

# Using Asset Manager and Discovery and Dependency Mapping Inventory<sup>®</sup> to start a license management process

## Getting Started on Efficient License Management

HP<sup>®</sup> Software BTO IT Asset Management



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## Introduction

Managing software licenses is a challenge that few companies successfully take on. The keys to success are processes and tools. This white paper provides a detailed process to follow for implementing successfully Software Asset Management. Asset Manager delivers the tools you need to get the job done.

Asset Manager includes a Software Asset Management (SAM) module that allows you to create contracts and licenses, manage inventory information, and check compliance using powerful counters.

First you need to establish processes for managing licenses, and this can be the most difficult part. A company has to establish business processes that allow:

- Tracking software programs that are used and installed in the company
- Gathering information about software licenses that were purchased
- Storing information about contractual conditions of use
- Defining an approval and certification process for current software installations and future purchases, which helps you decide whether to retire current software installations or purchase new ones.

This white paper shows how a company that does not currently manage its software licenses can get control of the situation, and then put in place processes to make sure that future software asset management is done in a systematic way that promotes software license compliance.

This software compliance project is based on Asset Manager. Several processes have to occur simultaneously, as you can see in the *Process overview* section:

- An inventory process involving the IT department: What computers does the company own? Which software installations are used, by whom, and how often?
- An internal policy process closely tied to legal department: What software can be used, and by whom? This process concerns commercial licenses as well as freeware.
- A license Management project: What does the company own? What applications can be used, and under which contractual conditions?
- A compliance project, where you gather information from other processes, will be managed in Asset Manager for auditing goals. Asset Manager software counters provide extensive reporting capabilities, and help the company have the right visibility to take appropriate actions to be compliant and to conduct the right license management policy.

As you can see, implementing a license compliance project is not a part-time job. It involves several departments such as legal, IT, and purchasing, and it is important to have one person coordinating and being accountable for the success of this project. That person is the Software Asset Manager. Refer to the section *Resource needs* for more information about the personnel and time commitments that a typical implementation requires.

## Who is this white paper intended for?

This white paper is focused on processes, and provides an overview of the user interface of the Asset Manager Software Asset Management module (See [Managing compliance in production](#)). No specific technical skill is required to go through the white paper — Motivation for getting control of your licensing situation should be sufficient! If you are involved in a compliance project (tied to Sarbanes-Oxley for instance), you may wish to get a better understanding of what a software compliance project covers and why it is a real project for a company.

The section [Technical tips: software counters and useful calculated fields](#) is aimed for more technical people (such as an Asset Manager implementer or the Software Asset Manager). This section goes beyond process and interface to provide real-life examples of software counters, as well as calculated fields illustrating the advanced level of reporting that Asset Manager allows.

## SAM quick start: the HP SAM best practice package.

This document describes a detailed and systematic approach to be successful in a Software Asset Management project.

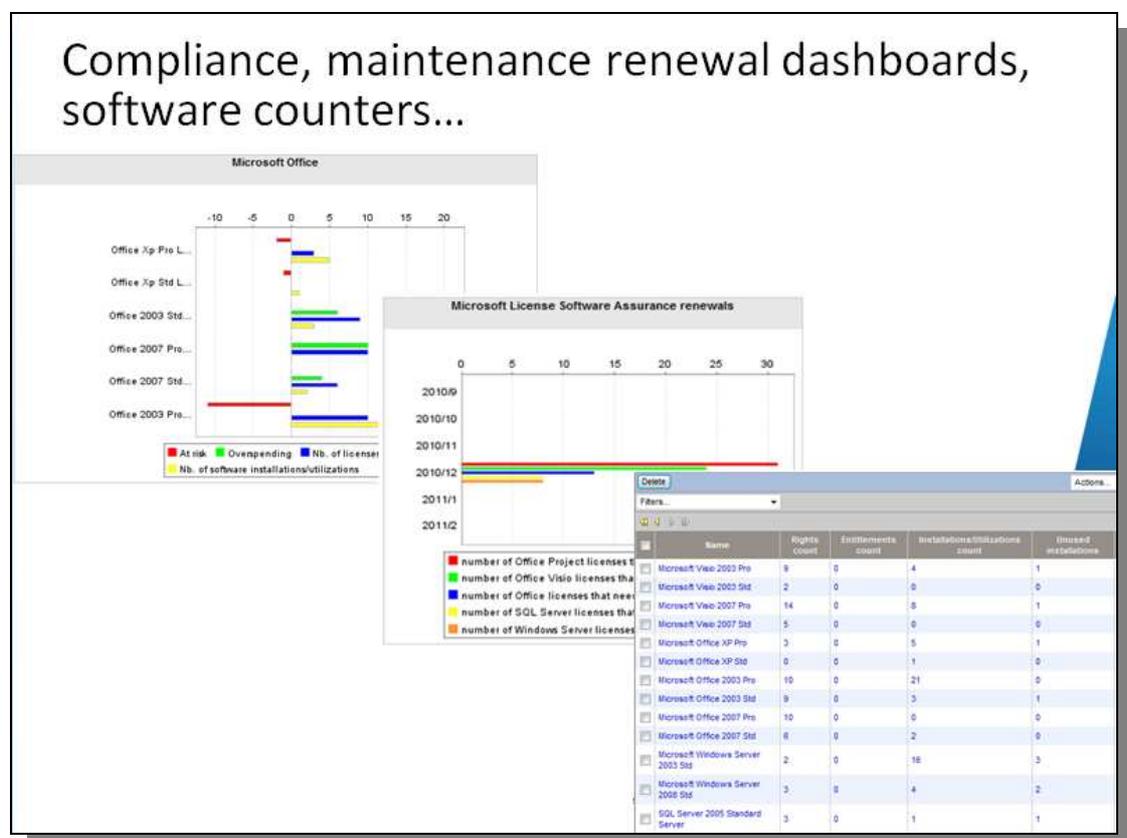
Besides the comprehensive approach, there is a quick start that provides short term benefits: from Asset Manager 5.2 on, HP provides a way to take immediately advantage of Asset Manager Software Asset Management capabilities: the SAM Best Practice Package. It provides out of the box software counters for the main software publishers (Microsoft, Adobe, Oracle...), dashboards (Software compliance, proactive renewals of license maintenances), SAP Crystal reports (Software expenses).

The Package can be imported into a production database or a test system (It includes sample data).

The SAM Best Practice Package is released regularly including new titles and software publishers

- On the HP Software Technical Support Portal (SSO), in the AM patches sections.  
<http://support.openview.hp.com/selfsolve/patches>
- On HP Live Network <https://h20088.www2.hp.com/> (Asset Manager community / standard content).

Asset Manager SAM Package addresses complex licensing and allows a true evaluation of the software compliance, which will lead to minimizing risk and substantial license savings: indeed, with a manual management of the complex rules described below, the risk for being non compliant is big and the risk for over estimating the needs is even bigger.



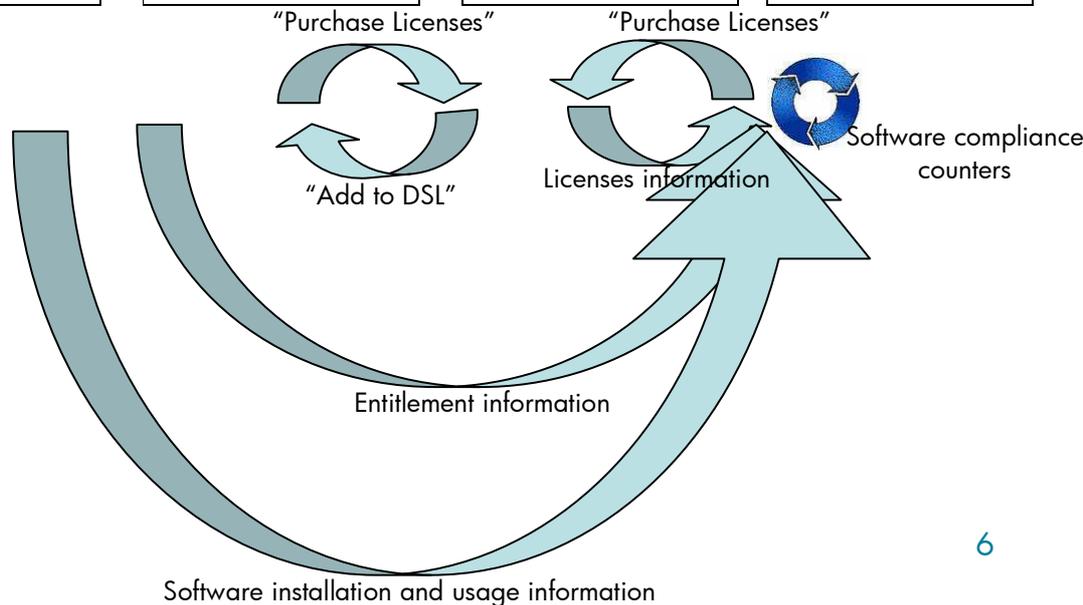
For instance:

- Asset Manager tracks compliance for SQL Server Enterprise Edition (The price of a SQL CPU license is around \$20k, optimizing the use is a great area for savings!). According to Microsoft Licensing a SQL Enterprise Edition customer is able to license either the physical server for all its CPUs or each of the virtual instances with their CPU. Asset Manager SAM Best practice Package software counters will compare server by server the number of Physical CPUs of the server with the sum of CPUs of virtual instances that have SQL server installed.
- For Microsoft Windows Server Enterprise Edition compliance, for each physical server, a license can cover up to 4 virtual instances of Windows Server Enterprise. Asset Manager software counters will count the virtual instances and will report an additional deployment only from the fifth virtual instance on.
- Asset Manager computes Oracle db CPU compliance with respect to the Oracle Processor Core factor Table. Each CPU type is linked to a factor for evaluating the number of required CPU licenses
- According to Microsoft desktop application licensing: a user can install a second copy of the application on a portable device if he has a license. Asset Manager can flag every first Microsoft application on a portable device not to be counted

The implementation of the SAM Best Practice Package is described in its release notes. The Software counters, dashboard, contract templates will be imported through an installer. Customer using HP Discovery and Dependency Mapping Inventory (DDMI) and the DDMI-AM Connect-It scenario that creates directly the software installation models will directly get the Software counters ready to be calculated. Other users will get all the Software counters addressing the different licensing models and will need to update them with the application titles and license titles specifically created by their inventory tools using the appropriate wizards (see the “Modifying software counters” section).

