A Quick-Start Guide to Software Asset Management

EXECUTIVE SUMMARY

Enterprises of all types continue to heavily invest in software licenses and maintenance. In fact, according to Software Magazine, revenue for the Software 500 grew more than 16 percent in 2005 and 14 percent in 2004[1]. Given this level of expenditure, organizations should begin to rationalize their software investment while minimizing the risk of non- compliance with license agreements. While this discover and rationalization exercise typically requires near-Herculean efforts, new "quickstart" models are emerging which enable organizations to enjoy the full benefits of software asset management (SAM) practices, while also bypassing the complexity of full-scale IT asset management (ITAM) initiatives.

"By focusing resources and effort on the top 20 percent of your vendors, you should be able to manage about 85 to 90 percent of your total spending". —*Gartner*

Most organizations understand that opportunities exist to consolidate and rationalize the licensing, utilization, and maintenance of many enterprise software titles. For example, recent industry estimates show that companies are approximately 35 percent over-licensed for CRM applications. This represents wasted capital expenditures that cannot easily be recovered and ongoing maintenance fees that average 22 percent of the cost of the perpetual license. Though CRM software is often the subject of licensing studies, it represents a small percentage of enterprise software that is underutilized.

Exacerbating effective software license management is the constant threat of an audit from a vendor, Business Software Association (BSA), or the Federation Against Software Theft (FAST). In a recent survey more than 30 percent of respondents reported that their software licenses had been audited within the previous 12 months[2] The BSA actively publicizes the fines it collects and has even run banner ads on the Internet sites offering rewards of $50,000 for reporting illegally licensing software.

Combating these trends are effective SAM practices which are, in essence, a subset of broader

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ITAM. Unfortunately, most enterprises lack the experience and leadership to implement an ITAM initiative, much less drill down into SAM.

Most companies have implemented IT asset management (ITAM) programs with varying degrees of success. Gartner estimates that fewer than 25 percent of companies worldwide have an enterprise-wide life cycle asset management program than can proactively address risk, minimize costs and improve the operational efficiency of their environment.[3]

Gartner also predicts the following regarding the investment required to implement an asset management project and the return on investment.

Through 2010, customers that commit a minimum of 3 percent of their annual operating budgets to ITAM programs and tools can expect a 25 percent reduction in their total cost of ownership (0.8 probability).[4]

At a minimum, for an organization of 2,500 professionals, establishing a solid ITAM process will require 18 to 24 months (depending on the maturity of their current processes) and will require an ongoing investment of 3 to 5 percent of the annual operations budget for ITAM resources.[5]

Although a traditional SAM project can take significant time and investments, BDNA believes that several easy-to im can deliver significant results without requiring major process changes. The purpose of this paper is to introduce the BDNA Quick-Start Program for SAM, which delivers tangible cost savings while reducing the risk of non-compliance.

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Asset Management Implementation Challenges

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Implementing a traditional lifecycle asset management practice requires significant executive level support, project management skills, resources, and time as the outcome of an asset management implementation is usually a new set of processes and departmental responsibilities. As noted earlier, implementations also require a significant investment for processes creation and supporting tools.

Many organizations look to commercial software products to solve their asset management problems. Although many software vendors claim to offer a complete solution, Gartner asserts that "no single out-of-the-box solution exists for IT asset management."[6] Gartner also says that "however, implementing a sound ITAM program that includes a combination of people, processes, and tools is required to maximize IT investments and minimize corporate risks."[7]

Even though organizations can expect savings once an asset management practice is operational, many view these projects as requiring the same degree of project management skills and sophistication as implementing an ERP system. Most IT executives are all too familiar with studies indicating that the vast majority of IT projects fail or finish late and over budget, which adds to their resistance to implementing a lifecycle asset management project.

Most SAM "best practices" such as those documented by the IT Infrastructure Library (ITIL) and others state that a key step in implementing an effective SAM practice is to centralize procurement.[8] This requirement alone is usually difficult because most enterprises have decentralized it. In all likelihood, most organizations cannot centralize or reorganize their procurement functions easily or quickly even if they can justify the expense.

