

Is SMS Still Right for Your Organization? - Relevant CIO Considerations

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**ENTERPRISE MANAGEMENT
ASSOCIATES**

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CIO Summary

When comparing systems management solutions, IT should ensure that the currently installed choice offers the best fit for the organization. If the organization has a Microsoft Volume License Agreement (VLA), it is important for IT to understand the agreement. Sometimes Microsoft products are automatically selected without evaluating alternatives because of the illusion that Microsoft software is free even though it is not.

Enterprise Management Associates (EMA) examined two software management products, LANDesk® Management Suite 8 from LANDesk Software and Microsoft Systems Management Server (SMS) 2003, specifically with regard to the selection criteria listed below—taking into consideration cost savings, risk reduction, and enhanced security. The remainder of this paper discusses EMA's findings from this comparison, including LANDesk and SMS product differentiators, an examination of the Microsoft volume licensing program in more depth, and exploring the savings gained by implementing software management products.

EMA finds that when IT begins looking for a systems software management product, several fundamental selection criteria must be considered.

- Architecture and Installation
 - Simplified complexity of architecture, installation, and management
 - Support for a heterogeneous environment
- Reduced FTE
 - Automated installation of required management agents
 - Ability to simultaneously send application and security software packages to one or more computers
- Reduction in maintenance and operations costs
 - Efficient reporting mechanism for asset inventory
 - Manage and control compliance of software licenses
- Security monitoring
 - Routine query for vulnerability patches from a trusted provider, and automatic downloading for distribution to affected machines

- Automated repeatable processes
 - Gather and routinely update hardware and software inventory on any/all managed computers (desktops and/or servers)
- Enhanced customer support
 - Ability to manage mobile computers that intermittently connect to the network
 - Allow managed computers to be remotely controlled by systems management personnel
 - Provide additional support for hand-held devices

LANDesk and SMS Technological Product Differentiators

In enterprises with a majority of Windows-based systems—desktops and servers—SMS has gained a large following. While SMS is a technologically sound product, delivering good basic Windows-centric management functionality, it is often chosen without comparison to other products because it appears to be free or low-cost. For some, adoption in the enterprise may have more to do with the economics of Microsoft's volume licensing strategy (discussed in a later section), than with technological differentiators (listed below).

Because of the operational and cost implications of deploying such a system, IT must weigh the pros and cons of any systems management product. Table 1 shows a side-by-side comparison of the two products with respect to EMA systems management criteria.

Weighing the Costs of a Systems Management Solution

Table 1 shows that LANDesk is able to deliver more functionality than SMS, while it is quickly installed and easier to use. However, IT organizations continue to use SMS. One of the reasons for this is the perception that SMS is a lower cost solution. Upon further examination, one finds that this is not necessarily the case.

Why SMS is Adopted in the Enterprise - Volume Licensing Agreements (VLAs)

The Microsoft OS is installed on over 700 million computers worldwide. Join that ubiquity with Microsoft's clever volume licensing program, its channel sales efforts and technical certification program, as well as free, 120-day evaluations of any Microsoft software—it is easy to see why SMS is well positioned and readily adopted by IT.