# Process overview

	Processes			
Time	Inventory Management	Internal Policies Management	License management	Compliance check
	Set up an DDMI scanner, deploy agents, and start the SNMP / scanner inventory.	Set up a list of authorized and unauthorized software, in iterations with employees, a steering committee, and the legal department. List of inventoried licenses will extend the DSL	Inventory licenses; enter relevant information into Asset Manager	Start to build some software counters in Asset Manager; make sure the list of counters is exhaustive (from inventory, the DSL, and license information). Build a counter for "not managed" installations.
	Isolate exceptions in inventory and fix them; teach the SAI library to have a wider scope of recognized applications.  Import data into Asset Manager; perform software model name reconciliation in Asset Manager if necessary.	Communicate the list to employees; have them sign a code of conduct with the list of authorized and unauthorized software.  Build entitlement rules that reflect authorization policies: An application can be authorized in the company, but only for a certain profile of user (for instance, a code editor just for developers)	Depending on the compliance check, purchase new licenses (when the decision is made not to remove software installations). Manage license contracts in Asset Manager (creation, negotiation, validation). Store information about new licenses in Asset Manager	Update software counters for newly inventoried software installation models or newly purchased software licenses. The goal is to have the Global software compliance counters include all licenses and installation models
	Ensure once that the inventory process in place is systematic and that a regular update is performed by ConnectIt in Asset Manager.	Run a DSL update process where employees can request for a new application models. The new Model will be integrated in the logical DSL after a license has been acquired for commercial licenses		Take appropriate actions when a compliance issue is raised (Purchase, removal...): All processes being managed in Asset Manager
		Regularly publish the DSL and have a code of conduct that is signed by new employees		



## Implementation considerations

While it is simple to list tasks and processes, it is more difficult to define the resource needs and the duration of a license management project.

### Attributions

A license compliance project is cross-departmental: The legal, IT, and purchasing organizations are involved. One person will coordinate and be accountable for the success of this project. That person is the Software Asset Manager.

### Duration of implementation

Defining the duration of a software asset management project is complex because it depends on many factors, including the maturity of asset management processes in place at the beginning of the project, the complexity of the organization (centralized versus decentralized), and the complexity of the IT architecture that can impact the inventory project. To take an example, the implementation of the project can be estimated to take 4 months for a company with 10,000 employees, and DDML and Asset Manager implementations are prerequisites.

After completion of the project, software asset management is an ongoing effort.

### Resource needs

Inventory and asset management implementation will be considered as prerequisites. The following table focuses only on tasks that are specific to software asset management.

A typical implementation may require the following resources:

Task	Duration (Total qty of resources)	Resource	Remarks
Initial search for acquired licenses	1 person month	Contractor	Perhaps the most resource-consuming task is to look for and accumulate license information for purchased software, to acquire license information from vendors when required, and then to enter all the information into Asset Manager. No particular skill is required for this task, except tenacity and the capacity to communicate with stakeholders such as the purchasing department, vendors, and IT.
Set up the list of authorized software, maintain the DSL	3 person weeks; then, an ongoing effort	Legal managers and the Software Asset Manager	Legal validation of freeware licenses can be a long process because it implies a check by the legal department of the full license text.
Create and maintain software counters	1 person week initially. Then, 5% of a full-time person's job	The Software Asset Manager creates counters templates and starts creating software counters.  A "Counter Technician" then updates counters or creates new ones from existing one.	Software Asset Manager will focus on a limited number of software titles identified as key (such as 20); and then raise the number of counters to be close to an exhaustive management of compliance. In a large company, the number of software counters can easily be above one hundred.  Software counter updates are facilitated by workflow tasks created each time a new software installation or license model is added to Asset Manager.

Task	Duration	Resource	Remarks
Manage compliance and create purchase requests	1 person month initially. Then, 30% of a full-time person's job	Software Asset Manager	This task consists in supervising the software counters dashboard, isolating compliance problems
Manage purchases		Purchase Manager	This should cause no additional resource costs because of the license management project.
Manage contracts and contract validation process		Contract Manager	This activity causes no additional work since it is an ongoing activity in the company that will be facilitated by Asset Manager

## List licenses that were purchased

Many companies regularly buy software licenses in a decentralized way, and then discover that gathering information about all software that was bought, and when, and for what price, and under which conditions, can be a complex undertaking. This can be a long and systematic task that entails the following steps:

1. Find licenses, documents, and installation CDs, and then classify them in the DSL store.
2. Obtain invoices from the accounting department. If necessary, request invoices from the license provider.
3. Retrieve missing information and add it to Asset Manager. The following is information that you typically manage:
  - Software name
  - Software version
  - Description
  - Editor
  - Vendor
  - License type
  - Number of rights
  - Purchase price
  - Date of purchase
  - User name necessary for key activation
  - License key
  - Department and accounting codes
  - License location
  - User
  - Purchase order number
  - Maintenance contract or Service contract
  - Starting and ending dates for technical support
  - Point of contact at the company
  - Point of contact at the vendor
  - License text (scanned and added as a document to the license portfolio item)

## Start the legal validation process

A big challenge in a software compliance project is that compliance does not apply only to commercial licenses, but also to freeware. Indeed, a freeware license often states that use of the free version of the software is restricted to individuals and forbidden in a corporate environment.

Successfully discovering all the software tools and freeware that a company uses is nearly impossible because most inventory tools recognize commercial licenses but not freeware. A method that your organization may find faster and easier is to set a list of freeware and commercial licenses used in the company to quickly define the scope on which compliance has to be checked.

This step consists of retrieving from users the lists of tools, freeware, and commercial products they are using. A consolidated list is built, apparent redundancies are discussed with a steering committee, and a final list for validation is sent to the legal department, along with the text of each individual license.

The list of commercial licenses that is created has to be carefully managed, since the biggest risk of non-compliance lies with them. To make sure that these models are not forgotten during the license counters creation phase, you create installations models corresponding to the software that is declared as used. A reconciliation process against software models discovered by an inventory tool will occur; however, the important thing is to keep in mind that an installation under a commercial license is used, even if the inventory tool doesn't discover this installation model.

## Build your logical Definitive Software Library (DSL)

The Software Asset Manager will build a list of authorized and forbidden software. The outcome will be a list of models that represent the logical DSL that you can display in the Portfolio Management/IT/Software/ Definitive Software Library menu of Asset Manager

This list will include authorized or non-authorized status and comments, and will reference the licenses for freeware and commercial licenses, containing a scan of license text.

This list will be acknowledged by employees to protect the company from illegal use of software by employees, and to confirm employee responsibility for compliance. This list should be mentioned in a code of conduct that is signed by employees in the context of Sarbanes-Oxley (SOX) compliance.

Beyond the responsibility of employees that is created, the DSL will be useful for internal processes:

- On the one hand, once you build a DSL, you only present to the end user what is authorized using an IT and Service Catalogue. That way you can control purchase and stock through a procurement process.
- On the other hand, if unauthorized software is found during inventory process, its removal will be automatically requested in Asset Manager.

An iterative process will then occur to make sure no application was forgotten during this DSL construction and DSL extension.

**Note:** A white paper called *Managing a DSL and DHS and Related Processes in Asset Manager* provides a very detailed approach to setting up a DSL in Asset Manager and managing it. This white paper is packaged with Asset Manager 5.

## Set up an inventory process

Setting up this process involves three principal tasks:

- Implementing DDMI successfully
- Gathering the maximum information about what software is installed
- Ensuring that this information is comprehensive and up-to-date in Asset Manager

## Using DDMI as an inventory tool

### DDMI SNMP recognition

DDMI actively discovers network devices in your enterprise network through SNMP. Thus, information about online equipment is retrieved into DDMI with no need for agent or scanner deployment.

### DDMI scanner

A second, more complete method for computer discovery is the scanner. A scanner is an executable that runs on computer systems. It retrieves information about hardware, software, and software usage. Scanners can be customized to retrieve specific system information or information through interaction with users, such as computer barcode, user name, and location.

**Note:** Please refer to DDMI documentation for information about creating scanners.

Scanners can be launched on Windows®, UNIX® or Macintosh® systems. A Windows agent allows scan tasks to be launched from the DDMI server and to retrieve usage information.

### DDMI SAI library

The SAI library contains a signature of all software entered in the library. This signature (which includes dll names, executable names, and total size on disk) is reconciled with software information that the DDMI scanner retrieves during the XML enrichment process. Thus, DDMI can define the software installations using software models that make sense and that are highly normalized and reliable.

The advantages of the SAI library are:

- Consistency of naming conventions
- Ability to recognize software suites
- Ability to detect installations that were simply copied and pasted from existing installations and not appropriately installed

DDMI also tracks desktop shortcuts to shared installations as software usage. Software programs are normalized against the United Nations Standard Products and Services Code (UNSPSC) for application types.

A limitation with the SAI is that you have to rely on the SAI library for all your software-related information. The SAI includes over 15,000 versions of mainstream software applications. This master library can be extended by sending the install media to Hewlett-Packard, or by teaching it yourself to a User.SAI.

### It is possible to extend software recognition by application teaching

DDMI allows you to teach in a simple way the SAI library, and to add new records with normalized model names according to inventory data that DDMI scanners retrieve. Please refer to DDMI documentation and to published white papers, including the white paper entitled *DDMI: Teaching*

*Applications*, to get more details about teaching new applications to DDMI. DDMI allows you to set rules for adding new software versions in your SAI according to previous SAI records.

## **Out-of-box Connect-It scenarios retrieve DDMI data into Asset Manager**

These scenarios retrieve from DDMI all relevant data that will be used during compliance check process, including hardware data, software information (including usage).

## **Additional inventory tools**

You can also interface with the other inventory tools you may use.

## **Connect-It connectors allow connectivity to many inventory tools**

Connect-It allows you to import data from multiple inventory sources. Connectors are available for commonly used inventory tools (including SCCM®, LANDesk® Inventory Manager, Tivoli® Inventory Manager, and Altiris®), and out-of-box scenarios are available for integrating data from these tools into Asset Manager. Some reconciliation techniques may be used if the company uses several inventory tools simultaneously for the same computers.

## **Software model reconciliation helps manage multiple and non-normalized inventory sources**

DDMI is one of the rare inventory tools that have an out-of-box application library. Importing inventory data can be extremely complex if model names are not normalized and consistent.

The Asset Manager Software Asset Management (SAM) module provides a reconciliation mechanism for software installation models. This mechanism can be easily extended to hardware as well.

A reconciliation table allows the mapping of values between “discovered” software installations models and “definitive” ones.

## **Gathering inventory data into Asset Manager**

Follow these steps to gather as much information as you can about the software that is already installed on your company’s computer systems:

1. Create a scanner.
2. Set up agents in the DDMI deployment within your company. Refer to the *DDMI Troubleshooting Guide* to help you successfully deploy DDMI agents.
3. Set up a scan rule that is compatible with the level of accuracy you want for your hardware and software information, which may depend on the frequency of software and hardware changes in your company.
4. Deploy the scanner into the environment.
5. Run the DDMI-to-Asset Manager Connect-It scenario to insert the SNMP and scan data into your Asset Manager repository.
6. Conduct the software model name reconciliation phase. Once definitive models are associated with models discovered using DDMI (and possibly other) tools, the process must be run only for newly discovered software. The process helps you to define how precise you want to be in the management of your software installation classifications (models).

