



# Software Distribution



Implement controlled automation for software installation, security and virus update, and application patch management across heterogeneous network environments.

# Fire it off and forget it: Centralized, automated software distribution

## The Challenge:

Installing software on one computer takes time. Rolling out applications to many users across the company is a real challenge. Managing ongoing application, security and virus updates can take up so much time and manpower that other tasks are left undone. And every time a new update comes out, the process starts again

## Automated installs required

Manual software installation gives IT the greatest levels of control, but also takes the most time and requires the most record-keeping. As companies grow, however, automated software distribution becomes the only real answer, especially for companies with more than one location.

Effective automation is more than copying files. It's selecting targets for distributions, scheduling the task, and monitoring task completion. It's deploying the right applications to a new user's computer and automatically installing prerequisite packages as needed. It's distributing to mobile as well as desktop machines. It's automatically tracking licenses so you can ensure compliance.

## Maintain security/ preferred state

Once software is installed, effective automation means maintaining the preferred state for both users and machines. It's getting virus updates and security patches out to targeted computers fast. It's keeping applications healthy and up to date—without IT intervention.

If automation doesn't address new installs, ongoing security updates, and application patch management, it's just another partial answer to a complex problem that will require more of your time to plug the holes in the system.

## Infrastructure impacts

Distributing some software packages requires a huge amount of network bandwidth. If you distribute a 120MB application suite to 100 users, you

could end up using 12 gigabytes of network bandwidth—enough to choke most networks.

Some systems use dedicated servers replicated across the network to create local application availability. That added hardware infrastructure is expensive and requires extensive setup and maintenance—losing much of the time and money saved by moving to an automated system in the first place.

## Increased success rates

Sometimes software packages don't reach their targets. Mobile users can be disconnected from the network, some machines might be powered down, and others may crash part way through the process.

So you end up redistributing the same package to many of the same users. With even a ten percent failure rate, distributing a single application can take days or weeks. If you're dealing with thousands of computers, that can stretch out even further.

## No time to wait

If the application or patch is critical, you have to closely monitor the process to make sure everyone receives it in a timely manner. Asset management tools can help you figure out who didn't get the package, but you still need to reschedule the job, wait for it to finish, then check it again.

## Control the process

Automation by itself doesn't really solve the problem. You need to be able to tightly control what happens and when.

## OVERVIEW

**Business Need**—To automate software installation, security and virus patch, and application update across the enterprise, with:

- Minimal impact on network resources
- Efficient mechanism for distributing software to many users at once
- Flexible platform and package support
- Easy targeting to users based on inventory attribute or directory policies
- Requirement checking and automatic prerequisite package install
- Automated task scheduling
- Task completion and job status tracking
- Mobile device and Macintosh support

**Solution**—Software distribution from LANDesk, featuring:

- Task-based distribution model enables process efficiency
- LANDesk® Targeted Multicast™ technology minimizes bandwidth use when distributing to many users across complex networks
- LANDesk® Peer Download™ technology increases distribution efficiency on the subnet and supports mobile users
- Package-agnostic distribution supports Mac OS X, Linux and other platforms in heterogeneous IT environments
- Full integration with Microsoft Active Directory Service and Novell NDS/eDirectory data simplifies targeting and enables policy-based management
- Prerequisite checking and package chaining ensure complete software installs
- Task scheduler automates the whole distribution process
- Automated task completion and task status reporting ensure the job is done
- Bandwidth detection, checkpoint restart, byte level differencing and task completion support mobile devices as well as improving success in any bandwidth-constrained network environment

The best solution will give you the ability to create a set of standardized application and update packages, tie those packages to a set of directory policies, then automatically install packages to maintain those policies—without massive network impact, infrastructure requirements, or IT supervision.

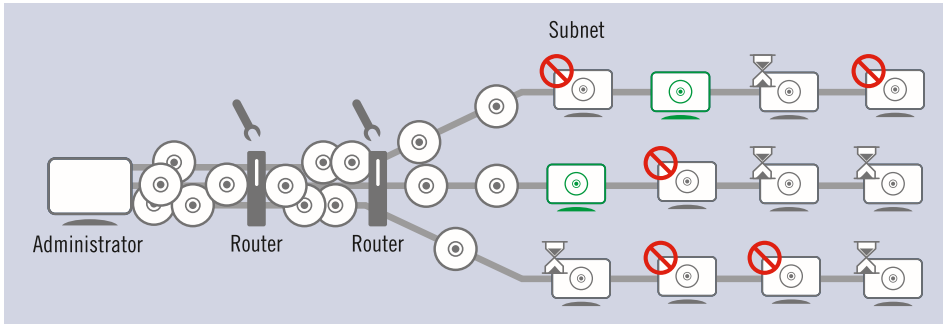
## The LANDesk® Solution

LANDesk® software distribution technology gives IT the tools to implement controlled automation for fast and efficient software installation, security and virus update, and application patch management across heterogeneous network environments.

