointsL** link) for each order line selected by the **WHERE(...)** clause.

Field or link	Value
Label (TextLabel)	PC2 - Select - Assurance points
SQL name (SQLName)	PC2SA
Table (TableName)	Contracts (amContract)
Field type (seType)	Basic script
Result type (seDataType)	Numeric

Field or link	Value
Script (Calculated-field script)	RetVal = AmDbGetDouble("SELECT SUM(Asset.fTotalQty * Asset.Model.fv_CP2PointsSelectSA1) FROM amAstCntrDesc WHERE lCntrId = " & [lCntrId] & " AND dCntrIncluded >= #" & (Year([dStart]) + 2) & "-" & Month([dStart]) & "-" & Day([dStart]) & "# AND dCntrIncluded < #" & (Year([dStart]) + 3) & "-" & Month([dStart]) & "-" & Day([dStart]) & "#") RetVal = RetVal + AmDbGetDouble("SELECT SUM(Asset.fTotalQty * Asset.Model.fv_CP2PointsSelectSA2) FROM amAstCntrDesc WHERE lCntrId = " & [lCntrId] & " AND dCntrIncluded >= #" & (Year([dStart]) + 1) & "-" & Month([dStart]) & "-" & Day([dStart]) & "# AND dCntrIncluded < #" & (Year ([dStart]) + 2) & "-" & Month([dStart]) & "-" & Day([dStart]) & "#") RetVal = RetVal + AmDbGetDouble("SELECT SUM(Asset.fTotalQty * Asset.Model.fv_CP2PointsSelectSA3) FROM amAstCntrDesc WHERE lCntrId = " & [lCntrId] & " AND dCntrIncluded >= #" & (Year([dStart]) + 0) & "-" & Month([dStart]) & "-" & Day([dStart]) & "# AND dCntrIncluded < #" & (Year ([dStart]) + 1) & "-" & Month([dStart]) & "-" & Day([dStart]) & "#")

Description of the first **RetVal =** of the script:

- **RetVal =**: The script returns a value.
  For better readability, the calculation is performed in three parts, thus we have: **RetVal = RetVal + ...**
- **AmDbGetDouble(...)**: The value returned is a double-precision number (8 bytes).
- **FROM amAstCntrDesc**: The query searches the **Assets covered by contracts** table.
- **lCntrId = " & [lCntrId] & "**: First condition of the **WHERE** clause.
  The assets covered by contracts must be linked to the current contract identified by the **lCntrId** field.
- **dCntrIncluded >= #" & (Year([dStart]) + 2) & "-" & Month([dStart]) & "-" & Day([dStart]) & "#**: Second condition of the **WHERE** clause.
  The assets covered by contracts must have been included (**dCntrIncluded** field) at least two years after the start of the contract.
  The **#** character is used to delimit the reference date.
  The reference date is reconstituted by concatenating the year, month and day of the start of the contract (**dStart** field).
  We thus obtain a date with the format **#YYYY-MM-DD#**.
- **dCntrIncluded < #" & (Year([dStart]) + 3) & "-" & Month([dStart]) & "-" & Day([dStart]) & "#**: Third condition of the **WHERE** clause.
  The assets covered by contracts must have been included (**dCntrIncluded** field) at least 3 years after the start of the contract.

- **SUM(Asset.fTotalQty * Asset.Model.fv_PC2SelectPointsSA3)**: The query sums the products of the **Total qty.** (fTotalQty) fields and the feature **PC2SelectPointsSA3** of the assets covered by contracts selected by the **WHERE** clause.
  In effect, it is this feature that gives the number of Software Assurance points to be counted when the license is acquired during the first year of the contract, when there remains 2 to 3 years of Software Assurance.

Display the calculated fields and the feature of the contracts

> **Note:** This operation can only be performed by using the Windows client.
>
> You must use Asset Manager Application Designer to customize windows and have them display calculated fields in a detail window or in a list in the Web client.