One approach consists of granularity that is in alignment with the licensing model. For instance, if a software vendor proposes a licensing model that is at the major version level (where, say, a software version 5.0 license confers rights to version 5.0 *and* to all following minor versions such as 5.1 and 5.2), definitive software models could be set at the major version level. This choice creates a more readable list of your software installations because it specifies fewer models. It also helps when building counters because you reference fewer models, which creates symmetry between software installations and software license models.

A more generic approach consists of choosing granularity at the software model level, with no consideration of the version level. This approach allows the request process to align the description of assets with user needs and knowledge. For example, an end user may request a text editor and not know that the current text editor in the company is Microsoft® Word 2010. Choosing the precise version that the company is currently purchasing (the version of the software in the Definitive Software Library, or *DSL*) is more a back-office process. This approach keeps precise information at the software installation record level in the `amSoftInstall` table. A counter query can select models and refine the version information that DDML retrieves.

**Note:** Asset Manager already provides definitive models that are created on the fly by the “Normalize models: 'amInventModel' added” (`syslvExtModelNew`) workflow, for the SAI software models, with a grouping at the major version level.

## Ensure that the information is comprehensive and up to date in Asset Manager

This is one of the biggest challenges in a license management project, and is usually performed in two steps: First, you ensure that the information is comprehensive; and then you ensure that the information is up to date in Asset Manager.

### Ensuring that the information is comprehensive

DDML provides two methods of recognition for computers: The first method is SNMP scanning, which determines which devices are connected to the network. The second method is completed using DDML scanners, and contains both hardware and software information. Cross-checking SNMP network scans with “full” DDML scans helps you gather useful information.

Views in Asset Manager can provide information about agent deployments that failed. For instance, a filter that includes all devices that are workstations or laptops, and that have a network scan date and no hardware scan date, might look like the following:

```
(Portfolio.Model.Nature.bHasSoftInstall = 1) AND (dtNetworkScan IS NOT NULL) AND (dtHardScan IS NULL)
```

### Ensuring that the information is up to date in Asset Manager

Companies that are starting from a low level of maturity in their change management processes commonly do not track retired assets. A big effort has to be made to identify and retire computers that are no longer in the Portfolio. Asset Manager helps you with this task.

Views in Asset Manager allow you to detect a device that has been offline for a long time, which can lead to manual management of this exception. A view built simply on the last network scan date can provide a good indication of offline devices. Depending on the reconciliation key you are using in your DDML-to-Asset Manager Connect-It scenario, a long period without a hardware scan can simply indicate that the computer was renamed (if, for instance, you use a Domain/computer name as a barcode that will be used as a reconciliation key). Or it can indicate that you changed the network card, or that the computer is connected through a wireless network card that was not in use the last time the computer was scanned if you use a Mac address as the reconciliation key. In such cases, it is important to reconcile duplicate records in Asset Manager and to ensure that historical data is not lost and that counts are correct.

Automation of DDML scanners, and troubleshooting issues in scanner deployment, can ensure that computers on the network are regularly scanned and that information about them is accurate.

## Starting the reconciliation process: Software counters

A software counter is an Asset Manager tool that allows compliance checking through reconciliation of:

- Licenses that Asset Manager manages, along with the number of rights these licenses provide, and
- Software installation records that are stored in Asset Manager from an inventory process

Licenses and installation models are used to determine those elements that we compare in order to get a complete view of compliance.

Additional information is provided by:

- Software usage: Criteria are set for counting certain installations as “unused,” such as all installations not used for more than 90 days
- Entitlement: Information that allows measurement of utilizations against internal entitlement rules. This entitlement can be either named (authorized users are picked up in the employees list) or scripted (user.parent = “Development”).

Software counters can be set for very simple licensing models, with the “per installation” licensing model being the most common. Additionally, counters can adapt to very complex models. For instance, Oracle® licenses include the CPU types to determine how many CPU licenses are necessary for a server. Asset Manager has the query and scripting capabilities that allow to reflect any type of licensing in the software counters.

With Asset Manager, the software counter technician simply chooses the models of installations and licenses to be included in the counter. If you choose to create a “Global compliance” counter, the Asset Manager counter creation wizard will filter the models of licenses and installations so that the same model cannot be used in two different counters in the “Global Compliance” family; and ensure that license models are consistent with the software counter template you chose (consistent licenses types such as “per named workstation”). Finally, automation is implemented that creates workflow tasks each time a new software installation or license model is created in Asset Manager. These tasks either propose adding the new models to an existing counter, or creating a new counter that includes the new model.

The best indication that you are effectively controlling your software compliance occurs when you launch the corporate compliance counter creation wizard and no installation models are displayed to you. This signifies that all installation models are actually included in the corporate compliance counters.

### **Create counter templates adapted to your specific needs**

Asset Manager provides out of the box a great choice of counter templates adapted to different license types. For instance, for the “per installation or utilization” license type, you are provided counters that will count — or not count — unused installations.

However, some specific needs may require that you create specific templates. The section [Technical tips](#) provides more explanation of templates and gives examples. To summarize, a template includes some calculation intelligence that will reflect the licensing model of the application tied to the software counter. Note that the “License type” of the counter template will be used for the filtering applied by the “create a compliance counter” wizard. Depending on the license type you choose, you will be shown the templates according to their license type. (See the [Technical tips](#) section.)

A simple way to create a new template is to start from an existing template and modify it so that it addresses the specific licensing of the application you want to measure compliance on.

# Create counters for the licenses that are in Asset Manager

## Preliminary analysis

If you need to check compliance for licenses that your organization has already purchased, study the license text and check what licensing model applies for the counter you are creating. Consider the following factors:

- Does each installation count? Is it a per-user license (where each user can use an unlimited number of installations), or is it a per-workstation license (where several installations can be on one computer, and only one right is used)?
- Is it a point model, where each installation does not count as one right, but counts for a certain number of points, depending on the type of hardware where the application is installed (for instance, Oracle CPU licensing or IBM PVU licensing)?
- Does the license cover one version, or does it cover *all* minor versions under one major version?

Depending on these factors, the counter you build may vary according to the models selected for installations and licenses, and according to the count calculation applied for the actual compliance count and determined by the software counter template you will choose..

**Note:** The [Technical tips](#) section in the end of this white paper includes examples of software counters that show the flexibility of Asset Manager in adapting to all possible licensing models and a steps by steps description of a Software counter creation.

## Create a “non-managed installations” counter

It is a challenge to gather comprehensive inventory information. It is an even bigger challenge to manage the huge number of installation models that an inventory tool can retrieve, such as drivers and tools that are associated with a main software model. The number of software installation models can easily reach into the thousands.

It can be useful to build some counters that contain only information about software models that you do not manage under special license contracts. Several “non-managed installations” counters can exist — such as one for freeware and another for drivers — and the query for licenses will refer simply to a “retrieve nothing” query.

Building “non-managed installations” counters, you extend the number of installation models managed by the global compliance counters. These installation models will no longer be displayed when creating or modifying new software counters. This “non managed installation” counter does not report on compliance; you can check the box “Do not publish in the compliance report” in the counter creation wizard so that this counter is not displayed in compliance reports. However, it helps in providing visibility on which software installation models are included in software compliance counters.

“Non-managed installations” counters can help a company to reach the ideal situation where the software compliance counter creation wizard will show an empty list of software installations models, which means that all software and installation models are included in either a counter used for compliance or in “non managed installations” counters. This is a systematic but necessary process for the Software Asset Manager who wants to have a clear picture of compliance.

**Note:** A white paper called *Minimizing Software Stored in Asset Manager* provides a way to reject certain software installation models before they are inserted into Asset Manager, using the software models reconciliation feature of SAM.

## **Remaining software installations that are under licenses and for which no right was purchased**

After you create software counters for licenses you have purchased, for freeware, and for software installation models that you do not want to manage, some software installation models may not belong to any of these categories. These include applications that are being used in your company that should be placed under license. For such applications, you should create software counters that count the software installations of a specified model. You have to create the license model that would be necessary to cover these installations. There will be no associated license asset, and the software counter will be negative with zero rights associated with the license.

To ensure compliance for these applications, decide either to request that users remove the applications, or to add them to the list of authorized software and start a purchase process for them.

## **Software installations under licenses that are not recognized**

This is a case that causes concern: from the Definitive Software Library you built some installations under licenses where authorized, but you state that your inventory tool does not retrieve information on these installations.

You cannot justify compliance for these models and must urgently teach the SAI library so that the next DDML scanner retrieves into Asset Manager the installations information that will allow the software counter to retrieve accurate information.

## **Managing compliance in production**

Managing compliance in production is successfully accomplished through four activities:

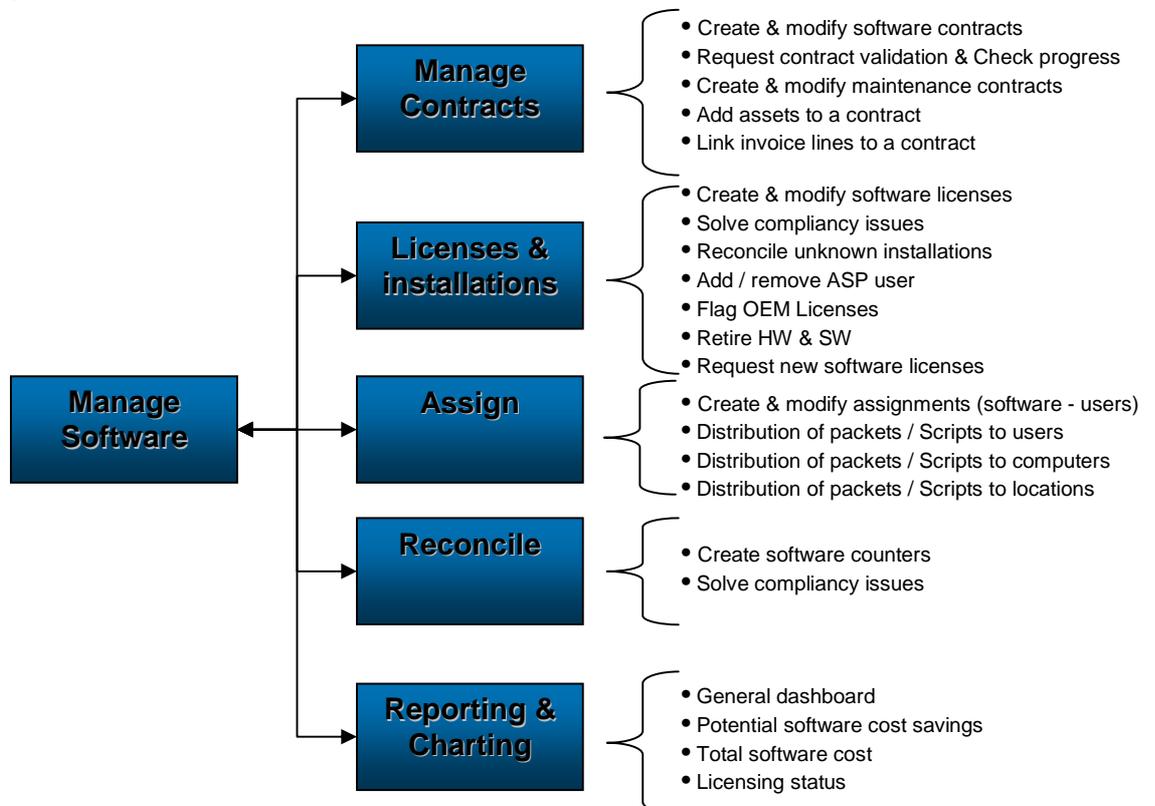
- Management of all licenses through Software Asset Management wizards
- Systematic counters and inventory management
- Systematic management of purchased licenses (such as scanning license texts)
- Updates and regular publication of an authorized licenses list

