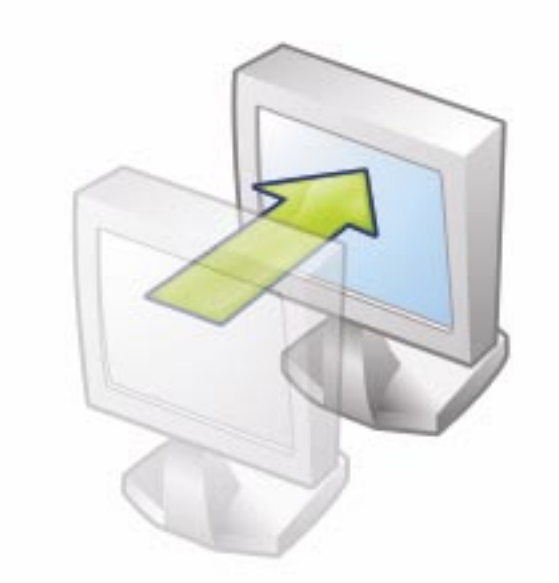
OS Deployment and Migration



Automate the entire process from planning to deployment, and configuration to maintenance.

LANDesk® SOFTWARE

Simplify OS upgrades and user migrations

The Challenge:

Migrating users to new Windows operating systems is a complex, multi-step process. You need to analyze the environment and select targets, then plan the rollout, prepare images, capture user data and settings, deploy the images, finish configuration, reload applications, restore user and application settings and validate successful deployment.

It's time-consuming, expensive and intrusive—and it's both a business and IT necessity.

Balancing costs against gains

Deploying and supporting operating systems is probably the most complex, pervasive task that IT departments face. As a result, many IT departments put off migration to Microsoft's latest operating systems and lose out on the benefits and cost reductions that the latest technology facilitates.

It's a balancing act between seemingly constant maintenance and intrusion on the user environment, or standardization on an older but more stable platform.

Often the costs seem too high—too much time, money, and effort to balance the performance gains. Some IT departments wait until new technology forces an OS upgrade—then migrate as few machines as possible to avoid disruption.

IT standardization

To increase benefits and reduce costs many IT organizations standardize on a single operating system. That consolidates support costs and training, and reduces the total costs of ownership. It simplifies application purchases and IT decision making.

Which is perfect until a new OS is released and new applications require the unique features of that new OS to run. Worse, support for older operating systems is phased out. To ensure standards, IT needs to migrate the entire company at once. So they wait as long as possible and migrate as seldom as possible.

In other words, decisions are often made on the basis of pain or price tag rather than stability or performance improvement.

Tools versus solutions

Imaging tools make it easier to create standard OS images. Distribution tools can deploy images to existing computers. Profile migration tools can save settings, preferences, and data then restore them after the current disk is blown away and replaced with the standard image. PXE tools can deploy operating systems to "bare-metal" systems with a disk but no software.

But tools have their own dependencies and don't always work well together. Often, version numbers count and IT is forced to use an older tool to maintain compatibility even though better tools have become available. The tools begin to limit each other, and you.

A single-vendor toolkit can eliminate that problem. Each tool provides good functionality and the tools work well together. But many toolkits use proprietary formats that require you to and install new infrastructure, build new images and develop new plans. The toolkit still stops short of a comprehensive, integrated solution.

IT control

It all comes down to control. IT needs to control costs and processes, tools and data. More importantly, IT needs to control the technology, not be driven by it.

If you've already built a series of standardized OS images, you should be able to use them. If you've invested time, training, and money in a profile migration tool you should be able to leverage it. Gaining the benefits of an integrated, automated solution shouldn't require you to give up the work you've already done.

Fortunately, you don't have to.

