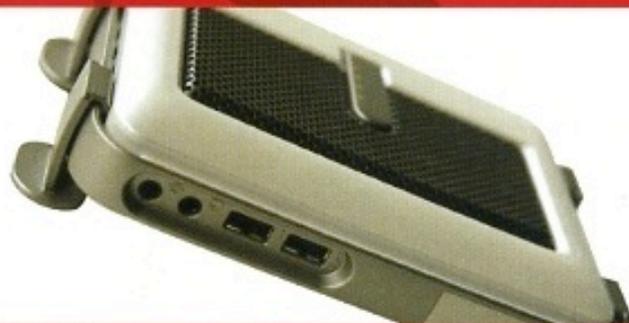


**DESKTOP LIFECYCLE
MANAGEMENT
REFERENCE GUIDE**



Making the most of your
desktop resources
from start to finish

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DESKTOP LIFECYCLE MANAGEMENT REFERENCE GUIDE

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.

» We are pleased to also offer the **CDW•G IT Investment Guide**. It includes products and information to help you meet your desktop lifecycle management objectives.

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MAKING THE MOST OF DESKTOP RESOURCES



CHAPTER 1:

The Benefits of DLM

DLM Components

When IT managers are asked what part of their job they like least, most will mention some routine and time-consuming task that feels like busy work rather than a problem-solving project that really engages their skills.

Desktop lifecycle management (DLM) likely ranks high on that least-enjoyable job list. Desktop lifecycle management is a thankless but critical job in the ongoing maintenance of an organization's IT infrastructure.

While some of its aspects are tedious and appear to have little value, with DLM, it's the little things that add up. Making sure that desktops, notebooks and workstations are running optimally allows an organization to maximize the productivity of its operations. And hardware and software updates and upgrades are an inevitable necessity that cannot be avoided.

THE BENEFITS OF DLM

Organizations have much to gain from a purposeful, thought-out DLM strategy. In the area of cost prevention, a coordinated approach to DLM can reduce the amount of time that IT staff is spending on routine and time-consuming tasks, freeing up more time for more strategic projects.

And when general staff don't have to concern themselves with whether their notebook or desktop has the most up-to-date version of Windows on it or not, overall staff productivity increases.

Another cost-saving benefit of DLM is that the organization gains a wider understanding of the lifetime financial obligations of the

solutions that it purchases. An organized DLM approach does away with the inherent duplications that occur when equipment purchases are made on an ad-hoc basis with little forethought or planning for the built-in additional costs to come.

