CDW® PEOPLE WHO GET IT™

SOFTWARE ASSET MANAGEMENT: GETTING STARTED

Take on SAM with this primer to help launch a successful program.

Executive Summary

Each year, organizations spend billions of dollars on software. And many may not be getting all of the value they should from these investments.

By not keeping careful track of software purchases, installations and usage patterns, these entities can find themselves careening from overspending on applications or licenses they don't use. They may also be overusing titles for which they possess too few licenses — a situation that may expose the organization to severe fines and penalties.

Software asset management, or SAM, can mitigate the danger of license noncompliance by providing the information needed to optimize software libraries and license arrangements to suit the requirements of users and missions. SAM also provides a way to continuously fine-tune software costs.

The need for SAM has accelerated with the explosive use of new technologies. These include the growth in mobile devices as enterprise endpoints, the adoption of cloud computing, and the rise of server and desktop virtualization.

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TWEET THIS!

The Situation

No assets — financial, physical or human — will yield maximum ROI unless they can be effectively managed. Software is a good case in point. It underlies every function of the enterprise, plus it's a major cost element. Only by treating software as a strategic asset can organizations get the most from their investment.

SAM offers a way to maintain control over software throughout its lifecycle.

A Process and Practice

Taking a best–practices approach to software management can ensure that it buys the correct software under optimal licensing agreements. But that's just the beginning.

Best practices also make sure users and software managers have the documentation they need and IT has the information it needs about users and how they interact with software. The objective is to keep the organization protected from needless financial and legal risk.

A SAM tool provides these benefits by automatically discovering and inventorying software licenses, providing reports on license compliance and version currency and correlating these conditions with constantly changing needs.

In theory, all of these tasks can be done manually. In practice, however, few organizations of any complexity can afford the hours required or tolerate the risks of inaccuracy.

Not Install and Forget

Like all enterprise initiatives, implementing a SAM solution takes effort and planning. One irony of getting a SAM program going is that an organization needs a baseline of information to begin.

Specifically, the IT group must know the extent of hardware, servers and endpoints, as well as software packages purchased and deployed. The source of that second set of information is likely to be an organization's purchasing or accounting department.

It's also useful to have an idea of what versions have been installed, and whether instances of software have been updated. Plus, an entity will want some idea of the number of users, and the access and use privileges each user has.

It may seem ironic that before installing a SAM tool, the organization will have to do the work to get answers that the tool is supposed to provide. But the purpose of the baseline is to create a point of comparison for data gathered by the SAM tool.

Large organizations routinely find they are running thousands of apps willy–nilly that have been purchased over the years for this or that need of the moment. An inventory will also likely yield all sorts of random apps installed by users.

They may or may not be licensed to run in the environment, or they may contain network backdoors that create security vulnerabilities.

The first payback from a SAM effort might be simply a general decluttering of applications that add needless complexities to the network. These may also represent wasted budget via unused licenses or productivity hindrances — particularly if people perform similar tasks using different apps.

But the real payoff will come from mastering the complexity of the core apps the organization relies upon. A SAM program will help sort out three interrelated conditions:

- Software licenses in use and their manufacturers
- The limits of the license agreement for each application
- Where the organization stands in allowable licenses

This last point, utilization, is where gaining control of the software environment begins to yield major benefits — operational, financial and legal. It's essentially why an organization should adopt a SAM solution in the first place. Perhaps the best way to think of SAM is as part of a risk management strategy.

Buyers often forget that multiuser or enterprise software licenses give the supplier or manufacturer the right to audit the customer's network for compliance with the license terms. It's not a hypothetical right: A recent Gartner study found that 85 percent of respondents had been audited by a software maker or vendor at least once in the previous year.

Are Audits on the Rise?

According to Dallas software attorney Robert Scott of the law firm Scott & Scott, audits are on the rise. From the perspective of his practice, Scott has witnessed a significant increase in audits — especially over the past two years.

Scott adds that being unprepared for just one software license audit will convince any organization to invest in a software asset management (SAM) system and to gain the skills to use it.

"Maintenance is less expensive than an audit fire drill," Scott says, and far less disruptive to the organization. He recommends at least yearly (or better, quarterly) self–audits.

