

SOFTWARE LICENSE MANAGEMENT FOR THE MODERN ENTERPRISE

Successful organizations leverage SLM best practices to cut costs, streamline operations and meet business goals.

Executive Summary

Remarkably, only about 20 percent of organizations have a formal software management program in place, according to consulting firm Ernst & Young. And more than half continue to use spreadsheets to manage software licenses, according to the research firm Opinion Matters.

Although technology professionals have long voiced concerns about the consequences of poor software license management (SLM), their misgivings have largely gone unheeded. However, IT leaders are now beginning to see the potential impact effective SLM can have on a company's bottom line.

For instance, a study conducted by the tech research and advisory firm Gartner shows that organizations can realize savings as high as 25 percent by driving out the hidden inefficiencies from over-licensing applications or harboring unused software. And the benefits just start there.

Whether it's eliminating unnecessary licensing expenditures or avoiding the consequences of software audits, enterprises of every size and type are turning to robust and cost-effective technology tools to gain control over software license management.

Table of Contents

- 2 The Situation
- 3 Software License Management Explained
- 4 Effective License Management Pays for Itself
- 5 New Management Considerations
- 5 Streamlining SLM
- 6 Steps to Maximize Software License Management ROI
- 7 SLM: Components for Effective Implementation
- 8 CDW: An SLM Partner That Gets IT

The Situation

Computer applications, whether they reside in a data center, at a desktop or on a mobile device, are fundamental to a successful enterprise.

According to Gartner, enterprise software spending as a percentage of revenue is running at about 1.4 percent. Further, this spending is expected to grow at a rate of 6.4 percent throughout organizations worldwide.

To put these numbers in perspective, a midsize organization with revenue of \$1 billion per year will spend approximately \$14 million on software in 2013. That number is expected to increase to nearly \$15 million in 2014.

With so much at stake, it's clear that software assets must be managed effectively. The downsides to mismanaging software assets include:

- Inefficiencies
- Increased costs
- Software licensing violations
- Headline-making fines, perhaps in the millions of dollars

A recent survey, conducted by the market research firm Opinion Matters, estimates that organizations waste an average of \$407 in software license costs per PC, per year. This figure includes unused software costs of \$221 (of which nearly \$100 is ongoing maintenance costs), plus the cost of shelfware (applications that have been purchased but not installed) at approximately \$186 per machine.

While it's easy to think that these numbers apply only to a small percentage of companies, research shows otherwise. In the same Opinion Matters survey, a full 92 percent of managers acknowledged having shelfware. Moreover, managers admitted that a whopping 22 percent of software products, on average, were destined never to be deployed.

Further, a recent report, from the market intelligence firm IDC, revealed that some businesses are paying millions of dollars in fees and penalties to application producers. And enterprises with \$1 billion or more in sales were significantly more likely than smaller firms to be audited.

These audits can plague organizations repeatedly. According to IDC, companies that already have spent millions of dollars on applications can run into multimillion-dollar compliance problems on an annual basis.

In a recent Gartner survey, 61 percent of senior managers reported being audited by at least one software application producer during the previous 12 months.

On the flip side, organizations that properly manage software assets can expect:

- Reduced application costs
- Improved security
- License compliance
- Positive software audits
- Reduced overall IT costs

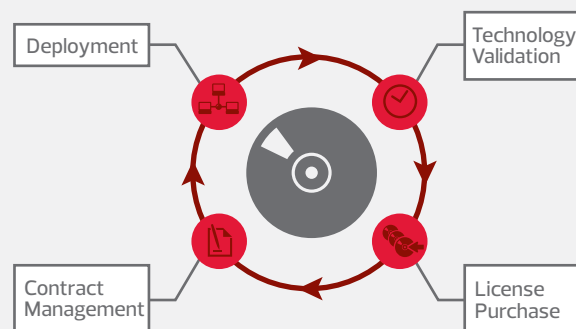
Yet, the very attributes that make medium- and large-size enterprises successful, in general, also can prove a hindrance to effectively managing software assets.