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Criteria	SMS 2003	LANDesk® Software Management Suite 8
Complexity of architecture, installation, and management	** Complex to architect, deploy, and maintain. Uses numerous servers (added cost). Active Directory (AD) schema extension required.	**** Architecture is simpler. Typically uses a smaller number of servers for comparable setups. No AD schema extension.
Automatically detect and install client agents	*** Must be initiated by the administrator. Two client types: Advanced (Windows 2000, XP and Server 2003) and legacy.	*** Must be initiated by the administrator. All Windows as well as various non-Windows clients (Mac, Linux) are supported. Products that are heterogeneous out of the box do away with the need for 3rd party products significantly reducing costs.
Low-bandwidth support	** For advanced clients only	**** Product has low-bandwidth support designed in
Organize managed computers into groups	** Ships with pre-defined “collections.” New groups can be created with a non-intuitive query tool.	**** Ships with several pre-defined groups. Easy to create new groups.
Software/Hardware inventory	*** An administrator initiated process. Due to software application upgrades, SMS may show more than one installed product for a given computer.	**** An administrator initiated process. Inventory filtering shows an accurate software inventory.
Inventory reporting	**** Over 120 pre-defined reports in a Web-based report viewer. Custom reports can be created—requires knowledge of SQL.	**** Many reports available. Custom reports can be easily created.
Non-computer inventory	(0 stars) Very difficult and non-intuitive process to create a custom MIF.	**** Very easy process.
Software license monitoring and management and compliance	** Monitoring and management, but no compliance.	**** Monitoring, management and compliance are supported along with a software usage report.
Vulnerability patch downloads from a trusted provider, and updating of clients	*** Through downloadable additions to SMS. Patches are downloaded from Microsoft, and then sent through SMS software distribution using pre-built packages and wizard-driven processes. Vulnerability scanning included when inventorying clients.	**** Vulnerability scanning included when inventory is scanned. Automated out-of-box patch downloading from LANDesk. Patches are sent through software distribution.
Software distribution	* Uses a non-intuitive and potentially error-prone process. The package preparation/delivery process needs to be simplified.	**** Drag and drop packages to the group to which the package is to be deployed. Easy to use.
Mobile computers	*** Uses Microsoft BITS technology, package installations perform byte-level checkpoint restart.	**** Package installations perform byte-level checkpoint restart. Also dynamic bandwidth throttling throughout package installation.
Remote control	*** Windows only.	**** Heterogeneous client support

Table 1 – Essential systems management functions—product differentiator notes (continued on next page)

* = poor, ** = satisfactory, *** = good, **** = strong

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Criteria	SMS 2003	LANDesk® Software Management Suite 8
Hand-held support	* But Microsoft has plans to eventually support Pocket PC only.	**** Hand-held support for a variety of devices is built into the suite.
Heterogeneous support	* Not without 3rd party software	**** Out-of-the-box support for Macintosh, Novell Netware, UNIX, Linux, Windows
UI easy to use, intuitive	** MMC-based UI is not intuitive. Microsoft is redesigning the UI.	*** UI requires some training, but is well laid out and intuitive.
Cost ¹	** 10,000 node deployment - \$750K - \$1M	** 10,000 node deployment - \$750K - \$1.5M
Software vendor support	*** Premier support specialists (PSS) provided through a separately priced support contract ²	**** Granular, robust, people-oriented support

¹ Costs depend on the extent of professional services required, training costs (i.e. cost of courses, certification tests, flights to training center, meals & lodging). Additional costs also include 3rd party snap-ins to SMS or other modules for LANDesk. Planners should also consider help-desk and desktop support training costs.

² Microsoft Premier Support Services are recommended for enterprise-class support of Microsoft server products. Generally, a mixture of a Technical Account Manager (TAM) time coupled with an incident package for PSS engineers is bundled into the agreement. Agreements can run into the hundreds of thousands, even millions of dollars. If already in place, SMS engineers can utilize incidents and TAM time at no extra cost.

Table 1 – Essential systems management functions—product differentiator notes (continued on next page)
 * = poor, ** = satisfactory, *** = good, **** = strong

Windows IT pros often gravitate to and advise IT leaders to purchase and install a Microsoft product. This may or may not be good advice, depending on the product, its evolution in the Microsoft development lifecycle, and the quality of its competitors. When coupled with the erroneous idea that Microsoft’s products are inexpensive or free, the purchasing decision often defaults to Microsoft, though in many cases it might not be the best choice.

It is important to understand the actual expense of a Microsoft software acquisition. Many IT organizations have a VLA with Microsoft, making SMS appear to be a logical software management choice from a financial perspective and causing the organization to go forward with an SMS installation.

However, for a fair comparison decision-makers should consider the following points when comparing LANDesk with SMS:

- 1) Microsoft has a partner program and is supportive of its “partner ecosystem.” Partners often develop superior products that work in place of Microsoft software. LANDesk is a Microsoft partner developing systems management products that are

more robust out-of-box than SMS, yet completely Windows-friendly.