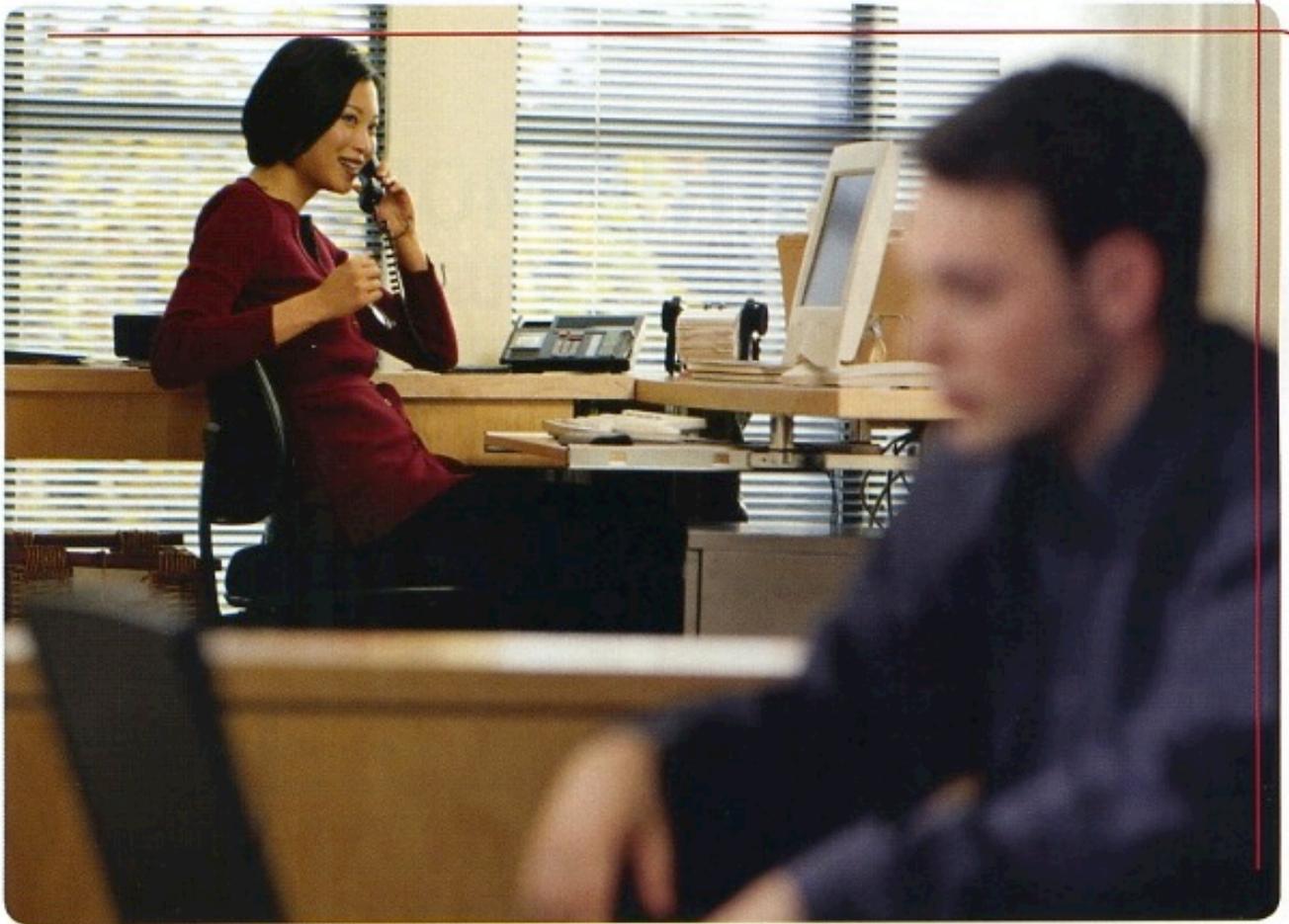
Organizations can see the associated costs beyond the initial purchase of a personal computer, for example. This is extremely important, because according to IT industry research firm Gartner, typically 70 percent of an organization's IT budget goes toward service and support (and only 20 percent going toward hardware and software purchases). Another consideration down the road will be disposal costs as organizations embrace a greener approach to product disposal.

Having a top-down view of IT spending is becoming increasingly important as the gap between acquisitions costs and the total cost of ownership (TCO) for a desktop solution continues to widen.

For example, the TCO for a \$2,000 desktop computer can balloon to \$20,000 over a three-year period. With the growing complexity of desktop workstations and personal computers, this TCO is only going to grow in the future.

Another value gained from a DLM strategy is that an organization avoids risks, such as not staying current on software licensing and the associated liabilities resulting from a violation.

When a mindful DLM process is in place, less time and attention needs to be invested in the little tasks of keeping an organization's assets up and running, and more time can be devoted to furthering the organization's mission.



DLM COMPONENTS

A successful desktop lifecycle management strategy is a process, a complete continuum that requires attention to detail at every phase.

DLM can be broken down into four distinct phases:

- **Assessment, planning and design:** Prior to any solution purchase, an organization should assess how its current desktop fleet is working to identify any unfulfilled needs. Having a full understanding of your staff, the organization's processes and the technology at its disposal will then allow you to map out and design the perfect solutions for your organization's needs.
- **Configuration:** Getting the initial deployment of your desktop solution right is crucial, and will save money and future headaches. A detailed understanding of your staff's computing needs will allow you to provide the optimal features that they need to excel at their jobs.
- **Installation:** Deploying a desktop solution is no simple matter. A good deal of forethought and planning needs to go into a successful installation. Addressing all of the system-wide issues and the finer details of how the solution works in the cubicle or office is a necessity for a good rollout.

- **Asset lifecycle support:** This is the heart of a good DLM solution and includes resource tracking, help-desk support, maintenance, warranty and software licensing management, patch management and end-of-life disposition.

Another option explored in this guide is to go the managed services route: Hire a vendor to handle some or all of your DLM needs so that highly skilled (and highly paid) IT staff can focus on other important projects.

Uncertain economic times, lean IT budgets and the increasingly rapid pace of technological development are all factors that are pushing organizations to be more proactive in managing their desktop fleets.

Developing a well-thought-out approach to your organization's desktop lifecycle management will allow you to squeeze out as many efficiencies as you can from your resources, as well as reduce your IT expenditures, increase security and reduce your IT operational and support costs. ♦

ASSESSING, PLANNING AND PROCURING



CHAPTER 2:

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Taking Inventory

.....
Planning and Policy

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Assessing Infrastructure

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Procurement
.....