1. Display the contracts (**Asset lifecycle/ Supplier contract management/ Contracts** link on the navigation bar).
2. Right-click the list header.
3. Select **Utilities/ Configure list** from the shortcut menu.
4. Add the calculated fields **PC2 - Select - Assurance Points (PC2SA)** and **PC2 - Select - License Points (PC2L)**.
5. Click **OK**.
6. Examine the values you have added for the **PC2MSA1** and **PC2MSA2** contracts.

Create the queries required for the Excel counter

1. Display the queries (**Administration/ Queries** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following tables:

Field or link	Value Identification of the cost center for which we will account for license rights and installations.
Name (Name)	PC2 - Cost center 1

Field or link	Value Identification of the cost center for which we will account for license rights and installations.
Table (TableName)	Cost centers (amCostCenter)
Query tab	
Query (memQueryText)	Title = 'PC2 - National Marketing'

Field or link	Value Identification of Excel licenses
Name (Name)	PC2 - Excel - Licenses
Table (TableName)	Portfolio items (amPortfolio)
Query tab	
Query (memQueryText)	Model.Name = 'PC2 - Excel - License'

Field or link	Value Identification of Excel licenses
Name (Name)	PC2 - Excel - Installations
Table (TableName)	Portfolio items (amPortfolio)
Query tab	
Query (memQueryText)	Model.Name = 'PC2 - Excel - Installation'

Create the Excel counter

1. Display the counters (**Asset lifecycle/ Software Asset Management/ Software counters** link on the navigation bar).
2. Create the following records, by populating the fields and links as shown in the following tables:

Field or link	Record
Name (Name)	PC2 - Excel - License control

Field or link	Record
Use as model (bType)	No
Do not include in the compliance reports (bInternal)	Yes
Edit the counter using the wizards (bAutomated)	No
User-rights count (bCountLic)	Yes
Installations/Utilizations count (bCountInst)	Yes
Entitlements count (bCountEnt)	No
Group by (Context)	Cost centers (amCostCenter)
Scope of application (Definition)	PC2 - Cost center 1
License contract (Contract)	Select the **PC2MSA1 (PC2 - Microsoft Select - Applications - Acquisitions)** record from the list
Rights tab	
Rights counter context (LicContext)	Portfolio items (amPortfolio)
Scope of the rights to be counted (LicQuery)	PC2 - Excel - Licenses
Rights -> Group By link (LicGroupBy)	CostCenter **Note:** Asset Manager adds automatically a period (full stop) to the end of the string you type or paste. You must delete this period (full stop) in order to validate what you have entered.
Rights-calculation mode (seLicCountMode)	Count according to a calculation formula
Field for rights count (LicCountFormula)	SUM((fQty * Asset.lSoftLicUseRights))
Installations/Utilizations tab	
Installation/Utilization counter context (InstContext)	Portfolio items (amPortfolio)
Scope of the installations or utilizations to be counted	PC2 - Excel - Installations

Field or link	Record
(SoftInstQuery)	
Installations/Utilizations -> Group By link (InstGroupBy)	Parent.CostCenter **Note:** Asset Manager adds automatically a period (full stop) to the end of the string you type or paste. You must delete this period (full stop) in order to validate what you have entered.
Installations/Utilizations calculation mode (seInstallCountMode)	Count according to a calculation formula
Installations/Utilizations calculation formula (InstCountSQL)	Countdistinct(lParentId)

3. Click the **Calculate** button.
4. Display the **General** tab: The counts are summarized here.
5. Display the **Results** tab: The counts are detailed here.

Note: You can create a counter for Project in the same way.

