



The Software Asset Management Specialists

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# The Power to Take Control of Software Assets



## Software Asset Management Inventory Tools: Essential to a Software Asset Management Program

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### Abstract

The use of inventory, license management, software usage, and repository tools are a cornerstone of successful Software Asset Management (SAM) programs. While no program is complete without management-supported policies and processes, this white paper will specifically address the role that inventory (also known as auto-discovery or tracking) and license management tools play in SAM. Because of the virtual nature of software assets and their widespread deployment in most organizations, many IT managers rely on technology for conducting inventories and tracking software licenses.

Implementing the right inventory and license management tools will help eliminate errors from manual data-collection processes in addition to providing other near-term benefits. The right inventory tool will provide an accurate and complete record of software and hardware deployed throughout an organization. When combined with a license management tool, which tracks software licenses and software upgrade paths, an organization will have the necessary information to monitor and reconcile software licenses.

Furthermore, an accurate and complete inventory is the basis for the patch/release management, change management, and configuration management that support various IT governance and regulatory requirements.

This white paper will discuss the baseline capabilities found in SAM tools and how common tool features can help your business grow and save money.



## Software Inventory Tools Provide Benefits

Performing an inventory of software deployed throughout your organization is an essential step in performing many IT functions:

- License reconciliation
- Security patch and release management
- Help-desk ticketing
- Migration and upgrade planning
- IT budgeting
- Adherence to IT desktop standards and usage policies
- Asset life cycle management (the processes that control the IT asset requisition, procurement, deployment, ongoing management, and retirement life cycle stages)

Organizations that utilize a suitable autodiscovery inventory and license management tool will be able to produce accurate, complete, and timely inventories. These inventories are the foundation for license reconciliation, which is an essential element of a SAM program.

It is not uncommon for a midsize business or enterprise company to use over 250 software applications in its environment. Given the number and the variety of licensing models that might apply, keeping track of what software is deployed or in use can be very difficult without the assistance of a tool. Companies can avoid manual inventories by enlisting a suitable autodiscovery inventory tool. Manual inventories are inherently dated due to the time required to complete them and can also be prone to errors due to the human factor.

Furthermore, do not rely on software vendors to manage this process. According to IDC Research Group, 41 percent of the largest software vendors are relying on customers to ensure their day-to-day license compliance. The necessity of having processes and tools to manage SAM is also driven by growing regulatory measures such as Sarbanes-Oxley (SOX), the Health Insurance Portability and Accountability Act (HIPAA), and the Gramm-Leach-Bliley Act (GLBA).

For the reconciliation process to be effective, an accurate and complete inventory of software installations and license ownership must be available in a format that can be easily interpreted. This forms the basis or foundation for a license compliance assessment but must be combined with a full understanding of license terms to complete the assessment.

Providing timely information on changes to systems and doing so while the reporting and the underlying calculations in the tool remain consistent is one of the many benefits of using an inventory tool. An IT asset manager then can generate reports that can be used to influence executive decision making—whether short-term budgetary decisions or long-term strategic planning.

Performing an assessment of which applications are actually in use in an organization is also a base function of many tools. With software usage monitoring and/or metering, your organization can examine whether it has purchased more software than is actually in use. Then it can optimize purchases, reallocate underutilized licenses, control usage (for concurrent license models), and plan for improved software consumption.

The IT Infrastructure Library (ITIL) has published a guidebook on SAM best practices that reinforce the role that SAM tools play in managing software assets. The authors of the document, all practitioners, stress that the asset inventory tools are the essential foundation of SAM activity. With respect to license management tools, the authors maintain that potentially one of the most important tools in a SAM implementation is the ability to track on a regular basis what full licenses an organization has.

## Key Considerations for an Inventory Tool

The following are the four key considerations for an IT asset manager when selecting a software inventory tool:

## Deployment/Integration

Inventory tools are most efficient in a networked environment. Most inventory tools are agent based, which allows continual monitoring of the remote machines for software/hardware changes; most best-of-breed tools have agents that install silently (i.e., they require no end-user intervention).

When assessing inventory tools, you should consider the range of computing platforms in your environment (e.g., Microsoft® Windows® operating system, Macintosh, and UNIX) to ensure that suitable agents exist. You should also examine the organization's network architecture to identify sufficient agent deployment methods. In distributed computing environments, in particular, determine how to ensure that all machines have been inventoried; some tools have network discovery features built in.

For additional functionality, separately consider integrating an autodiscovery inventory tool with other systems such as procurement (purchase data), HR (personnel data), and/or contract management systems.

## Discovery

Can the tool easily discover all the pertinent software installed or in use on computers in the environment? What mechanism does the tool use to identify software "units"? Tools that use a combination of collection methods (e.g., add/remove programs, identification of executables, software identification database) tend to be the most reliable in correctly identifying installed software. Note that many tools identify vestiges of programs that were "removed" and there is running debate in the SAM community whether these "removed" products should be identified. A complete and accurate inventory will also provide detailed hardware information (e.g., machine name, IP address) and match the software installs to the hardware.

Inventory needs for license reconciliation differ from those needs for IT operations/service management. Whereas

the data for license reconciliation purposes should be at a summary level, granular inventory data for such service tasks as patch management and help-desk support is needed. For example, ensure that all machines have the correct security patches to protect your network. The inventory needs to be granular enough, therefore, to identify what security patches have been installed on each machine.

For license reconciliation purposes, installation data for product suites such as Microsoft Office must be listed at the suite level (the way it is licensed) and not at the component level. In addition, products must be condensed into appropriate units for license management (e.g., Microsoft Office Word 2003 and Office Word 2003 SP1 are the same version for licensing purposes).