# Manage all licenses through Software Asset Management wizards

## Overview of Software Asset Management process



Asset Manager SAM module wizards structure is aligned with this process



SAM wizards allow you to manage all aspects of license management: contracts, procurement, and compliance. People with various roles will focus on specific sections of SAM wizards in a simplified

user interface adapted to their roles. From a single simple interface, all processes will be managed with a high level of automation.

The Contract Manager focuses on contract creation, contract negotiations, and contract validation. For contract validation, a workflow automates the process: all stakeholders are requested validations depending on their roles. Asset Manager provides a visual status on the validation process. It is crucial that all contracts and licenses be appropriately created with all required information. (See the section [List licenses that were purchased](#) for more information about data that is typically managed). Maintenance contract dates are used for reminders so that you can renew contracts proactively.

**Manage software...**

**Contract management**  
This wizard guides you step-by-step in defining an SAM contract.

Current contract: **ORA10gEnt (Oracle Enterprise Edition 10g)**

Last action: **Create a new software license...**  
Software license 862102 has been created.

Progress

- Create a new software contract (draft)
- Request validation for a contract
- Contract validation progress
- Create a completed contract
- Modify an existing contract
- Create a new maintenance contract
- Modify a maintenance contract
- Add assets to an existing contract
- Link invoice lines to the contract.

Previous Next Finish Cancel

The Software Asset Manager focuses on:

- Creating the software templates reflecting the licensing model of the application if it is a new one.
- Creating software counters. This task can also be performed by a technician: the Software Asset Management module provides a powerful and simple interface to create software counters.

## Creating Software counters

Step by step description of a software counter creation through the "Create a software license management counter" wizard:

Asset Manager splits software counter creation between two distinct processes:

- The template creation (when the need is not already covered by the out of the box templates), that requires skill to translate licensing rules into SQL. An asset manager administrator or implemented will typically create software counter templates. The template will contain all the licensing logic.
- The creation and update of software counters. This straight forward task consists in associating license models, software installation models and entitlement rules in a very simple interface, using all the power of the templates but hiding their complexity.

It is key that software counters are created through the "create a software compliance counter" wizard. This is the only way to ensure that the counter will be precise (Counting discrete license models and installations with no risk of overlap between software counters) and easy to maintain (update a software counter consists in adding or removing license or installation models to the definition of the software counter).

While the wizard offers a very simple interface, the logic is strong and a step by step description may be useful.

Step1: select the licensing of the application you are going to build a software counter for. The list displayed is the list of "license types", defined at license model level that can be extended by the implementer. Note that the license types can appear or not depending on the "May be selected (models, assets, counters) (bSelectable).

Name
<input type="radio"/> Not defined
<input type="radio"/> By CPU
<input type="radio"/> By CPU speed
<input type="radio"/> By CPU type
<input type="radio"/> By number of CPUs
<input type="radio"/> By CPU cores
<input type="radio"/> Per number of concurrent accesses
<input type="radio"/> Per installation or utilization
<input type="radio"/> Per installation - Number of points
<input type="radio"/> By LPAR
<input type="radio"/> Per site
<input type="radio"/> OEM
<input checked="" type="radio"/> Per named workstation

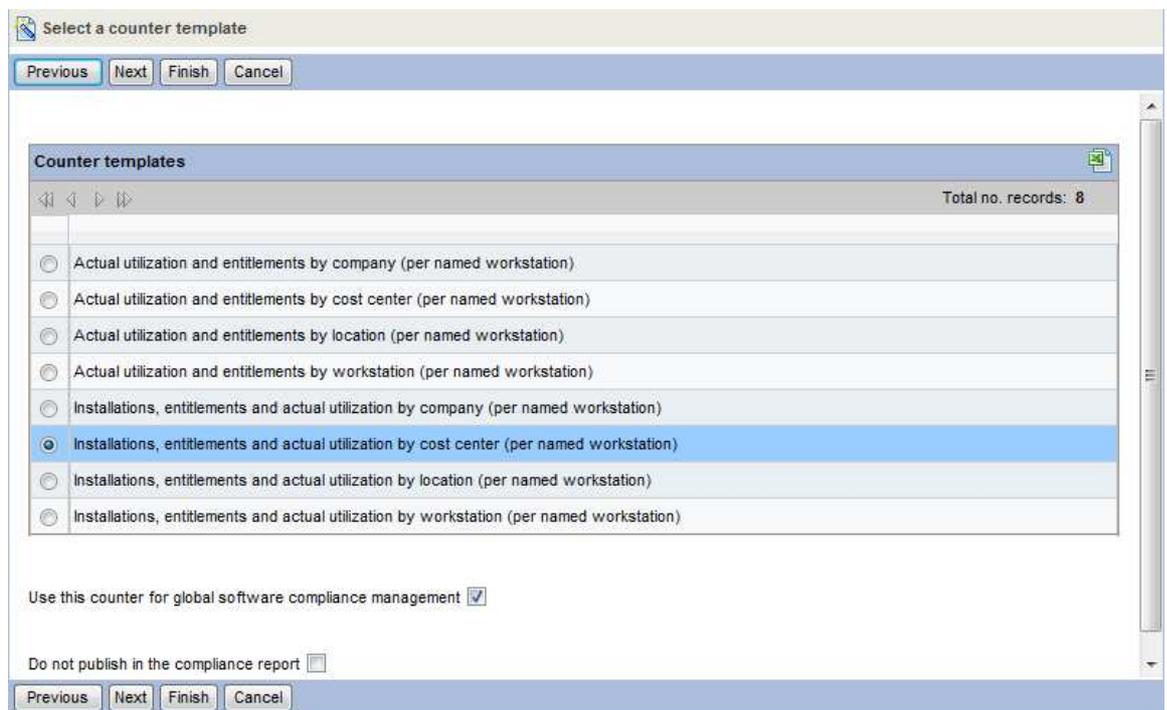
Step2: select the template corresponding to your need. The templates that will be displayed will be the template corresponding to the license type you initially chose (Per Named Workstation here). The OOB templates provide information on

- The type of software deployment taken into account (Software installations or software utilizations ("actual utilization"))
- The fact that an entitlement will be in scope or not for the software counter
- The utilization or not of a usage criteria for the identification of "unused installations"

- The “group by” that is provided (per user, cost center, workstation...)
- All the licensing logic (What is counted, number of servers, number of points deployed given the CPU type, count of not of the virtualized environments...)

During this second step, you will choose if the software counters you are creating is a corporate software counter. A corporate software counter will be run on all records of Asset Manager database. Per definition, it is not possible to restrict the scope of a corporate counter. A corporate counter can just monitor License models and Installation models that are not already included in another corporate software counter. The goal being to avoid including the same license or installation model in two redundant software counters. Corporate counters provide a discrete vision of the Software compliance.

“Do not publish in the compliance report” will take the software counter out of the software counter results screen. This is the case for test software counters for instance.



Step 3: Select the license model(s) that you want to include in your compliance count. The filter on the top of the pages makes the selection easier. Only license models corresponding to the license type you chose at step 1 will be proposed. If you chose in step 2 to create a corporate software counter, models proposed will only be the ones that are not already used in other corporate software counters.

You can refine the filter adding the version of the application you want to monitor (second screen shot)

Select software licenses based on software application type

Previous Next Finish Cancel

Name of the model contains

Apply filter

**\* Software licenses (models)**

Filters...

Total no. records: 57

Selection	Name	Full name(Parent)
<input type="checkbox"/>	Office suite software	/Information Technology Broadcasting and Telecommunications/Software/Software license/
<input checked="" type="checkbox"/>	Office 2007 Pro License	/Information Technology Broadcasting and Telecommunications/Software/Software license/Office suite software/Productivity/
<input type="checkbox"/>	Office 2007 Std License	/Information Technology Broadcasting and Telecommunications/Software/Software license/Office suite software/Productivity/
<input type="checkbox"/>	Office 2010 Pro License	/Information Technology Broadcasting and Telecommunications/Software/Software license/Office suite software/Productivity/
<input type="checkbox"/>	Office 2000 Pro	/Information Technology Broadcasting and Telecommunications/Software/Software license/Office suite software/Productivity/
<input type="checkbox"/>	Office 2000	/Information Technology Broadcasting and Telecommunications/Software/Software license/Office suite software/Productivity/

Previous Next Finish Cancel

Select software installations based on software application type

Previous Next Finish Cancel

Name of the model contains

Apply filter

**\* Software installations (models)**

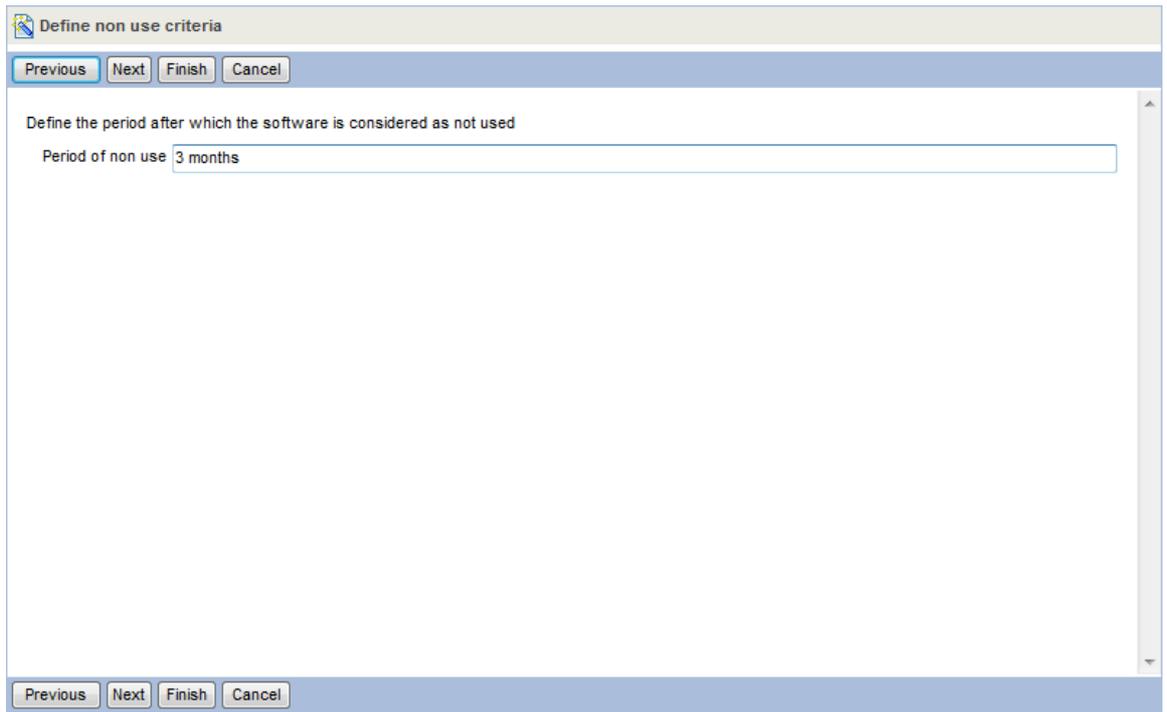
Filters...

