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Software REFERENCE GUIDE

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What is a CDW·G Reference Guide?

At CDW·G, we're committed to getting you everything you need to make the right purchasing decisions — from products and services to information about the latest technology. Our Reference Guides are designed to provide you with an in-depth look at topics that relate directly to the IT challenges you face. Consider them an extension of your account manager's knowledge and expertise. We hope you find this guide to be a useful resource.

Software: Managing It as an Operations Asset

Strategic planning can reduce compliance risks, cut costs and boost productivity.

One of the ironies in this era of belt tightening is that government and educational organizations may be paying too much for software. They may be squandering funds on applications they don't even use. This is unfortunate as something as simple as effectively managing software can add value and save money.

So how do excessive software costs escape the glare of today's hypervigilant budget hawks? The answer is frustratingly simple: Software expenses can be difficult to track because software assets themselves are inherently difficult to manage.

Here's one example: An organization with a few thousand staff does the smart thing and buys a software license agreement for Adobe's Creative Suite 5. The popular software package includes everything from Photoshop and Illustrator to Flash Professional and Dreamweaver.

But then crunch time hits and a designer in the creative services department needs Illustrator pronto to meet a deadline. Understanding production schedules better than software license agreements, the department head gives the OK to download the stand-alone application from the web instead of pointing the staffer to the bought-and-paid-for site license. The result is overlicensing and excessive costs.

Situations like this are surprisingly common. In fact, the vast majority of organizations tend to overlook opportunities for reducing their software budgets by paring down excess licenses, says Lisa Erickson-Harris, research director at Enterprise Management Associates, an IT management and consulting firm.

"In addition to sitting on inventory that's not being used, they often renew those licenses just as a matter of routine," she adds. "Using toolsets that enable better control over software license excess, organizations can assure that expense goes right back into the budget as license counts are reduced and funds can be reallocated to the right places."

Over, Under and Out of Balance

Overlicensing	
Number of large organizations that overspend for data center software	30%
Underlicensing	
Underlicensing in the U.S. due to piracy	20% of installed software
Organizations audited by at least one software developer in 2009	56%
The Bottom Line	
Extent of noncompliance in organizations without a formal asset tracking system	30% of the software portfolio

Sources: COMPASS America; 2009 BSA-IDC Global Software Piracy Study, Gartner

Still, excess is only part of the issue. Poor software management also manifests itself in the form of underlicensing — the inadvertent (or perhaps intentional) act of paying for fewer licenses than is legally required. The consequences can be as costly as overlicensing if a developer stages an unannounced audit that results in legal action and fines.

Analyze these issues and it quickly becomes clear what's missing from this picture: a formal software asset management (SAM) strategy. IT managers have understood the need for decades but have been hard-pressed to find best practices and effective tools to help them manage software assets successfully.

The result has been ad-hoc SAM programs that focus only on specific manufacturer platforms or particular departments. Fortunately, with a little effort, IT managers can now say goodbye to incomplete and inconsistent software acquisition and management practices.

Centralization Is Critical

The first requirement is a change in mindset. Organizations need to embrace the notion that software should be managed like any other essential operations asset, such as PCs, servers or even human resources.

For example, few well-run organizations would risk managing their staff with decentralized HR operations in which individual departments develop their own hiring practices, benefit plans and pay scales. Such a setup would guarantee unmanageable costs, legal difficulties and inefficiency. When software assets aren't controlled by a central authority, organizations face those same risks.

Once an organization adopts a SAM approach, it quickly becomes apparent that the spreadsheets commonly used to track software licenses, version numbers, expiration dates and assigned users have run out of headroom. Under those conditions, finding the right balance between licenses and deployments becomes a roll of the dice.

Today, IT managers can swap their spreadsheets for centralized software asset management tools. These applications send software agents to every server and endpoint to automatically detect all the software being used and file reports that give managers a complete rundown of unused, underused, redundant and unlicensed assets.

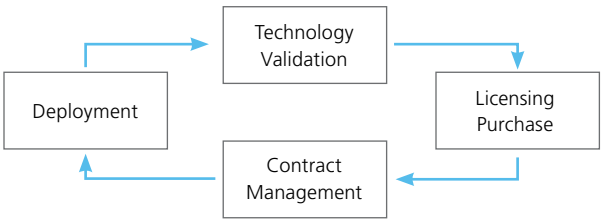
Build a Framework

IT leadership must also create a framework for constantly reaffirming that end users have the best applications available and that a formal plan is in place to patch, upgrade and refresh what is being used. That's the overall view, but the details can be devilish.

Software lifecycle management (SLM) practices can help to assure that organizations are fully utilizing the benefits of their agreements. SLM generally incorporates four steps that occur throughout a calendar year:

1. **Contract Management:** Create a baseline or reassess current software applications across the organization by checking each server and endpoint — simply reviewing license records is insufficient. SAM tools can relieve the burden of performing this review manually.
2. **Deployment Planning:** Evaluate the software currently in use to guarantee that it's the best choice for the organization's operational goals, and schedule manufacturer briefings and pilot projects to stay up to date with new technology.
3. **Technology Validation:** Review the organization's technology roadmap with department heads to determine requirements over the coming year.
4. **Annual Review and Licensing Purchase:** Choose the right contract option for each application. Is it more cost effective to buy individual software copies, various types of software licensing or perhaps an emerging software as a service (SaaS) alternative? The number of potential users and whether the software addresses a short-term or ongoing need will determine the best option.

Yearly Lifecycle Activities



To strategically manage software assets, organizations should adopt a four-step approach that runs throughout the calendar year. This will assure you have the right software at the right price to meet current operational needs, and that a roadmap is in place for meeting future requirements.

Organizationwide Benefits

Pairing a SAM application with a solid software license management program will provide the needed framework for taking control of software assets now and maintaining control as technology and operations requirements evolve over time. And that's good news, even beyond the IT department.

Such benefits will ripple throughout the organization. These can take the form of lower licensing costs, budget dollars saved and higher productivity from software innovations that keep staff working and collaborating more efficiently. ■

SAM: The Cure for Licensing Uncertainty

Proper management helps conquer the complexities of software agreements and maximize operations assets.

IT managers don't typically spend a great deal of time considering the possibility that they will be audited by a software vendor. The chances are slim. But the truth is it does happen and organizations need to be prepared for this possibility. Experts in the field of software licensing will tell you that very few organizations are able to quickly pull together the licensing data necessary to defend themselves when they are audited.

Purchasers have found that software publishers are enforcing their intellectual property rights more aggressively than ever, resulting in a growing number of audits or requests for organizations to conduct self-audits of their operations. In fact, industry experts say that some of the larger software manufacturers are now routinely examining the licensing practices of all of its major customers.

Fortunately, software users don't have to live in fear of regulatory risks or wonder if they're spending too much on licenses. A safety net is available in the form of software asset management. SAM is the process of effectively managing and optimizing the purchase, deployment, maintenance, utilization and disposal of software throughout the organization.

Effective SAM can end the mad scramble to gather licensing and usage information under the pressure of an audit request. Furthermore, it gives buyers a way to judiciously document their licensing and usage activities.

SAM: The Big Picture

Software management best practices are a maturing discipline. They have attained formal status from international standards groups such as the Information Technology Infrastructure Library (ITIL) and the International Organization for Standardization, whose ISO/IEC 1970 protocols spell out recommendations for relevant SAM processes and identification tags.

One of SAM's primary benefits is its ability to quickly produce an inventory of all the software products that are installed in an organization's computing environment. This can include a headquarter campus, satellite facilities and even the home offices of mobile staff.

Just as important, SAM processes can

Licensing Complexity

Formal software asset management is the antidote for what can be one of the biggest headaches in any IT manager's life: the sometimes mind-numbing complexities of software licensing. Licensing confusion can thwart even the best attempts by an organization to stay compliant and fiscally responsible.

It doesn't help that tech managers have to face these difficult challenges while doing their other full-time job — that being the one that keeps the organization operating at optimum levels of efficiency and productivity.

Software Complexity

What makes software licensing so complex? One reason is that software licenses come in so many varieties. Publishers may license some applications for individual devices, while others grant rights to individual users.