Part IV: Appendixes

Appendix A: Glossary

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Navigation bar, menus and tabs

The following navigation bar links and menus of the Windows client are directly linked to the **Software assets** module:

Navigation bar links, menus and tabs in the Software assets module - list

Menu and navigation bar link	Table that the menu accesses (label and SQL name)	Dedicated tabs, fields or links	Comments	Section of the guide to consult
File **Manage modules**	Does not apply.	Does not apply.	Enables you to activate or deactivate the Software assets module if your license file authorizes it.	Refer to the **Tailoring** guide, part III **Customizing Windows clients**, chapter **Customizing a Windows client**, section **Activating the modules**
Asset lifecycle/ Infrastructure management/ Portfolio items menu or navigation link	Portfolio items (amPortfolio)	• **Software inst.** tab • **Utilization** tab • **License** tab		• Method 2: Using the menus • Method 2: Using the menus
Asset lifecycle/ Infrastructure management/ Assets and batches menu **Asset lifecycle/ Infrastructure management/ Assets** navigation link	Assets (amAsset)	• **License** tab		
Portfolio management/ Asset configurations/ Software installations and utilizations menu **Portfolio management/ Asset configurations/**	Software installations or utilizations (amSoftInstall)	• All		Software installations and utilizations management

Navigation bar links, menus and tabs in the Software assets module - list, continued

Menu and navigation bar link	Table that the menu accesses (label and SQL name)	Dedicated tabs, fields or links	Comments	Section of the guide to consult
Software installations navigation link				
Portfolio management/ Asset configurations/ Natures menu or navigation link	Natures (amNature)	• **Also create** field (OverflowTbl) • **Has software installed** field (bHasSoftInstall) • **License** field (bSoftLicense)		• Manually creating a software installation/utilization • Create a software license nature
Portfolio management/ Asset configurations/ Models menu or navigation link	Models (amModel)	• **Software inst.** tab • **License** tab		• Manually creating a software installation/utilization • Method 2: Using the menus
Organization management / Named entitlements menu **Organization management / Operations/ Named entitlements** navigation link	Named entitlements (amEntitlement)	• All		Software entitlement management
Asset lifecycle/ Software Asset Management/	Does not apply.	Does not apply.	Triggers the **Manage Software...** wizard.	How to create records

Navigation bar links, menus and tabs in the Software assets module - list, continued

Menu and navigation bar link	Table that the menu accesses (label and SQL name)	Dedicated tabs, fields or links	Comments	Section of the guide to consult
Software asset management... menu **Asset lifecycle/ Software Asset Management/ User actions/ Manage software** navigation link				
Asset lifecycle/ Software Asset Management/ Dashboard... menu **Asset lifecycle/ Software Asset Management/ Dashboards/ Software dashboard** navigation link	Does not apply.	Does not apply.	Displays a reports dashboard.	Method: Using the links on the navigation bar
Asset lifecycle/ Software Asset Management/ Definitive Media Library menu **Asset lifecycle/ Software Asset Management/ Definitive Media Library (DML)** navigation link	Models (amModel)	• **Software inst.** tab	Displays the list of records in the **Models** table (amModel) linked to a nature whose **Also create** field (OverflowTbl) is set to **Software installations or utilizations (amSoftInstall)**.	
Asset lifecycle/ Software Asset Management/	Inventoried models (amInventMode	• All		Result of the import in the Asset Manager

Navigation bar links, menus and tabs in the Software assets module - list, continued

Menu and navigation bar link	Table that the menu accesses (label and SQL name)	Dedicated tabs, fields or links	Comments	Section of the guide to consult
Inventoried software keys navigation link	l)			database
Asset lifecycle/ Software Asset Management/ Results of the software counters menu or navigation link	Software counters (amSoftLicCounter)	• All	Displays the list of all counters that are not models, and also displays the results of the selected counter. Can also be used to recalculate the counts, modify counters using wizards, and solve irregularities between license rights and installations/utilizations.	Updating the results of a software counter
Asset lifecycle/ Software Asset Management/ Software counters menu or navigation link	Software counters (amSoftLicCounter)	• All		Method 2: Creating a counter directly
Asset lifecycle/ Supplier contract management/ Contracts menu or navigation link	Contracts (amContract)	• **Licenses** tab		Method 2: Using the menus
Asset lifecycle/ Supplier contract management/ Master leases menu **Asset lifecycle/**	Contracts (amContract)	• **Licenses** tab		Method 2: Using the menus

