Integrate Software License Optimization and IT Service Management to Increase Efficiency and Reduce Costs
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Executive Summary
The task facing IT professionals today is complex and multifaceted. IT is charged with delivering the services the business needs at agreed-upon service levels across an increasingly complex and continually changing IT infrastructure. This infrastructure includes physical, virtual, cloud and mobile resources, some of which reside outside the enterprise. The enterprise relies on that infrastructure to drive the efficiency and innovation needed to ensure long-term business success.

To meet the challenge, IT organizations are deploying IT service management (ITSM) solutions. These solutions provide sophisticated tools that implement and automate a number of IT processes based on best practices. ITSM solutions help IT increase its efficiency and effectiveness in keeping the IT infrastructure healthy and performing at the required service levels. By increasing the productivity of the IT staff, ITSM solutions also help drive down costs.

But the pressure to contain costs is relentless. Software accounts for up to a third of total IT spend, and software licenses account for a substantial portion of that amount. Unlike hardware, software can’t easily be seen, so IT organizations often lack the information and processes needed to gain insight into and optimize their software license positions. This often results in license overbuying and waste. Consequently, software licenses present an opportunity for significant cost reduction.

The problem is that software licenses are complex and involve complicated terms and conditions such as vendor specific product use rights. To address the problem, many organizations are employing Software License Optimization solutions. These solutions provide innovative technology that gathers comprehensive data about hardware and software installations, application usage, software purchase agreements and license entitlements, and reconciles this data to generate an optimized license position. With these solutions, IT can manage software licenses with the same
rigor as it manages the delivery of business services and further drive down costs.

ITSM and Software License Optimization solutions have evolved somewhat independently. However, the business processes they automate and manage are closely related and IT organizations are beginning to recognize the value of integrating them. Integration enables IT organizations to drive efficiency, increase productivity and put a lid on rising IT costs.

This paper provides an overview of the capabilities of ITSM and Software License Optimization solutions and describes how the enterprise can integrate them to eliminate waste, increase efficiency and reduce costs.

Challenges and Solutions
IT organizations in most enterprises today face numerous challenges related to both ITSM and Software License Optimization. With respect to ITSM, the staff is responsible for maintaining agreed-upon service levels across an increasingly complex IT infrastructure.

IT organizational structures compound the challenge. The traditional siloed structure inhibits collaboration among IT teams, hindering their ability to create cross-functional processes that drive efficiency gains. Merger and acquisition activities add to the problem because IT often doesn’t have the resources to integrate the technology assets of acquired companies.

ITSM solutions are enabling IT professionals to meet the tough challenges they face. With these solutions, the staff can integrate and automate processes that span multiple IT and business disciplines across the enterprise, increasing efficiency and productivity. Consequently, IT can deliver services at the quality levels mandated by service level agreements (SLAs).

Some ITSM solutions include basic software asset management (SAM) capabilities. As with traditional SAM tools, these ITSM solutions provide insight into what software assets are in the environment and may also keep a count of the number of software licenses purchased. This is needed to support some of the core ITSM business processes. However, such capabilities are insufficient to maintain software license compliance and optimize spend across the software estate as they do not provide the capabilities needed to gain an accurate picture of the enterprise software license position, let alone to optimize that position. As a result, many enterprises are overbuying or overusing licenses and are not even aware of it. Some enterprises are overbuying in one area, such as geography or vendor, and overusing in another area. In any case, the result is higher costs and increased risk.

Software License Optimization solutions address the need for greater visibility and financial control of software assets. These solutions contain in-depth information on software vendor contracts, product use rights and associated license models — information that is far more comprehensive than that maintained by ITSM-SAM solutions. Software License Optimization solutions leverage this information through automated processes. These solutions help IT utilize licenses to the maximum extent allowable by license agreement terms and conditions, and ensure that the enterprise has the optimal license quantities and types to meet the needs of its users at the lowest cost.

Integrating Software License Optimization with an ITSM solution and enabling the two solutions to share data enhances the capabilities of both. Integration delivers extensive Software License Optimization capabilities that support ITSM processes while enabling organizations to drive down software costs and eliminate waste in the form of unused or underused applications. Integration also provides the Software License Optimization solution with deeper visibility into the makeup of the IT environment, allowing greater accuracy in the optimization process.