Software (Application) Lifecycle Management

Much the same way as IT departments manage the lifecycle of hardware or data, successful organizations also follow best practices with respect to application lifecycle management or ALM.

ALM is the continuous process of managing the life of an application through governance, development and maintenance. Application lifecycle management runs from idea to deployment, through ongoing management and finally, end of life.

Because a good ALM strategy is an ongoing process, not a one-time task, organizations should maintain the following practices:



1. Validate the Technology. An analysis of business and technology plans can help the entity determine what technology it needs for the coming year.

2. Purchase the License. Select the deployment model that is best: boxed product, volume licensing, subscription or cloud.

3. Manage Software Contracts. The IT department should check each server and endpoint to assess the organization's current software applications.

4. Plan for Deployment. Decision-makers within the organization should evaluate whether a particular piece of software is the best choice to meet stated objectives.

5. Review Software Annually to Guide Purchasing.

The organization should review its specific software needs and align its software contacts to meet these needs.

Also, larger organizations can benefit from an integrated approach to ALM. Rather than view applications in isolation, a workflow management solution can centralize and automate ALM across an enterprise.

Among other things, integrated ALM maximizes acquired applications by ensuring they are used in multiple ways, by multiple individuals, rather than allowing unnecessary versions of an application to be purchased, deployed and maintained.

For example, many midsize enterprises maintain decentralized IT operations to ensure that different locations receive appropriate technology support. And, by definition, multinational companies have distributed operational structures. This typically requires an IT organization in every country, plus IT outposts, set up by region or facility.

What's more, the report *Key Trends in Software Pricing and Licensing Survey* by Flexera Software and IDC predicts that software licensing will only grow more complex as application producers meet demand for an increasing diversity of software licensing models.

Over the last decade, the complexities of managing enterprise software have grown exponentially. Cloud computing, virtualization, mobility and an array of trends – including bring-your-own-device (BYOD) and new software licensing models – have transformed the way organizations use and manage applications.

Fortunately, organizations of all sizes are recognizing the value of effectively managing software assets and the licenses related to those assets. Whatever the reason, experts such as Forrester Research Senior Analyst Stephen Mann say organizations have shown growing interest in improving their SLM practices.

"IT organizations are realizing their software estates and procurement and provisioning processes are in a state of under-management, if not mismanagement," Mann says. As a consequence, he adds, they waste a significant amount of their IT funding each year on unnecessary license procurement and maintenance agreements.

Ultimately, business leaders are coming to understand that embracing SLM just makes good sense.

Software License Management Explained

As enterprise IT shops become aware of the benefits of effectively managing software assets, they recognize the need for a software license management program.

The discipline, as defined by the International Business Software Managers Association, includes:

"... the active management and administration of software allocation, deployment, licensing and contractual obligations. License management encompasses managing the risks associated with software license compliance as well as the costs of acquiring the software."

Once practiced only rarely, SLM has developed into a critical field – so much so that IT staffers can gain a certification in the discipline. And a growing body of technology tools has been designed to specifically follow and automate SLM best practices.

Typically, SLM tasks are divided into management of the following:

TITLES. Keeping track of the software titles an organization purchases is a core task. This includes versions, updates, patches, etc., for each title as it exists on each machine in an enterprise. For software delivered via the cloud, tracking typically focuses on users rather than devices.

Frequently, entities without robust SLM programs purchase multiple copies of the same title rather than simply investing in additional licenses. In most cases, additional licenses are more cost-effective than owning multiple copies of a title.

Regardless, the more copies of a title, particularly those delivered by download rather than on physical media, the more challenging it becomes to track each instance. However, in an audit situation, it's highly likely that the vendor's representative will find every copy, so doing the work in advance is well worth the benefit of risk reduction.

For newer releases of products from major vendors such as Adobe, CA Technologies, Microsoft or Symantec, the ISO/IEC 19770-2 tag file may be the best and most accurate way to identify a local software product on a device.

According to the 19770-2 Standard, developed by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC), the tag file provides the name, version and edition of the software product installed, as sold by the publisher. It also may contain a list of the software components.