No successful strategy can be implemented without careful planning. This holds true for desktop lifecycle management. The more time and attention your organization gives to this predeployment phase, the better the results will be.

TAKING INVENTORY

One of the first steps is to conduct an inventory of the organization's desktop resources. With a firm accounting of what resources you have, your organization will gain a few helpful insights. First, knowing what technology you currently possess will give you a better sense of where you might be lacking in meeting the desktop needs of your organization.

Second, you will have a benchmark to reference going forward, which will allow you to measure the progress you make with your DLM strategy. Third, having an idea of what resources are available will help you squeeze out greater efficiencies from them as you fine-tune your DLM plan going forward. Knowing where you're starting from is essential to determine where you're going with your DLM plan.

As part of this taking-stock phase, your organization should also categorize each desktop asset's product specifications, its age and its operating system. Another helpful categorization method is to break down your resources into desktops, notebooks, workstations, tablets and thin clients.

It's easy to get carried away with this categorization process, so it's best to stick to the basics. Once all of the personal computer options are laid out, they should be further categorized to detail

specific user needs such as application requirements.

Asset management software solutions are available, and some organizations may find them helpful in this process, simplifying the data collection and summarization process.

PLANNING AND POLICY

Once your organization has taken an inventory of its current desktop resources, it can begin to plan out and formulate policy for its DLM strategy. One important issue that you will want to address while planning is how long you will utilize your desktop hardware; what will its lifecycle be.

The lifespan of a PC is open to interpretation. Many vendors continue to support the traditional notion of a three- to four-year refresh cycle for PCs.

But a combination of performance advances and the uncertainty of the economy and budgets has led many organizations to extend their refresh cycle to six to seven years. It's up to each organization to determine how frequently they need to update their technology.

With an inventory of desktop resources and a lifecycle nailed down, organizations can begin to research what desktop solutions are available and their product cycles. This is where having a firm understanding of the end user's needs proves its value. Obviously, you will want to match up products that best meet those needs at the most cost-effective price you can find.

Another consideration to plan out is whether your organization is going to standardize on its hardware and software choices.

Standardization is a good idea generally, because it makes for easy maintenance throughout the lifecycle of the solution.

From a security standpoint, there might be some concern about vulnerabilities if all of your computers are the same — they'd all have the exact same vulnerabilities, which, if taken advantage of, could put your entire fleet at risk.

But standardization also makes staying up-to-date on security easier too. So as long as the IT department stays on top of security patches, standardization will prove to be very helpful.

A GREEN PERSPECTIVE

As more and more organizations take an interest in applying an environmentally friendly approach to their operations, you may wish to bring a green perspective to your DLM planning. A great area for improving an organization's everyday impact on the environment is computer efficiency. Researching the Energy Star ratings of the PCs that you deploy can help you make the green choice.

Currently, one of the key metrics for computer efficiency that the Energy Star rating focuses on is the 80 Plus rating, an energy-saving incentive program funded by electric utilities for power supplies (80plus.org).

The 80 Plus rating calls for power supplies to be at least 80 percent efficient at 20 percent, 50 percent and 100 percent output

loads. Desktop computers have improved and there's been a dramatic drop in power consumption. Today, they're loading larger power supplies at only 5 to 10 percent output. But that metric alone really can't tell you how efficient a computer is.

Probably the most important consideration is power consumption. To get lower power consumption at the desktop level, an organization should consider using thin clients or blade PCs. Short of these options, notebooks are a good choice because they are designed with long battery life in mind, and thus low power consumption.

Ideally, your organization should try to conduct its own power measurements and create its own performance benchmarks on its actual workloads to help with purchasing decisions, because no standardized benchmark can be representative of all workloads.

ASSESSING INFRASTRUCTURE

Desktop systems do not operate in a vacuum. They are dependent on an organization's infrastructure, so it is necessary to assess the infrastructure as part of your DLM predeployment strategy to make sure that what you plan out at the desktop level will work within your organization's larger systems. Three especially important areas that should be assessed are your network infrastructure, mobility infrastructure and security concerns.



NETWORK ASSESSMENT

Planning for your DLM strategy should include performing an accurate assessment of the current network environment and a gap analysis to determine if the existing infrastructure, sites and production environment can adequately support the planned upgrades to your desktop systems.

The assessment should take into consideration the following:

- Current applications and data on the network, such as VoIP, e-mail, structured query language (SQL), common Internet file system (CIFS), Internet and video on-demand;
- Current network topology, including but not limited to: network devices, physical and logical links, external connections, frame types, routed and routing protocols, application specific protocols, IP addressing scheme and traffic and network utilization analysis.