Some licenses are assigned for individual servers, while others cover a set number of users across an organization. Confusion has grown in recent years with the rise of multicore processors, server virtualization and blade servers.

So far there is little industrywide consensus as to how to license the software that runs on these devices, which leaves it up to the software buyer to research the individual policies of each manufacturer. Adding to the scope of the organization process is the sheer volume of applications that most organizations own.

Decentralized Purchasing

When individual departments or teams buy software to meet their own needs, it's nearly impossible to create an accurate headcount of all the titles, version numbers and license types that top-level managers are responsible for.

General IT flux can be another inhibiting factor. As tech refresh cycles constantly add or retire PCs, IT managers are challenged to know which software licenses should be retained, which should be upgraded and which replaced.

And the future may only get cloudier — literally. Cloud computing and software as a service agreements may eventually simplify licensing issues, but for now these evolving areas require extra attention.

generate reports that reconcile all existing license agreements with purchasing records and staff headcounts. This can help managers to immediately spot cases of over- and underlicensing.

Note: Don't confuse the process of software asset management with the growing number of SAM software applications which gather and report data essential for contract compliance and audit trails. While both serve a similar function, one could be considered a strategy and the other a tactic.

Financial Benefits

Audit fears are only one reason to think seriously about implementing a disciplined SAM strategy. The financial bottom line is another. Organizations that manage applications well often see significant reductions in their software budgets — sometimes in the range of 15 to 30 percent — according to research by the tech analyst firm Gartner.

For most organizations, this can represent a great deal of money. In fact, according to the experts, the amount saved can be substantially more than what can be saved via conventional hardware asset management processes.

Even if an organization never faces a software audit, SAM programs can help save budget dollars. The concept is to help managers get the best value from existing software assets at an acceptable cost and risk.

A SAM program can also help IT decision-makers make better spending decisions in the future. A program can quickly determine what software is installed, what software is needed and what isn't needed. Organizations are at a real disadvantage without this knowledge when it comes to software licensing and purchasing.

Overprovisioning

Many organizations incur unnecessary software costs in their IT operations simply because they buy too many licenses. Overlicensing often arises from a misguided attempt to avoid the costly ramifications of a software audit.

However, opting for a shotgun approach — rather than committing the time and resources necessary to develop a central SAM policy — can be costly. While compliance overkill may initially provide a feeling of safety, in the long run, overbuying thwarts attempts to bring greater efficiency and cost controls to the IT department.

Overspending may also arise from confusion about software licensing and the benefits it offers for even a relatively small number of seats. Note that it is common for organizations to pay for software licenses on a "per seat" basis. This allows a predetermined number of users to access the application at any given time.

Most large software developers, for example Adobe, CA, Microsoft, Symantec, Trend Micro and more, offer straightforward volume application licenses for a single price — sometimes for as few as five seats.

Because software buyers are making a significant commitment in terms of users and time — software license agreements typically

span one to three years — they're in a stronger position to negotiate price discounts than when they're purchasing licenses one at a time.

In addition, software manufacturers may offer technical support as well as other customer services as part of a software license agreement. This provides added value and serves as further incentive for end users to consider a software license option.

Because SAM reports show how often each application is being accessed and by whom, managers can compare these numbers with licensing records. Usage details may also uncover consolidation opportunities. For example, some staff may use only one or two of the core apps in a suite of products and thus may be better served by lower-cost alternatives with only the required capabilities.

If, on the other hand, a SAM report shows that too many people are using a particular application compared with purchasing records, managers can immediately take corrective action before they face an audit and any resulting penalties. SAM reports also assure that no staff violate internal licensing and security policies by downloading or installing unauthorized software.

Some organizations are also finding that SAM becomes a big help in the aftermath of a departmental merger. Software is not necessarily part of the due diligence that occurs prior to reorganizations. A SAM report provides up-to-date and accurate inventory with which to profile the new merged environment. Without it, IT managers may have only a vague idea of what applications and licenses will be part of the mix.

SAM Value

Formal software asset management, or SAM, is a multifaceted approach to better control of software assets. It uses a collection of formal policies and processes resulting in a number of benefits including:

- **Cost savings:** Lower costs are associated with purchasing and maintaining a software library and IT systems. By capitalizing on overall buying power with manufacturers and purchasing through software license agreements, many organizations are able to cut costs.
- **Risk management:** Operations and legal risks, related to improper software deployment, can be more effectively controlled with a SAM plan. Organizations also lower the chances of exposure to malware by ensuring only genuine software is deployed.
- **Good governance:** An effective plan can help an organization to better serve its constituents.
- **Disaster protection:** Manufacturers will often assist owners of software license agreements with disaster recovery assistance.

Source: Microsoft

Software as an Asset

Use of SAM can bring peace of mind. Thanks to the cost savings that often materialize as a result of better software management, many organizations get even more out of the bargain: money freed up for new IT projects and productivity-enhancing innovations.

Additional benefits include the disciplined software refresh schedules and licensing agreements that give end users immediate access to software upgrades. There's no question, a solid SAM strategy offers something every organization needs — knowledge of what's going on inside it.

SAM and PC Lifecycle Management

While software asset management is an important initiative in itself, many organizations implement it as part of a wider technology lifecycle management campaign. These are often centered around the PC, the most common and utilitarian technology in use at most organizations.

To effectively manage their PCs, IT administrators need to deploy a combination of best practices and software tools. This is called PC lifecycle management, and it has three key ingredients: performing asset management, which is taking inventory of

each PC, its technical specs and the software that is installed (where SAM comes into play); keeping track of warranties and maintenance agreements; and ensuring that staff are fully trained to use their computers and applications.

By deploying a PC lifecycle management strategy, IT departments can efficiently manage their PCs and software, reduce help desk calls, cut costs, and meet security and compliance requirements (many of the same goals of SAM). Through this effort, staff gain experience and the know-how they need to properly perform their jobs, and it helps ensure that the organization gets the most out of its IT investment.

With asset management, IT departments get a detailed inventory of PC and software assets throughout their lifecycle, from purchase to retirement. This provides IT administrators the information they need to effectively manage and support their PCs, and it helps control spending.

Asset management software tools let IT departments keep track of which computers are assigned to who and each PC's make, model and specific configuration (including processor, memory, hard drive space, operating system and software). The tools also keep track of warranty information and contract information if PCs are leased.

With all of this data housed in a central repository, the IT department can analyze the different types of PC makers, operating systems and software applications that are supported throughout an organization, and it can help IT administrators drive a PC and software standardization effort, which in turn simplifies help desk support and cuts costs.

Disposing of retired PCs is also part of the lifecycle, and asset management tools let IT departments keep track of the age of computers and when to retire them.

Warranties and maintenance agreements are another important part of PC lifecycle management. PC makers typically offer one-year warranties for new desktops and notebooks. Organizations need to decide whether to buy two-year, three-year or longer extended warranties that provide onsite or mail-in repairs.

Some warranties offer next-day service, while others have a turnaround time of three to five days. So there's a lot to track and stay on top of with all of these agreements.

Staff training is the third key part of PC lifecycle management. Training staff how to use new applications or new versions of existing apps is important because it reduces help desk calls and optimizes worker productivity.

This training also offers an avenue to teach people security and acceptable use policies, such as banning users from installing their own software on their computers. And it can help reduce security risks and prevent future computer problems. ■

Steps to Implement a SAM Plan

Build a roadmap to visualize the benefits and savings of software optimization.

Formally managing software can be a challenge. While everyone knows it is necessary, starting a program and sticking to it can be tough.

Fortunately, software asset management has matured to the point where dedication and discipline are made easier with an assortment of best practices. Plus, an increasing number of tools are available to keep the ultimate goals of licensing compliance and fiscal control on a steady course.