"Reconcile the information on every computer you have with your purchase history," he says. "Go through it vendor by vendor."

A bonus of such an effort may be information to help the organization negotiate more favorable pricing on a particular license agreement. Scott advises treating licensing agreements as dynamic. The enterprise should be ready to pounce on any opportunity to gain better terms based on changing volumes, he says.

BSA, the Software Alliance, calls the use of unlicensed software "piracy," and it encourages members to treat it that way. The group's website regularly recounts tales of entities that have had to pay thousands of dollars to settle software misuse claims.

Why SAM Sometimes Fails

SAM is not just a product that an organization buys and installs. An "out of sight, out of mind" approach will result in a SAM program that kicks off with gusto, but fails to deliver continuous results.

The best chance for success comes from carefully defining the goals for a SAM program and the requirements for SAM software.

The overall goals for the program should include:

- Ensuring compliance with software license terms
- Supporting a strategy for continuous software cost optimization
- Enabling better software planning

A SAM application, meanwhile, should:

- Integrate well with IT procedures while not requiring extensive training
- Help enforce the organization's rules for software use
- Discover all applications that exist on the network
- Scale effectively to the size of the environment
- Meet industry standards, notably the ISO/IEC 19770 international standard covering software asset management

Even with the potential to meet these goals and requirements, a SAM program can fail or perform at a level that is less than ideal.

Future software audits can seem like an abstraction in the day-to-day running of business process. For example, an IT group, dedicated to good service to users, may not check licensing agreements in the rush to provision a particular user or group. There's no piracy intent, but that's of little solace once an audit ensues.

This implies two salient conditions for a successful program.

1. SAM requires executive ownership.

It's analogous to the Sarbanes–Oxley Act governing financial reporting and integrity, which requires organizational leaders to personally sign off on mandatory financial reports. Experts agree that SAM success requires top leadership buy-in and endorsement. That sends a signal that the organization is committed to managing software assets in a way that promotes improvement and avoids noncompliance with licensing agreements.

2. Establish an owner of the SAM program below the CEO or COO

Below the CEO or chief operating officer level, the organization needs to establish an "owner" of the SAM program. That typically is the CIO or an equivalent technology executive. In theory, at least, the CIO has visibility into the technology infrastructure, user requirements, and legal and financial issues associated with software.

Regardless of whether the SAM owner is the CIO, the chief financial officer, legal counsel or even the procurement chief, the program needs a single responsible agent with the backing of executive management.

Multiple Moving Parts

Think of the components of SAM: Software and assets are things; management is an activity. Before installing SAM software, an organization should establish a strategy for its program.

It might seem obvious, but a first element of the strategy should be to track the most widely used software in the organization — that can identify the biggest payoff potential as well as the most likely source of licensing violations.

It's also where an organization is likely to get its first big win. Early and substantial gains can quickly boost the credibility of a SAM strategy and thereby deepen its acceptance by employees at all levels. By contrast, slow-to-come or small results will have the opposite effect.

But that doesn't mean only universally used apps should be inventoried by the SAM solution. To the contrary, a second element in the strategy must be comprehensiveness. Each organization will have smaller, limited-use software. These apps might exist for the convenience of one group, or they might be mission-critical. If they are strategically important, such apps must be included in the SAM program — no matter their user base.

The Right Balance

There are no apps too small to be tracked. Any vendor can surprise an organization with an audit. At the same time, the SAM rollout should strike a balance between comprehensiveness and baby steps.

Taking small steps will bring pint-sized results, but rushing an enterprise tool such as SAM can also be counterproductive. The idea is to roll out a comprehensive goal, test initially in a limited way, then spiral rapidly until all apps are being tracked.

Distributed acquisition and IT environments can make SAM success tricky. That's because the organization may have neither a single repository of purchase information, nor a single inventory database of software in use.

Sometimes organizations get that way by organic growth that moves faster than systems planning. Frequently,

SAM Software Offerings

- **CDW Software License Manager** — This is a free, agentless tool that tracks all licenses regardless of where the software was purchased. Its wizard-like interface streamlines many tasks that otherwise would require hours to complete.