Even when centralized negotiated contracts are in place, it is often difficult to effectively reconcile purchases in a distributed procurement environment. There is a high probability of inaccuracy[9] for simple reasons such as different subsidiary names, asset management systems, and purchasing documentation "standards."

For these and other reasons, most IT organizations are hesitant to implement ITAM processes and fewer still implement SAM processes. Gartner predicts that "software asset management will remain an immature practice through 2007 (0.8 probability)".[10]

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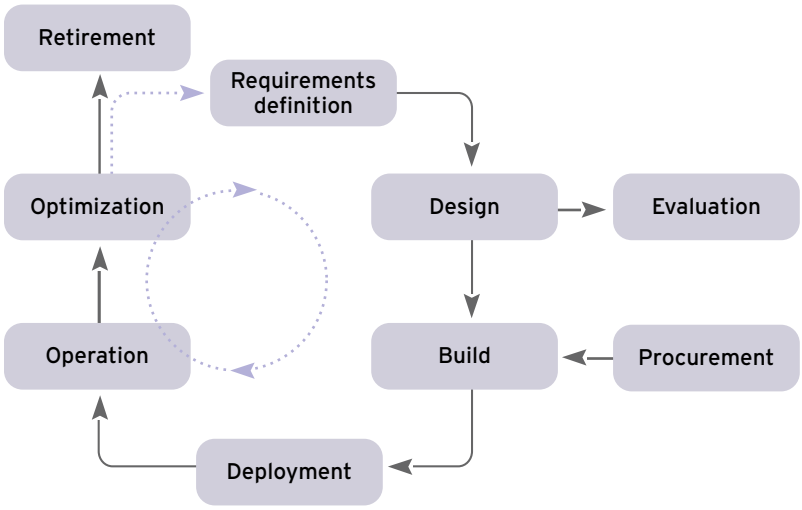
Software Asset Management Defined

Complicating the implementation of SAM is that definitions vary from simple to complex. Many mandate significant process changes.

For example, ITIL defines 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."[11] ITIL specification of SAM indicates that it is significantly more complex than managing hardware assets.[12] See Figure 1 for an illustration of the processes required to implement SAM.

FIGURE 1: Processes Required to Implement SAM[13]



Microsoft's definition of SAM focuses on licensing as a process that "protects your organization's software and helps you recognize what you've got, where it's running, and any licensing overlap."[14] Microsoft prescribes four processes to implement SAM:

1. Perform a software inventory.
2. Match software to licenses.
3. Review policies and procedures.
4. Stay the course.

BDNA defines SAM policies and processes designed to maintain an accurate software portfolio inventory that is reconciled with purchasing and license data. This approach to SAM lays a foundation for optimizing and rationalizing their software investment while minimizing non-compliance risk. BDNA believes that SAM is more than ensuring license compliance. As enterprises of all types continue to spend significantly on software, SAM should help to determine exactly where savings can be achieved. Unlike large lifecycle SAM implementations, BDNA believes that significant savings and risk reduction are possible through focused quick-start projects that do not require major process changes.

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The Quick-Start Approach to SAM

Gartner offers organizations the following pragmatic advice for implementing a SAM program. "By focusing resources and effort on the top 20 percent of your vendors, you should be able to manage about 85 to 90 percent of your total spending".

In working with IT organizations for the last five years, BDNA has concluded that the following four steps for the top 20 software vendors should easily reduce software license and maintenance expenditures at least 25 percent, while ensuring compliance.

1. Compare license data to actual inventory. The comparison should reveal any license inconsistencies, maintenance contracts that can be eliminated, and the full range of redundant software titles.

2. Analyze installed software titles and cross reference both usage data and licensing terms. The outcome of this step should reveal where there are opportunities to consolidate instances of enterprise software and remove underutilized desktop software.