The Five R's of Software Management

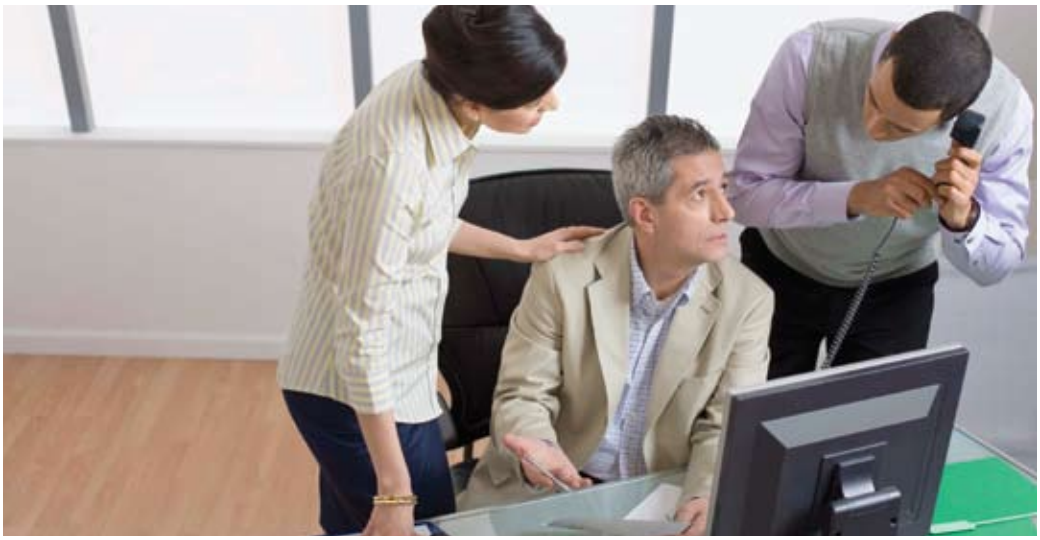
How do you begin managing your software? Start with these five steps that make up the software asset management process:

1. Review the current software environment, including who's using what titles.
2. Reconcile usage data with purchasing records to identify over- and underlicensing problems.
3. Reengineer purchasing and record-keeping policies to enforce managerial discipline.
4. Retool with appropriate products and services designed specifically for SAM.
5. Repeat steps one through four to make SAM an ongoing effort.

Here's a look at each step in more detail.

Step 1: Review the existing environment.

Start with an assessment that takes stock of current software installations by carefully documenting all of the programs loaded on desktop PCs, notebooks, mobile phones and other devices. The goal is to create a baseline of information that will provide a realistic picture of everything that's running — authorized or not — in the organization.



The baseline assessment provides other nuts-and-bolts benefits. Savvy IT managers will use it to rank the dollar value of their software assets by publisher to help them prioritize license reconciliation efforts tackled in subsequent steps. Asset groups that represent the largest software investments make the short list of those to evaluate first for legal and budgetary issues.

Step 2: Reconcile licensing records.

Use the inventory data from the previous step to perform a compliance check. Do this by comparing the application titles in use with official licensing purchase records.

For example, an organization with a staff of 100 may find that each individual's computer is running Microsoft Office. However, perhaps the organization has only purchased a 50-seat desktop license. Obviously, IT managers need to keep track of how many times they've installed the product versus how many licenses purchased.

Some agencies or schools may be surprised to find that their inventory contains programs not on their official records. There can be a number of reasons for this, including the unauthorized purchase of boxed software product or an original equipment manufacturer (OEM) version of software on a newly purchased computer.

It could also be because of rogue applications downloaded by staff without an IT manager's approval. All of these software surprises offer testament to the complexities of software management.

Undocumented apps are more than a tech support headache. They represent potential legal risks if they come to light during a software audit. Organizations are responsible for the proper use of the software. Liability for copyright infringement is attached to the software owner regardless of fault or knowledge.

Initially, it might seem that a quick comparison of license agreements to inventory in use would be enough. But best practices require IT managers to dig even deeper by probing their contracts to understand the usage rights granted for each application.

Most software licenses allow limited rights. For example, restrictions may be applied to the number of users, number of computers, number of CPUs, number of sites or may even indicate specific users by name.

It's not enough to just match documentation to installation. Keep in mind that possession of a license doesn't entitle unrestricted use of software.

This reconciliation step may seem tedious, but this is where organizations can begin to put their legal fears to rest — as well as uncover some cost-saving opportunities. This is where organizations discover if and where they have overlicensed or underlicensed. Such knowledge allows the IT department to make additional purchases where required to avoid noncompliance.

Step 3: Reengineer operations processes.

This step is where organizations can consider some fundamental changes to software acquisition and management practices. Start by creating software usage policies that are backed by underlying operations rules for requisitioning, acquiring, installing, reallocating and removing applications.

The overarching goal is to create a series of checks and balances by centralizing software purchasing. It's often best if a single authority can determine if the number of licenses and users are in sync — and that this ratio stays that way as staff size fluctuates and hardware is refreshed.

Centralized procurement also maximizes the opportunities for software licensing discounts. Acquisition policies also should formally prohibit staff from installing unauthorized software on servers or clients. And organizations should install monitoring tools that automatically uninstall rogue programs. IBM, Microsoft and SonicWALL are among the manufacturers that offer network monitoring software.

A number of resources exist to jump-start these process re-engineering efforts. Respected sources include the Information Technology Infrastructure Library and the International Organization for Standardization. The ISO and ITIL both lay out recommended processes for procurement, security and other areas. They both offer a variety of processes that organizations can use to establish control of their software environments.

Additional best practices and training resources are available from the International Association of IT Asset Managers. Incorporated in 2002, this organization is a professional association offering information to individuals and organizations involved in any aspect of IT asset management.

Organizations may also have a wealth of internal expertise to help them devise the right processes. Establish a SAM working group that includes senior managers, procurement specialists, sales staff, HR executives and legal counsel to develop an overall SAM game plan.

These groups should discuss the end-to-end processes and where there's potential for them to break down. This kind of dialogue will help determine what can be put in place to fix problems, as well as what organizations should be thinking about putting in place over the next year or so.

Step 4: Retool with dedicated SAM applications.

Software management tools, designed specifically for SAM, are now available to help IT teams with software assessments and analyses to improve software buying decisions. These products automatically provide the data needed not only to comply with license agreements but also to make strategic decisions about software purchases. They can give IT professionals valuable information that can help them make better use of their software dollars.

Software management applications provide reports on what software is used, how often it is used and by whom. After implementing, many organizations find that they are paying for more software packages than they've actually installed.

In addition, they may find that some products, while installed on end-user devices, are rarely or never used. On the other hand, organizations that find users are accessing more software than the organization has purchased licenses for can rectify the situation before a software audit triggers penalties. This data can include situations such as when an individual program sits idle long enough for it to become a retirement candidate.

Implementing a software management tool is a straightforward process. The infrastructure can often be installed in under an hour and an organization can be up and running in half a day. A scan can be conducted almost immediately. It's important to keep in mind that asset data improves over time. Organizations will want to take a close look at what the data looks like after several weeks.

Many organizations collect about a month's worth of data before doing any preliminary analysis. This is typically a sufficient amount of time to discover, validate, reconcile and aggregate data from a number of sources into a central repository for greater cost control and accountability.

The data reported by SAM tools depends on the organization's level of maturity or desired level of detail. Level one basically tells an organization what software assets it owns. Level two offers some value recovery. This may include, for example, discovery of unused software or the ability to move down to a lower (and less expensive) version of a software suite. And level three offers enhanced operational efficiency along with optimizing costs and risk mitigation.

Some SAM products allow organizations to add operations rules that, for example, alert managers if a staffer has not used a product in a given period of time. Therefore, the software may be safely removed from the individual's computer.

Besides eliminating unused software, organizations can utilize data from SAM tools to help make decisions about which packages to buy. For example, some SAM products can "look inside" suites to see which of the applications staff are really using.

This data may allow organizations to replace professional versions of suites with lower cost standard versions. In some cases, organizations have been able to move from suites to low cost, or even free, individual applications.

While software management products provide information on software usage, that information can also be used to make more efficient use of hardware. For example, some organizations ferret out computers that are rarely used, allowing for better deployment elsewhere in the facility.

Or a project to upgrade hardware, in order to accommodate new software upgrades, can be postponed. This can happen if the organization discovers that many staff members do not use the software which is being upgraded.