LICENSES. With every license comes documentation and data such as purchase orders, serial numbers, DVD media location (if delivered on physical media), download codes (if delivered by download) and installation codes.

Software license managers need to track which licenses belong to which title, either manually or using an SLM solution. Although this may seem simple at first glance, the proliferation of the types of licenses that software producers offer makes the task far more challenging.

In larger organizations, any given title can have multiple types of licenses, depending on when the instance of the title was purchased and under what contractual conditions.

For example, one copy of Microsoft Office could be purchased from a retail outlet and carry a single license. Another copy of the same suite might be bought from a technology partner and be licensed for multiple computing devices. Still another copy could be preloaded on a device and carry a manufacturer's license.

Each of these license types must be tracked for each title. Further, any relationships among software titles must be documented as some titles can be bought individually or as part of a suite.

LICENSE TYPES. The complete list of license types continues to grow. As enterprises find new ways to deploy technology, such as from boxed product, volume licensing, subscription or cloud, software producers evolve their licensing strategies.

Surviving a Software Audit

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 license management (SLM) tool and to gain the skills to use it.

"Maintenance is less expensive than an audit fire drill," he says, and far less disruptive to the organization. He recommends firms do self-audits at least yearly (or better, quarterly). "Reconcile the information on every computer you have with your purchase history," he adds. "Go through it vendor by vendor."

Software companies and their representatives, such as the Business Software Alliance (BSA), conduct thousands of software audits each year. Each license agreement for every piece of software purchased specifies the terms under which the software can be used, such as the number of users or the number of CPUs on which an application can be installed. Audits can lead to stiff fines for organizations that use software outside of a license's specified terms.

Here are some suggestions to help survive an audit:

- **Cooperate:** The organization being audited should demonstrate that it will comply with the audit. It should seek written notification of the audit well in advance and ask for a plan that spells out how the process will be conducted and what products will be audited.
- **Maintain good documentation:** A variety of documents can help prove a state of compliance. The IT department should compile materials such as licensing agreements and certificates, purchase receipts, packing slips, paid invoices and software documentation.
- **Implement software license management tools.** Automating the management of software licenses helps an organization handle increasingly complex IT environments. Staying on top of the situation is essential to prepare for a software audit.

Every software producer is likely to offer multiple types of licenses for each of its titles in order to meet customer demand. Therefore, it's impossible to assume that a given software product will automatically carry a particular license type.

Complicating matters are individual producer rules surrounding multi-core processors, BYOD, cloud, server virtualization and blade servers. No industry standards prevail to simplify matters. And as new hardware technologies arise, software producers' licensing policies sometimes take time to catch up.

According to IDC's "Key Trends" survey, the following types of licenses are commonly used:

- **Node-locked.** These licenses are specific to a computing device, or node, on a network, permitting the software to be run only on that machine. Approximately 40 percent of producers offer this type of license.
- **Floating or concurrent user.** This license type permits an application to be used on a network and comprises two basic subtypes:
 - **Feature-based.** This type permits concurrent use predicated on the features of the application in use. About 39 percent of software producers offer this.
 - **Token-based.** This uses tokens, which are checked in and out across users and products. Just under a quarter of software producers offer this type of license.
- **Device.** This type is issued to a device for a specific number of days. If it fails to connect to the network within that time frame, it's assumed that the device is no longer in use and the license can be reassigned to another device.
- **Others.** Additional commonly used license types include named user, site license and client access license or CAL.

On the horizon are still more licensing structures, such as the utility model, which bases the agreement on factors such as usage, time and the number of transactions. This model is expected to become more popular, "further signaling increased interest in usage-based pricing," the IDC Key Trends report says.

Effective License Management Pays for Itself

In recent years, as the economy has stalled and revenues have waned, software vendors have increasingly viewed audits as a tool to boost revenues. Turning to effective software license management can help IT shops avoid unproductive practices, boost efficiencies and minimize the chance for an audit.