ITSM, A Strong Foundation
IT service management is a process-based practice that aligns the delivery of IT services with the needs of the enterprise, emphasizing benefits to business users. ITSM involves a paradigm shift, from managing IT as stacks of technology components to focusing on the delivery of business services using proven best-practice processes, such as those outlined in the IT Infrastructure Library (ITIL®) guidelines.

As Figure 1 illustrates, a comprehensive ITSM solution provides numerous functions that help IT design, deploy, operate, maintain, support and improve the delivery of
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business services. It simplifies, automates and integrates IT processes across the enterprise, leading to improved operational efficiency and lower IT costs. With an ITSM solution, IT establishes a single system of record that orchestrates and automates workflows across cloud, virtual, distributed and mainframe resources and throughout all areas of the business.

Configuration Management Database
A key component of an effective ITSM solution is a configuration management database (CMDB) that provides a single source of service-oriented configuration and relationship data across the enterprise. The CMDB consolidates silos of data to provide an enterprise-wide view of the IT infrastructure. This view shows the physical and logical dependencies of the resources and the relationships of the resources to the business services they support. Strong analytical capabilities parse and combine CMDB data related to software, deployments, cost and requisition to automate processes across ITSM disciplines and support management reporting.

An automatic discovery capability captures detailed information on the hardware and software assets that comprise the infrastructure, focusing on the relationships and dependencies among those assets. The discovery tool populates the CMDB with this information and keeps it up to date by continually scanning the infrastructure and recording any changes detected. The ITSM asset management functionality lets IT track these configuration items (CIs) across the enterprise through their lifecycles.

A well-architected CMDB is based on a federated architecture in which not all data resides in the CMDB. Some data remains in the source databases but is directly accessible by the CMDB. Federation permits responsible groups to maintain possession and control of their data without having to replicate that data in the CMDB.

A Framework for Software License Optimization
An ITSM solution may provide a SAM capability that addresses Level 1 and Level 2 of the 4-level Software License Optimization maturity model as shown in Figure 2.

• **Level 1.** The organization automatically collects hardware and software inventory data, performs application recognition and determines what is installed throughout the IT environment. Level 1 does not include license reconciliation in which purchasing data (basic entitlement) is imported and reconciled with the installation data collected.

• **Level 2.** The organization adds the ability to process license purchase order data and reconcile it with software installation data. But the reconciliation is typically done manually and on an ad hoc basis that revolves around software audits, annual true-ups and contract renewals. As a result, continuous license compliance is typically not achieved.

Software License Optimization, a Step Up to Higher ROI
As enterprises continue to be subject to software license audits and seek ways to improve efficiency and control costs, they realize that they need to mature their SAM and service management processes. At low levels of SAM maturity, software over spend on some applications and license compliance issues on others are quite common. A high level of SAM maturity requires additional tool functionality and data to achieve the maximum return on your software investment. A Software License Optimization solution collects the necessary data and provides the needed functionality.

Software License Optimization extends beyond traditional SAM to provide the information and automation necessary to proactively manage software consistent with vendors’ specific license models and associated product use rights. It
incorporates the strategies, processes and tools that enable IT to fully leverage license entitlements and maintain the optimal license quantities and types to meet user needs.

The ongoing data normalization, license reconciliation and optimization process performed by a Software License Optimization solution helps the enterprise maintain an optimized license position, minimizing license consumption and reducing ongoing software costs.

From Software Asset Management to Software License Optimization
Software License Optimization is based on two primary strategies:

- **Product usage.** There are two types of usage-based license optimization. The first is to track and analyze detailed usage data for specific types of license models. A good example of this is the optimization of SAP named user licenses; there are many different user license types at widely different price points (such as Developer, Professional User and Limited Professional User). The goal here is to determine the optimal named user license type that meets the needs of the user at the lowest license cost.

  The second type involves tracking basic usage of software (usually desktop applications) to determine if there are users that have not used the application for some period of time. The objective is to maximize license utilization by ensuring that all licenses owned are being used productively, before buying any new licenses. Software License Optimization automates the process of reclaiming unused and underused licenses and making them available to other users.