- 2) Microsoft is comfortable with a Windows-only niche. Microsoft applications generally do not play well in heterogeneous client environments without additional expensive partner eco-system support. LANDesk is widely heterogeneous out-of-box.
- 3) Considering the cost to procure and deploy, Microsoft implementations are often on par with competitors’ costs, though IT may believe otherwise. It is a misnomer to say that Microsoft software is inexpensive or free. LANDesk implementation costs compare with SMS.

Expense of Microsoft Software

Under a Microsoft VLA, for a few hundred dollars per computer IT organizations obtain a completely licensed desktop—each of which is entitled to have the latest OS and Office software installed, as well as the necessary Client Access Licenses (CALs) allowing users to connect to Windows servers and applications in the enterprise. Large organizations pay millions of dollars so each desktop can be utilized with impunity.

When IT negotiates a Microsoft VLA, the CALs required for the clients are contractually agreed to by Microsoft

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representatives and at least one decision-maker in the company (not necessarily the CIO). CALs vary in price, depending on the application—SMS being one of the most expensive, but a likely deployment candidate. In negotiating a VLA, the SMS CAL will typically be bundled into the price. As a result, once the VLA is in place, in order to purchase a complete SMS system, IT only needs to justify the purchase of the additional inexpensive SMS server licenses. CALs represent hidden costs that are not usually factored into the total costs by IT when implementing a systems management system. Microsoft VLAs and CALs are not typically accounted for because the licenses are already paid for, so the budget that must be approved for purchasing the additional server licenses is much smaller and easier to get approval for—making an SMS deployment appear to be very inexpensive compared to other products.

A closer examination of the actual costs reveals interesting numbers. Consider the example in Table 2 of an enterprise with 10,000 computers (nodes), installed in an SMS architecture consisting of one primary and two secondary sites. (All numbers approximate—prices vary with the size of the enterprise and class of volume license agreement)

VLA Cost (The agreement will likely include 10,000 CALs for regular Windows servers, Exchange, and SMS, with a few SQL Server CALs) @ \$300/node	\$3M
SMS CALs portion of the volume licensing agreement, 10,000 nodes @ \$65/node	\$650,000
SMS Server licenses, 10 servers @ \$500/server	\$5,000
SQL Server licenses, 3 servers @ \$500/server	\$1,500
Windows Server 2003 licenses, 10 servers @ \$500/server	\$5,000
Ten 2U servers, nicely equipped for SMS @ \$8,500/server	\$85,000
Cost of SMS deployment minus SMS CALS	\$96,500
Cost of SMS deployment including SMS CALS	\$746,500

Table 2 – General costs of an SMS deployment—organization with a 10,000 node VLA

IT decision-makers must understand the expense of CALs, or the actual cost of their SMS deployment may be significantly underestimated. In addition to the costs listed above, add \$2,500 per SMS administrator per week

of training, professional services, and costs for a project manager. Clearly the implementation could easily hit the \$1M mark, not including partner eco-system SMS plug-in software, as well as soft costs such as reduced CPU cycles that other non-SMS servers encounter when they begin acting as an SMS helper server (servers not requiring an SMS license, but playing a role in the SMS architecture).

Most comparisons claiming SMS is significantly lower in cost than LANDesk do not take the CALs into consideration. IT leaders entering into new VLAs must carefully consider the CALs they need—especially with respect to their intent to keep SMS or deploy an alternative systems management product.

For IT organizations already involved in a VLA, the important thing to remember is that *it is the VLA owners who determine the CALs they want*. At VLA re-negotiation time, IT leaders can opt to substitute *different* CALs not originally included. For example, those who want to deploy a non-Microsoft systems management product can replace the SMS CALs with Microsoft SharePoint Portal (SPS) Server CALs. By switching to SPS CALs, the organization’s VLA is well utilized, costs are reduced, and IT is free to implement an alternative systems management solution if it so chooses.

In summary, the salient factors for IT leaders to consider regarding the actual costs of SMS are:

- What is the total cost of the current SMS system *including* CALs?
- What are the choices if IT decides to use an alternative systems management solution to SMS?
- Is the CAL mix in the VLA well understood by all involved personnel?
- Is there a desire for IT to accomplish other Microsoft initiatives (such as SPS), for which there are currently no existing CALs under the VLA?
- Can the VLA be re-negotiated (potentially even in the middle of the contract term) to attain a different mixture of CALs?