Over-provisioning: To avoid the consequences of a software audit, it's common for enterprises to over-license. The effect of this practice on IT budgets can be substantial. According to IDC, 56 percent of organizations indicated that they have over-provisioned applications.

Under-provisioning: The flip side of over-provisioning, under-provisioning occurs when organizations inadequately manage software assets, resulting in failure to purchase enough licenses. IDC found that 38 percent of enterprises overused some of their applications and, therefore, were out of compliance with their software licenses. This practice can expose an organization to multimillion-dollar fines.

License Reallocation: Rather than allowing unused applications and their licenses to sit idle, a good SLM program includes uninstalling unused software and reallocating the licenses. The potential savings organizations can see from pursuing reallocation are significant, but according to a recent

Opinion Matters report, only 9 percent of U.S. enterprises regularly reallocate licenses.

Licensing Agreement Negotiation: Once a software license management program is in place, a way to maximize its effectiveness is to include the staff members who administer the program on the license negotiation team. These SLM administrators generally have the broadest and deepest knowledge of an organization's licensing position.

Internal Policies, Processes and Procedures: To be effective, administration of an SLM program must be an ongoing process. This means establishing policies, processes and procedures for procuring, allocating and tracking software licenses. The key is building in flexibility to ensure that software still can be acquired when needed to avoid constraining enterprise productivity.

External Audit Preparedness: Regardless of how well an organization manages licenses, it is still susceptible to an external audit. Formalizing audit response procedures helps minimize organizational disruptions and costs.

Risk Reduction: A robust SLM program inevitably will encompass management of the risks associated with software license compliance.

New Management Considerations

In addition to managing traditional software assets and licenses, the advent of BYOD IT environments and enterprise app stores brings new challenges and considerations.

BYOD Software Assets: If an application on an employee's personal device is used for a business purpose, the enterprise is considered responsible for having the appropriate license.

Sandboxing is one common tactic that IT shops use to work out the bugs in the BYOD paradigm. With sandboxing, all business applications are housed in an area of a device that is separate from personal applications, enabling the effective management of licenses. Employee policies also must be developed to ensure compliance.

A mobile device management (MDM) tool integrates with an enterprise SLM solution. It can be valuable for organizations that permit employee-owned devices.

Enterprise app stores: Unlike software that the IT department installs, an enterprise app store provides on-demand service for end users. Enterprises that establish their own app stores should include the capability to track licenses, checking them in and out as workers need them.

An SLM program robust enough to handle enterprise app stores will help an organization avoid issues associated with over- or under-provisioning.

Streamlining SLM

Clearly, the importance of proper software license management cannot be overstated. But a Forrester Research

survey found that less than 40 percent of organizations have implemented this capability.

While this number indicates a rise from previous years, most organizations have a long way to go. According to an Opinion Matters survey:

- 52 percent of enterprises still use spreadsheets to manage software licenses.
- 12 percent of enterprises still use a paper-based filing system to manage software licenses.
- 12 percent use no tool, or have no process whatsoever, for managing software licenses.

These findings indicate that a significant portion of organizations that reported having software management capability are still attempting to manage licenses with manual tools.

But software-based SLM tools provide tremendous efficiencies over a system that tries to manage licenses on a spreadsheet – much less in a filing cabinet.

Microsoft and Effective Software Management

Microsoft enterprise users can improve licensing compliance and reduce complexities by participating in various programs that the company offers.

For organizations with Microsoft Enterprise Agreements (EA), the Microsoft Software Assurance Program helps entities maximize the value of their EA by supplying several benefits:

- **Planning Services:** Microsoft experts assist IT departments with planning their deployments.
- **Training Vouchers:** The program provides technical training to help an organization's IT staff in deploying, managing and supporting Microsoft products.
- **E-Learning:** For end users as well as IT professionals, Microsoft offers extensive online training tools. Access depends on the type of products and licenses purchased.