OVERVIEW

Business Need—Implement a proactive OS deployment and migration strategy

- Mass OS deployment and migration from a centralized location
- End-to-end automation in a single solution
- Leverage existing disk images, tools and processes
- Minimize impact on both user productivity and network resources
- Capture and migrate user and application settings, desktop settings and user data
- Support for both in-place migration and new provisioning to "bare-metal" machines

Solution—Automated OS deployment and migration from LANDesk Software

- LANDesk® OS Deployment Wizard automates the entire OS deployment and migration process
- Automatic profile migration retains user, system and application settings and restores them after migration
- Extensible application migration library and SDK means you can develop custom migration scripts
- "Image agnostic" deployment distributes images made with any standard tool
- LANDesk Targeted Multicast™ technology minimizes bandwidth use when deploying to many users
- PXE proxy technology enables bare-metal deployment without dedicated hardware on the subnet
- Scripted post-deployment configuration for hands-off task completion (SYSPREP)

The LANDesk® Solution

The LANDesk® OS deployment and migration solution automates the entire process from planning to deployment, and configuration to maintenance.

OS deployment and migration features include:

- The LANDesk OS Deployment Wizard guides IT administrators through the entire OS deployment and migration process
- Remote image capture makes it easy to create OS images
- "Image agnostic" distribution enables deployment of existing disk images created using another imaging tool
- Automated profile migration captures user and application settings, desktop settings and user data so you can quickly restore the user environment after image deployment
- Extensible application migration library with available SDK
- LANDesk Targeted Multicast™ technology speeds deployments to multiple targets while minimizing bandwidth use to reduce total network traffic without dedicated hardware or router reconfiguration
- PXE proxy technology enables rapid provisioning of "bare-metal" machines without dedicated servers on each subnet, boot floppies, or network reconfiguration
- Automated SYSPREP management completes post-image configuration automatically
- Deploy applications automatically to get users up and running immediately

Deployment Wizard

The LANDesk® OS Deployment Wizard guides IT administrators through all the major tasks associated with OS deployment and migration.

Create new images or specify existing images. Initiate automatic profile migration or create a standalone profile migration utility. Set SYSPREP variables to automate post-deployment configuration.

Whether you use the LANDesk imaging and migration utilities, or your own tools, the OS Deployment Wizard creates a consistent, easy to use interface for completing the tasks needed to deploy and migrate operating systems across the network.

Process Automation

Task scripting means you can precisely control how OS deployment tasks run. Automatically capture user profiles, deploy new images, and restore user and application settings and data. Choose standard unicast or advanced Targeted Multicast as your distribution method. Configure automatic application install or custom post-deployment configuration.

Automatically stage OS deployments to execute for only a certain number of targets at a time, regardless of the total selected. Choose what conditions must be fulfilled before the script moves to the next set of targets. This automates staged migrations while still giving you control over how and when tasks execute.

A simple UI directs you through the entire process. Directly edit scripts with your own text editor for highest levels of control. Define user-specific "personal" scripts to meet specific deployment needs without cluttering the public UI. Authorized console users can also define generally accessible "public" scripts to enable consistent management for all administrators. Extensive script management features enable IT to optimize the OS deployment UI and increase staff efficiency.

"We can capture all the settings we needed from a user, remove the old computer, add the new computer, have it automatically insert itself into LANDesk Management Suite, reload a standard FCSAmerica image and have the user log in to the new computer which has all the setting and software he/she had before.

What used to be a 13-week new hardware rollout for everyone in the company, has now been done in 24 days."

DENNY CANNON

PC INTEGRATION SPECIALIST

FARM CREDIT SERVICES OF AMERICA

Image agnostic deployment

The LANDesk OS deployment solution is image agnostic, which is to say it can deploy any disk image—whether created using the LANDesk imaging utility, or using tools such as those provided by Symantec*.

This image freedom gives you the power to leverage your existing imaging technology. Since there's no need to recapture images, you can quickly upgrade your OS deployment and migration capability and start showing immediate results.

You can also use the powerful image capture utility provided with the LANDesk® OS Deployment Wizard to capture an image from any remote computer off the network.

Automated profile migration

The LANDesk solution can automate profile migrations for many users, create a standalone utility so users can migrate their own profiles, or use your existing migration tool.

This gives you freedom to make choices that are most effective for your individual situation. If you have a substantial investment in another profile migration tool, you can integrate that tool into the process using the LANDesk OS Deployment Wizard.

The LANDesk solution features a robust profile migration tool that can capture and restore desktop and application settings, and other user data according to rules you specify. This makes it easy to quickly migrate users to new operating systems with a minimum of interruption.