What's the state of the SAM application landscape today? Here's a sampling of some high-profile products:

- **LANDesk:** This vendor's asset management software tracks assets to help organizations develop an accurate picture of their software environment and map information about asset contracts, licenses and service agreements to specific computers or users.
- **Microsoft:** The company offers a family of asset inventory and management tools to help organizations control software assets. The Microsoft Software Inventory Analyzer (MSIA) is a free tool available for download that's designed as a starting point for SAM programs. MSIA creates an inventory of Microsoft software that is installed on a single computer or on multiple computers in networks with 250 or fewer computers.

In addition, the firm's System Center Configuration Manager and Microsoft Desktop Optimization Pack each include asset inventory services as part of their larger toolset of IT management capabilities. Microsoft also certifies solutions partners for SAM competency, enabling them to provide outsourced SAM services. These services may include quarterly or annual asset reviews, as well as onsite training and workshops to help staff comply with SAM policies.

- **Novell ZENworks Asset Management software:** This tool provides an accurate view of software installations and license compliance status. It integrates the asset inventory with software usage and license reconciliation capabilities that include automatic filtering for purchased versus discovered products, as well as for different versions, editions and suites.
- **Symantec Altiris Asset Management Suite:** This product provides IT asset discovery and tracking for hardware information, installed software packages and operating system settings. Prebuilt workflow templates automate common tasks plus operations processes, such as collecting information and providing follow-up notifications.

Step 5: Repeat the steps regularly.

Because software asset management requires some heavy lifting up front, organizations need to budget enough time to create a plan that will clearly identify the software license compliance situation. How much is enough depends on the size of the organization and its software investments. Government agencies and educational institutions should plan on it taking 12 to 24 months to build a comprehensive, centralized SAM program.

Just as important, IT managers need to remember the fifth R, and repeat each of the previous four steps annually. Organizations with quickly changing environments should review them more frequently. This means periodic reviews of software installations and usage patterns, spot checks to ensure compliance with organizational policies and ongoing SAM workshops for staff.

This represents a major commitment of resources, but it's a commitment that's becoming a fact of operations life. The ongoing cost to manage compliance, once the initial baseline survey and process changes have been completed, averages about $30 a year per computer. For organizations with 500 computers, that's $15,000. And what's the cost to an organization with a thousand computers? Budget $30,000.

This may sound like a lot of money. However, given the legal ramifications and the chance to uncover new money-saving opportunities, conscientious SAM may be one of the biggest bargains around today. ■

CDW's Software Asset Manager

IT managers have a number of options to help them successfully manage software assets. Among them is a SAM tool known as CDW Software Asset Manager, an IT auditing and license management solution.

Part of its appeal is its usefulness for a wide range of organizations. "The CDW Software Asset Management tool scales to all sized organizations," says Nicole Jesse, CDW software sales manager. "We see very large organizations utilizing it as well as small- to medium-size organizations with 100 to 300 seats."

Among its core strengths, CDW Software Asset Manager enables IT managers to conduct a comprehensive audit of their software environment. The program captures a complete inventory of every application that's running on network-connected hardware devices.

CDW Software Asset Manager finds the applications by releasing software agents to roam the network, analyze the software status of individual computers and then report the information back to a central database. Without CDW Software Asset Manager or a similar asset management tool, IT must spend precious time manually gathering and analyzing the information.

The tool then conducts an up-to-date reconciliation of installed applications and licenses by comparing audit data with official purchasing records. By accurately identifying, cataloging and tracking software usage, IT managers have the information they need to effectively manage their software assets for licensing compliance and budget control.

Additional analytical tools slice and dice data into reports that quickly show IT managers crucial data points. These can include identifying applications that have an inadequate number of licenses given usage levels or which programs incur unnecessary expenses from being overlicensed given the current staff size.

Other benefits of CDW Software Asset Manager include:

- **Software environment insights:** IT managers can readily see the status of all IP-addressable hardware, including servers, desktops, notebooks, network printers, switches and other devices. A baseline audit provides a full hardware and software inventory, along with the physical location of all assets.
- **Remote auditing:** All IT assets can be monitored anywhere in the organization, whether they're onsite or connected remotely to the network.
- **Multiplatform tracking:** Users can track all major enterprise platforms, including Microsoft Windows, Linux, UNIX, Apple Mac OS X and AIX, as well as Windows Mobile devices such as smartphones and PDAs.
- **Accuracy and timeliness:** Up-to-date asset records enable easier reconciliation of the software inventory with software agreements to ensure compliance and reduce liability exposure.

Take a tour of the CDW Software Asset Manager by starting at: **CDWG.com/solutions**

Software Licensing: Strength in Numbers

Use licensing agreements to choose, deploy and manage software across the organization.

One of the things that makes software management cumbersome is the sheer number of titles most organizations find themselves trying to keep tabs on. And the task grows even more challenging when organizations purchase multiple copies of the same branded software for multiple staff members and teams needing similar functionality to do their jobs.

That's a lot of licenses, purchase orders, serial numbers, DVD media, installation codes and documentation to manage. Someone has to make sense of it all. And when gaps emerge, compliance risks and overlicensing costs aren't far behind.

One of the tools that software buyers can use to control the clutter and simplify license record keeping are software license agreements (SLAs). Software licensing is a straightforward concept in the sometimes tangled world of software management: One license covers many users when multiple people in the organization are using the same software title.

Software license agreements offer a number of significant advantages. These include:

- Upfront cost savings compared to traditional retail licensing
- Access to the latest software releases and versions
- Opportunities to better manage a software budget
- Ensuring legal compliance while avoiding litigation and fines
- Guarding against the use of fraudulent or pirated software

Licensing Programs at Work

Software license agreements typically work like this: Imagine a group of staffers in an expanding organization that regularly use the array of applications in Microsoft Office. One option is to buy individual boxed copies of the suite for each user.

The applicable staff might include various production teams, administrative assistants, managers and department heads who oversee these operations. This would be more than a dozen licenses, serial numbers and DVDs to track, not to mention recycling all the packaging and redundant manuals.

Now consider an SLA version of Microsoft Office with one set of DVD media (some manufacturers also offer software downloads) for loading the programs on all authorized computers. This gives IT managers a single license to track and upgrade when the terms of the contract expire. It also allows installation of the same software license on multiple clients from a single point on the network.

Operating from one blanket agreement, instead of individual software purchases, is a huge time saver. Multiply that simplicity across all the applications that a typical workforce has in common and the effort required for SAM is cut significantly.

Increase Purchasing Power

Simplification is one of the core benefits of software licensing, but not the only one. Many software vendors recognize the commitment that software buyers are making when they enter into an SLA, not only in terms of multiple users, but also from a time standpoint — most licenses span one to three years.

In return, many software publishers are willing to negotiate

valuable pricing discounts that wouldn't be available for one-off purchases. In fact, most organizations can qualify for an SLA with as few as five initial licenses or seats, providing immediate financial return.

Many license agreements even allow buyers to spread payments over the life of the contract. This trades a possible steep up-front investment for a set monthly fee and can be an important step in making software expenditures more predictable.

And what if the organization that signed a contractual license agreement sees a spike in the number of people who need to use the application? Some software developers let organizations automatically add users throughout the year and settle the cost difference during an annual review.

To sweeten the deal, software makers will extend discounts beyond the reduced per-seat costs. In addition, some programs offer software maintenance and support. This can include better rates for technical support services that protect users against application downtime.

Upgrade protection may also be part of an SLA. This would make it possible for organizations to obtain the latest software versions that become available while the software license agreement is in place. This can push productivity enhancements to users perhaps a year or two sooner than with typical software refresh cycles.

First Steps

How can an IT manager decide if an SLA is right for an organization's applications? Consider volume. When using a license agreement, the more software an organization buys the more it can save.

Initially, develop a shortlist of software titles that are being used by multiple staff members. With any luck, the results of a recent organizationwide software assessment will be available to quickly identify these programs.

The good news is that many SLAs have a low entry point. Conversely, contracts can scale into the hundreds or thousands of users, making license agreements an option to consider for almost any size organization.

Large and small organizations see the same benefits: one serial number for the set number of seats purchased, whether it's five or 500. And there's no need to track separate software serial numbers or DVD media.