Total no. records: 108

Selection	Name ↑	Full name(Parent)
<input checked="" type="checkbox"/>	Office 2007 Pro	/Information Technology Broadcasting and Telecommunications/Software/Software installation/Office suite software/Productivity/
<input checked="" type="checkbox"/>	Office 2007 Pro Plus	/Information Technology Broadcasting and Telecommunications/Software/Software installation/Office suite software/Productivity/
<input checked="" type="checkbox"/>	Office 2007 Pro Plus Sp1	/Information Technology Broadcasting and Telecommunications/Software/Software installation/Office suite software/Productivity/
<input checked="" type="checkbox"/>	Office 2007 Pro Plus Sp2	/Information Technology Broadcasting and Telecommunications/Software/Software installation/Office suite software/Productivity/
<input checked="" type="checkbox"/>	Office 2007 Pro Sp1	/Information Technology Broadcasting and Telecommunications/Software/Software installation/Office suite software/Productivity/
<input checked="" type="checkbox"/>	Office 2007 Pro Sp2	/Information Technology Broadcasting and Telecommunications/Software/Software installation/Office suite software/Productivity/

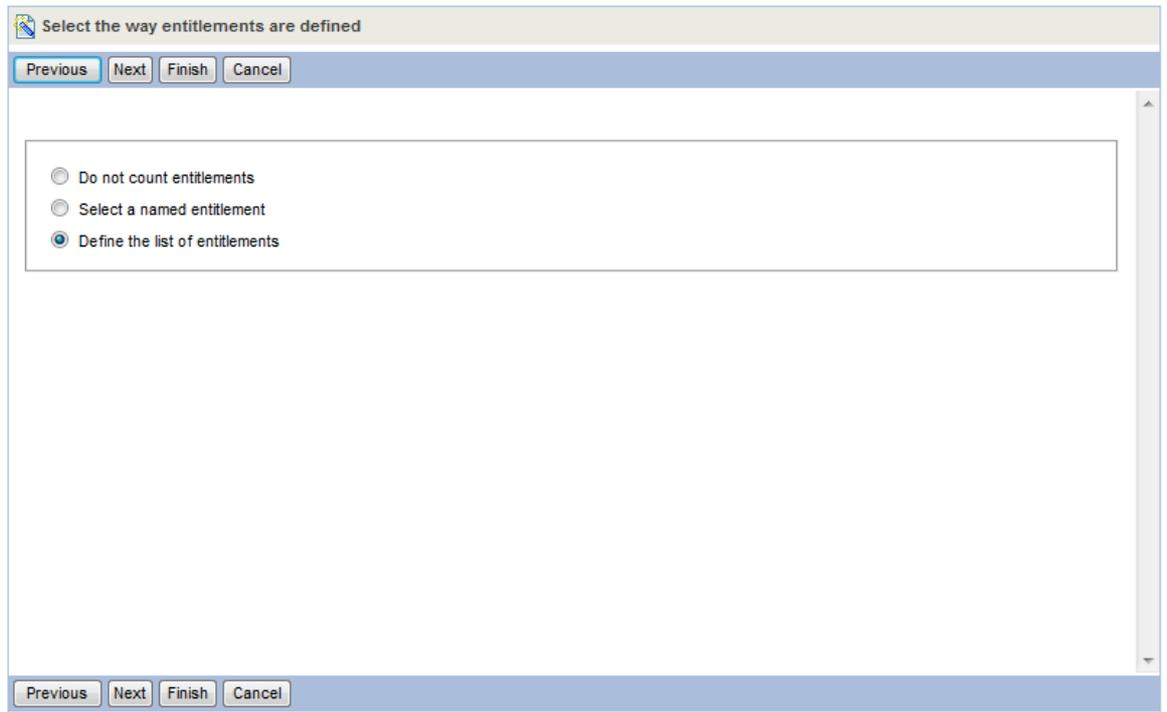
Previous Next Finish Cancel

Step 4: If you chose a template that includes usage, you can chose the criteria for “period on non use”.



The screenshot shows a dialog box titled "Define non use criteria". At the top, there are four buttons: "Previous", "Next", "Finish", and "Cancel". Below the title bar, the text reads "Define the period after which the software is considered as not used". Underneath this text is a text input field with the value "3 months". At the bottom of the dialog box, there are another set of four buttons: "Previous", "Next", "Finish", and "Cancel".

Step 5: Define your entitlement (depending on your template, you may be directly moved to step 6).



The screenshot shows a dialog box titled "Select the way entitlements are defined". At the top, there are four buttons: "Previous", "Next", "Finish", and "Cancel". Below the title bar, there is a list of three radio button options:

- Do not count entitlements
- Select a named entitlement
- Define the list of entitlements

At the bottom of the dialog box, there are another set of four buttons: "Previous", "Next", "Finish", and "Cancel".

Step6: define your entitlement consistently with your "group by" choice

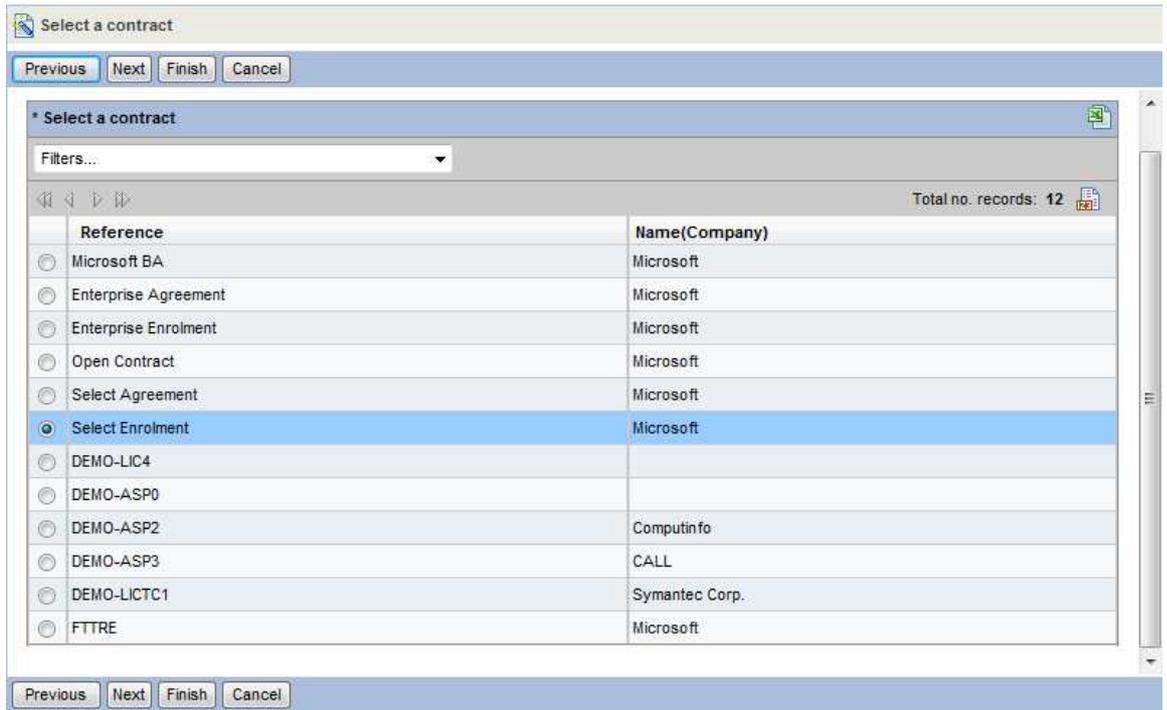
The screenshot shows a dialog box titled "Select cost centers covered by the entitlement". At the top, there are navigation buttons: "Previous", "Next", "Finish", and "Cancel". Below this is a section titled "\* Cost centers" with a "Filters..." dropdown menu. A table lists various cost centers with checkboxes for selection. The table has two columns: "Selection" and "Description". The "Total no. records: 34" is displayed in the top right corner of the table area. At the bottom of the dialog, there are more navigation buttons: "Previous", "Next", "Finish", and "Cancel".