- **Product use rights.** The objective here is to ensure that the enterprise is taking maximum advantage of the product use rights granted by software license agreements. For example, the ‘right of second use’ means that a single license covers two installations of the application—desktop and laptop, for example. Other product use rights such as virtual use, DR/failover, and multiple installations (on the same device) rights provide the same type of benefit—the consumption of fewer licenses than the number of installations. Software License Optimization leverages use rights to minimize license consumption and eliminate unnecessary license purchases.

As Figure 3 shows, a Software License Optimization solution collects and maintains a wealth of in-depth data on software assets. This includes software licenses purchased (purchase order data), software installed and/or in use (inventory data), license entitlements (product use rights), and software contract data. The solution collects data from many existing IT systems including inventory tools, configuration management systems, procurement, ERP and ITSM systems.

The solution aggregates and normalizes this data — reconciling software inventory, purchase order, usage, and other information — to determine a license compliance position. The solution also streamlines and automates the process of applying product use rights, enabling the enterprise to optimize its vendor license position and reduce spending while ensuring continuous license compliance and a state of software audit readiness.
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With a Software License Optimization solution, IT can progress through all four levels of the maturity model, as shown in Figure 4, to achieve the highest level — Optimized, in which the highest return on investment is realized.

- **Level 3.** Organizations at this level automate the process of reconciling purchased licenses with installed software, determining exactly what software (publisher, title, version and edition) has been purchased, under what type of purchase agreement (such as EA, Select Plus or CLP) and whether a maintenance and support program is included. The result is an accurate license compliance position that enables the enterprise to maintain compliance and minimize audit risk.

- **Level 4.** At this level, organizations have best practice Software License Optimization processes and tools in place to dynamically and optimally apply product use rights to minimize license consumption while ensuring license compliance. In addition, usage based optimizations ensure organizations are purchasing the lowest cost license that meets the needs of their users. The result is a reduction in ongoing costs and risks and an increase in return on investment.

As the enterprise matures its software asset management processes, it increases its visibility and control of software licenses. The impact on IT spend, risk and return on investment is significant.

**Optimizing across the Software Asset Lifecycle**

An effective Software License Optimization solution operates across all phases of the software asset lifecycle.

(See Figure 5.) For example, many organizations are implementing enterprise app stores to empower business users to serve themselves when requesting software. This approach dramatically shrinks the time to fulfill requests while allowing IT to maintain control of the software procurement and delivery process. Here, the enterprise must ensure that an appropriate license is available prior to fulfillment of each software request. By integrating the Software License Optimization solution with the app store request and fulfillment process, the solution can ensure license compliance — without overbuying licenses.

**Figure 4. Software License Optimization Maturity Model.**

<table>
<thead>
<tr>
<th>Level 4: Optimized</th>
<th>Level 3: Continuously Compliant</th>
<th>Level 2: Managed</th>
<th>Level 1: Installed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automated entitlement based license management and optimization; Minimize license consumption and software spend</td>
<td>Automated purchased vs. installed license reconciliation; SAM processes to manage contracts and maintain continuous license compliance</td>
<td>Perform purchased versus installed license reconciliation on an ad hoc basis; point-in-time management of licenses and contracts</td>
<td>Identify software and hardware installed</td>
</tr>
</tbody>
</table>

**Figure 5. Software Asset Lifecycle**
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### Comparison of Software License Optimization and ITSM Capabilities

The table below shows the key capabilities of Software License Optimization and ITSM solutions. While there is some overlap, the two solutions solve different but closely related problems. And that's why there's value in integrating these two solutions— to achieve a level of service delivery, operational efficiency and financial control that is not otherwise possible.