From this initial list of candidates, focus on any applications that are likely to see greater demand over the next 12 months. This may be because of staff additions, new operations initiatives or general growth.

Armed with this prioritized list, IT chiefs or their software asset management consultants are ready to review the software license terms and conditions offered by various publishers. When the right contractual matches are made, the long-term challenge of managing software assets suddenly becomes much simpler.

CDW·G Resources for Software Management

Best practices and management tools are essential components for a well-run software asset management program. And because the software licensing landscape can be complex as well as dynamic, many organizations require a third element: expertise.

To assure that organizations won't have to handle SAM on their own, CDW·G maintains a staff of highly trained and certified technology experts. These are professionals who understand software asset management and can help software buyers address its inherent challenges and opportunities.

CDW·G's software services guide organizations through the formal license procurement and management process. This includes providing everything from onsite assessments and customer advocacy during contract negotiations to evaluation of contract renewals and help with additional product purchases.

Having a team of software experts on call gives IT managers the help they need to stay compliant and financially sound. And they can do it without taxing internal staff and budget resources.

Team of Experts

The dedicated CDW·G account team starts with an account manager, who is backed by a cadre of software specialists, engineers and representatives. Working together, they serve as a guide to software licensing programs and solutions that best fit an organization's requirements. CDW·G software experts collaborate on your behalf. Here's how:

Software licensing specialists: CDW·G software licensing specialists are certified in a wide array of licensing programs. SLSs are dedicated to assisting organizations with understanding and navigating complex licensing options from the top software publishers.

They can help compare key features of different programs, thereby ensuring compatibility of products. They also work with an organization and its CDW·G account manager to ensure software quotes are accurate and assist with ongoing contract maintenance.

Licensing account executives: Along with an inside software licensing team, CDW·G has dedicated licensing account executives nationwide. These field-based resources are available for onsite meetings and technology briefings.

LAEs can review the current operations environment and assist with software planning for the future. They can then recommend the appropriate products and licensing programs while providing a cost analysis of these options.

Pre-sales system engineers: In addition to understanding software licensing, CDW·G's pre-sales system engineers are available to answer in-depth technical and product questions. The team of PSEs can help ensure that during the initial consultation

process an organization is getting the right mix of software products to meet organizational needs.

Software manufacturer representatives: To help organizations keep up to date with the rapid changes in the technology industry, CDW·G has aligned itself with leading software manufacturers — many of whom have onsite representatives at the CDW·G campus. This benefits organizations by allowing CDW·G to offer firsthand knowledge of program changes and provide immediate assistance, product-specific advice and responsive support.

Software Support Services

CDW·G offers an array of value-added, convenient and cost-effective software support services to help organizations improve IT investment while decreasing overall spend. Core offerings span everything from initial product evaluation, software asset management, custom software configuration and onsite installation to full lifecycle support and ongoing management of software contracts.

Assessment, planning and design: For software licensing programs, the software procurement management process typically involves program selection, planning and contract negotiation. For this, CDW·G can support the organization with:

- Evaluating software licensing program options
- Simplifying program planning and contract negotiation

Configuration: No one likes to sacrifice productivity by taking talented in-house IT staff away from mission-critical projects to load software on new PCs. Instead, CDW·G will custom-configure systems prior to delivery so that the technology arrives ready to plug and play.

CDW·G image processing services can transfer any customized operating systems and/or software settings to an organization's equipment. All work is performed by a staff of highly trained and certified technicians. CDW·G can also custom-create an image for installation at an organization's facility.

Onsite software installation: Today IT departments are stretched thin. To help, CDW·G experts can be onsite. CDW·G has partnered with the nation's leading manufacturers and local service providers to offer software installation and configuration for PCs, notebooks and PDAs as well as servers and routers.

Lifecycle support: CDW·G's software services don't end with the installation of a solution. We're committed to helping organizations with the total lifecycle management of technology assets and stretching IT investment even further. We do this by providing:

- Retainer agreements that augment existing IT staff with certified technology specialists, thereby allowing organizations to meet aggressive timelines without investing in a full-time headcount
- Help desk services that amplify in-house technical support with industry-certified help desk agents — even off-hours or on the weekends
- Staff training that offers standard and customized education and certification services from leading technology training organizations

Microsoft National Services

CDW·G account manager teams, along with an SLS, can monitor and support Microsoft software requests and requirements on several fronts. These include:

Microsoft Enterprise and Select agreements: CDW·G can manage a Microsoft contractual and/or select license program throughout its lifecycle. We will systematically keep IT managers informed of current software versions, patches and upgrades, as well as benefits and upcoming opportunities pertinent to Microsoft EA and/or select agreements.

The CDW·G team can also provide notification regarding:

- Software assurance benefits including training, deployment planning and tools, product support, and discounts
- Deployment and migration options with other service providers, so organizations can best utilize licenses already purchased
- Annual reviews of desktop and server counts to strategize the best licensing path for future needs
- Annual tune-up reports for evaluation of renewal options

Microsoft gold-certified solution areas: CDW·G's strong working relationship with Microsoft includes earning the Microsoft Gold Partner title along with being named Microsoft Large Account Reseller Partner of the Year for 2010. These accolades better allow us to assist organizations to implement Microsoft products and leverage Microsoft investment in tandem with the following solution areas:

- Microsoft Information Worker Solutions feature highly skilled consultants delivering smart solutions including Microsoft SharePoint Collaboration, Business Intelligence, Business Process Automation, Enterprise Search and portal solutions.
- Microsoft Unified Communications Solutions deliver end-to-end services for Exchange and Office Communications server. Our certified consultants have earned Microsoft specializations in delivering messaging, mobility, instant messaging, presence, conferencing and Voice over Internet Protocol (VoIP) solutions.
- Microsoft Server and Security Solutions can help power and secure an entire organization. The CDW·G team delivers cutting-edge solutions like server virtualization, SQL database implementations, directory services, Forefront security, identity management and network access management.
- Microsoft Monitoring and Management Solutions enable organizations to achieve an optimized desktop environment by providing Microsoft solutions that maximize Windows Client, application virtualization and desktop optimization.

SLA Legal Fine Print

When considering a license for software, particularly for a complex or customized application, it's imperative to take certain legal issues into account.

Before you sign, here's a checklist of should-do practices:

1. **Determine the scope of the software license.**
   Organizations should quickly surmise whether an exclusive or nonexclusive license is needed and the extent to which the license can be used. This should include, for example, the purpose of software, geographical territory for use and intended systems platforms; whether it must be customized or will be used off the shelf; and any other unique scope restrictions.

   By making these scope determinations initially, the organization can draft an agreement that will promote early negotiations over any significant misunderstandings with the software manufacturer or supplier. Plus, it will ensure that the license actually aligns with the organization's expected uses.
2. **Define the terms of use in the license.**
   When considering a license, it's a good idea to carefully evaluate the definitions for terms used in the agreement. This is an important exercise because it will help maintain consistent use of language throughout the agreement.

   Important items to review include definitions of the software being licensed, source code, territory or field, and media on which the software is to be used. Some other items to consider are terms related to the length of the agreement, confidential information and any services to be performed under the agreement.
3. **Get into timing particulars.**
   Understanding the terms of the agreement, as well as the conditions for termination, will help the organization set and track important dates, such as when renewal is needed (under either the same or different terms). Overlooking or missing important dates set forth in the agreement can result both in missed opportunities and higher fees for the organization.
4. **Double-check the intellectual property specs.**
   If the software is proprietary, then the manufacturer generally assumes responsibility for intellectual-property ownership issues surrounding its development. For example, was open-source or some type of freeware used in the development process? Was the source code an original development or did third parties contribute? Is the software protected by copyright, patents, trademarks or confidentiality clauses?

   The bottom line really comes down to knowing risks and the responsible party ahead of time should a problem arise.
5. **Review procedures for testing, performance standards and operation prior to implementation.**
   With the advent of the software age and the advanced use of software generally, making sure that software operates properly perhaps has become less significant. But for complex or custom applications software, it remains an important concern.

   Every licensing agreement should set forth a performance expectation. For instance, you want a product that's substantially error- or bug-free, and you want warranties in place that address how a problem will be remedied if errors occur.

