Moving up the Software License Optimization Maturity Curve to Drive Business Value
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Software Asset Management and License Optimization

Software Asset Management (SAM) and license optimization are critical IT initiatives for two simple reasons: the ability to substantially lower IT expenses over a relatively short period of time and the reduction of risk related to non-compliance with software license contracts. Corporations benefit with an improved bottom line and IT gains budgetary flexibility as it contributes to financial results.

SAM, as defined by the ISO 19770-1 standard, is the “processes and resources to help firms oversee and control their various assets and inventory throughout their life cycle.” From another perspective, the Information Technology Infrastructure Library (ITIL) describes SAM as “all of the infrastructure and processes necessary for the effective management, control and protection of the software assets within an organization, throughout all stages of their lifecycle.” Software License Optimization (SLO) extends traditional SAM through automation (tools), policies and procedures such that an enterprise can make the most effective use of its software investments, optimally purchasing and allocating licenses across the organization. Software license optimization increases value to the organization while driving down costs for software and reducing license liability risk.

Figure One: Software Asset Lifecycle
Moving up the Software License Optimization Maturity Curve to Drive Business Value

For enterprise IT, managing software assets is a challenging task due to the complexity of licensing models, terms and conditions offered by software vendors, the IT environment (e.g. virtualization technologies), as well as the relative ease of proliferation of software throughout the organization. Acquisition of software has often been decentralized—with very few checks and balances. For example, the engineering team may have a strong need for computer-aided design (CAD) software and is in the best position to address requirements for that purchase. Similarly, the manufacturing floor holds the expertise to understand its needs for “just-in-time” inventory management. It is easy to see how control over contracts, renewals and allocation of valid software licenses can quickly get out of control. While procurement of software assets can be decentralized, formalized asset management control measures and procedures require at least some level of centralization.

The volume of software applications deployed in an enterprise is astonishing. Organizations have a tendency to over-provision software licenses as a means of “self-protection” against license compliance audits. Over-provisioning software is an unaffordable luxury and yet most companies have not found a way to avoid the well-entrenched habit. Other aspects of the software asset lifecycle are also remaining unaddressed. Reallocation of unused or under-used software licenses and recycling of licenses allocated to retired hardware tend to fall through the cracks. Software license optimization is impossible to accomplish without a tool that can automate processes, keep up with software license entitlements (e.g. product use rights) and license model changes, and provide alerts due the quantity and complexity of software applications in a corporate environment.

Key requirements for a robust software license optimization solution include discovery and inventory management, automated purchase order processing, financial analysis of software licensing, contract management, the ability to understand and apply license entitlements, the ability to aid selection of optimal license types, and support for software audits. Solutions that incorporate these requirements go well beyond traditional software asset management tools. Many SAM offerings in the market are mere inventory tools and/or geared towards one category of software assets such as desktop products. Organizations need a software license optimization solution that offers a range of business-focused functionality across technology silos and also addresses cloud and virtual computing environments.

**Tackling Software License Management**

Defining and implementing a strategic software license optimization program can be an overwhelming and daunting task. SAM and license optimization involve moving into a position of managing software assets proactively, automatically and for the majority of software titles. Yet, it is not necessary, nor practical to tackle everything all at once. In fact, a large enterprise may decide to focus on only a handful of critical software vendors in the early phases of the project. And, most enterprises can move towards software license optimization and feel satisfied once they are managing 90% of their software titles. It is an evolutionary process and more importantly, one that shows substantive financial results at the completion of every phase of the project.

Each company has unique priorities that will help delineate a phased approach for SAM and license optimization. For some organizations, staffing up the asset management team in order to drive data collection for software inventory and purchase orders, along with defining and implementing best practice processes will be the right approach. Yet others will choose to more effectively manage five or six key vendors’ software products for which expenses are high and distribution is wide. High on the list of usual suspects are: Microsoft, IBM, Oracle, SAP, Symantec and Adobe.