- **CDW Software Asset Manager** — This IT auditing and management subscription solution adds to the capabilities of the Software License Manager. It gathers inventory information, providing organizations with the ability to reconcile licenses and compare software actually installed against software purchases. Other capabilities include remote auditing and tracking of all major enterprise platforms, including Microsoft Windows, Linux, Unix, Apple OS and IBM AIX, as well as Windows Mobile devices.

- **IBM Tivoli Asset Management for IT** — It permits real-time management of an organization's business infrastructure. The comprehensive suite includes a SAM product that also tracks an organization's hardware. One module looks into virtualized environments to calculate "processor value units" to help maintain compliance for licenses tied to processors or cores.

- **LANDesk Management Suite** — Now in version 9.5, the software takes a comprehensive approach to lifecycle asset management for software, hardware (including mobile devices), and even asset characteristics such as power consumption by individual end points. It provides multiple views of assets — for example, by user group or by product enterprisewide.

- **Microsoft Assessment and Planning Toolkit (MAP)** — Besides discovery of Microsoft products, both server and endpoint, this free, downloadable product tracks server use rates for Hyper-V virtualized environments. It produces reports oriented to helping IT shops perform "true-ups" to bring usage into compliance with licensing terms.

- **Microsoft System Center 2012** — This is the company's comprehensive IT asset manager for physical, virtualized and cloud infrastructures. System Center encompasses a suite of enterprise applications for performance monitoring, orchestration of software deployments, configuration control and cybersecurity. Unlike MAP, System Center covers products from multiple vendors such as Citrix Systems, IBM, Oracle and VMware.

- **Novell ZENworks Asset Management** — The program emphasizes license management and compliance. It provides information on usage and license reconciliation, the latter of which can be set to filter purchased applications and discovered ones. ZENworks also reports on versions and editions running in the environment.

- **Symantec Altiris Asset Management Suite** — Oriented toward software license management and optimization, it creates a software catalog for the organization, listing licensed applications, and lets IT organizations compare inventory and usage patterns with an eye toward compliance and squeezing out unnecessary cost.

it's because of mergers and acquisitions. In these instances, comprehensive discovery is a linchpin of success.

Where to Start

Step 1: Gather the Team

Organizations should waste no time in launching or updating SAM efforts. The economy has been hammering on both private- and public-sector entities to reduce costs, and software is a major cost for nearly every entity. Plus, software publishers, in no mood to give away licenses or products, are stepping up the frequency of audits.

As noted, the most senior member of the team should come from executive management, serving more as a sponsor and motivator than as an operational leader. Even so, "executive sponsor" is more than a label: He or she should receive periodic reports on software inventories and license compliance and should be prepared to ask questions.

Working SAM team members should come from procurement, accounting and IT. The purchasing department executes the

software buys, so its database of purchase history provides an important element in SAM calculations.

To strengthen the SAM effort, the procurement shop can create a special code or designation for software purchases. Accounting provides the information to verify initial purchases and for ongoing expenditures based on license contract terms — another element in the reconciliation process. And of course, IT collects the information on software usage per endpoint and user, as well as server, core and cloud usage.

To the purchase and inventory information, the team must add in vendor data on license terms, found in contract details.

Step 2: Compare and Review Licenses to Actual Use

Once team members from different functional areas of the organization have contributed the data elements needed to operationalize SAM, the next step is to apply a SAM tool to the data.

First, compare the license data from purchasing and from vendor records to the inventory of software in use. Ideally,

SAM: What Is It Good For?

Formal software asset management is a multifaceted approach to better control of software assets. It uses a collection of formal policies and processes resulting in a number of benefits including:

- **Cost Savings:** Lower costs are associated with purchasing and maintaining a software library and IT systems. By capitalizing on overall buying power with vendors and purchasing through volume software licensing contracts, many businesses are able to cut costs.

- **Risk Management:** Business and legal risks, related to improper software deployment, can be more effectively controlled with a SAM plan. Firms also lower the chances of exposure to malware by ensuring only genuine software is deployed.

- **SAM Advantage:** An effective plan can help the enterprise stay ahead of the competition through streamlined operations and faster time-to-market.

- **Good Governance:** Achieving and demonstrating compliance helps a business with responsibilities under government legislation, such as Sarbanes-Oxley.

- **Disaster Protection:** Vendors will often assist owners of software volume licenses with disaster recovery assistance.