   It should also include some details regarding the condition of software media and warranties if these conditions are not met. And, it's wise to make sure the application contains no surprise timing elements, locking functions or other unknown code elements.

   Finally, it also is prudent to set a period for testing the licensed software. That way the organization can make sure that it works according to the expected performance, specifications and operating conditions set forth in the agreement.

   If these five practices are applied when setting license agreements, many problems and surprises should be eliminated when it comes to actual use of the software that the organization buys and implements. ■

Software and Best-of-breed Technologies

Take advantage of today's technology with software products that meet operations needs.

Software asset management is essential for long-term cost savings and mitigating the risk of noncompliance with license agreements. But SAM is not an end in itself. Its real value lies in helping organizations get the most out of apps in order to thrive.

Ask today's CIOs about their most valued technology applications and these four focal areas will likely rise to the top of the list: infrastructure optimization, security, unified communications and continuity of operations (COOP). Each area can help organizations cut costs, build productivity and ensure security — components essential to success, especially in a challenging economy.

Infrastructure Optimization

One thing is clear in the aftermath of the recent recession: the do-more-with-less strategies that have permeated IT departments in recent years are here to stay. It just makes sense in an era where IT budgets are shrinking.

To counter, organizations needs to fully leverage the potential of information technologies. Organizations need to simplify critical operations processes in order to fulfill their missions and serve constituents. Infrastructure optimization can help by providing a more dynamic, secure and cost-efficient core.

Best of all, IT optimization doesn't have to mean doing less with less. A broad range of mainstream technologies help organizations cut costs and boost efficiency without sacrificing innovation. They include:

- **Server virtualization:** By running multiple operating systems on a single rack-mount server or blade, IT managers maximize each system's processing power, reduce the overall need for physical servers, improve availability and recovery performance, and achieve on-the-fly provisioning of IT resources. ***Essential software:*** A hypervisor such as VMware vSphere, Windows Server 2008 R2 Hyper-V or Citrix XenServer.
- **Client virtualization:** Housing applications in the data center rather than on individual PCs or notebooks eases IT administration, speeds the rollout of new or revised software and bolsters security. Client virtualization can be implemented in three different ways:

CDW·G Virtualization Assessment

IT managers can jump-start their infrastructure optimization efforts with a complimentary CDW·G virtualization assessment. This includes an initial discovery session to understand goals, requirements and budget; and a review of the existing environment. The assessment can verify the viability of the project while offering insights as to how to proceed.

presentation virtualization, application virtualization and desktop virtualization.

Essential software: Client applications such as Citrix XenDesktop, Microsoft Application Virtualization (App-V), Symantec Endpoint Virtualization Suite, VMware View and others.

- **Storage virtualization:** Pooling data on networked high-performance storage devices makes them appear as a single storage system. Storage virtualization enables better information lifecycle management (ILM), cuts search times and fortifies security and availability.

  Essential software: Storage platforms such as EMC Invista, HP StorageWorks P4000 Virtual SAN, IBM System Storage SAN Volume Controller and others.
- **Storage management:** This technology offers a centralized approach to managing data and data storage systems that reduces complexity through automation and deduplication for flexibility in addressing growth in data volumes.

  Essential software: Management consoles available in IBM Tivoli Storage Manager, Symantec Enterprise Vault and other applications along with data deduplication programs from CommVault, Data Domain, EMC, Symantec and others.

Security

In the world of IT, there always seems to be a threat to worry about. As more and more government and educational institution activity goes online, security is becoming more important. Consequently, strong security is one of the most critical components of any IT operation.

The idea is to make security an operations enabler. When every security product, service and policy is mapped to operations, defending existing security investments is straightforward. And it makes it easier to lay out a roadmap detailing future security direction.

It's a balancing act, with severe consequences if something goes wrong and great operational benefits for organizations that get it right. Here are some of the keys to getting security right:

- **Threat prevention:** Threat prevention consists of multilayered security that prevents malicious attacks from entering the protected environment and corrupting systems and data.

  Essential software: Antivirus, antispam, content filtering and intrusion detection applications from CA, Cisco Systems, McAfee, Symantec, Trend Micro, Websense and others.
- **Secure remote access:** Remote access security solutions manage risks that arise from an increasingly mobile workforce. Secure remote access allows authorized users to safely and efficiently interact with information on the network while outside the gateway.

  Essential software: Virtual private network (VPN) technology from Cisco Systems, Check Point, Juniper Networks, NetMotion Wireless, SonicWALL and others; network access control software from Cisco, Juniper, Symantec and others. Also critical are firewall, antivirus and patch management systems from CA, Check Point, McAfee, Microsoft, PGP, Symantec and more; plus two-factor authentication and digital certificates from RSA and other manufacturers.
- **Data loss prevention:** DLP tools and strategies focus on protecting data and work in conjunction with traditional tmethods for keeping intruders from gaining access to the network. Security managers typically devote their DLP attention to the most sensitive data they control, such as information about constituents, staff and partners.

  Essential software: Encryption and DLP applications from CA, Check Point, McAfee, PGP, Symantec, Trend Micro and other vendors.
- **Endpoint protection:** The true value of technology lies in the degree to which it enables staff to handle information or engage in transactions that would otherwise remain inaccessible. In today's IT world, securing the organization's endpoints is increasingly essential. Not only are threats omnipresent, complicating matters is the ever-expanding mobility of endpoint devices.

  Essential software: Encryption applications from CA, Check Point, McAfee, PGP, Symantec, Trend Micro and others; antivirus, personal firewall and host-based intrusion prevention from Cisco Systems, McAfee, Symantec, Trend Micro and more.

Consider a Managed Security Solution

Each day, government agency and educational institution networks are under siege. To counter, CDW·G offers a range of resources to help organizations maintain the highest levels of security.

One of the best ways to gauge security is to hire an independent expert to probe the environment with a comprehensive risk assessment. Done right, a professional assessment will identify and document vulnerabilities and offer recommendations for how to plug any holes.

CDW·G is one of only a few technology vendors that can deliver the full range of security services. This includes the security assessment itself, implementation of any remediation efforts, performance monitoring and ongoing management. A holistic security approach also aids in regulatory compliance.

The CDW·G Security Assessment online tool helps IT managers measure their network security against peers and gain a deeper understanding of how various security threats might affect their organizations. This tool will also identify potential vulnerabilities and provide advice for eliminating them.

- **Risk assessment and compliance:** Security compliance establishes protocols to protect data confidentiality, prevent unauthorized access to information and otherwise adhere to regulatory compliance policies.
  Essential software: Policy management software from CA, Enterasys Networks, NetIQ, NetMotion Wireless, Symantec and Quest Software.

Unified Communications

Innovative organizations rely on a wide range of communication channels to foster collaboration among staff, stay in close contact with constituents and extend operations processes to partners. But when these channels exist as separate silos, the result can be confusion and missed opportunities.

In the UC environment, all communication tools — from voice, data, video conferencing and instant messaging (IM) through e-mail and text messaging — are fully integrated in real time. UC allows organizations to access data on demand and collaborate with virtual teams anywhere for greater productivity and competitive advantage.

- **Telephony:** By integrating voice traffic over the network, organizations can realize cost savings by reducing carrier service charges and those associated with deploying or relocating staff phone systems. VoIP implementations also can integrate with existing communication systems, such as those for e-mail or instant messaging.
  Essential software: VoIP systems from Avaya, Cisco Systems, Nortel Networks and ShoreTel.
- **Conferencing and collaboration solutions:** Integrated conferencing and collaboration tools unify audio and video to give organizations anytime-access to people, documents and resources. Audio, web and video conferencing tools also allow users to share desktops and view presentations with invited participants.
  Essential software: Adobe Connect, Citrix GoToMeeting, IBM Lotus software, Microsoft Live Meeting and others.
- **Messaging:** Messaging applications enable individuals and devices to share information using a variety of communication methods, including voice, e-mail, faxing, instant messaging and presence. Messaging technologies can also integrate information; for example, merging customer relationship management (CRM) databases with contact histories.
  Essential software: An e-mail server platform such as Microsoft Exchange or IBM Lotus Software.
- **Call center management:** These tools combine telephony applications, messaging and use databases into a cohesive system for routing calls, e-mail and chats to the most appropriate and available resources.
  Essential software: Call center management applications from 3Com, Avaya, Cisco, IBM Lotus, Konexx and Nortel Networks.