Additionally, enterprises with more than 250 PCs can participate in the following programs:

- **Microsoft Enterprise Enrollment:** The program establishes a framework under which organizations can run PC software, device applications and cloud services. This can help reduce costs and provide additional pricing advantages above the standard EA volume pricing levels.
- **Microsoft Enrollment for Application Platform:** EAP focuses on development tools for Microsoft SQL Server, Visual Studio, SharePoint Server and BizTalk Server. The program can provide additional volume licensing and pricing benefits.
- **Enrollment for Core Infrastructure:** The ECI relates to Microsoft Windows Server and System Center. Like EAP, this program can offer extra volume licensing and pricing benefits.

Steps to Maximize Software License Management ROI

While every SLM program is unique to the organization it serves, several common steps can maximize the return on investment (ROI) made in the people, processes and technologies.

Step 1: Centralize All Software Licensing Operations

Pooling all licenses, regardless of application locations, creates a central repository where licenses can be available to meet needs as they arise. Centralizing SLM provides IT managers with a single view for more effective and efficient deployment of licenses across enterprise units.

A single view also improves visibility into licensing inventory, enabling administrators to know which licenses are available and when any given license will expire. This, in turn, permits redeploying under-provisioned licenses.

Centralizing licensing also enables proactive SLM, such as receiving alerts before license expirations. Early issue resolution supports employee productivity and lowers administrative costs.

Additionally, centralization improves IT resource utilization. Rather than employing a dedicated SLM administrator at each location, an organization can assign a single individual to manage licenses across the enterprise.

Step 2: Consolidate Licenses and Vendors

Once a central repository is established, the SLM administrator can accurately inventory licenses and compare them with licensing needs. This often results in the ability to consolidate licenses under various producer programs at a significant savings.

An analysis of sources from which an organization purchases software can squeeze out even more savings. By eliminating small purchases from multiple sources, in favor of volume purchases from a limited number of IT partners, the cost of individual licenses can be greatly reduced.

Step 3: Gather Accurate Usage Statistics

Legacy SLM tools frequently record only the initial installation of an application – rather than monitor its use. Furthermore, such tools don't permit users to "check in" a license when they're finished using an application, a situation that can lead organizations to purchase unnecessary licenses.

Fortunately, modern software license platforms permit IT managers to base purchasing and renewal decisions on accurate, detailed usage information collected over time. This can significantly minimize the errors organizations commonly make in software licensing.

Step 4: Effectively Leverage Usage Reports

Today's software management tools can generate detailed and accurate usage statistics. This allows IT managers to segment and analyze usage statistics by location, project, user group or other categories. This provides detailed insights into actual software usage across the enterprise and enables organizations to:

- **Reduce Spending on Unnecessary Software.** The fastest and least painful way to reduce software costs is to eliminate unnecessary, unused or underutilized software. This not only reduces purchasing expenses but also lowers update and support costs. Sometimes organizations can even trade in unused titles.

- **Manage Licenses According to Peak Demand.** One way to purchase and manage licenses is to determine how many licenses are required during peak demand periods. Then an organization can set thresholds that deny usage when demand spikes.

For example, an organization may allocate 10 licenses to a workgroup of 11 users and set 90 percent as the threshold. Then peak demand will occur when either one or no license is available. By denying access to some users during periods of peak demand, the organization can see significant savings from owning fewer licenses.

This strategy is effective if users are denied access only for a few minutes or rarely. When denials are disruptive, users become less productive and hoarding behavior can occur, where individuals refuse to exit an application for fear of being denied in the future.

Adopting a software license tool that permits analyzing usage regarding the time of day, week or month is vital.

- **Optimize Software Renewals and Remixes.** By some estimates, IT organizations spend 10 to 20 percent of their budgets on unneeded software updates and maintenance. Analyzing and leveraging usage data can help avoid the erroneous assumptions that lead to these costs.

With robust software management tools, IT managers can determine whether usage trends are permanent or part of normal business cycles and take appropriate action. For example, software licenses can be remixed in cases where a project takes one set of software applications during the conceptual phase, another set during prototyping and a third set during testing.