<table>
<thead>
<tr>
<th>ISV</th>
<th>Market Share</th>
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<tr>
<td>Microsoft</td>
<td>24.37%</td>
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<tr>
<td>IBM</td>
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<tr>
<td>Oracle</td>
<td>8.65%</td>
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<tr>
<td>SAP</td>
<td>5.72%</td>
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<tr>
<td>Symantec</td>
<td>2.81%</td>
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<tr>
<td>Adobe</td>
<td>1.66%</td>
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Figure Two: Top Software Companies by Market Share  
(Source: [http://www.softwaretop100.org](http://www.softwaretop100.org))

A silo-oriented plan can also drive priorities where datacenter server licenses may be more important than desktop software titles. Common objectives include asset visibility/control, license liability risk reduction and cost reduction. There may also be unique business unit requirements, and considerations related to applications that are deemed mission-critical to the business. Priorities for defining and implementing a SAM and license optimization program are clearly in the eyes of the beholder.

One of the first steps to be taken is to perform a gap analysis to assess the current standing of the organization in relation to accepted best practice methodologies. A gap analysis involves taking stock of what strengths and limitations exist within current corporate policies and processes, and then using that analysis to build upon processes that are in place, improving them to achieve best practice. Multiple and independent perspectives on some of the following questions can be helpful in planning a strategy for managing assets and developing processes.
Some considerations include:

- Is there a written SAM policy?
- Do we have a senior executive sponsor within the organization?
- Is there an authorized vendor/supplier list?
- Do we have a centralized license repository?
- Are unused licenses re-harvested?
- Can staff members install software on their own PCs?
- When a computer is retired, are the associated licenses re-harvested?
- Do we purchase software centrally?
- What is the process used for purchasing/approving new software titles?
- Do we understand and apply license entitlements such as Product Use Rights?
- Do we track usage to understand whether the optimal license types are being purchased?

With the gap analysis in hand, a strategy can be developed that focuses on starting where the most value can be gained. Organizations must look at SAM and license optimization priorities and then gain an understanding of the best practices that are needed to support them. Data collection—either manually to start or obtained from existing toolsets—will drive some specific decisions. If an organization has chosen to manage only the vendors where there is the largest software spend, then data will identify which vendors should be targeted. A history of audits will enlighten IT leadership as to which vendors are likely to pursue an audit in the future. Streamlined processes utilizing best practice methodologies, automation and proactive management based on business priorities make up the path to achieving meaningful results.

**Software License Optimization Maturity Levels and Business Value**

Flexera Software has defined a maturity model that can be used to advance enterprise goals vis-à-vis SAM and license optimization. Unlike other industry-defined models, the Flexera model specifically addresses business benefits at each level of maturity realizing that value can be realized by the business at each stage. Each level of maturity brings increasing return on investment (ROI) to the company.

![Software License Optimization Maturity Model](image)

**Introduction to the Flexera Software Maturity Model**

A successful, business-centric approach to SAM and license optimization occurs when an organization begins at Level 1 (Installed) and moves through each successive phase until it reaches Level 4 (Optimized) in the Flexera Software Maturity Model. Most organizations will take a period of time between 18 and 24 months to complete such an evolution though it can be accomplished much more rapidly with the right resources applied to its implementation and depending on the scope of the program, as discussed above.

**Installed—Maturity Level 1**

As an enterprise embarks on the journey of effective software asset management, the initial phase as defined by Flexera Software is Installed—Maturity Level 1. This is the discovery phase and is characterized largely by having the ability to collect hardware and software inventory to understand what’s installed in the IT environment. Processes are developed and discovery tools are deployed to ensure an accurate and ongoing inventory is maintained.
Moving up the Software License Optimization Maturity Curve to Drive Business Value

At this stage, organizations are just beginning to gain some visibility and control over their IT assets. They are typically not doing software license reconciliation—meaning comparing installations with purchased entitlements to understand their license position, so they would be at the mercy of the software vendor during an audit. Organizations at this level are often more focused on hardware asset management than software and may have good hardware asset lifecycle processes in place.

Characteristics of an Installed organization include:
- Discovery and baseline inventory of hardware and software assets
- Lack the ability to determine an accurate software license position for a given vendor
- Hardware asset management focus.

**Business Benefit at “Installed” Level**
Most organizations start at the Installed level in implementing a comprehensive SAM and license optimization program. Inventory data may be stored in multiple locations or systems and may even be collected manually. The goal in this phase is to automatically collect that data into a central repository and ensure its accuracy. The business benefit is preparedness for subsequent phases and understanding what is installed in the IT environment.