Many tools exist to facilitate network assessment. These tools range from basic device information output tools that display the network device utilization to third-party tools.

For example, within Cisco devices, you can view interface statistics, CPU and memory utilization, NetFlow, and application flows using Network Based Application Recognition (NBAR). Third-party tools that monitor networks, sniffers and SNMP tools can be used too.

WIRELESS SITE SURVEY

After defining the devices (and their individual requirements) in your DLM strategy, a site survey of the areas requiring wireless coverage becomes indispensable. This process involves placing wireless signaling gear in the area and using special software or equipment to gather information about the site with regard to wireless networking.

Implementing wireless for voice involves more stringent requirements than those for data coverage. The survey requirements will change if location-based services will be overlaid on top of voice or data needs. Organizations should give special consideration to access point power, user requirements and cell overlap.

Other critical factors include the power capabilities of the users that will connect to the network, user roaming capabilities, whether these devices will attach to an 802.11a/b/g/n network and the number of users that will connect to a single access point at any given time.

Taking user and device density into consideration is important because in areas where the potential exists for a large number of users, you will want to add the appropriate number of access points to accommodate the traffic.

Placing too many users on one access point can degrade performance for everyone. It may also prove valuable to consider what mobile security solutions will be used on the organization's devices as some facilitate faster transfers between access points than others.

A site survey ensures proper quantity and strategic placement of access points throughout the area in order to efficiently provide coverage. It also verifies sufficient coverage overlap between access points so that the users will have the ability to move freely through areas and roam seamlessly between them.

Note that a site survey physically conducted on premises remains the only reliable method for identifying the required number of access points and their proper placement.

SECURITY ASSESSMENT

It will prove valuable to do a security risk assessment as part of your DLM preparation. Knowing what your organization's security needs are will be an important consideration as you choose what hardware and software to equip your desktop fleet with.

Various approaches to security risk assessment can be adopted. At one end of the spectrum, it's possible to do risk assessment mostly on paper. Such abstract approaches to risk assessment focus on the following issues:

1. Identifying the organization's assets and thereby determining what's at stake in the event of a security incident;
2. Identifying likely areas of trouble, or "threat modeling," which involves brainstorming about potential sources of harm to the assets identified above;
3. Attempting to prioritize the risks posed to the organization by ranking these potential troubles in terms of their likelihood and their potential impact.

It's possible to complete the third step without either detailed actuarial data about security incidents or uninformed predictions of the organization's future security.

The advantage of this strategy is that it offers a relatively quick and inexpensive path to valuable organizational knowledge. However, because it's conducted in a vacuum, it may not bear much relation to actual vulnerabilities or threats.

At the other end of the spectrum, it's possible to approach risk assessment from an applied technical perspective. A team of engineers with expertise in discovering and gauging the impact of vulnerabilities can take a snapshot of the environment and identify both assets that stand in jeopardy because of vulnerabilities and the types of threats that might affect them.

Quantitative in nature, this tactic has the advantage of providing a more realistic measurement of the environment's resilience to the

conditions of actual incidents. At the same time, a purely technical approach will often overlook important but intangible assets, such as public relations and good will. For this reason, it's a good idea to blend the two approaches.

PROCUREMENT

Every organization has its own unique (and often extensive) procurement process. With an uncertain economic climate and resulting uncertainty regarding budgets, it's a good idea for the IT team to educate themselves on the ins and outs of the steps they need to take in order to get the solutions they need for their DLM strategy.

Knowing how to use the procurement system to your advantage is knowledge that will pay off in large dividends when your organization determines its budgets.

IT teams need to know how to make the case for their budget

needs. Here are some tips about how to make your case for the DLM solutions that you need:

- **Translate performance into dollars:** If you are looking to upgrade your hardware as part of your DLM strategy, pilot a system to precisely quantify improvements in technical performance. Then try to quantify the financial benefits of the upgrade. Are end users demonstrably less productive without the upgrade? Are opportunities being missed?
- **Find the right advocates:** In the real world, the frustrations of managers carry more weight than those of rank-and-file staff. That's why it's smart to find the right allies when you're seeking approval for DLM spending.
- **Leverage inevitability:** PCs are aging assets that must be retired eventually. So it's better to position an upgrade as merely the acceleration of an inevitable purchase, rather than as a cost that could be avoided. ♦





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LOOK INSIDE for more information on:

- Choosing the right desktop configuration for your staff's needs
- Negotiating software licensing agreements
- Properly disposing of your IT assets
- Assessing managed services offerings