3. Analyze installed software titles and cross reference version and age. During this stage, many no-longer supported individual installations of major titles will be discovered.

4. Analyze installed software titles for redundant functionality. In many cases, several software titles provide similar functionality. By creating standards and monitoring compliance and progress over time, it should be possible to reduce complexity and total cost of ownership (TCO).

This straightforward process for analyzing a software portfolio does not require major operational changes as a prerequisite for this type of analysis. Armed with the information discovered during the execution of these four steps, IT executives can make fact-based decisions about any process changes that may be necessary in their unique environments.

Many organizations find it more practical and efficient to perform these four steps annually rather than invest in major process changes to implement lifecycle asset management.

This white paper will now discuss steps one and two in more detail, as these lay the groundwork for delivering significant ROI in months, as well as creating a foundation for more SAM processes.

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Step 1 Comparing Licence Data to Actual Inventory

To determine the level of software compliance around major software titles, and to reconcile installed licenses to purchase records, organizations must periodically conduct a license reconciliation project. Though this exercise may initially seem trivial, most IT executives discover that a "single source of the truth" for either actual inventory and/or purchasing records does not exist.

Software asset data typically exists in different "silos" including:

- **Discovery products:** There are dozens of commercial products, freeware, and "homegrown" products in this category, including products that execute discovery on a subset of the IT infrastructure. Leading commercial products include Microsoft SMS®, Tally Net.Census, Tivoli Configuration Manager, Altiris, and HP OpenView. Each product is typically used by an IT technical support organization to help it manage an individual component such as desktops, Windows servers, routers and switches, and UNIX servers. Most organizations have implemented four or more different discovery tools, and there is usually little, if any, integration among them.
- **Asset management repositories:** These include products such as CA Argis, Remedy Asset Management, and Peregrine AssetCenter. Many IT organizations use fixed asset management systems from SAP or PeopleSoft and even rely on storing data in Microsoft Excel®.

Purchasing and software license data is also distributed and tends to be stored in asset management repositories, fixed asset management systems, and spreadsheets. As a result, organizations also often look to vendors and resellers to provide licensing data, although the accuracy of these files can widely vary according to Gartner research.

After data sources have been certified as reasonably accurate, the next step is to reconcile data between sources. This process is time consuming and error-prone because the data is usually incomplete, inaccurate, and rife with technical descriptions.

For example, data from a computer software reseller usually contains line items representing orders received from a customer organization. Figure 2 show actual file contents from a major software reseller.

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FIGURE 2: Software Asset File Contents from a Reseller

Date	Manufacturer	Product Description	License Type	License Details	Amount
6/28/2005	IBM	IPLA Lotus Team Workplace U MP LIC W/MNT (EU,LN)	License Only	Contractual License & Maint	384

In this example, the reseller reports that the customer bought 384 licenses of Lotus Team Workplace, including four years of maintenance, under the IBM® International Program License Agreement. A reseller file may have thousands of similar line items containing cryptic information for each purchase of a license and maintenance agreement.

Physical inventory records from a product such as Microsoft SMS can identify installed software products, but often the product description is only somewhat similar to the invoice description. The problem is exacerbated when matching the data against internal purchasing records because the sales documentation is usually incomplete.

In recognition of the difficulties that can plague a seemingly simple stepwise process, BDNA has developed a solution to automate this process. Figure 3 displays a chart produced by BDNA's Software License Reconciliation software where purchasing records in Ariba and discovered installations in Microsoft SMS for a product called Crystal Ball are reconciled. The key used to ensure a "hard match" was to exactly match the requestor name with the computer user name. BDNA also uses fuzzy logic techniques to report partial and possible matches.