Navigation bar links, menus and tabs in the Software assets module - list, continued

Menu and navigation bar link	Table that the menu accesses (label and SQL name)	Dedicated tabs, fields or links	Comments	Section of the guide to consult
Supplier contract management/ Leasing/ Master leases navigation link				
Tools/ Actions/ Edit menu **Administration/ Actions** navigation link	Actions (amAction)	• All		Refer to the **User interface** guide, chapter **Reference information**, section **Actions**.
Tools/ Actions/ <Name of action> menu Multiple locations on the navigation bar depending on the action's functional domain.	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
Tools/ Customize toolbar... menu	Does not apply.	Does not apply.	Enables you to add icons to or drop icons from the toolbar (**Portfolio** category).	Windows client toolbar icons
Tools/ Reporting/ Reports menu **Administration/ Reporting/ Reports** link	Reports (amReport)	• All		Reports
Administration/ List of screens menu	Does not apply.	Does not apply.	Enables you to access tables that are not accessible by the present menus.	Refer to the **User interface** guide, chapter **Record lists**, chapter **Using lists**.

Navigation bar links, menus and tabs in the Software assets module - list, continued

Menu and navigation bar link	Table that the menu accesses (label and SQL name)	Dedicated tabs, fields or links	Comments	Section of the guide to consult
			This task is reserved for the administrator. This is because these tables are not usually modified directly.	
Administration/ System/ Itemized lists menu or navigation link	Itemized lists (amItemizedList)	• All		Itemized lists
Administration/ System/ Counters menu or navigation link	Counters (amCounter)	• All		Counters
Administration/ System/ Calculated fields menu or navigation link	Calculated fields (amCalcField)	• All		Calculated fields

This table does not list the actions or reports included in the **Software assets** module and which can be found on the **Asset lifecycle/ Software Asset Management/** branch of the navigation bar.

Windows client toolbar icons

No toolbar icons of the Windows client are specific to the **Software assets** module.

For more information on customizing the toolbar, consult the **Tailoring** guide, part III **Customizing Windows clients**, chapter **Customizing a Windows client**, section **Customizing the toolbar**.

Windows client interface options

There are no Windows client interface options specifically dedicated to the **Software assets** module.

For more information on configuring the interface options, consult the **Tailoring** guide, part III **Customizing Windows clients**, chapter **Customizing a Windows client**, section **General options**.

Tables

The **Software assets** module uses numerous tables.

The following tables are linked directly to the **Software assets** module:

Tables in the Software assets module - list

Table label	SQL name of the table	Links on the navigation bar used to access the table	Section of the guide to consult
Generic tables			
Portfolio items	amPortfolio	**Asset lifecycle/ Infrastructure management/ Portfolio items**	• Create a software license • Manually creating a software installation/utilization
Models	amModel	**Portfolio management/ Asset configurations/ Models**	• Create a software license model • Creating software installation/utilization model
Natures	amNature	**Portfolio management/ Asset configurations/ Natures**	• Create a software license nature • Creating a software installation/utilization nature
Tables specific to software			
Contracts	amContract	**Asset lifecycle/ Supplier contract management/ Contracts**	License contract management

Tables in the Software assets module - list, continued

Table label	SQL name of the table	Links on the navigation bar used to access the table	Section of the guide to consult
Named entitlements	amEntitlement	**Organization management/ Operations/ Named entitlements**	Create a named entitlement for a license
Software counters	amSoftLicCounter	**Asset lifecycle/ Software Asset Management/ Software counters** **Administration / List of screens** menu, **Software counters (previous format)** line	Monitoring license compliance of installations
Rights / Utilizations count	amRightsUsesCount	**Administration / List of screens** menu, **Rights / Utilizations count** line	Periodical cleaning
Software installations or utilizations	amSoftInstall	**Portfolio management/ Asset configurations/ Software installations**	Software installations and utilizations management
Inventoried models	amInventModel	**Asset lifecycle/ Software Asset Management/ Inventoried software keys**	Result of the import in the Asset Manager database
Installations to create	amModelSoftInfo	**Administration / List of screens** menu, **Installations to create** line	

Relationships between tables

The **Software assets** module uses numerous tables in the Asset Manager database. There are multitudes of 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.