Finally, any tool being used for license management purposes should differentiate between paid licenses and those that come free or bundled with other products (e.g., Microsoft Outlook® Express or Microsoft SQL Server™ 2000 Desktop Engine [MSDE]/SQL Server 2005 Express Edition, Microsoft's free versions of SQL Server).

## Recognition

How is application recognition performed? Is it comprehensive? Is the data in a format that is useful for license reconciliation? In other words, can the inventory data be easily compared with the supporting license? For example, while Microsoft Office version 11.0.6361.0 is technically the same as Office 2003, the product is licensed as Office 2003.

For Microsoft products, the edition (e.g., Standard) and language (e.g., French) also need to be identified with the product name and version. Many tools have software identification databases, which are helpful in the discovery process if they are kept current. In addition, the ability to self-title homebuilt and other software programs that are not identified by the database is a feature of many tools.

## Reporting

How is the data presented so informed decisions can be made by both IT and senior managers? Is there one report on software installations or must you perform individual queries? Do the various built-in reports corroborate or contradict one another? (This can happen if the inventories for each report are pulled from different sources.) Some internal reports may be built from identified executables while other reports pull from entries in add/remove programs. While the data representations may differ based on the purpose of the query (license management versus IT operations management), the reports should be generated from the same data. The goal is to pick a tool that has comprehensive, customizable, and intuitive reports and provides data that can be exported into third-party tools such as Microsoft Access or Crystal Reports for data manipulation and custom reporting.

In addition, you should also be able to view summary inventory data and drill down to which machines have a particular application installed. Likewise, the ability to find out what triggered the tool to identify an application as being installed is helpful.

## Additional Note

The SAM tool must be designed to inventory software from a license management and compliance perspective. This differs from IT operations/service management (i.e., help-desk support), which needs more granular inventory information. For IT operations management, a help-desk/service technician is interested in discovering what executables, patches, and associated files are resident on a user's PC at the file name and executable name level. However, for license management, software information needs to be identified at a level that can easily be compared to license purchase records. In addition, IT operations management tools typically have their own ancillary features such as help-desk functions (service tickets), limited change management, and basic requisition modules. One exception is application control (also known as usage metering); tools with that feature fall into both categories.

Many asset management tools are marketed as a "complete" asset management tool, meaning that they will meet the requirements for license management and IT operations/service management. Most tools, however, perform well at one or the other, despite what their marketing claims might state.

## Key Considerations for a License Management Tool

According to the ITIL's best practice guidebook on SAM, there are several types of functionality that may be considered necessary for a license management tool:

- The ability to determine and track on a regular basis the need for licenses based on the licensing model (e.g., installed copies, concurrent usage)
- The ability to demonstrate the effective license quantities, which involves linking upgrade licenses with the underlying full licenses
- The ability to link license requirements to effective licenses held and to report on any licensing exceptions

While it is preferable to have a tool that can integrate inventory and license data for comparison, this is not necessary. If the titling of applications in the inventory tool is suitable for comparison to license data, the reconciliation can occur outside of the tools. Reconciling licenses to inventories in one third-party tool may save time but is not essential.

## Key Considerations for Selecting the Right Inventory Tool

When assessing inventory tools for your organization, consider the following:

- Whether the autodiscovery inventory tool easily integrates with other systems.
- Whether the inventory tool scales to your environment, specifically as it relates to agent deployment, database growth and transaction processing requirements, and connectivity for remote clients to the tool's server component.
- Whether the inventory tool is compatible with the company's current computing platform(s) (e.g., Windows, Macintosh, or UNIX).

- What configuration options there are for customizing the agent (e.g., reporting interval and data gathered).
- Whether the tool tracks application usage for each client in environments with thin clients (i.e., Terminal Server deployments). The technology requirements are typically similar to assess application usage on full desktops; the tools differ, however, in how they recognize usage.
- The full cost of the tool over 3 to 5 years (including software, hardware, support, and maintenance requirements).
- Whether the necessary internal resources to support and properly use the tool are available.
- Whether a managed (i.e., hosted) solution may be a better option than completely deploying the tool in-house.

**With respect to data integrity and presentation, other questions to consider include:**

- Can the tool easily deploy to all the machines in an organization and discover all the pertinent software installed or in use on those computers?
- Does the tool gather data that is complete and accurate for license reconciliation purposes?
- Is application recognition comprehensive and is that data in a format that is useful for license reconciliation?
- How is the data presented? Does it produce reports that will be useful to IT and senior managers?

Finally, the best method to selecting a tool is to utilize the team concept. The team members should include representatives from business units that will be involved in tool acquisition, implementation, use, and support. Active team member involvement will ensure tool adoption and user satisfaction. Whether the tool project is considered a success ultimately will depend on these.

**Summary**

The ability to perform an accurate, complete, and timely inventory for license reconciliation purposes is an essential element of a SAM program. Inventory tools, whether suite or point solution products, play a necessary role in making this happen.

The benefits to using an inventory and license management tool for license reconciliation can be summarized as follows:

- Ease of making executive decisions
- Control of computing environment
- Accurate and current data for license management and risk mitigation
- Help with ensuring return on software investments

**Sources**

*Software Licensing and Value: Clear Connection or Colossal Challenge*, IDC, April 21, 2004.

**About Soft-Aid**

Soft-Aid is a consulting firm that specializes in Software Asset Management (SAM). We help organizations put policies and procedures in place to effectively manage their software assets, and reduce costs, reduce risks, and increase IT efficiency.

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