Continuity of Operations

The list is long when it comes to what can go wrong to bring critical IT systems down at the worst possible times. Continuity of operations planning tops the list of what's right.

Continuity of operations strategies address the big risk, such as systems failures, security breaches or natural disasters. (Keep in mind, COOP often outlines strategies and processes in addition to those concerned with IT systems and data such as identifying crisis management personnel, locations for staff to gather in the event of building evacuation, copies of insurance contracts, etc.)

The best COOP plans also tackle less dramatic but equally important issues. These can include reliable archiving and discovery systems that enable organizations to readily locate all the data requested in the discovery phase of a legal proceeding.

Managed Disaster Recovery Solutions

The complexity of assembling and managing a continuity of operations infrastructure certainly isn't lost on today's IT managers. As a result, many organizations are turning to consultants or trusted partners to develop a viable disaster recovery plan, identify the right systems and build out the best possible infrastructure.

Organizations that prefer a managed services approach can rely on CDW·G to design, implement, host and maintain a high-availability disaster recovery solution. CDW·G's enterprise hosting centers are built to be fault-tolerant at all key points of the infrastructure.

These resources give organizations the option of hot-site recovery with recovery times of less than an hour. CDW·G uses replication software to mirror data from an organization's source servers to target servers that are owned by government agencies and educational institutions but hosted in one of CDW·G's data centers.

For those who choose to manage disaster recovery internally, CDW·G's certified storage specialists work to define goals, assess needs and budgets, evaluate manufacturers and technologies, and act as advisers through the acquisition and deployment phases. Specialists remain on hand to provide full-time telephone support and ongoing product lifecycle management.

Such challenges require a multifaceted solution. The foundation for COOP systems includes:

- **Backup strategies:** Focusing more on day-to-day anomalies, backup is a strategic and methodical process used to copy and ultimately recover data. The objective of backup is to restore a computer system to a previous state at a given time.

  The backup process copies data from file servers, databases and client systems to another device or media for future use. The best backup products offer continuous data protection (CDP) of both file servers and databases.

  Essential software: Acronis Backup & Recovery, CA ARCserve, IBM Tivoli Storage Manager, Symantec Backup Exec and others.
- **High availability:** Also known as disaster recovery, high availability includes the replicating of entire IT systems and data to offsite locations to ensure a certain degree of operational continuity in the event of disruption or disaster.

  Many organizations are weaving high availability into the fabric of their entire enterprise. To be certain, disk mirroring, clustering and data replication are quickly becoming the foundation for an IT infrastructure that's suitable for the 21st century world.

  Essential software: Continuous replication, server monitoring and automated failover by CA ARCserve Replication and High Availability; backup, replication and recovery via Double-Take Backup and Availability and Symantec Backup Exec System Recovery; server clustering by Symantec Veritas Cluster Server; replication, deduplication, virtualization and cloud services from Acronis, CommVault, Symantec and other manufacturers.
- **Archiving:** This is the systematic approach to providing structure to unstructured data while serving as a foundation for e-discovery. Archiving also lets organizations define data storage, management and search policies that are most appropriate for operations and regulatory needs.

  Essential software: CA Message Manager, EMC archiving solutions, HP Voltaire GridStack, Symantec Enterprise Vault and others.
- **E-discovery software:** Using archiving solutions as a base, e-discovery software offers advanced search features and systematic archiving inventories for efficient searches. Legally significant files can be flagged to ensure they are not altered or deleted per data retention policies.

  Essential software: CA Records Manager, IBM InfoSphere eDiscovery Manager and Symantec Enterprise Vault Discovery Accelerator. ■

SAM Meets SaaS

Consider another way to meet user, partner and operations software needs.

Cloud computing is often considered Internet-based computing and a model offering numerous advantages. First, it lets organizations tap into web-based processing power, operations applications, storage and other key resources that run offsite.

Sometimes referred to as zero-CAPEX or pay-as-you-go, cloud computing may allow organizations to avoid the upfront cost of having to purchase incremental hardware and software. And it often serves to more effectively match computing resources to an organization's needs and budgets.

Moreover, cloud computing can allow organizations to streamline operations. Instead of pressuring IT staffs at smaller government agencies and educational institutions to handle the workload of a larger organization, these IT shops can now access capabilities with a low initial investment and significant scalability.

SaaS Savvy

A cloud subset, Software as a Service (SaaS) has caught the eye of IT management at organizations of all sizes. Interested in offering better, faster and cheaper service capabilities, organizations are turning to SaaS for everything from e-mail and customer relationship management (CRM) to web conferencing applications.

With SaaS, users connect to an operations app and all of its features and capabilities via a secure web connection. Because the actual application runs at a provider's data center, subscribers are not responsible for buying the infrastructure, installing software, maintaining the platform and putting backup and disaster recovery systems in place.

SaaS appeals to a common interest in most IT shops: keeping costs at bay while increasing computing resources and accommodating new operations initiatives. According to insiders, SaaS offers less financial risk for buyers, is less expense to use and equally profitable for software developers.

For a predetermined monthly fee, organizations enter a subscription agreement for the underlying services they need. SaaS providers generally price applications on a per-user basis. The minimum number of users is typically small. However, there may be additional costs if either extra storage or bandwidth are required.

One of the most salient benefits of SaaS, especially when organizations are adapting to a capricious economy, is its flexibility. Many software service providers will allow users to upsize and downsize subscriptions as needed. This type of scalability can be highly cost effective.

Speed is also cited as a factor in SaaS implementation. Because there are no internal processes or setup time required, it allows organizations to be up and running within days.

Impact on SAM

The number of cloud-based applications an organization has will ultimately determine the cloud's impact on its SAM strategy. Fortunately, SaaS has the potential to ease asset management in a significant number of ways.

First, it simplifies the balancing act of matching licenses with usage rates because subscribers pay for a set number of seats. SaaS contracts typically call for annual reviews so subscribers can adjust for any fluctuations in staff size to keep per-seat allocations up to date and eliminate over-

CDW·G Smoothes Path to Cloud

Interest in Software as a Service (SaaS) is fueled by the thought that the organization can quickly and economically expand IT operations and bring new flexibility to vital operations systems. That being said, initial contract negotiations and knowing what questions to ask when the paperwork is written is extremely important.

To assure success, IT shops may need advice on how to navigate the nuances of SaaS integration. As with all software assessment and implementation, a dedicated CDW·G account team — led by an account manager and backed by software specialists, engineers and manufacturer representatives — can serve as a guide to SaaS.

Further facilitating the process are CDW·G web-based SaaS offerings from leading cloud — and on-premise — software partners. These include EMC, McAfee, Microsoft, Symantec and many more.

CDW·G also offers hosted and managed services including website, e-mail, back-office infrastructures, disaster recovery solutions and more. Located in Wisconsin and Minnesota, our enterprise hosting centers are built on a redundant infrastructure and are engineered for a high level of redundancy and availability.

licensing expenses.

In addition, SaaS initiation and implementation costs are relatively low. And SaaS subscribers note that greater functionality and more frequent upgrades — more than those available via on-premise applications — sweeten the service package. Because cloud computing is a fast-evolving technology, IT managers will need to devote extra time to learning its nuances.

Many industry watchers believe that even when SaaS matures, most organizations will choose hybrid environments that make partial use of cloud services. They will likely place general-purpose applications, such as e-mail and accounting systems, in the cloud while keeping core operations programs on premises.