Here is a table that optimizes the order of how you should create your records. It indicates which dependant tables you need to populate.

The practical cases used in this guide follow these recommendations.

Interdependence of tables - table

Table (label and SQL name)	Tables to populate beforehand (label and SQL name)	Mandatory values	Automatically created records
Locations (amLocation)			
Employees and departments (amEmplDept)	Locations (amLocation)		
Contracts (amContract)	Employees and departments (amEmplDept)		
Nature (amNature)		• **Create** (sebasis): **Portfolio item** • **Also create** (seOverflowTbl): **(No table)** • **Management constraint** (seMgtConstraint): **Unique asset tag** • **License** (bSoftLicense): **Yes**	
		• **Create** (sebasis): **Portfolio item** • **Also create** (seOverflowTbl): **Software installations or utilizations (amSoftInstall)** • **Management constraint** (seMgtConstraint): **Free**	
Models (amModel)	Nature (amNature)		
Portfolio items (amPortfolio)	Models (amModel)		• Asset (amAsset) • Software installations or utilizations (amSoftInstall) • Rights / Utilizations count (amRightsUsesCount)

Interdependence of tables - table, continued

Table (label and SQL name)	Tables to populate beforehand (label and SQL name)	Mandatory values	Automatically created records
Named entitlements (amEntitlement)	Employees and departments (amEmplDept)		
Queries (amQuery)			
Counters (amCounter)	• Employees and departments (amEmplDept) • Models (amModel) • Queries (amQuery) • Portfolio items (amPortfolio) • Named entitlements (amEntitlement)		Rights / Utilizations count (amRightsUsesCount)

Itemized lists

You can select the value of certain fields using an open or closed itemized list.

To access the **Itemized lists** table (**amItemizedList**), use the **Administration/ System/ Itemized lists** menu.

The following table details the itemized lists specific to the **Software assets** module.

Itemized lists - list

Table (label and SQL name)	Field populated using an itemized list (label and SQL name)	Itemized list identifier
Software counters (amSoftLicCounter)	Nature (Type)	amSLCountNature
Software installations or utilizations (amSoftInstall)	Language (Language)	amLanguage
Software installations or	Operating system (SoftOS)	amOS

Itemized lists - list, continued

Table (label and SQL name)	Field populated using an itemized list (label and SQL name)	Itemized list identifier
utilizations (amSoftInstall)		
Software installations or utilizations (amSoftInstall)	Status (Status)	amSoftInstStatus
Contracts (amContract)	Nature (Nature)	amCntrNature
Contracts (amContract)	Status (Status)	amCntrStatus

For more information about itemized lists, consult the **Advanced use** guide, chapter **Itemized lists**.

Calculated fields

The **Software assets** module uses numerous calculated fields.

The following table details the calculated fields specific to the **Software assets** module.

Calculated fields - list

Calculated fields - list

Label of the calculated field	SQL name of the calculated field	Label and SQL name of the field that uses the calculated field	Utilization
Productivity software installations count	sysSamOfficeInst	Portfolio items (amPortfolio)	Programming
Productivity software license count	sysSamOfficeLic	Portfolio items (amPortfolio)	Programming
Utilization-points count	sysSamUses	Portfolio items (amPortfolio)	Programming
License-points count	sysSamLicences	Portfolio items (amPortfolio)	Programming

For more information about calculated fields, consult the **Advanced use** guide, **Calculated fields** chapter.

For more information about writing scripts, consult the **Advanced use** guide, chapter **Scripts**.

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

Counters

The **Software assets** module does not use counters.

To access the **Counters** table (amCounter), select the **Administration/ System/ Counters** link on the navigation bar.

Actions and wizards

The **Software assets** module uses actions to automate common tasks.