Source: Microsoft

they should match, leaving the team to rest assured that the organization has no license compliance problems — but that's rarely the case.

Unlicensed copies can come from creation of virtual machines, from the simple convenience of installing a new PC or tablet without removing an app from the old one, or from an external source. This is the point at which the organization is likely to discover the value of the software management process itself. It's like assuming the kitchen is clean until you move the refrigerator.

If significant variance exists between the inventory and the license information, the organization must true up to get in compliance. It also means that software acquisition and deployment processes require a fresh look to see how they can be optimized to maintain compliance.

Step 3: Dust Off the Shelfware

The data-driven audit may also reveal overspending on software for unused licenses or unused titles. Situations will reveal themselves that suggest solutions to increasing efficiency and cutting costs. Here are some examples of the analytical comparisons organizations can run using their SAM tools to find opportunities for savings:

- Undertake a second analysis of all of the purchased titles versus the inventory by title (in contrast to titles running per machine or processor). This crosscut will give the IT department a profile of demand for a given app. It may have a license for X number of users of a package.

  But suppose that, in fact, only X minus N employees actually use it. The organization has the opportunity to reduce costs by resetting the contract for fewer licenses. Switching from a per-user volume license to a simultaneous-use license also might be more advantageous, or vice versa.

  An organization might also discover titles for which it is paying yearly or monthly license fees that very few (or no) workers are actually using. In this instance, it can eliminate some titles altogether.

- Analyze title installations, crosscutting versions and ages of apps running. This tactic is especially important in geographically dispersed organizations or in those with decentralized software purchasing. The organization might be paying for earlier-generation or obsolete versions, denying users access to the latest features and functions. Or, older apps might exist but might not be in use, making those licenses candidates for cancellation.

- Look at functionality of licensed titles. Here, the discovery process might uncover two or more products in use for essentially the same task. With a little retraining, the organization can consolidate on a single app and then use the resulting larger volume for the remaining app to negotiate more favorable terms.

An Example of Software Inventory in Use

Product Name	Version	Edition	License Type	Installations	Licensed Quantity	License Excess or Shortfall
Office	2007	Professional	FPP	14	12	-2
Office	2010	Professional Plus	VL	25	25	0
Windows	Vista	Enterprise	VL	20	25	5
Windows	7	Professional	OEM	19	19	0

Source: Microsoft

Calculating SAM Savings

Obviously, full-featured software asset management products are not free. Add to the cost of acquiring a SAM application the hours the multidisciplinary team spends on self-auditing the organization, and the enterprise could have an expensive project on its hands. Top management or the finance department might ask, "Why are we doing this?"

It's worth spending the time to analyze the return on investment in initializing a SAM project.

On one side of the equation, list all of the cost inputs: the SAM software and the time required for the project. Subtract this from the calculated estimate of taking an enterprisewide software inventory manually.

On the other side, list the benefits — both direct and indirect. Direct benefits will come from more financially favorable license agreements and outright elimination of unused or redundant applications. Indirect benefits come from reduced risk: An unfavorable software vendor audit is likely to result not only in a demand to pay for excessive licenses but also in fines, plus any legal fees.

New Reasons for SAM

The need for comprehensive enterprise SAM has intensified with the latest iteration in the long history of computer architectures.

At one time, it was easy to find apps. They were all hosted on the mainframe, safely behind glass walls. Ditto for the minicomputer era, when dumb terminals still reigned on the desktop. The client-server era scattered apps all the way to the PC, requiring discovery over the LAN. Now, mobility has dispersed apps even farther afield.

Essential Now: Mobile Discovery

The physical location of software has changed radically in recent years. Workers in large numbers have become completely untethered through the use of mobile devices. In response, nearly all enterprise software manufacturers publish mobile versions of their apps, suitable for rendering and interacting on tablet and smartphone screens. The mobile app mentality can lull a tech organization into assuming these apps are all free or cost only a few dollars.

But nothing could be further from the truth. Licensed apps running on mobile devices still involve detailed licenses — and must be paid for. That means a SAM solution must incorporate the elements of mobile application management (MAM) software and services for providing and regulating access to commercially available, as well as internally developed, mobile apps.