<table>
<thead>
<tr>
<th>Capability</th>
<th>Software License Optimization &amp; Enterprise App Store Solution</th>
<th>IT Service Management Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Catalog and ITIL Process Delivery (Request, Change, Problem, Configuration, etc.) and CMDB</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>Definitive Software Library with Dependency Mapping</td>
<td></td>
<td>✅</td>
</tr>
<tr>
<td>Enterprise IT Asset Management: Contracts &amp; Contract Management</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>Integration with Discovery Tools</td>
<td>✅ (May also include its own discovery capability)</td>
<td>✅</td>
</tr>
<tr>
<td>Physical and Virtual Discovery and Inventory</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>Hardware Asset Management</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>Integration with ITSM Tools and CMDB</td>
<td>✅</td>
<td></td>
</tr>
<tr>
<td>Self-service Software Request and Approval Process with License Availability Check; Automated License Reharvesting Process</td>
<td>✅</td>
<td></td>
</tr>
<tr>
<td>Application Recognition and Data Normalization</td>
<td>✅</td>
<td></td>
</tr>
<tr>
<td>Automated Software PO Processing Utilizing SKUs and License Reconciliation with Software Installations</td>
<td>✅</td>
<td></td>
</tr>
<tr>
<td>Built-in Knowledge of Software License Models (device, user, processor/core, PVU, etc.)</td>
<td>✅</td>
<td></td>
</tr>
<tr>
<td>License Compliance Reporting</td>
<td>✅</td>
<td></td>
</tr>
<tr>
<td>Applies Product Use Rights to Optimize License Position</td>
<td>✅</td>
<td></td>
</tr>
<tr>
<td>License Management by Organizational Hierarchy—Cost Centers, Business Units</td>
<td>✅</td>
<td></td>
</tr>
<tr>
<td>License Modeling and Simulation (‘What IF’ Analysis)</td>
<td>✅</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Summary Comparison of Software License Optimization and ITSM Capabilities
The Power of Integration
Figure 6 shows how integration enables the ITSM and Software License Optimization solutions to share data, thereby enhancing the capabilities of both solutions.

Enhances ITSM
The Software License Optimization solution provides a wealth of in-depth data on the applications and licenses in the IT environment. This additional data permits the enterprise to continue to mature and improve ITSM processes. For example, the solution provides detailed data on the software titles installed on each device. The data enhances incident, problem, configuration, change and request management by enabling IT to:

- Extend the ITSM discovery capability with the ability to precisely identify installed software by title, version and edition; and to collect the data required for complex license models for vendors such as IBM
- Speed mean time to repair by providing a detailed list of software installed on each machine—helpful, for example, when there is a performance problem with the system
- Improve configuration management by bringing greater consistency across devices that have similar software installations

- Enhance change management by identifying the machines that are candidates for update when new versions of desktop or server software are released
- Facilitate the creation of a software product catalog by making a normalized list of software titles available to the CMDB

With its ability to reconcile license entitlement and inventory data, the Software License Optimization solution determines an accurate license position. It does this for a wide range of complex license models, taking into account vendor-specific product use rights (such as upgrade, downgrade, right of second use and virtual use) that help minimize license consumption. An accurate and optimized license position enhances ITSM in a variety of ways, including:

- Supports software request management by indicating whether the enterprise has a license available to fulfill a software request — ensuring license compliance at the point of request
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- Enhances change management with predictive what-if analysis to understand the impact of IT environment changes on software licensing, including the financial impact; changes can include addition of servers, addition of processors to a server, virtual machine moves, new software installations, etc.

- Supports capacity/demand management by enabling IT to determine the impact on license position of adding or virtualizing servers, or adding processors to a server

Software License Optimization solutions can also provide advanced reporting and trend analysis to enhance visibility and improve IT budget forecasting for software.

Enhances Software License Optimization

The Software License Optimization solution can tap the in-depth hardware and software inventory data provided by ITSM discovery tools and collect asset lifecycle data maintained in the CMDB to gain a richer, more detailed view of the assets in the IT infrastructure. For example, the solution can leverage the device ownership, device role (production, test, development, backup/failover, etc.) and device status (active, in storage, retired) data from the CMDB. Asset information, such as who “owns” what devices, enables the Software License Optimization solution to apply its built-in knowledge of product use rights to perform sophisticated license optimizations. Here are three examples:

- A user wants to run a particular application on both a desktop and laptop computer. The product use rights for that application include right of second use. The Software License Optimization solution automatically ensures that only a single license is consumed even though the application is installed on two devices.

- The product use rights include roaming rights for an application. The Software License Optimization solution leverages this information to ensure license compliance for corporate applications that are accessed via tablets and mobile devices.

- The Software License Optimization solution can leverage the device role data maintained by the ITSM solution. Server roles may include production, test, development, and backup or failover machines. Entitlements for a server application might vary depending on that server’s role. For example, a cold backup server may not require a separate license from the primary production server.