Selection	Description
<input type="checkbox"/>	Common Line
<input checked="" type="checkbox"/>	IT
<input type="checkbox"/>	Development
<input type="checkbox"/>	Operations
<input checked="" type="checkbox"/>	Burbank operations
<input type="checkbox"/>	Los Angeles operations
<input type="checkbox"/>	Administrative
<input type="checkbox"/>	Finance
<input type="checkbox"/>	Corporate services
<input type="checkbox"/>	Production
<input type="checkbox"/>	HP Common Line
<input checked="" type="checkbox"/>	HP IT

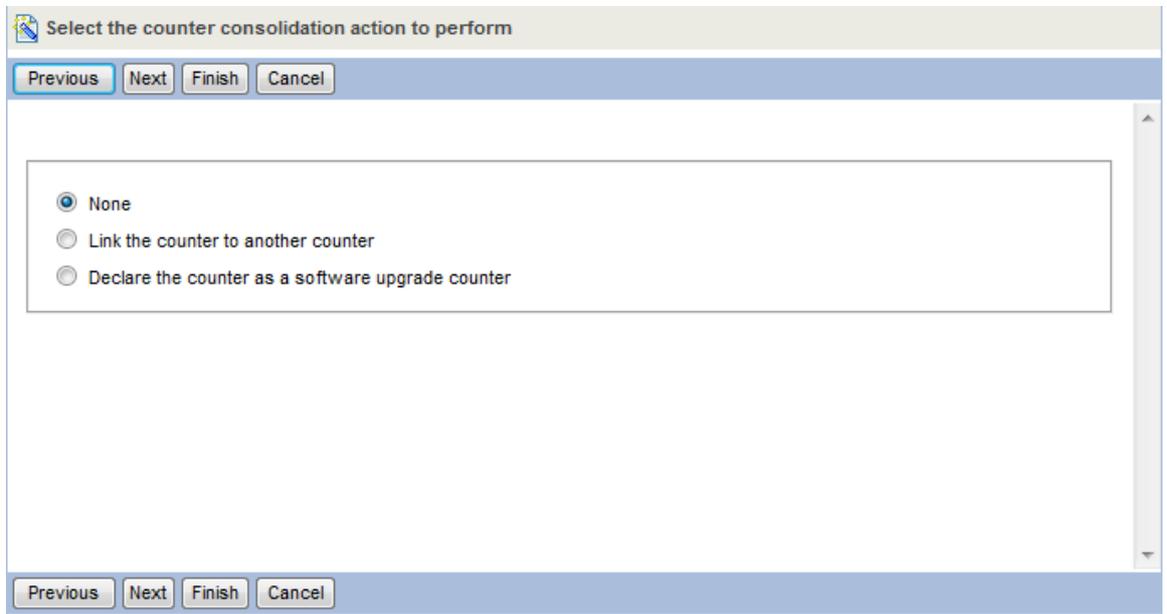
Step 7: give a name to the software counter.

The screenshot shows a dialog box titled "Enter the other parameters of the counter". At the top, there are navigation buttons: "Previous", "Next", "Finish", and "Cancel". The main area contains several input fields: "Counter name" with the value "Office 2007 Professional Edition", "Supervisor" with the value "Admin," and "Brand" with the value "Microsoft". Below these fields are two radio button options: "No contract" and "Link to an existing contract", with "Link to an existing contract" selected. At the bottom, there is a "Description" section with a text area containing a "+" sign. At the very bottom of the dialog, there are navigation buttons: "Previous", "Next", "Finish", and "Cancel".

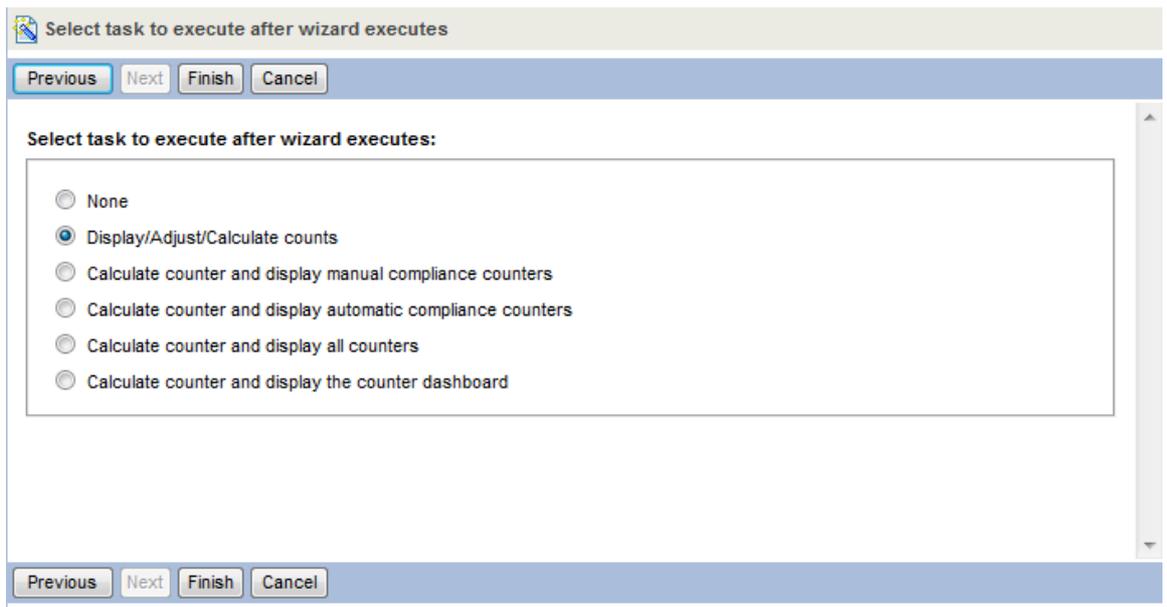
Step 8: link to contract



Step 9: you can then link the software counter to other counters to manage upgrade and downgrade rights (please refer to License assets documentation).



Step 10: choose the last step.



Step 11: The result of the software counter will be displayed.

Results Consolidation

Add Delete Statistics...

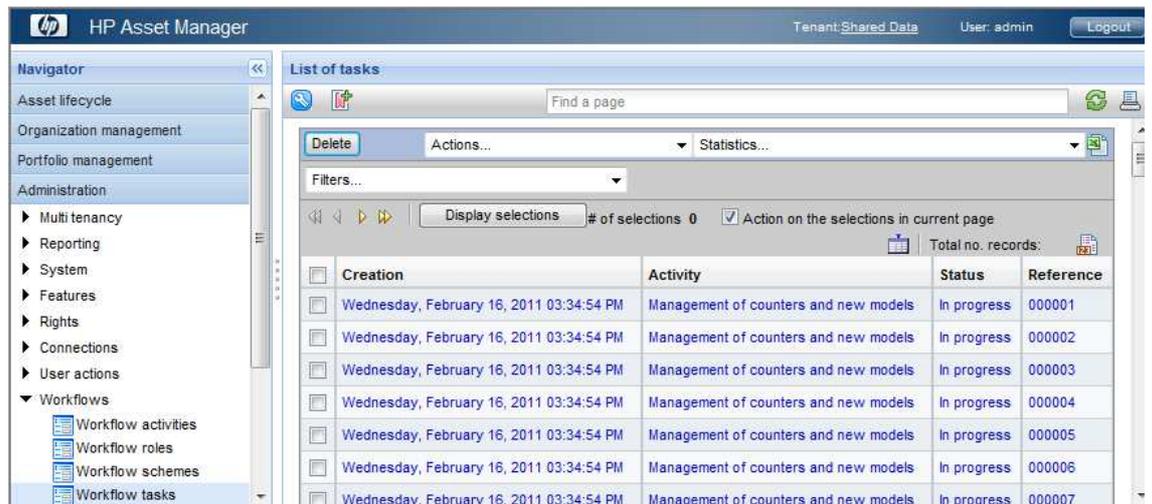
Filters...

Total no. records: 3

<input type="checkbox"/>	Referenced object	No of rights	No of entitlements	No of installations/utilizations	Number of unused installations
<input type="checkbox"/>		0	0	1	0
<input type="checkbox"/>	Common Line	0	0	27	0
<input type="checkbox"/>	IT	0	26	8	0
<input type="checkbox"/>	Development	10	0	13	0
<input type="checkbox"/>	Burbank operations	0	4	1	0
<input type="checkbox"/>	Los Angeles operations	0	0	1	0
<input type="checkbox"/>	Production	0	0	2	0
<input type="checkbox"/>	HP IT	0	13	5	0

## Modifying software counters.

As the software portfolio evolves, new software installation models are created through the inventory process. A new license model can be created after a purchase process. These new models can either be incorporated into existing counters or be used in new counters. Automated processes are set in Asset Manager that create workflow tasks that incorporate the new models into software counters. It is crucial to keep a close watch for added models to ensure that there is no deviation in counters and that they reflect the actual compliance state of the company.



- The Software Asset Manager checks compliance and uses the “Solve compliancy issue” wizard in Asset Manager for requests to users or IT technicians to purchase new software licenses or remove illegal or unjustified software installations. To take appropriate decisions, use counters that provide the following information:
  - The number of rights
  - The number of installations
  - The number of unused installations, thanks to metering rules that can be added to the counters. (Typically, we can consider an installation that has not been used for 90 days as unused.)
  - Entitlement rules: The counter displays line by line of the result if the user was entitled or not for using the software. This possibility to have entitlement in the counter result is new in Asset Manager 5. In former versions, entitlement was managed in specific counters (and will be used in the “rights” calculation).

For example, a company purchased 80 Visio licenses.

- A deployment of 85 Visio installations recorded in the software counter. The company is actually not compliant, but additional information provided by the software counter will bring visibility.
- Only Project Managers can install the Visio; a named entitlement rule reflects this internal policy. The company has 75 people authorized to use Visio.
- Among the 75 authorized installations, 20 are not used (software usage information).

- The final decision is to request removal of unauthorized and unused installations instead of purchasing additional Visio licenses and even re-adjust the number of Software Assurance paid to Microsoft

The Purchasing Manager drives the procurement cycle for the requested licenses. The decision to purchase is initiated by the Software Asset Manager and follows the normal validation process.

## **Be systematic for counters and inventory management**

For calculating counters, a workflow (sysSamCalcCounter) refreshes counter counts on a regular basis. It is launched periodically by Asset Manager server.

Counters update with newly created license and software installation models; this update is helped by Asset Manager workflow tasks that are created each time a new installation or license model is created, as described above.

A systematic update of inventory data is performed by DDMI thanks to its automatic scanner of computers.

## **Be systematic in management of purchased licenses**

The compliance management process will likely require that you purchase new software licenses. All relevant information about licenses will have to be scanned and entered into the Asset Manager database. Asset Manager will be the master repository for compliance information, and will point to physical storage of licenses and installation media.

A “Link invoice lines to contracts” wizard in the contract management section of Software Asset Management module allows the reconciliation of invoice lines to contracts.

## **Update the logical Definitive Software Library and regularly publish the authorized software list**

The list of authorized software will be updated regularly. Any purchase of new licenses will result in the creation of the corresponding Software Installation models, with the “authorized DSL” attribute. It is important to create a model that will be consistent with the one retrieved by DDMI.

The updated list will be communicated regularly and acknowledged by employees that will sign the code of conduct described in section [Build your logical Definitive Software Library \(DSL\)](#)

## **Technical tips: software counters and useful calculated fields**

This section is intended for technical people who will work on Asset Manager for compliance implementation, typically the Software Asset Manager. This section provides examples of software counters and calculated fields. These examples can be useful only for an advanced Asset Manager user. This section will not provide the end user interface view (which is simple and managed through wizards), but a technical interface for people managing technical objects.