MAM differs from mobile device management (MDM) in the amount of control offered over the mobile device. MAM focuses on application management while MDM solutions can manage device firmware and configuration settings as well as apps and application data.

When planning a SAM project, the SAM team should make certain the chosen solution extends to mobile devices. Care should also be taken to verify that data from MAM and/or MDM solutions can interoperate with SAM tools.

Bring-your-own-device (BYOD) programs can add another layer of complexity from a SAM perspective. Thorough discovery is essential. The only time to discover software on a mobile device is when it's connected to the corporate network. This implies that the IT department should configure its MAM, MDM and SAM tools for mobile discovery, so that they routinely check users' devices when connected to the network.

It's also wise to remotely wipe mobile devices when a user leaves the organization or when there is an emergency. The right of the organization to do this should be spelled out in any BYOD plan. The IT team can configure resets to apply only to the organization's partition on the mobile device, leaving the owner's personal information and apps intact.

Virtualization and Cloud Compliance

Cloud computing has introduced another location for software to reside. Unlike another in-house data center that might function as a cloud, a third-party or commercial cloud is not under the direct control of the user organization. The IT group must focus special attention on discovery of software licenses when using infrastructure as a service (IaaS) providers.

When using software as a service (SaaS), discovery for purposes of license compliance is simple because, for a service such as Microsoft 365, the vendor bills per user, per month. No audit is required of the infrastructure, although the organization should regularly make sure that all of its monthly subscriptions are actually being used. By contrast, IaaS providers are running software in their infrastructure, so visibility and auditability should be written into service-level agreements (SLAs).

The risk is compounded when virtual machines are hosted in the cloud. The organization can create VMs with a few clicks of a mouse, but each VM is a potential new license, depending on the agreement with the app vendor. Under some volume-license agreements, each VM equals a new license. Under others, a single license is good for as many VMs as the organization can squeeze onto one processor core. So how the VMs are deployed in an IaaS cloud can have an enormous affect on license fees (or produce some unpleasant surprises).

Another new area for SAM stems from the self-provisioning that often goes along with BYOD. Taking a cue from large consumer app marketplaces, organizations now often opt to have users self-provision their devices, downloading apps

from corporate app "stores." Lest the app store become a backyard hose running with no one minding it, SAM tools, along with MAM and/or MDM solutions, should offer the ability to control and provision content so the organization can track apps as users download them.

The 80/20 Rule and Software Management

Pareto's law is commonly known as the 80/20 rule. The principle can be applied to software management. For example, 80 percent of budget dollars and compliance risk can likely be found in 20 percent of software holdings.

Concentrating on the 20 percent – vendors posing the most compliance risk, requiring the most budget dollars or of greatest strategic importance – allows a busy team to make a sizable impact on a SAM initiative in a short period of time.

Progressive Degrees of SAM

IT organizations are often described in terms of capability maturity model, based on the phases originally developed by the Software Engineering Institute at Carnegie Mellon University. Basically, the more predictable, reliable and bug-free its software development and general business processes, the higher an organization's capability maturity.

Level 1 means the organization employs people who know how to code. That alone can, and often does, bring chaos. Level 5 means the entity has well-managed processes and can continuously improve them.

SAM as a discipline shares that characteristic with software development. Organizations have different phases of SAM capability. With the right commitment, an entity can mature through these phases and reach the point where SAM is a finely honed instrument used to continuously optimize software utilization and control costs.

Phase 1: Discovery

Phase 1 occurs when the organization needs to renew licenses or wants to get an idea of what is running in its environment.

At this point, the organization may not even have a SAM tool in place. Instead, it might conduct a manual accounting of software for which it has licenses. Manual software discovery is possible, but not efficient and is likely to be inaccurate. It requires cooperation from users throughout the organization that, let's face it, have better or more pressing things to do.

What's more, software deployments occur in dynamic, ever-changing environments. Regardless of the organization's size, by the time the IT staff finishes manual discovery, the environment has changed.

If the inventory is conducted under the pressure of a vendor's audit, the fire-drill quality of the inventory process could

tip off the vendor that the organization is not fully in control of its licenses. That increases the likelihood of fines and penalties — even reputational damage.