To access the **Actions** table (**amAction**), select the **Administration/ Actions** link on the navigation bar.

You can filter the actions linked to the **Portfolio** and **Software assets** modules by using a simple filter on one of the following fields:

- Domain (**Domain**)
- Nature (**Nature**)

The following actions are directly linked to the **Software assets** module:

Actions and wizards - list

Name of action	SQL name of the action	Type of action	Context of the action (SQL name of the table)	Section of the guide to consult
Create a software license management counter...	sysSamCreateSoftwareCounter	Wizard		Method 1: Create a counter using the Create a software license management counter... (sysSamCreateSoftwareCounter) wizard
Calculate all software installations	BstSamComputeAllLicAndInstall	Script		Main features of the Periodic verification of licenses workflow scheme
Software	BstSamDashBoard	Dashbo		Customizing the

Actions and wizards - list, continued

Name of action	SQL name of the action	Type of action	Context of the action (SQL name of the table)	Section of the guide to consult
dashboard		ard		dashboard
Mail to administrator concerning licenses overrun	BstSamLicenses_exceeded	Messaging	amSoftLicCounter	Sending an automatic message in case of license overrun
Missing software assignment	BstSamMissingSoftware	Script	amComputer	Flagging software missing from the last computer inventory
Mail to administrator concerning unauthorized installation	BstSamUnauthinstallation_found	Messaging	amSoftInstall	Sending an automatic message when an unauthorized installation occurs
Add an ASP user	sysSamAddAspUsers2Cntr	Wizard		Adding a user to the current ASP contract
Create a software license type (model)...	sysSamCreateLicModel	Wizard		Create a software license
Create a software license model from installations...	sysSamCreateLicModFromInst	Wizard		Create a software license
Create a new software license...	sysSamCreateLicpfi	Wizard		• Method 1: Using the Manage software wizard (sysSamLauncher) • This starts the Create

Actions and wizards - list, continued

Name of action	SQL name of the action	Type of action	Context of the action (SQL name of the table)	Section of the guide to consult
				a new software license (sysSamCreateLicpfi) wizard.
Create a request on named entitlement...	sysSamCreateReqFromEntitledTempl	Wizard		Method 1: Using the Manage software wizard (sysSamLauncher)
Create a software contract (Draft)...	sysSamCreateSoftContract	Wizard		• Creating a license contract • Modifying a license contract
Delete an ASP user...	sysSamDelAspUsersFromCntr	Wizard		Removing a user from the current ASP contract
Flag OEM installations...	sysSamFlagOEMInst	Wizard		Flagging installations as OEM installations
Select your current software contract...	sysSamGetEnv	Wizard		Selecting the current contract in the Manage software wizard (sysSamLauncher)
Solve software compliancy issues...	sysSamIdentifyIllegalInstall	Wizard		Processing irregularities between installations/utilizations and licenses
Manage software...	sysSamLauncher	Wizard		How to create records
Prepare licenses and software installations...	sysSamLicenseProcess	Wizard		• Create a software license • Method 1: Using the Manage software wizard (sysSamLauncher)
Link	sysSamLinkInvoices2Cntr	Wizard		Link invoice lines to the

Actions and wizards - list, continued

Name of action	SQL name of the action	Type of action	Context of the action (SQL name of the table)	Section of the guide to consult
invoice lines to the contract...				current contract
Recalculate rights and installations	sysSamReCalcCounters	Wizard		Processing irregularities between installations/utilizations and licenses
Reconcile external software license models...	sysIvtReconcExtModelWiz	Wizard	amInventModel	If a new record is created in the Inventoried models (amInventModel) table or if an existing record in the Inventoried models table is linked for the first time to a software installation
Request validation for a contract	sysSamReqContractApproval	Wizard		Requesting validation for the current contract
Propagate reconciliation of external model	SYS_RES_MOD_ACT01	Script	amInventModel	Automatic mechanisms triggered by the import
Modify the list of installation models to take into account...	sysSamAddInst2Counter	Wizard	amSoftLicCounter	Modifying software counters
Modify the list of license models to take into account...	sysSamAddLic2Counter	Wizard	amSoftLicCounter	Modifying software counters
Define or redefine	sysSamAddScope2Counter	Wizard	amSoftLicCounter	Modifying software counters