### **Software counters**

#### **How software counters are built in Asset Manager**

What makes counters extremely flexible and powerful in Asset Manager is that they split all parts of the compliance approach in the following way:

- The scope of the licenses and installations to be counted: Selection of a set of licenses and installation records to be counted is based on a query. (The query very often searches for a model name, and for conditions under which a user or computer type can be added.). A scope for entitlement will add an internal attribution policies dimension to this compliance reporting.
- Restriction of the scope of the counter to a subset of the company, such as a single department.
- A calculation rule that is applied to the records retrieved by one query and filtered by another query.
- A “group by” link that allows you to manage how the result is displayed. It allows you to have for one counter several possible reporting methods, and prevents multiplying software counters.

**Note:** To obtain detailed information about how counters are built, refer to the Asset Manager product documentation.

The screen below shows a typical software counter:

The screenshot displays the HP OpenView AssetCenter interface for a software counter. At the top, a table lists several counters with their respective metrics:

Name	Rights count	Entitlements count	Installations...	Unused installations	Cost for Compliance
Oracle 10g Enterprise Server	800	6	865		400 5604€
Office Professional Rights Counts	20	0	595		0 0€
NAV 7	119	0	256		0 2968€
Microsoft Select Consolidated	3 500	0	3 494		0 0€

Below the table, the configuration details for the 'Oracle 10g Enterprise Server' counter are shown:

- Name:** Oracle 10g Enterprise Server
- Code:** C\_PCP\_Oracle981857
- Nature:** (dropdown menu)
- Group by:** amEmplDept (Employees and departments)
- Supervisor:** (dropdown menu)
- Scope of application:** (dropdown menu)
- License contract:** ORA10gEnt (Oracle Enterprise Edition 10g)

Configuration options include checkboxes for: 'Use as template', 'Is part of corporate software management', 'Counter not used for compliance', 'Edit the counter using the wizards', 'Rights count', 'Entitlements count', and 'Installations/Utilizations count'.

The 'Criteria' section shows: 'Installation/Utilization counter context: amSoftInstall (Software installations or utilizations)', 'Scope of the installations or utilizations to be counted: CU981857', and 'Installations/Utilizations -> Group By link: PortfolioItem.Parent.User'.

The 'Unused software' section includes: 'Include usage information' (checked), 'Period of non use: 3mo', and 'Definition of unused installations:'. The 'Installations/Utilizations-calculation mode' is set to 'Count according to a calculation formula'.

The 'Calculation' section contains the formula:  $SUM(((PortfolioItem.Parent.Computer.ICPUNumber * PortfolioItem.Parent.Computer.ICPUSpeedMHz) / 30))$ .

Some explanation on certain fields:

- “Use as template” (bType): the counter is a template. Depending on its code, it will be displayed when creating a counter from the counter creation wizard.
- “Is part of corporate software management” (bFamily): checks these counters to make sure the same license model or software installation model is not used in two counters.
- “Counter not used for compliance” (bInternal): Not part of the compliance dashboard, and will not be exposed in corporate compliance lists.
- “Edit counter using the wizard” (bAutomated): this field is readonly and set when a counter is created from the “create a license management counter” wizard. These counters can be modified only from contextual wizards.
- “Right counts,” “Entitlements count,” and “Installations / Utilizations count” are also set automatically when creating the counter. These fields will drive the relevance and behaviors of the counters.
- “Include usage information”

## Master Counters and derived counters

A best practice with Asset Manager is to have an exhaustive set of Corporate counters that will be maintained and updated. Duplicating the master software counters, and making sure that the duplicated software counters are not checked as “corporate counter”, you will create derived software counters that will point to the same queries as the master software counters. If you add a new installation model to the master software counter definition, the derived software counter will automatically take advantage of the update. Thus

- The maintenance of the Software counters is simplified and restricted to the Master software counters
- The flexibility of reporting is huge: the derived counters will allow a great variation of group by (by cost center, by employee...) or scope (on a specific country for instance).

## Counters and counter templates

The description provided below is technical, including some queries. This complexity is hidden to the Counter Technician, since counter creation is managed through simple wizards. End users just pick up software installations and software licenses models, as depicted in the screenshot below, to build software counters from templates.

**Create a software license management counter...**

Select software licenses based on software application type

Filter the list to keep only models whose name contains:

\* Software licenses (models)

Selection	Name	Full name(Parent)
<input type="checkbox"/>	Adobe Acrobat Distiller 5	/Software license/Utility software license/
<input type="checkbox"/>	Adobe Photoshop Site License	/Software license/Utility software license/
<input type="checkbox"/>	Adobe Acrobat Distiller 4	/Software license/Utility software license/
<input type="checkbox"/>	Adobe Acrobat Distiller 6	/Software license/Utility software license/
<input type="checkbox"/>	Adobe Acrobat Distiller 4-5 Upgrade	/Software license/Utility software license/

Technical skills (knowledge of SQL and Asset Manager database schema) are necessary only for the Software Asset Manager to build counters templates that will contain all computing intelligence adapted to the licensing models.

## Software counter templates

Software counter templates are the starting point for building a software counter. A template is tied to a license type in the Software Counter screen.

A template is a software counter that has the attribute “use as template.” It contains all fields that will be inherited by the software counter. Only selection of models for licenses and software installations will be specific to the software counter. For instance, if you select a “per installation and utilization” template that counts as unused installations those not used for more than three months with a “group by” on cost center, the counter will just inherit from these attributes. You will just pick up the installations and licenses models corresponding to the counter.

The easiest way to create a template is to duplicate a template provided out of the box, and change the scope or group by or add conditions.

## Detailed examples

**Important:** The counters described below are provided *only* as examples to understand the design of Asset Manager software counters and help create new templates. The SAM Best Practice Packages provide out of the box software counters for Microsoft, Adobe, Oracle...

The “Queries” for license count and installation count are generated from the choice made in the counter creation wizard. To keep examples clear, the part of the query that defines models selection was summarized with “(PortfolioItem.lModelId IN (SELECT...))”. A template will bring additional conditions that will be applied to the licenses and installations records the query will retrieve. For instance: Computer operating system is “Windows” or Installation status is “in use.”

Calculation formulae are the part that has to be set to reflect the licensing model.

### Example 1: Adobe® Acrobat® Distiller software

This type of license requires the simplest type of counter. One installation consumes one right. The counter consists of retrieving all software installations of the different versions of Adobe Acrobat Distiller that are covered by the license. For instance, versions 6, 6.2 and 6.5 will all be counted under the version 6.0 license.

#### Count for software licenses:

Scope:

Explanations: Based on licenses models that were chosen in the create a counter wizard.

Context table: amPortfolio. Generated automatically from the “create a corporate Counter” wizard.

Query:

```
lModelId IN (SELECT r.lModelId FROM amRelCountLic r, amSoftLicCounter c
WHERE (c.lCountId = r.lCountId) AND (c.Code = 'C_PIU_IAUD982977'))
```

Calculation:

Explanations: Typical “Points count” calculation type: addition of all rights for Distiller licenses

Formula:

```
(SUM((fQty * Asset.lSoftLicUseRights))
```

#### Count for software installs:

Scope:

Explanations: Based on installation models; context table = amSoftInstall. Generated automatically.

Query:

```
((PortfolioItem.seAssignment = 0) AND (seType = 0)) AND
(PortfolioItem.lModelId IN (SELECT r.lModelId FROM amRelCountSoft r,
amSoftLicCounter c WHERE (r.lCountId = c.lCountId) AND (c.Code =
'C_PIU_IAUD982977')))
```

Calculation:

Explanations: Simple count calculation type, will sum the number of installations.

Formula:

```
(SUM(PortfolioItem.fQty))
```

### Example 2: Oracle® 10g Enterprise database for Windows (Processor license)

#### Count for software licenses:

Scope:

Explanations: Based on licenses models that were chosen in the “Create a counter” wizard.

Context table: amPortfolio Generated automatically

Query:

```
lModelId IN (SELECT r.lModelId FROM amRelCountLic r, amSoftLicCounter c
WHERE (c.lCountId = r.lCountId) AND (c.Code = 'C_PCP_Oracle981857'))
```

Calculation:

Explanations: Typical "Points count" calculation type: addition of all rights for Oracle licenses

Formula:

```
(SUM((fQty * Asset.lSoftLicUseRights))
```

**Count for software installs:**

Scope:

Explanations: Based on Oracle server installation models with additional condition on the OS of the server. Context table = amSoftInstall. The first part of the Query was generated automatically. The second part that filters on operating system was inherited from counter template.

Query:

```
((PortfolioItem.seAssignment = 0) AND (seType = 0)) AND
(PortfolioItem.lModelId IN (SELECT r.lModelId FROM amRelCountSoft r,
amSoftLicCounter c WHERE (r.lCountId = c.lCountId) AND (c.Code =
'C_PCP_Oracle981857')) AND
(PortfolioItem.Parent.Computer.OperatingSystem LIKE 'Windows%')
```

Calculation:

Explanations: Reflects the Oracle 10g licensing model for processor based licenses: on Intel and AMD platforms, a number of processor is calculated and rounded for each computer. Number of CPUs multiplied by 0.5. Number of CPU is the sum for all servers in the company.

Formula:

```
Floor(((((((0.25 * sign(charindex('Ultra',
PortfolioItem.Parent.Computer.CPUType))) + (0.5 * sign(charindex('AMD',
PortfolioItem.Parent.Computer.CPUType)))) + (0.5 *
sign(charindex('Pentium', PortfolioItem.Parent.Computer.CPUType)))) +
(0.75 * (1 - sign(((charindex('Ultra',
PortfolioItem.Parent.Computer.CPUType) + charindex('AMD',
PortfolioItem.Parent.Computer.CPUType)) + charindex('Pentium',
PortfolioItem.Parent.Computer.CPUType)))))) *
PortfolioItem.Parent.Computer.lCPUNumber) + 0.999)).
```

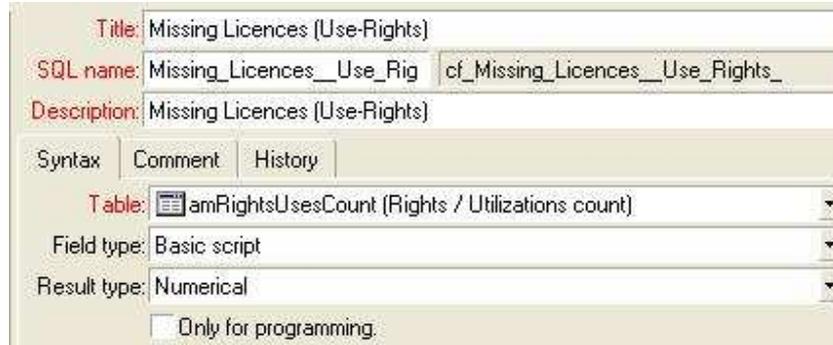
**Note:**The SAM Packages takes a slightly different approach: a workflow update the number of points of the Oracle Server Software installation with a script that matches CPU types with the right CPU Core Factors published by Oracle

## Useful calculated fields for compliance reports

### Display non-compliance

#### *Missing\_Licenses\_counters*

In the Windows client, it is possible to associate red color with non-compliance.