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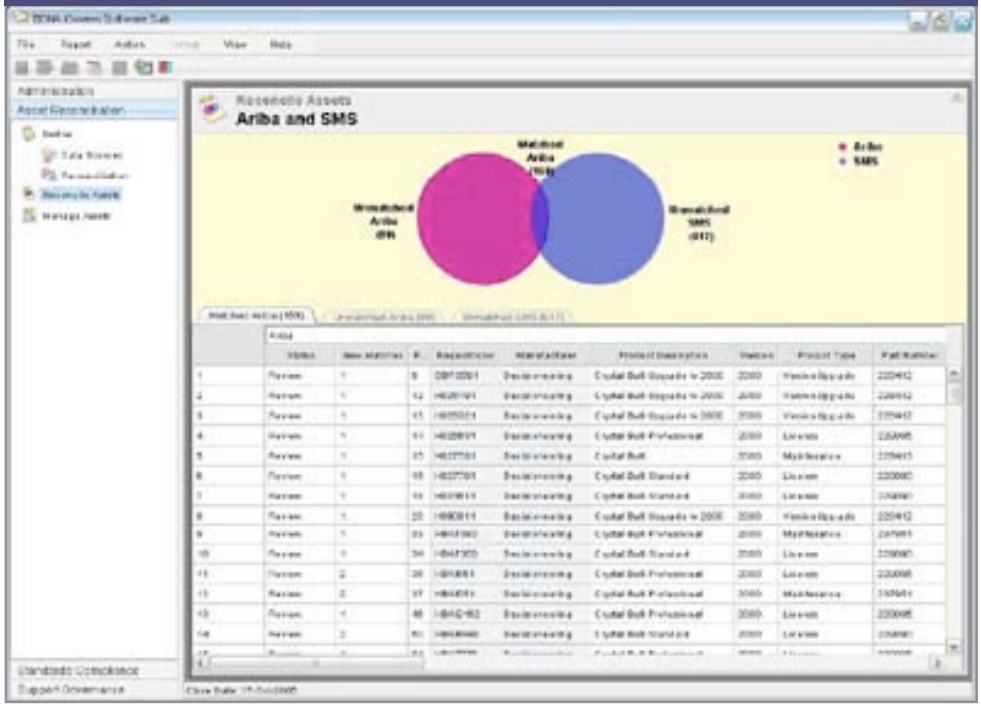
FIGURE 3: Chart Produced by BDNA Software License Reconciliation



In this example, the BDNA Software License Reconciliation software matched a subset of the installations of this software title. The Venn diagram shown on the computer screen above indicates three things:

1. Of the 260 installation purchase requests stored in Ariba, only 160 were actually discovered.
2. Almost 100 installations of *Crystal Ball* stored in Ariba could not be found in the SMS datasets. Typically, this means that the software has been removed from the desktop but hasn't been decremented as a used license in Ariba. Alternatively, it could mean that some desktops have not been scanned by SMS.
3. Microsoft SMS discovered more than 600 copies of *Crystal Ball* that had not been requisitioned through Ariba. Therefore these installations were not included in any license counts.

By periodically reconciling software license data for major software titles, organizations can ensure that they are in compliance. Gartner provides the following guidance on when to reconcile software licenses.

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When to Verify: Most companies pay annual maintenance and support to the software vendor. This is an excellent time to ensure your inventory count including names of products), reflecting the name at purchase, variations over the years, current inventory by name and license model, and maintenance and support by line item". [15]

If there are major variances at the completion for the reconciliation, the variances can be investigated and records can be brought up-to-date. In this example, the organization quickly discovered that it had not properly accounted for a significant number of installations. Obviously, it was not using the Ariba system to control the requisitioning of installations – leading to the need to update the requisition process.

The next step for the example enterprise would be to reconcile the Microsoft SMS More information on BDNA Strategic Services is available at http://www.bdnacorp.com/prodassetrec.shtml.

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Step 2 Analyzing Software Usage

Analyzing software usage has become fairly common in the desktop environment through agent-based tools such as Microsoft SMS 2003, but it is more difficult to accomplish in server environments.

An analysis of enterprise license usage data can positively impact software spending in several ways:

1. Reduction of annual maintenance fees for installed software titles.
2. The opportunity to defer the purchase of additional user license purchases.
3. The ability to prepare for software licensing changes resulting from dual and multi-core CPU processors.