**Managed—Maturity Level 2**
The second level of maturity in the Flexera Software Maturity Model is Managed—Maturity Level 2. In a Managed environment, IT operations personnel have a solid inventory and have the ability to collect license entitlement (purchase order and contract) data, and yet are not able to proactively assess their software license position—continuing to operate reactively in the face of software audits, renewals and true-up events.

Organizations at this level have a manual process for reconciliation of software inventory against purchase orders and contracts. This manual procedure is impacted by human error and is so time consuming that it can only be done on an ad hoc basis when there is a critical event.

Managed is therefore SAM at a “point-in-time.” The strength of the Managed maturity level is that there are now some people and processes in place to deal with software asset management and license compliance issues. Asset management processes are beginning to evolve.

Characteristics of a Managed level of maturity include:
- Accurate hardware and software inventory stored in a centralized repository
- Refinement of procedures defined in the Installed phase
- Reactive and manual license reconciliation processes
- Have the ability to face software vendor audits and independently determine a license position (although it is almost certainly not optimized).

**Business Benefit at “Managed” Level**
Northrup Grumman established a central repository where none previously existed; capturing 60% of their software spend. The company substantially reduced its license liability risk in taking this first step and positioned itself for advancing up the SLO Maturity Model.

**Continuously Compliant—Maturity Level 3**
As a Continuously Compliant—Maturity Level 3 organization, the SAM function has shifted from reactive to proactive in nature. Inventory is under control and the organization has moved to being primarily compliant for most software titles. Inventory data contained is reliable and actionable.

Distinguishing aspects of an organization at this stage are represented by formality of procedures and automation of critical elements such as purchase order processing. Processes are defined and tools are in place enabling software purchase orders to be automatically imported from existing procurement systems to allow the capture of license entitlements (how many did I buy) in the asset management repository. Software asset management and license optimization tools are also in place to aid in the license reconciliation process so that basic license entitlements can be compared to installations on a continuous basis. This allows organizations to maintain license compliance and avoid unbudgeted audit true-up surprises.

Characteristics of the Continuously Compliant level of maturity are:
- Automation of key tasks such as software purchase order processing to capture license entitlements in a central asset management repository
- Proactive management of software assets, including the ability to generate a license position as needed and maintain license compliance
- Refinement of procedures defined in the Managed phase.

**Business Benefit at “Continuously Compliant” Level**
A major IT managed service provider took advantage of the FlexNet Manager Platform’s Stock Keeping Unit (SKU) Library with more than 500,000 software product part numbers to begin automating its reconciliation process by matching purchase order SKUs to software inventory. Similarly, Westpac implemented automatic reminders for upcoming contract expirations, adjustments, and reviews to drive contract renegotiations in their favor for cost reduction.
Optimized—Maturity Level 4
The enterprise that has achieved an Optimized – Maturity Level 4 enjoys the highest return-on-investment for its software license optimization program and has the most efficient utilization of its overall software investment. It is now dynamically, proactively and optimally managing software assets, taking advantage of license entitlements including vendor-specific product use rights to reduce license consumption and achieve software cost savings.

Organizations at this level also have the processes and tools in place to optimally select the most appropriate license types for their user communities, such as in the case of SAP user-based licensing. Risk levels are lowered due to best practices processes that have been refined to dynamically manage software assets and maintain license compliance.

Optimized enterprises can proactively assess the impact of IT infrastructure changes on licensing, including the financial impact, before the changes are actually made. Changes can involve hardware, software and virtual environment changes that can affect the organization’s license position.

Achievement of an Optimized level of maturity offers the organization the ability to better forecast future software needs through multi-variable and trend analysis. SAM and license optimization strategy and implementation are in alignment with business goals and objectives. Software assets can be dynamically shifted as licenses are reallocated to meet changing business needs.

Characteristics at an Optimized level of maturity are:
• Automated application of product use rights (second or portable use, multiple installations, backup/failover rights, virtual environment use, roaming use, etc.) to determine an optimized license position and reduce software spend
• Procurement and allocation of optimal license types (e.g. SAP named user licenses) to best meet the needs of the organization at the lowest possible cost; in the SAP case, this is based on the ability to perform detailed usage data collection and analysis
• Optimization of license counts and application mix to minimize denials of service and maximize software utilization (applies to high cost, high value engineering and technical applications that use concurrent licenses)
• Proactive contract management to ensure best terms and conditions for purchases and renewals based on accurate information, including usage data and trend analysis
• Significant automation of asset management tasks to increase accuracy and operational efficiency.