Savings Opportunities for IT Organizations

In terms of real dollar savings, the three most important operational gains IT can expect when deploying systems management products are:

- Software and hardware asset inventory

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- Packaging and deployment
- Remote control

A discussion of each area follows including how SMS accomplishes the goal compared to LANDesk, and ROI factors for IT leaders to gauge expected savings in implementing a systems management solution.

Software and Hardware Asset Inventory

A complete, trustworthy, automated, routinely updated hardware and software asset inventory provides the ability to make confident decisions with regard to the computer fleet—in terms of replacement plans, software licensing, and maintenance costs. This fulfills one aspect of ITIL Service management.

SMS easily and routinely collects hardware and software inventory. But, the process of collecting inventory in SMS is a multi-tiered discovery/installation/inventory proposition. Inventory reporting has been simplified in SMS 2003, yet custom reports might be difficult to generate. If an application is upgraded, SMS may report that a client has more than one copy of software installed. Inventory report viewing permissions can be controlled for security purposes.

LANDesk inventory gathering and reporting are automatic, with records neatly displayed, and the risk of inventory misreporting reduced. Estimated costs are a few hours of an administrator's time. Inventory report viewing permissions can be controlled for security purposes.

ROI Factor: IT can expect tremendous ROI gains with hardware and software asset management. Consider inventorying a 10,000 node enterprise in which there are 40 people, each of which has 250 nodes that he or she is responsible for. If each person makes \$65/hour (including benefits), estimating 1 hour per computer, the costs for a yearly, manual inventory activity are \$650,000.

250 nodes/support person * 40 support persons * \$65/hour/support person * 1 hour/node inventory	\$650,000
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Automatic inventorying can completely eliminate these costs.

Packaging

Packaging software is accomplished by using a software packaging program or script to wrap up an application, then using software distribution technology to deliver the package to computer groups for installation. Risk is

mitigated because packages install uniformly across all computers in the group. Security is quickly maintained because vulnerability patches can be sent *en masse* to systems. The packaging function maps to ITIL Support and Service Management best-practices. Architecting a thorough packaging process is the key to realizing ROI from software packaging, rather than simply letting the systems management administrator develop and distribute packages.

Packaging in SMS is an arduous, esoteric process. After a package is created, a complex advertisement, delivery and installation process is undertaken. Packages are stored on repository servers, taking up potentially unplanned-for disk and CPU resources. Packages are sent to groups of computers that are defined by using a tool called the Query Generator. Because of the non-intuitive user interface of the Query Generator, it is possible that some computers will be unintentionally included in the collection used for distribution, and will receive the package, even though they should not have been targeted. Others may be left out. The entire SMS packaging concept requires significant preparation and use of administrator and packager time, not to mention server resources.

Where extra costs are involved with SMS packaging, they are diminished with LANDesk. Collections of computers are created by simply naming a new group folder, then dragging groups of computers to the folder. The LANDesk packaging architecture does not require package repository servers that are required by SMS: LANDesk uses peer-to-peer and multicast package delivery technologies that minimize overall bandwidth usage and use of server resources (hardware and personnel) for package delivery. LANDesk is able to accept legacy packages of any type, whether EXE, MSI, Ghost, others.

ROI Factor: Consider the savings that can be realized by using a comprehensive packaging approach, as compared to installing software manually. Assume a situation where 40 desktop support technicians are charged with upgrading 10,000 computers from Microsoft Office XP to Office 2003. The technicians each have a volume license Office 2003 CD, which is unlocked so a license key is not required. Each technician must personally visit 250 nodes. The installation takes a minimum of 2 hours per desktop, and the technicians earn (including

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benefits) \$75/hour. The cost of deployment for one package: \$1.3 million.