#### **Basic Syntax:**

```
If [dLicUseRights] < [dSoftInstallCount] Then
RetVal = AmRgbColor("Red")
Else
RetVal = AmRgbColor("Black")
End If
```

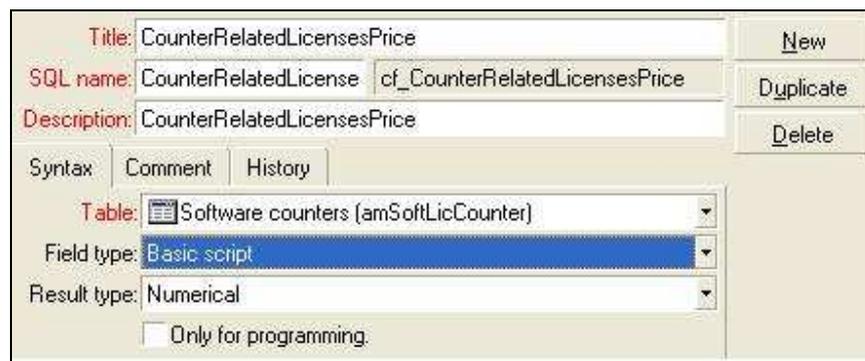
This calculated field can be then set into a list with the "Color" flag

### To evaluate the cost for compliance

It can be useful from a reporting perspective to get an evaluation of what we should invest to get compliant, or what we could save if we are over-licensed.

Two fields will be created: **CounterRelatedLicensesPrice** retrieves the total cost of licenses included in the software counter; and **CostForCompliance** evaluates the cost of compliance.

**CounterRelatedLicensesPrice** will take all licenses that the counter queries and sum their prices. To support multi-currency, mPriceRef1 field in amAsset table will be taken. This will convert all prices to the "Reference 1" currency.



#### **Basic Syntax:**

```
If [LicContext]="amPortfolio" and [bType]=0 then
retval=amdbGetDouble("select sum(asset.mPriceRef1) from amPortfolio where
" & [LicQuery.memQueryText])
else
retval=0
end if
```

**CostForCompliance** will take this total associated price, divide it by the number of rights associated to the counter, and multiply by the number of missing or excess rights with regard to

installs. This evaluation is not exact because it does not take a current reference price, but this “average” estimation gives a rough idea. This cost will be concatenated with the “Reference1” currency symbol

The screenshot shows a configuration window for a field. The 'Title' is 'Cost for Compliance'. The 'SQL name' is 'CostForCompliance' and 'cf\_CostForCompliance'. The 'Description' is 'Cost for compliance'. There are buttons for 'New', 'Duplicate', and 'Delete'. Below these are tabs for 'Syntax', 'Comment', and 'History'. The 'Table' is set to 'Software counters (amSoftLicCounter)'. The 'Field type' is 'Basic script' and the 'Result type' is 'Numerical'. There is a checkbox for 'Only for programming' which is currently unchecked.

### **Basic Syntax:**

```

If [dLicUseRights] = 0 OR [bType] = 1Then
    Retval = 0
Else
    Retval = INT(([dSoftInstallCount]-
[dLicUseRights])*[cf_CounterRelatedLicensesPrice]/[dLicUseRights])
End If

'Add Reference1 currency symbol
Dim lRc As Long
Dim hq As Long

hq = AmQueryCreate()
'Use ref1
lRc=amQueryGet(hq,"SELECT Symbol, seSymbolPos From amCurrency WHERE
bRefCurl = 1")
if lRc=0 Then
    if amGetFieldLongValue(hq,1)=0 Then
        RetVal=RetVal & amGetFieldStrValue(hq,0)
    Else
        RetVal= amGetFieldStrValue(hq,0) & RetVal
    End If
End If
End If
lRc = AmReleaseHandle( hq )

```

## Simulating compliance after needed adjustments

A logical decision when non-compliance is discovered is either to remove software installs or to purchase licenses. A decision to remove software installs can be taken when the installation is not used or when the user is not entitled to use the software.

Three useful calculated fields will allow you to simulate your compliance once you have removed these software installs. HP OpenView Asset Manager is integrated with HP OpenView Configuration Management (and also other software distribution tools) for removal requests. Here is the simulated compliance screen you can get:

**Results of the software counters** 






Total no. records: [Update](#)

Filter: <-- No selection --> Contextual actions: <-- No selection -->

<input type="checkbox"/>	Name	Rights count	Entitlements count	Installations/Utilizations count	Unused installations	Installations after Adjustments	Cost for Compliance after Adjustments
<input type="checkbox"/>	Oracle 8 Enterprise Server	800	6	865	400	253	-19,070

**Results**

<input type="checkbox"/>	Referenced object	No of rights	No of entitlements	No of installations/utilizations	Number of unused installations	Installations after Adjustments
<input type="checkbox"/>	Mankowicz, Dominic	0	1	0	0	0
<input type="checkbox"/>	Taltek,	0	0	66	0	0
<input type="checkbox"/>	Mitsuko, Annita	0	1	0	0	0
<input type="checkbox"/>	I.T. Department,	800	0	0	0	0
<input type="checkbox"/>	Chavez, Philip	0	1	0	0	0
<input type="checkbox"/>	Galley, Dave	0	0	400	400	0
<input type="checkbox"/>	Production,	0	0	146	0	0
<input type="checkbox"/>	Mason, Saby	0	1	121	0	121

We used three calculated fields to build this simulated view of compliance:

***Installations after adjustment (detail of the counter result)***

This field will show the number of installations of a counter result line, after adjustments are made: remove unused software installations and remove installation for elements that were not entitled (entitlement = 0). If the counter does not count entitlements (bCountEnt = 0), the calculated field will simply count software installation and subtract unused installation. Use of "Floor" is to have an integer number of installations after adjustments. Notice that use of operations equal to "0" that multiply terms of the query will allow to create "if, then" conditions in the AQL. For instance ((dSoftInstallCount - dUnusedInstall) \* (1 - AssociatedCounter.bCountEnt)) means: "if bCountEnt field equals "1" don't apply the first part of the formula.

Title:	Installations after Adjustments	New
SQL name:	AdjRemInstalls cf_AdjRemInstalls	Duplicate
Description:	Compliance after Adjustment	Delete
Syntax Comment History		
Table:	Rights / Utilizations count (amRightsUses)	
Field type:	AQL	
Result type:	Numerical	
<input type="checkbox"/> Only for programming.		

**AQL syntax:**

Floor((((-1 \* (((abs(((dEntCount \* dSoftInstallCount) - dSoftInstallCount) + dUnusedInstall)) - (dEntCount \* dSoftInstallCount)) - dSoftInstallCount) + dUnusedInstall) / 2)) \* AssociatedCounter.bCountEnt) + ((dSoftInstallCount - dUnusedInstall) \* (1 - AssociatedCounter.bCountEnt))))

***Installations after adjustment (aggregated at software counter level)***

This field will sum the adjusted installations of each line of the counter result.

Title:	Installations after Adjustments	New
SQL name:	CounterAdjReml cf_CounterAdjRemInstalls	Duplicate
Description:	Installations after Adjustments	Delete
Syntax Comment History		
Table:	Software counters (amSoftLicCounter)	
Field type:	AQL	
Result type:	Numerical	
<input type="checkbox"/> Only for programming.		

**AQL syntax:**

```
(SELECT sum(a.cf_AdjRemInstalls) FROM amRightsUsesCount a WHERE (a.lSoftLicCounterId = amSoftLicCounter:lCounterId) AND ((a.lResultId = amSoftLicCounter:lResultId)))
```

### **Cost for compliance after adjustments**

Same principle as cost for compliance, but based on installations after adjustments: it will show you how much you could save if you apply your internal use policies and remove unused software installations.

Title:	Cost for Compliance after Adjustments	
SQL name:	CostForComplAdjus cf_CostForComplAdjusted	
Description:	Cost for Compliance after Adjustments	
Syntax	Comment	History
Table:	amSoftLicCounter (Software counters)	
Field type:	Basic script	
Result type:	Text	
<input type="checkbox"/> Only for programming.		

### **Basic Syntax:**

```
If [dLicUseRights] = 0 OR [bType] = 1Then
    RetVal = 0
Else
    RetVal = INT(([cf_CounterAdjRemInstalls]-
[dLicUseRights])*[cf_CounterRelatedLicensesPrice]/[dLicUseRights])
End If
`Add Referencel currency symbol
hq = AmQueryCreate()
`Use refl
lRc=amQueryGet(hq,"SELECT Symbol, seSymbolPos From amCurrency WHERE
bRefCurl = 1")
if lRc=0 Then
    if amGetFieldLongValue(hq,1)=0 Then
        RetVal=RetVal & amGetFieldStrValue(hq,0)
    Else
        RetVal= amGetFieldStrValue(hq,0) & RetVal
    End If
End If
lRc = AmReleaseHandle( hq )
```

## Conclusion

Starting a license management project can seem like a daunting task, but the potential benefits can be huge. They include:

- Controlling the legal risk that is tied to software compliance. This includes Sarbanes-Oxley (SOX) compliance, which requires good license management.
- Cost savings. A better understanding of license needs can lead to the re-negotiation of license contracts with software vendors, and retiring unused software.
- Prevent piracy, fraud and unauthorized software through thorough inventory process
- Build your DSL, Software Catalogue, manage procurement and stock.
- The opportunity for better application and definition of internal policies with Asset Manager entitlements.

Investing sufficient resources in this project from the beginning is the key to the project's success. You need an efficient process with sufficient resources to conclude in a reasonable period of time and get buy-in from the users: indeed motivation and efficiency will be high if process is clear and progress easily measurable. It is important to be in a production mode as quickly as possible.

Moreover, being rigorous in the ongoing processes is necessary to the long-term success of the project. Having a Software Asset Manager who is accountable on a daily basis, and who has support from top management, helps ensure the success of the project.

Finally, having efficient tools that allow you to manage complex and intricate processes of license management, to automate flows, to gather accurate inventory data, and to ensure robust, flexible, and sophisticated software counters, is crucial to a successful project.

Asset Manager and DDMI meet all these demanding criteria completely.

## For more information

Please visit the HP OpenView support web site at:

<http://www.hp.com/managementsoftware/support>

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

HP OpenView online software support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valuable support customer, you can benefit by being able to:

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

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

To find more information about support access levels, go to the following URL:

[http://www.hp.com/managementsoftware/access\\_level](http://www.hp.com/managementsoftware/access_level)

To register for an HP Passport ID, go to the following URL:

<http://www.managementsoftware.hp.com/passport-registration.html>

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