Step 5: Automate Software Licensing Operations

As long as organizations rely on software to do business, the need to continuously evaluate and assess licensing requirements will remain. The more timely, accurate and precise the licensing data IT managers have, the more tightly they can align software licenses to business needs and, in turn, drive down costs. Automation holds the key to getting the job done.

Software license automation also allows for establishing an effective chargeback system. Such systems not only ensure that business units are correctly charged and credited for license cross-sharing but also allow IT managers to develop more sophisticated license-sharing strategies across enterprise units. Only automation makes this possible; spreadsheets just aren't sophisticated enough.

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 software management initiative in a short period of time.

SLM: Components for Effective Implementation

Before an organization begins to implement, or overhaul, an SLM program, it should develop a solid strategy based on best practices. For assistance, many enterprises turn to the ISO/IEC 19770-1 Standard, which provides specific details for designing and rolling out an effective SLM program.

In short, the basic components of a successful implementation include:

Establishment of New Business Policies, Processes and Standards – Any successful SLM program starts with building policies and processes around software and licenses. For example, it isn't enough to know what software the organization owns; it's vital to know which business unit purchased the software, what hardware it resides on, who can access it and who is using it. Also, the organization must be able to prove compliance in the event of an audit.

Designation of a Software License Manager – Just as centralized licensing is critical, so is naming a single individual as the SLM point person. What's more, that person must be empowered by the organization to get things done. Assigning the right person the responsibility for SLM can help drive the change necessary to achieve the desired efficiencies, goals and ROI.

Communication – After establishing SLM processes and appointing an SLM administrator, the organization must communicate with and train staff about its software management efforts. The communication should include information about enforcement to make sure that

Selecting the Right Software License Management Tool

Software license management can be an unpopular topic for IT professionals because many enterprises still are using cumbersome, outdated tools to manage software assets. This makes the task far more difficult while minimizing its benefits.

But modern software license compliance tools come with intuitive interfaces and advanced management capabilities that eliminate monotonous chores and make software license management (SLM) more effective than ever.

Leading software license management tools include:

- CDW Software License Manager
- FlexNet Manager Suite
- FrontRange License Manager
- IBM Tivoli License Compliance Manager
- LANDesk Asset Lifecycle Manager
- Microsoft Assessment and Planning (MAP) Toolkit
- Microsoft Asset Inventory Service (AIS)
- Microsoft System Center
- Novell ZENworks Asset Management
- Symantec Altiris Asset Management Suite

expectations are clear. The organization also should establish an "amnesty" period to encourage users to report licensing issues and to promote the acceptance of SLM.

Technology – IT tools play a major role in implementing a successful SLM program. Essential tasks to perform at the outset include:

- **Deployment of the SLM tool.** This is the repository for recording the various types of licenses and who owns them. An enterprise SLM tool automates many processes that previously took hours to complete.
- **Implementation of the software license auditor.** Found in many software asset management (SAM) solutions, this tool runs over the enterprise network and locates deployed licenses. Modern solutions frequently include support for virtualized environments.
- **Complete asset inventory.** In addition to locating installed software licenses via the auditor tool, a complete survey of uninstalled applications also must be conducted.

The Pilot Phase – Regardless of the specifics of any particular SLM program, every organization should consider beginning with a pilot. This phase of the program should involve only three to five software titles to keep the effort manageable. After the proof of concept is validated, the organization can begin to roll out SLM across the enterprise. In addition to working out any hiccups, a pilot project can quickly demonstrate SLM's benefits and cost savings.

CDW: An SLM Partner That Gets IT

While there are new challenges for managing software assets, CDW's trained and certified technology experts understand the intricacies of SLM and can help organizations take a comprehensive approach to software license management. CDW's team of SLM experts includes:

- **Software licensing specialists:** These specialists can assist with navigating complex licensing options and compare different programs to ensure compatibility.
- **Licensing account executives:** By attending onsite meetings and technology briefings, these specialists review your current environment.
- **Presales systems engineers:** The engineers are always available to answer in-depth software, licensing and technical questions.

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; and 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 license management solutions, contact a CDW account manager, call 800.800.4239 or visit CDW.com/slm



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