Some IT departments implement a hands-off policy for user data and settings—the C: drive is the user's responsibility. The LANDesk solution enables IT to create and distribute a standalone migration utility that enables users to take responsibility to capture and restore their own settings and data prior to a scheduled migration.

The LANDesk profile migration tool is fully extensible, and an SDK is available for you to develop custom scripts to meet the unique needs of your IT environment. As new application scripts are developed, they will be made available to registered users through a secured Web site.

LANDesk Targeted Multicast™

LANDesk Targeted Multicast technology makes it possible to distribute large OS images to many users across the network with a minimum of network traffic.

Targeted Multicast features require no additional hardware or software infrastructure, and require no router configurations to allow multicast packets. You get the potentially extraordinary benefits of multicast technology with none of its traditional headaches.

Standard unicast distribution

Standard software distribution uses a unicast model. If you distribute a 120MB package to 100 users, unicast requires 12 gigabytes of network bandwidth to deliver individual copies of the package to each target computer (see Figure 1).

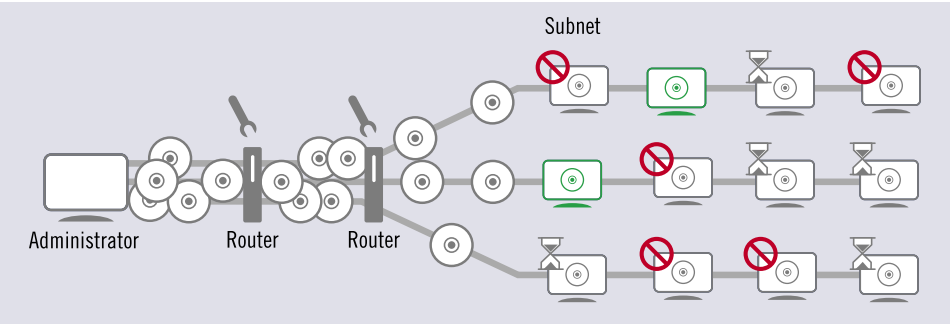


Figure 1: Standard unicast can flood the network when distributing large images to many targets.

While standard unicast technology works for smaller packages or deployments to

"Targeted Multicast significantly reduces software distribution times. On a site with 40 PCs, for example, transmission is now 20 times faster.

The impact on the network is dramatically reduced by multicasting."

DAVE BAKER

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only a few machines, it's not efficient for deploying large OS images to many users.

As a result, your options are limited. You can flood the network with traffic, break your distribution task into mini-tasks and spread them out over time, or schedule distributions for off-hours when network utilization is low—and many laptops are gone or computers are powered down, resulting in low success rates.

Advanced software distribution

LANDesk® Targeted Multicast™ technology uses a representative computer on the target subnet to function as a temporary multicast broadcaster.

The subnet representative pulls the distribution package down from the server using a standard http download then multicasts it on the subnet to listening clients. The software distribution agent on each target computer then installs the software and reports its status. The package only crosses the router once, and only one copy is broadcast on the subnet (see Figure 2).

Since the multicast happens on the LAN beneath the router, no router reconfiguration is needed to pass multicast packets, and no multicast traffic traverses the WAN. The single multicast on the subnet reduces local traffic substantially.

The computer that brokers the multicast is a normal managed computer that acts as temporary subnet representative until the distribution is complete, so no dedicated machines are required. Automatic selection of the subnet representative means the least burdened machine is used, or you can specify a specific machine to function as subnet rep.

This can result in a substantial reduction in network bandwidth use, especially when distributing large packages to many users on a subnet—with no router reconfiguration or dedicated hardware required.

Bare-metal provisioning

Many IT departments choose to purchase "bare-metal" machines with no preloaded disk image from the manufacture. The LANDesk OS deployment solution can automatically provision machines equipped with PXE-enabled NICs.

The LANDesk PXE solution requires no dedicated hardware, boot floppies, or network reconfigurations. Configure the OS imaging task and then deploy it. It's that simple.

The LANDesk PXE solution can select any managed computer on a subnet to temporarily function as a proxy PXE server. The system can automatically select the most powerful available machine, or you can manually designate a PXE proxy. Leverage the power of less-used machines to temporarily aid systems management tasks so no dedicated hardware is needed.