Strategies for Today

So what should IT managers do now to keep the door open for SaaS? Start by looking closely at a handful of basic IT issues:

- **Infrastructure:** SaaS relieves some but not all of the IT resource demands necessary to keep modern organizations humming. In particular, network bandwidth is a key concern. Staff productivity will hinge on the speed and reliability of the web connections that link staff to offsite apps and data.
- **Existing investments:** SaaS strategies do not have to account for all of the existing software licenses an organization has in place. Ignoring legacy apps in favor of new SaaS services is a rip-and-replace move that few organizations can justify. A better approach is to add SaaS to the mix when an existing operations platform begins the normal end-of-term license-review process.
- **Best candidates:** The applications best for SaaS migration are those that are rather straightforward, demand minimal support and typically require no customization options.
- **Security risks:** Industry polls regularly identify security concerns as the biggest deterrent to broader cloud computing and SaaS adoption. It's not that clouds are inherently less secure. In fact, some organizations may find that a higher level of expertise and resources at a service provider's data center actually deliver greater protection. The rub is that sensitive data flying across the network may call for virtual private networks, encryption and other protective measures.
- **Regulatory compliance:** Regulatory requirements, such as the Health Insurance Portability and Accountability Act (HIPAA), call for organizations to keep sensitive data held in health records safe from unauthorized viewers. Subscribers need to make sure that their internal operations and their service providers can bear the scrutiny of an audit.
- **Cultural backlash:** IT staffs and general staff alike may be initially uncomfortable with the thought of having their servers, applications and data housed in some distant location. To smooth the transition, cloud proponents advise organizations to move slowly, migrating one or two applications at a time and making each software acquisition strictly an operations-based decision.
- **Exit strategy:** At some point, an organization may want to switch service providers for one reason or another. Before signing a contract, develop a contingency plan that specifies how long it will take to move to a new provider, how quickly an existing provider must package proprietary data into a format that facilitates transfers and who's responsible for migrating data. ■

Software-as-a-Service Growth

In early 2009, the tech research and analyst firm IDC identified software-as-a-service (SaaS) worldwide growth at 36 percent over 2008 figures. Since that time, the firm has increased its 2009 SaaS growth projection to 41 percent over 2008.

Additional findings from the IDC study include:

- By the end of 2009, 76 percent of U.S. organizations would be using at least one SaaS-delivered application for operations use.
- The percentage of U.S. organizations that plan to spend at least 25 percent of their IT budgets on SaaS applications will increase from 23 percent in 2008 to nearly 45 percent in 2010.

Glossary

This glossary serves as a quick reference to some of the essential terms touched on in this guide. Please note that acronyms are commonly used in the IT field and that variations exist.

Applications software
This represents a type of app designed for end users that includes database programs, word processors, spreadsheets and more. These programs are unable to run without the operating system and system utilities.

Business Software Alliance (BSA)
Often considered the voice of the software industry, this organization provides education about copyright and software licensing parameters, studies software piracy and offers sample software asset management policies and free online SAM tools.

Client access license (CAL)
The companion to a server license, a CAL must be acquired for every authenticated user on a network. The CAL allows a client application that runs on a personal computer or workstation to access a server and its programs to perform operations on the local computer.

Cloud computing
Often considered Internet-based computing, this model lets organizations tap into web-based processing power, operations software applications, storage and other key resources provided by an offsite vendor. Software as a Service (SaaS) is often considered a form of cloud computing.

Concurrent use
Also referred to as a concurrent use license, this is an axiom used to describe a software license agreement based on the number of simultaneous users accessing a program at a given time. It typically deals with server-based software with users connecting via the network.

Enterprise agreement (EA)
This is a comprehensive Microsoft volume licensing agreement for organizations with typically 250 or more personal computers. Under the package, an organization and its qualified affiliates, with a certain number of desktops, notebooks or servers, may standardize on one or more of the Microsoft Platform Enterprise Products at discounted prices, based on a three-year agreement term.

Freeware
This category of software offers applications without charge. Unlike public domain software, freeware is copyrighted and users cannot do anything with the software that is not expressly allowed by the author, such as sell the software as their own.

Information Technology Infrastructure Library (ITIL)
This consists of a widely accepted set of concepts and best practices for technology development, information technology services management (ITSM) and IT operations.

International Association of IT Asset Managers
Incorporated in 2002, this organization is a professional association offering information to individuals and organizations involved in any aspect of IT asset management.

International Organization of Standardization (ISO)
This is a nongovernmental organization created to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods and services.

Keycode
A product key is typically a unique, alphanumeric code of varying lengths called for by many software applications during the installation process. For example, a 25-digit code is required to install many Microsoft programs.

Large account reseller (LAR)
A Microsoft designation given to a particular vendor, it grants the right to sell Microsoft Select Licensing and EAs.

License
This gives an organization the right to install an application on one or more workstations, desktops, notebooks or servers. It is most often provided on a nonexclusive basis and is generally subject to a list of specified conditions.

Maintenance
Also known as upgrade protection, maintenance ensures eligibility for software version

upgrades when released. For example, if a new version of Microsoft Office is made available during the term of coverage, an organization's licenses will automatically be upgraded to the new version.

Media
Software programs can be delivered in a variety of ways — for example, by DVD or electronic download. These are known as the software media.

Open-license program (OLP)
It allows organizations to purchase licensed software as an alternative to one-off boxed products. This reduces production costs by eliminating such things as media, packaging, shipping and warehousing. Savings are then passed on to the end user based on the highest volume software license purchased at predetermined discount levels.

Overlicensing
Often seen as a way to prevent compliance violation, this practice includes purchasing too much software or purchasing it ineffectively, often resulting in inefficiencies and excessive cost.

Per-processor licensing
This form of licensing includes the need to have one processor license for every processor in the server being licensed.

Per-seat licensing
This form of licensing refers to a software license based on the number of users who access the application within a network. For example, a 100-user per-seat license means that 100 individually named users can access the software program at the same time.

Per-server licensing
Also known as concurrent use, this form of licensing refers to software licensing based on the number of machines hitting the server at one time. For example, if an organization has 100 machines but only 50 hit the server at any given time, only 50 client access licenses are needed; but only 50 machines will be allowed to hit the server at one time.

Piracy
Also known as copyright infringement of software, software piracy refers to the unlawful installation of a software program on a workstation, desktop, notebook or server. According to a report issued by the BSA and the tech analyst firm IDC in May 2010, global software piracy last year accounted for 41 percent of all installed PC software.

Shareware
This is software that is distributed and paid for via an honor system. Usually the software is delivered free of charge with the understanding that users will pay a small fee if they use it regularly. The fee entitles the user to receive service assistance and updates.

Shrink-wrapped/boxed copy
Referencing the shrink-wrap plastic wrapping used to coat software boxes, this term refers to a one-off software application purchase including DVDs, manuals and license provided in a retail box, typically with a single-user license.

Site license
This type of license gives an organization the right to purchase software for multiple locations based on one central agreement.

Software as a Service (SaaS)
Also known as a service on demand or pay-as-you-go model, SaaS delivers software over the Internet from a third-party service provider who hosts the application.

Software asset management (SAM)
Effective SAM is a disciplined approach to managing software with the same scrutiny given to other IT assets. Goals include reconciliation of deployed software with licensing records and better financial control of software spending.

Software asset management applications
Specifically designed for SAM, these software management tools help IT teams with software assessments and analysis to improve software buying decisions. These products also automatically provide the data needed to comply with license agreements.

Software audit
Performed either by a software manufacturer or an independent third party, a software audit consists of an audit of software product or software process or an assessment of compliance.

Software licensing agreement
Software is licensed per the terms of a specified agreement. Once the terms of the agreement are completed, it must be renewed or the software must be removed.

Software lifecycle management
This consists of a formal approach to managing software assets from contract negotiation and acquisition to deployment and retirement.

Technical support
Software phone and web support will often be provided by manufacturers. The details will vary per licensing program.

Underlicensing
This term refers to the act of paying for fewer licenses than is legally required to be in compliance.

Upgrade protection
Also known as maintenance, subscription, software assurance or upgrade insurance, upgrade protection grants the right to receive new software version upgrades for a given time period (generally one or two years) for a discounted, prepaid price.

Version upgrade
This type of software upgrade grants the organization the ability to move from one software title to the next version release of that software title.

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About the CONTRIBUTORS

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LOOK INSIDE

for more information on:

- Managing software as an operations asset
- Implementing a software asset management (SAM) plan
- Simplifying software licensing
- Software license agreements
- Software as a Service (SaaS)

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