The Software License Optimization solution can also leverage ITSM data to gain visibility into the specifics of assets installed across the enterprise. For example, it can access the hardware asset status data that indicates whether an asset is active, retired or out of service. It can use this data to reclaim licenses from retired and out-of-service devices and reassign them to other devices such as new computers during a hardware refresh process.

Conclusion

ITSM and Software License Optimization solutions have evolved along parallel but complementary paths. Enterprises are realizing that the integration of ITSM and Software License Optimization is a natural progression of this evolution. By enabling these two solutions to interoperate and share data, enterprises can enhance the capabilities of both. With this combination, an enterprise can drive down costs even further and lower the risk of license compliance violations while ensuring that business users have the applications and service quality they need to continue to achieve business 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

About Flexera Software App Portal

Flexera Software App Portal is an enterprise app store that addresses the business need for rapid software distribution and users’ expectations of a consumer-like experience for accessing IT services in the workplace. The benefits in terms of higher end-user productivity and improved customer satisfaction are compelling. And the benefits don’t end there. Automating one-time software requests and enabling self-service operating system deployments and migrations save hundreds of hours of IT staff time.

In addition, App Portal provides enhanced visibility into software asset management that enables reclamation of unused software and avoids overspending on expensive enterprise software licenses. With the App Portal enterprise app store, IT maintains the control necessary to ensure compliance with licensing agreements and corporate policy while reducing software distribution costs and accelerating the consumerization of IT services.
About FlexNet Manager Suite for Enterprises

FlexNet Manager Suite for Enterprises is a comprehensive, proven Software License Optimization solution. With FlexNet Manager Suite, enterprises are tracking, managing and optimizing software licenses to:

- Reduce software costs and boost return on software investment
- Maintain continuous license compliance and minimize audit risk
- Better forecast and budget future software needs
- Improve IT operational efficiency

This advanced solution delivers three intellectual property libraries that contain in-depth information on applications, vendor agreements and license models:

- **Application Recognition Library.** Covers more than 125,000 commercial applications from 14,000+ software vendors across multiple platforms such as Microsoft Windows, Linux, UNIX and MAC OS.

- **SKU Library.** Includes more than 600,000 software product part numbers along with publisher, version, edition, and other product details

- **Product Use Rights Library.** Encapsulates vendor-specific software product use rights such as upgrade, downgrade, right of second use, multiple use, roaming use, virtual use and license mobility. Provides complex use rights for critical vendors including: Microsoft, Adobe, IBM, Oracle, SAP and Symantec.

FlexNet Manager Suite leverages existing discovery and inventory tools, as well as providing its own agent and agentless discovery technology. The suite discovers the applications installed across the enterprise and links them with the detailed data in the Application Recognition Library, providing world-class software identification that ensures understanding of exactly what software the enterprise has installed. Discovery captures the detailed information required for effectively managing the complex licensing of major business applications as well as a wide variety of engineering applications.

The Suite integrates with a variety of other systems. IT integrates with configuration management and inventory tools such as Microsoft System Center 2012 Configuration Manager, Altiris, IBM Tivoli, and HP Discovery and Dependency Mapping Inventory, allowing the import of inventory and usage data from these systems. It integrates with procurement systems to import purchase order data. It leverages the data in the SKU library to specifically identify the purchased applications and reconciles the purchase order data to the inventory data.

In addition, the Suite integrates out of the box with Flexera Software App Portal, the innovative Flexera Software enterprise app store solution. This integration brings together the software request and approval processes with the license availability check in the Platform to proactively maintain license compliance. An integrated and automated license reharvesting process maximizes utilization of existing software licenses to avoid over-spending on software.

**Integration with ITSM Solutions**

FlexNet Manager Suite and App Portal integrate with industry-leading ITSM solutions including BMC and ServiceNow. Integration is facilitated by out-of-box adapters that connect FlexNet Manager Suite to the ITSM Discovery tools, CMDB and Service Desk systems, enabling the Suite to share data bi-directionally with the ITSM solution. FlexNet Manager Suite and App Portal user interfaces are integrated into leading ITSM solutions to provide a single point of access for enterprise users. These integrated solutions allow organizations to enhance ITSM and Software License Optimization functionality, reaping all the resulting benefits that drive increased business value.

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Have Questions or Need More Information?

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