This PXE proxy responds to PXE requests from the bare metal machines, then

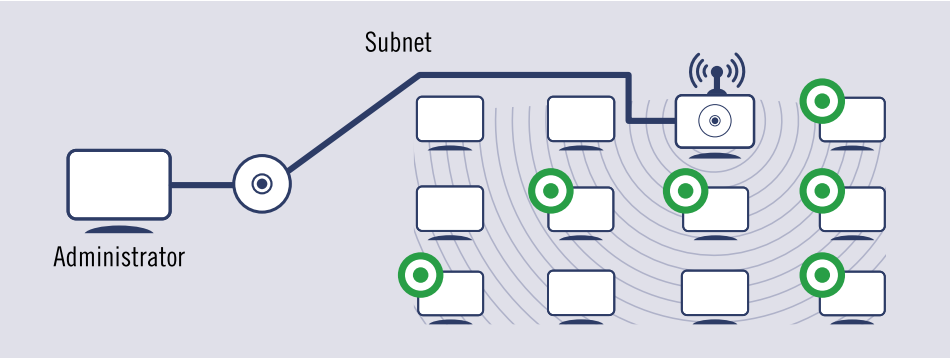

Figure 2: LANDesk® Targeted Multicast™ technology enables distribution of large images to many targets at once without flooding the WAN.

"The profile migration component's ability to store the user's data, preferences and settings and then migrate these over to a new box will save us a lot of time and minimize problems. This should keep our users happy by reducing their downtime."

MANNY FERRO
IT PROJECT SPECIALIST
MIAMI HERALD

pulls the selected disk image down from the LANDesk server and serves it out to those machines that request it.

That means there's no need to create custom boot floppies for each brand of NIC, and no need to install or configure expensive dedicated hardware on each subnet. Plug new hardware into the network, power them on, and let the LANDesk PXE solution do the rest. If you manage 30 remote sites, saving the costs of 30 PXE servers represents immediate, concrete ROI.

Post-deployment configuration

Have you ever done a five-minute image restore followed by a two-hour configuration session? Deployment scripts can automatically restore user profiles after migrations, and SYSPREP automation can quickly set up domain and machine information for new deployments according to rules that you specify.

Application deployment

When combined with Application Policy Management that lets you tie application availability policies with directory service (LDAP) policies, the LANDesk® OS deployment solution can automatically install all needed applications after OS deployment is complete. The application policy fires off automatically on the next login without any further intervention from IT.

Security Management

The most common reason for operating system updates is to address security issues. The longer it takes to distribute those updates, the more vulnerable your systems are to mischief. The LANDesk OS deployment and migration solution makes it easy to quickly target vulnerable systems and deploy critical OS updates across the company in a few minutes, closing security holes right now.

Rapid Results

By automating the entire process and giving IT control over that automation, the LANDesk OS deployment and migration solution makes a complex task manageable. Image-agnostic distribution and the ability to use existing disk images and profile migration tools means there's no need to recreate work you've already done.

The LANDesk OS deployment and migration solution requires no additional dedicated hardware or specialized router reconfiguration to provide full in-place migration or new image deployment, so you spend less time and effort preparing to deploy and more time getting useful work done. Automated post-deployment configuration gets users working fast.

Integrated Solution

Full integration with the LANDesk IT asset management solution makes targeting easy. The LANDesk solution takes full advantage of LANDesk software distribution technology to ensure efficient deployment and provide full task status and completion reporting.

The ability to deploy images created with both the LANDesk imaging tool and from other imaging tools means effective integration with the tools and utilities you're using right now. That creates efficiency and maximizes both current and future IT investments.

LANDesk Software, a Leader for OS Deployment and Migration Solutions

LANDesk Software is an industry leading provider of easy to use, integrated solutions for desktop, server and mobile device management. LANDesk solutions are proven, with more than 250 million managed nodes worldwide.

Find out for yourself. Call or visit our Web site to learn more about LANDesk solutions, then download a fully functioning 100-node, time-limited product trial so you can see for yourself how LANDesk solutions can help ease your systems management pain from the very first day.

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