Actions and wizards - list, continued

Name of action	SQL name of the action	Type of action	Context of the action (SQL name of the table)	Section of the guide to consult
the counter's scope of applicatio n...				
Request software licenses...	sysSamCreateLicReq	Wizard		Request new software licenses
Assign software...	sysSamEntitleUserOrItem	Wizard		Create a named entitlement for a license
Modify a software license...	sysSamModifyLicpfi	Wizard		Modify a software license
Reconcile unknown installation s with known software installation s...	sysSamNormalizeModels	Wizard		Reconcile unknown installations

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

For more information about writing scripts, consult the **Advanced use** guide, chapter **Scripts**.

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

You can create new actions or customize some of the existing ones.

Workflow

The **Software assets** module uses workflow schemes to handle certain procedures.

To access the **Workflow schemes** (amWfScheme) table, click the **Administration/ Workflows/ Workflow schemes** link on the navigation bar.

The following workflow schemes are directly linked to the **Software assets** module:

Workflow - list

Name of the workflow scheme	Reference of the workflow scheme	Context of the workflow scheme (SQL name of the table)	Section of the guide to consult
No more licenses available	BST_SAM01	amSoftLicCounter	Sending an automatic message in case of license overrun
Periodic verification of licenses	BST_SAM02	amSoftLicCounter	Automate periodical calculation of the software counters
Installation not authorized	BST_SAM03	amSoftInstall	Sending an automatic message when an unauthorized installation occurs
Detection of software missing from last scan	BST_SAM20	amComputer	Flagging software missing from the last computer inventory
Contract validation	sysSam_CNTR_APPR	amContract	Overview
Normalize models: 'amInventModel' resolved	sysIvtExtModelEnd	amInventModel	If a new record is created in the Inventoried models (amInventModel) table or if an existing record in the Inventoried models table is linked for the first time to a software installation
Normalize models: 'amInventModel' added	sysIvtExtModelNew	amInventModel	If a new record is created in the Inventoried models (amInventModel) table or if an existing record in the Inventoried models table is linked for the first time to a software installation

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

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

Asset Manager Automated Process Manager modules

Certain Asset Manager Automated Process Manager modules are specific to the **Software assets** module.

To access the Asset Manager Automated Process Manager modules:

1. Launch Asset Manager Automated Process Manager.
2. Connect to your Asset Manager database.
3. Select the **Tools/ Configure modules** menu.

Asset Manager Automated Process Manager module - list

Name of the module	Description
WkGrIddAcoupSYS_SAM	Execute workflow rules for execution group 'SYS_SAM'
DDMISyncSoftwareNormalization	Update software normalization information using DDMI (Discovery and Dependency Mapping Inventory) results
DDMISyncCASoftwareEvents	Update software events using DDMI (Discovery and Dependency Mapping Inventory) and CA (Client Automation) results
DDMISyncHardware	Update hardware information using DDMI (Discovery and Dependency Mapping Inventory) results
DDMISyncSoftware	Update software information using DDMI (Discovery and Dependency Mapping Inventory) results

For more information about the Asset Manager Automated Process Manager modules, consult the **Administration** guide, chapter **Asset Manager Automated Process Manager**, section **Configuring the modules monitored by Asset Manager Automated Process Manager**.

System data and Line-of-business data

Asset Manager is provided with a standard set of data.

These data sets are 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 areas.
- **Sample data**: Data that you can use to familiarize yourself with Asset Manager.

System data specific to the Software assets module
For the **Software assets** module, the **system data** package contains data for the following tables:

- Actions (amAction)
- Scripts (amScriptLibrary)
- Application options (amOption)

The **system data** is incorporated by default in the Asset Manager database.