Business Benefit at “Optimized” Level
Success in the Optimized phase is measured by reduced software spend. Examples of companies that have achieved this level of maturity include: a global conglomerate that realized more the $25M in savings from optimized management of Adobe and Microsoft products; a consumer packaged goods company with savings of $30M on SAP and Oracle licenses; and a defense contractor that has realized $10-12 million savings per year for two years using FlexNet Manager Suite.

Flexera Software’s FlexNet Manager Suite for Enterprises
FlexNet Manager Suite for Enterprises is the market leading solution for software asset management and license optimization. FlexNet Manager Suite provides a comprehensive solution that includes discovery and inventory collection for hardware and software assets, hardware asset management, software asset management, license compliance, license optimization and contract management. The Suite provides entitlement based license management and optimization to enable organizations to reduce ongoing software licensing costs and maintain continuous license compliance.

The foundation of the FlexNet Manager Suite is FlexNet Manager Platform which provides extensive hardware and software asset management (HAM and SAM) capabilities for managing desktop, laptop and server hardware, and software from more than 14,000 vendors.

Key Platform functionality includes:
• Discovery, Inventory and Application Recognition across multiple platforms (Windows, Linux, UNIX, MAC OS); Application Recognition Library identifies more than 110,000 software products
• Automated Purchased versus Installed License Reconciliation; SKU Library contains more than 500,000 software product part numbers to automate the process
• Contract Management
• Oracle database discovery, inventory and license management
• ‘What If’ Analysis to measure the impact of changes in the IT environment on licensing
• Cognos based Business Intelligence for SAM, trend analysis and reporting

FlexNet Manager Platform provides the breadth and depth of asset management capabilities that allow organizations to achieve ‘quick wins’ and build the credibility of your software asset management and license optimization program. The Platform enables organizations to:
• Consolidate applications and vendors to maximize volume discounts
• Collect application usage data to expose under-used software and re-allocate those licenses to reduce new purchases at true-ups and renewals
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• Leverage usage data to reduce maintenance on unused software and/or versions that are no longer covered by vendor support
• Reclaim licenses from retired hardware to defer new license purchases
• Maintain continuous license compliance to minimize audit cost and risk

Flexera Software Enables Business-Centric Planning and Execution for Managing Software Assets
• Volume Discounts—through advanced inventory management that consolidates applications and vendors across the enterprise.
• Reduction in Software Spend—leverage product use rights to minimize license consumption; identification of optimal license types. Reduce software spend by 5 to 30% per year.
• Maintenance Cost Reduction—Identification of unsupported versions of software removing those copies from maintenance agreements. Application usage analysis to uncover unused and under-used software to find candidates for maintenance cost reduction.
• License Recovery and Reallocation—Recovery of unused licenses and licenses allocated to retired hardware.
• Audit Avoidance—Minimization of audit cost and risk through continuous license compliance.

Leverage Existing Systems and IT Investment
FlexNet Manager Platform integrates with many existing IT systems, including third party discovery and inventory tools, configuration management systems, procurement and ERP systems, HR and Active Directory systems to collect the data needed for asset management and license optimization.

FlexNet Manager Platform provides out-of-the-box Integration with the following systems for inventory and usage data:

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</thead>
<tbody>
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<td>Microsoft SCCM / SCCM 2012</td>
<td>Citrix XenApp, XenDesktop</td>
<td>Oracle</td>
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<td>Microsoft Active Sync</td>
<td>Altiris</td>
<td>IBM Tivoli End Point Manager (BigFix)</td>
<td>BMC ADDM &amp; Marimba/BladeLogic</td>
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Software License Optimization Solutions
FlexNet Manager Suite license optimization solutions—FlexNet Manager for Adobe, FlexNet Manager for IBM, FlexNet Manager for Microsoft, FlexNet Manager for Symantec, FlexNet Manager for SAP Applications, and FlexNet Manager for Engineering Applications—enable organizations to implement multiple software license management and contract optimization strategies that save time, help ensure continuous license compliance and reduce costs by:

• Applying license entitlements, such as product use rights, to optimize license consumption based on contractual agreements; Product Use Rights Library contains license entitlement information for critical vendors including: Microsoft, Adobe, IBM, Symantec and SAP. The Product Use Rights Library is a key differentiator of the Flexera Software solution
• Utilizing license prioritization to drive intelligent allocation and minimize license consumption
• Tracking detailed usage of SAP software to automatically determine the optimal User License type for each user, frequently resulting in a lower cost structure for SAP licenses going forward.
• Optimizing the license count and application mix for engineering applications that use a concurrent license model