Software vendors treat maintenance revenue as an annuity and have pricing models of anywhere from 15 to 30 percent. Unfortunately, many organizations continue to pay annual maintenance bills without knowing enough about the status of software installation and the usage – and the savings potential these areas represent.

Software vendors are increasing their revenues by more than 14 percent annually,[17] indicating that organizations are buying new software licenses very rapidly. Given decentralized procurement, it is likely that new software licenses are being purchased without utilization analysis, resulting in underutilized software instances and unnecessary costs.

Finally, software usage has become a pressing issue as software vendors such as Oracle and IBM announce new licensing requirements for dual-core CPU servers. For example, Oracle has traditionally licensed its software by CPU but with the advent of dual-core processors, is now charging 75 a license for each core.[18] These new practices can easily increase licensing costs by 50 percent or more. It is also likely that increasing numbers of enterprise software vendors will adopt similar licensing uplifts.

By analyzing actual software usage, IT and purchasing executives can develop strategies to consolidate software instances, remove redundancies, and leverage their existing software investment before making additional software purchases.

Most organizations, however, struggle to accurately identify the software in their server environments and therefore cannot begin to analyze software usage information.

BDNA offers a solution for identifying software installations and instances on the Windows, UNIX and

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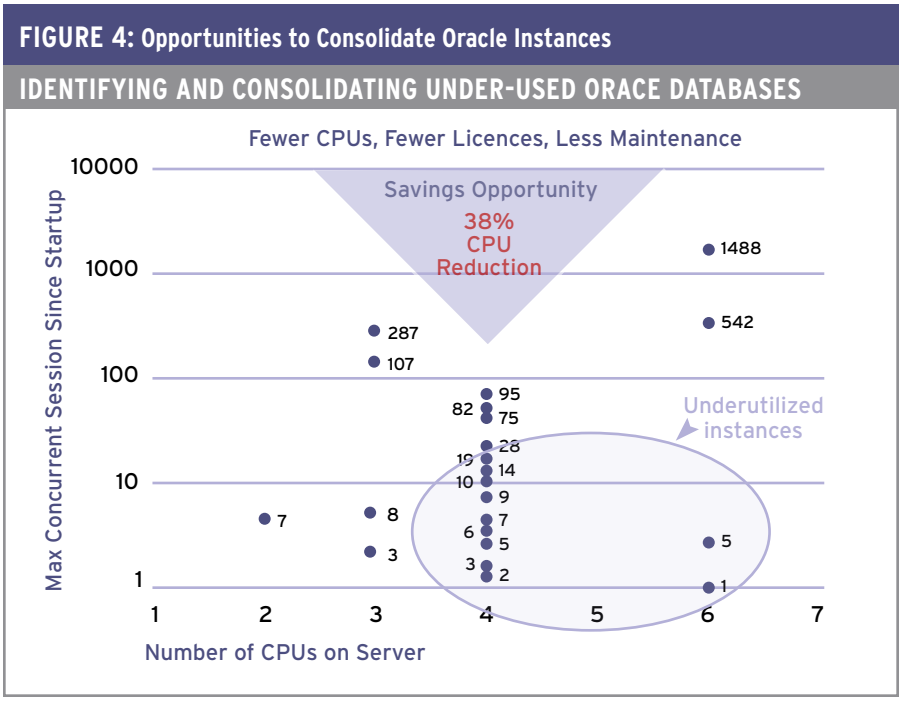
Linux platforms through the use of advanced non-intrusive and agent-free discovery techniques. Using the BDNA Inventory Consolidation solution, IT executives can not only discover enterprise software titles but also analyze actual usage data through the use of the flexible business intelligence functionality included in the solution. Additionally, BDNA provides expert on-demand Strategic Services to identify enterprise software installations, analyze usage data, and make recommendations for consolidation strategies.