40 technicians * 250 installations/technician * 2 hrs/installation * \$65/hour	\$1,300,000
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If instead, a package developer prepared an Office 2003 package and, after testing, passed it off to the LANDesk administrator to deploy to those 10,000 computers, the costs might be as follows:

One-time cost of package creation lab (test servers, reference computers, imaging software)	\$50,000
Package development – 40 hours @ \$95/hour	\$3,800
Testing – 24 hours @ \$95/hour	\$2,280
Administrator costs to deploy – 8 hours @ \$95/hour	\$760
Total package delivery costs	\$56,840

The difference in ROI between the manual and automated distribution is remarkable—one significant package push returns far more than the *total* LANDesk implementation costs. Developing a packaging lab and staffing it with one or more full-time packagers, creates an ITIL-centric repeatable process.

Remote Control

Remotely controlling client computers is useful for help-desk and desktop support technicians, as well as systems administrators. Remote control allows help-desk managers to get closer to *first-call resolution* Key Performance Indicators (KPIs) they have in place and maps to ITIL support management best-practices. Desktop support and help-desk technicians use the technology to minimize costly on-site visits to fix a problem, which is particularly important for highly distributed organizations. This allows IT managers to establish realistic KPIs in their Service Level Agreements (SLAs), and to deliver better service to their constituents.

Remote troubleshooting tools have long been a fundamental part of SMS—an adequate but not robust toolset. SMS remote tools have issues such as sessions “hanging up.” Additionally, Microsoft customers have experienced issues using remote tools to access client computers that have more than one Network Interface Card (NIC) because remote tools connects to the first NIC that it finds in the network connections stack. SMS

2003 remote tools can use Windows XP clients’ Remote Assistance capabilities, or connect directly to non-XP computers. Connectivity using SMS remote tools can be a problem, especially across large geographic expanses.

LANDesk® Management Suite has a solid remote control tool that is able to connect to any client computer, including non-Windows computers. Some LANDesk customers have purchased the product specifically for its remote control capabilities as a replacement for SMS remote tools that were not working well in their environment. Remotely connecting to and controlling non-Windows computers may require additional training on the part of those using the tool—another project cost that should be noted.

ROI Factor: Remote control allows IT to leverage help-desk and desktop-support efforts, while potentially reducing the number of required FTEs. Industry averages dictate that IT organizations should maintain one desktop support technician for every 200 client computers. This means that an enterprise of 10,000 computers should have a minimum of 50 desktop support technicians, not including the help-desk. Consider the cost of customer care for a 10,000 node enterprise where there are 5 help-desk and 50 desktop-support technicians all of whom are making \$65/hour. The annual costs to maintain this customer care operation, *not* including staff equipment and tools are stratospheric: \$7,436,000.

55 support technicians * \$65/hour * 2080 hours/year	\$7,436,000
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If IT leaders could enhance customer support through the use of remote control tools, while reducing the growth of FTEs, customer care costs could be significantly reduced.

EMA’s Perspective

There are many systems software management product choices. Microsoft’s SMS, while gaining maturity and widely deployed, is architecturally complicated, uses complex methodologies to carry out operations, and its actual cost is not as inexpensive as it may first appear. Its shortcomings are in the areas where the highest ROI can be realized by enterprises: packaging, remote control, and asset control.

LANDesk is a company strictly focused on systems software management. As such, its designers and developers have carefully thought out each component

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of their suite, to bring about a comprehensive product suite. When approached from the standpoint of ROI and the cost savings that a systems management product brings, combined with mitigating risk through automated processes, securing the environment through automated patch control, and standardizing on systems processes, LANDesk offers robust capabilities when compared to SMS.

About LANDesk

LANDesk Software is a leading provider of system and security management solutions for desktops, servers and mobile devices across the enterprise. LANDesk Software enables thousands of organizations to easily deploy and use end-to-end management solutions. LANDesk Software is headquartered in Salt Lake City, Utah, with offices located in the Americas, Europe and Asia, and can be found on the Web at <http://www.landesk.com/> or by calling 1-800-982-2130.

About Enterprise Management Associates, Inc.

Enterprise Management Associates, Inc. is the fastest-growing analyst firm focused on the management software and services market. EMA brings strategic insights to both vendors and IT professionals seeking to leverage areas of growth across e-business, network, systems, and application management. Enterprise Management Associates' vision and insights draw from its ongoing research and the perspectives of an experienced team with diverse, real-world backgrounds in the IT, service provider, ISV, and publishing communities, and is frequently requested to share their observations at management forums worldwide.

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