Figure Four: FlexNet Manager Platform Out-of-the-Box Integrations with 3rd Party Tools
Additional functionality of the FlexNet Manager Suite helps customers to position themselves for a business-focused approach to software asset management and license optimization. Some of these features are:

**Workflow Management**
Process development based on best practices is central to a mature SAM and license optimization program. As processes are defined beginning with the **Installed** phase, the Flexera Software Workflow Manager solution enables users to easily implement a workflow that maps to the process definition and automates key tasks to improve operational efficiency. Using Workflow Manager, users can also improve IT service levels and the end user experience.

**Reporting and Analytics**
Reporting and analytics are at the heart of aligning business needs with implementation of a SAM and license optimization strategy. The FlexNet Manager Platform offers IT executives a dashboard, the ability to perform “what if” analysis and further analytic capabilities through its integration with the IBM Cognos Business Intelligence engine.

The executive dashboard provides an “at a glance” capability to quickly assess areas of compliance concern. It provides IT leaders with high level information that can be used for decision-making around the reduction of license and maintenance expenditures. Similarly, it raises the visibility of products that require additional license purchases in order to remain in compliance and avoid audit-related fees and penalties.

“What if” Analysis allows organizations to simulate changes to be made to the IT environment, including hardware, software and virtual machine changes, to assess the impact on the license position. This capability allows organizations to proactively manage software assets and maintain license compliance in highly dynamic datacenter server environments. What If Analysis supports all server license models, including those from Oracle, IBM and Microsoft (processor-core based, PVU, etc.).

The FlexNet Manager Platform includes Business Intelligence capabilities as well for further analysis of software usage compared with contracts. Users are able to look at software multi-dimensionally and evaluate software usage in a variety of ways with the primary objective of forecasting future needs.

**Flexera Software Consulting Services**
Professional services are often the key to advancing complex IT strategies. Hundreds of customers have utilized our Software License Optimization solutions to ensure continuous compliance with software license agreements and to optimize their software spend – often realizing savings of 5-30%. Flexera Software Global Consulting Services has helped many of these customers with robust consulting, implementation and training offerings that help plan and implement a mature SAM and license optimization program to leverage best practices and achieve business outcomes. Our experts are fully versed in asset management best practices as well as the functionality of our FlexNet Manager Suite solutions. They apply proven methodologies that result in thorough planning, sound design, and smooth implementation of enterprise Software License Optimization programs.
Services include:

- Software Asset Management & License Optimization ROI Workshop
- Software Asset Management Planning and Design Workshop
- License Position Snapshot Service
- FlexNet Manager Platform Implementation Service
- And a number of other design, implementation and training services

Summary
Reducing software spend is an imperative for organizations of any size—an initiative that can substantially impact bottom-line results in a short period of time. Defining and implementing a strategy for SAM and license optimization, however, is not a simple task nor can it be accomplished without the right toolsets in hand. Challenges are many with the sheer magnitude and diversity of software products, license models and license agreements creating a complicated management environment. Accurate and current inventory, purchasing controls and an understanding of the variations in software licensing schemes used in the market all contribute to the task of implementing a business-centric software license optimization strategy.

The benefits of a mature SAM and license optimization program are far reaching. A solid program will help organizations avoid and/or successfully endure software audits while minimizing unbudgeted true-up expenses. Cost reduction can also be achieved by fully leveraging license entitlements and optimizing the selection and allocation of license types needed by the end users in the organization. Software license optimization offers the visibility and control needed to manage software assets throughout the entire software lifecycle. A mature asset management solution incorporating workflow process automation, trend analysis and advanced reporting is critical for success.

About Flexera Software
Flexera Software is the leading provider of strategic solutions for Application Usage Management; solutions delivering continuous license compliance, optimized usage and maximized value to application producers and enterprises. Flexera Software is trusted by more than 80,000 customers that depend on our comprehensive solutions from installation and licensing, entitlement and compliance management to application readiness and software license optimization - to strategically manage application usage and achieve breakthrough results realized only through the systems-level approach we provide. For more information, please go to: www.flexerasoftware.com