The point is to go where the money is and get the biggest return on the work. If nothing else, the effort will increase the credibility of a request to invest in a comprehensive SAM tool.

Phase 2: Reactive to Proactive

In Phase 2, the organization shifts from manual processes and a reactive mindset to automating and getting out in front of software license growth — and potential noncompliance.

The goals go beyond just getting a handle on software within the organization and staving off an audit. At this stage, tools are installed that enable automatic discovery of software assets on the network. Plus, managers have far more visibility into their software assets.

More important, transparency lets the organization do two things: One, develop policies and processes that carefully control the acquisition and installation of software. Two, establish a practice of continuous monitoring of software assets so that the organization's view is always current.

Phase 3: License Management

Phase 3 makes software asset management a high-level managerial function. SAM becomes a tool for continuously optimizing the organization's software library, creating efficiency in the use of licenses, ensuring license compliance and controlling software costs. In this stage, the team has coalesced behind the idea of using SAM strategically.

The organization can routinely pull an inventory of its installed software, and compare that data with purchase history and licensing agreements for a detailed and real-time view of software usage and contract compliance. Because tools are able to generate reports from multiple views, the organization can evaluate its user, title and licensing requirements with regular frequency. Software management becomes dynamic — letting the organization fine-tune both its use of and investment in apps to achieve the greatest utility.

In Phase 3, software operations that might have been slow or difficult become nearly automatic, including:

- Compliance activities such as "true-ups," recovery of unused licenses and uninstalls of unlicensed copies

- Maintenance, updates, patches and service pack rollouts

- Policy enforcement covering rogue or unauthorized software use

Ultimately, by implementing a SAM program along with a powerful SAM tool, organizations can realize the greatest potential return on their critical software investments and have confidence in their ongoing license compliance efforts.

CDW: A SAM Partner That Gets IT

CDW's trained and certified technology experts understand the intricacies of SAM and can help organizations take a comprehensive approach to deploying a solution that fits their unique environments. Our team of experts includes:

Software Asset Management Specialists

A SAM team custom license reconciliation results in knowing more about the products you have installed on your systems and what's needed to be compliant.

Licensing Executives

Inside and field-based licensing executives can help you understand your current environment, provide a cost analysis of various software and licensing programs, and recommend a future software plan.

Support System

Account Managers: This primary contact is dedicated to understanding your needs.

Presales Engineers: They are available to answer questions before you buy.

Software Manufacture Reps: Vendor partners provide up-to-the-minute product information.

For software licensing and asset management support services, CDW provides assessment, planning and design; assistance with evaluating software licensing program options; contract planning and management; configuration management to ensure that all settings and operating systems are retained; onsite software installation and lifecycle support. Our step-by-step approach involves:

- An initial discovery session to understand goals, requirements and budget
- An assessment review of the existing IT environment and definition of project requirements
- Detailed manufacturer evaluations, recommendations, future environment design and proof of concept
- Procurement, configuration and deployment of the chosen solution
- Telephone support and ongoing product lifecycle support

To learn more about CDW's software management solutions, contact a CDW account manager, call 800.800.4239 or visit CDW.com/sam

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Symantec

Symantec™ Altiris™ Asset Management Suite improves visibility into your IT assets at every point in the lifecycle to reduce costs and fulfill compliance initiatives. The suite helps you eliminate unnecessary software and hardware costs, proactively manage vendor contracts, and align resources to ensure IT investments are optimized and aligned.

CDW.com/symantec

LANDesk SOFTWARE

The ideal balance between user flexibility and readiness, LANDesk® Management Suite gives you all the control you need — no matter how big or diverse your environment — to address IT concerns throughout the organization. It enables you to discover devices in your network and store information on its configurations, OS, processor speed, installed memory and more — in a central database.

CDW.com/landesk

Microsoft

Microsoft® System Center is a comprehensive management platform that enables you to more easily and efficiently manage IT environments, including server infrastructure and client devices. With System Center, you get a cost-effective and flexible platform for managing traditional data centers, private and public clouds and client computers and devices.

CDW.com/microsoft

Novell

Novell® ZENworks® Asset Management combines sophisticated workstation inventory, network discovery, software management, license tracking, software usage and contract management into a comprehensive asset management solution with a single, unified administration and management console.

CDW.com/novell

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