More information about BDNA's advanced solution for asset discovery and analysis is available at http://www.bdnacorp.com/prodinvtconsol.shtml

More information on the BDNA Enterprise License Optimization strategic service is available at http://www.bdnacorp.com/sol_licopt.shtml.

For example, Figure 4 was created by a BDNA Strategic Services consultant for a client, Motorola, who wanted to consolidate their Oracle instances. Because Oracle licenses by CPU, the analysis looked at each instance by actual usage and the number of CPUs on the instance server.

FIGURE 4: Opportunities to Consolidate Oracle Instances



This chart highlights underutilized Oracle instances running on 4-way and 8-way processors that could potentially be consolidated with other instances.

Using the BDNA Quick-Start approach, combined with the discovery and usage analytics in BDNA Inventory Consolidation, Motorola was able to reduce their Oracle instance count by 75 percent – resulting in millions of dollars in savings.

For more information, please refer to the Motorola case study is available at http:// www.bdnacorp.com/resource.shtml

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Best Practices Going Forward

While implementing a lifecycle asset management process continues to the proposed by analysts, vendors and standards organizations, IT organizations may find that periodically executing the four steps of the BDNA Software Asset Management Quick- Start program will yield significant cost savings and avoid the need to undertake a major lifecycle asset management project.

To accomplish significant savings, BDNA recommends that organizations complete steps one and two, including the following for their top 20 software vendors:

1. Execute a software license reconciliation annually, well in advance of annual support and maintenance fees being due
2. Amend license agreements to require software vendors to provide an annual license inventory at least 60 days prior to the renewal of annual support and maintenance agreements.
3. Analyze enterprise software usage data and cross reference licensing data periodically – well before new license agreements are executed or maintenance bills are due.
4. Use the results of these exercises to determine where process changes are required to minimize variances going forward.

[1] http://www.softwaremag.com/L.cfm?Doc=2005-09/2005-09software-500

[2] Gartner Research Note, Asset Management Best Practices: Confirm Software Inventory, 31 May 2005 Jane B. Disbrow

[3] Gartner Research Note, Management Update: Predicts 2005: IT Asset Management Adds Value, Lessens Risk, 10 November 2004, Frances O'Brien, Jack Heine, Alvin R. Park, Frank DeSalvo, Jonathan Mein, Jane B. Disbrow

[4] Gartner Research Note, Management Update: Predicts 2005: IT Asset Management Adds Value, Lessens Risk, 10 November 2004, Frances O'Brien, Jack Heine, Alvin R. Park, Frank DeSalvo, Jonathan Mein, Jane B. Disbrow

[5] IBID

[6] IBID

[7] IBID

[8] ITIL Software Asset Management v1.0 Office of Government Commerce (OGC) 2003

[9] Gartner Research Note, Asset Management Best Practices: Confirm Software Inventory, 31 May 2005 Jane B. Disbrow

[10] IBID

[11] ITIL Software Asset Management v1.0 Office of Government Commerce (OGC) 2003

[12] IBID

[13] ITIL Software Asset Management v1.0 Office of Government Commerce (OGC) 2003

[14] http://www.microsoft.com/resources/sam/what.mspx

[15] Gartner Research Note, Management Update: Predicts 2005: IT Asset Management Adds Value, Lessens Risk, 10 November 2004, Frances O'Brien, Jack Heine, Alvin R. Park, Frank DeSalvo, Jonathan Mein, Jane B. Disbrow

[16] Gartner Research Note, Asset Management Best Practices: Confirm Software Inventory, 31 May 2005 Jane B. Disbrow

[17] http://www.softwaremag.com/L.cfm?Doc=2005-09/2005-09software-500

[18] http://www.oracle.com/corporate/press/2005_jul/multi-coreprocessorpricingpolicy.html

[19] Gartner Research Note, Management Update: Predicts 2005: IT Asset Management Adds Value, Lessens Risk , 10 November 2004, F. O'Brien, J. Heine, A. Park, F. DeSalvo, J. Mein, J. Disbrow