Line-of-business data specific to the Software assets module
For the **Software assets** module, the **line-of-business data** package contains data for a number of tables. Here are some examples:

- Employee groups (amEmplGroup)
- Software counters (amSoftLicCounter)
- Actions (amAction)
- Workflow schemes (amWfScheme)
- Itemized list values (amItemListVal)
- Inventoried models (amInventModel)
- Reports (amReport)
- Dashboard item (amDashboardItem)

Line-of-business data is automatically included in the Asset Manager demonstration database.

The **line-of-business data** is included in your working database if you select this option with Asset Manager Application Designer.

Import the line-of-business data into your existing database.

Reports

Asset Manager ships with many out-of-the box reports. A number of these are specific to the **Software assets** module.

In order for these reports and forms to be available for use with your database, you must import them using Asset Manager Application Designer.

Importing and identifying reports specific to the Software assets module
To find out how to import reports, refer to the **Advanced use** guide, chapter **SAP Crystal Reports**, section **Installing and using the reporting tool**, sub-section **Installing preconfigured SAP Crystal Reports in your database**.

To identify the reports specific to the **Software assets** module, refer to the **Advanced use** guide, chapter **SAP Crystal Reports**, section **Identifying SAP Crystal Reports specific to a given module**.

Background processes

For more information on the automatic background processes executed by Asset Manager, consult the **Database structure** guide. For each table discussed in this guide, you will find a **Background processes** section.

Tables.

API

Certain Asset Manager APIs are used in the **Software assets** module.

To obtain the list and description of the **Software assets** module's APIs, consult the **Programmer's reference**.

Views

There are no default views for the **Software assets** module.

For more information on using views, refer to the **Tailoring** guide, part III **Customizing Windows clients**, chapter **Using views**.

Other documentation

This guide only provides information directly related to the **Software assets** module.

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

Other documentation - list

Document	Contents	Format	Location in the Asset Manager installation folder
Installation and upgrade	• Installation of Asset Manager	Printed	**\doc\pdf*InstallationAndUpgrade*.pdf**
		Online	**\doc\chm\install.chm**
Core tables	• Management of locations and employees	Printed	**\doc\pdf\CommonTables*.pdf**
		Online	**\doc\chm\commontables.chm**
User Interface	• General interface of the application	Printed	**\doc\pdf*UserInterface*.pdf**
		Online	**\doc\chm\userinterface.chm**
Portfolio	• Management of natures, models, portfolio items and assets	Printed	**\doc\pdf*Portfolio*.pdf**
		Online	**\doc\chm\portfolio.chm**
Administration	• Use of wizards • Customization of fields • Use of calculated fields	Printed	**\doc\pdf*Administration*.pdf**
		Online	**\doc\chm\administration.chm**
Advanced use	• Itemized-list management • Creation of scripts	Printed	**\doc\pdf*AdvancedUse*.pdf**
		Online	**\doc\chm\advanceduse.chm**
Context-sensitive help for fields and links	• Use of database fields and links	Online	To access contextual help on a field or link: 1. Select a field or link. 2. Perform one of the following actions:

Other documentation - list, continued

Document	Contents	Format	Location in the Asset Manager installation folder
			◦ Right-click and select **Help on this field** from the shortcut menu. ◦ Press **Shift** and **F1** simultaneously on the keyboard. ◦ Select the **Help/Help on this field** menu.
Programmer's reference	• Use of APIs	Printed	**\doc\pdf*ProgrammersReference*.pdf**
		Online	**\doc\progref.chm**
Database structure	• List of the database's tables, fields, links and indexes • Automatic agents triggered by Asset Manager.	Text file	• **doc\infos\database.txt** • **\infos\tables.txt**
		Online	**\doc\chm\dbstructure.chm**
General online help	• The functioning of the entire application	Online	To access the online help, do one of the following: 1. Press **F1** on the keyboard. 2. Select the **Help/ Index** menu.

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Feedback on Software Assets (Asset Manager 9.61)

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to ovdoc-ITSM@hpe.com.

We appreciate your feedback!