- Task-based distribution model separates package building from delivery method to improve overall process efficiency and enable component re-use
- LANDesk® Targeted Multicast™ features that minimize bandwidth use when distributing large packages to many users—without dedicated hardware or router reconfigurations
- LANDesk® Peer Download™ leverages local bandwidth efficiency to access packages that have previously been delivered on a subnet
- Policy-based distribution helps automate software availability and keep applications in a preferred state
- Deployment task scripting enables detailed control over how tasks execute
- Prerequisite checking and package chaining make it easy to install multiple packages in a single operation, and automatically install prerequisite packages
- Task scheduler integrates with directory service and asset inventory databases to make target selection easy; real-time status reporting informs IT of deployment task completion status
- Both standard distribution and advanced Targeted Multicast to Mac OS X computers
- Package-agnostic distribution enables deployment of any package type, including MSI, RPM, setup.exe and other installers
- Multi-file MSI support enables rapid multicast distribution of very large application packages
- Full-featured package builder enables custom package building
- Extended mobile device support, including bandwidth detection, byte level checkpoint restart and task completion
- Both push and pull distribution to support your deployment plans

### Distribution process efficiency

LANDesk® software distribution is based on a modular, task-based model that can substantially improve your overall efficiency in planning, scheduling and managing software distributions. Packages, distribution methods, deployment scripts and target selection are managed separately to increase overall flexibility.



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

This enables you to create a library of basic distribution packages that include all the elements needed for successful install. You can then separately define a set of distribution methodologies that control how packages are actually made available to targets, including push vs. pull options, use of Targeted Multicast™ and/or Peer Download™ technologies, user feedback options, reboot options and more.

By separating packages from delivery method, this building-block approach enables more granular package control with a minimum of redundant effort. It also enables complex package chaining and distribution task flexibility, so you can optimize the deployment of every package.

### LANDesk® Targeted Multicast™

LANDesk® Targeted Multicast™ technology makes it possible to distribute large packages to many users across the network while minimizing 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, this model requires 12 gigabytes of network bandwidth to deliver individual copies of the package to each target computer (see Figure 1). Even if you use staging

servers or other infrastructure, each copy is still delivered one at a time.

While standard unicast technology is effective for smaller packages or deployments to only a few machines, it's not efficient for deploying large packages to many users.

As a result, your options are limited. You can flood the network with traffic, break your single 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).

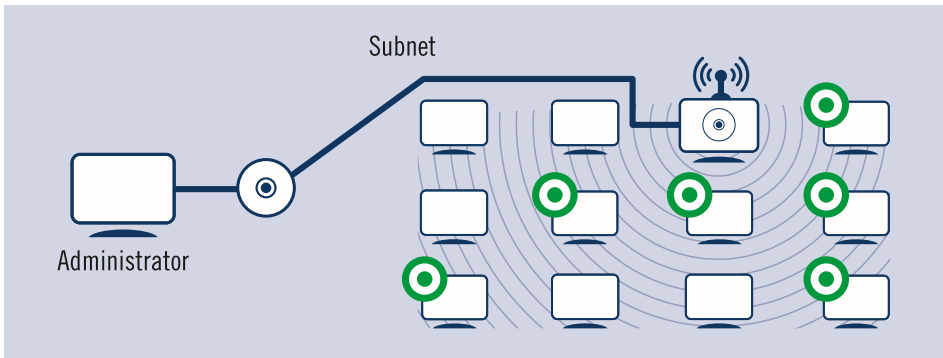
Since the multicast happens on the LAN beneath the router, no router reconfiguration is needed to pass multicast packets, and no multicast traffic traverses the WAN. The single multicast on the subnet reduces local traffic substantially.

“Targeted Multicast™ significantly reduces software distribution times. On a site with 40 PCs, for example, transmission is now 20 times faster. The impact on our network is dramatically reduced by multicasting.”

DAVE BAKER

BUILD MASTER

BT WHOLESALE MARKETS



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

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 for maximum control over the process.

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.

### LANDesk® Peer Download™

LANDesk® Peer Download™ technology enables managed computers to obtain software packages from other managed computers on the same subnet that previously received the package.

When packages are distributed to a managed computer, the compressed package is stored in a temporary cache on the target machine to speed install. Peer Download takes advantage of that cached package file to enable computers to quickly obtain the file from a local peer. A computer can even re-access a package in its own cache to enable rapid reinstall or repair.

When Peer Download is enabled for a distribution task, the target computer first looks in its own cache, then looks for the package in the caches of peers on the same subnet. If the package is not available locally, only then does the

target computer request that the file be downloaded from the distribution server.

Administrators can choose to make distribution packages available only through Peer Download. If the package is not available in its local cache or from peers on the local subnet, the distribution task fails and the administrator is notified. This can result in dramatic bandwidth savings when distributing large OS or application packages across the enterprise. More importantly, it puts bandwidth control in the hands of administrators.

The overall result can be substantially reduced traffic across routers and the WAN, more rapid task completion by keeping file transfers on the faster local subnet, less impact on the distribution server, and more efficient overall use of managed resources.

This is especially important for mobile users. By making packages available on the local subnet, there is less need to pull packages over expensive WAN links. With task completion, a distribution interrupted on one subnet can complete on a different one—without hitting the distribution server over the WAN. That flexibility makes applications available to any user, with an unmatched level of efficiency.

### You control the automation

Task scripting means you can precisely control how distribution tasks run. Set up rules that determine whether the package is required, recommended, or optional to define the level of user control. You can also expose or hide status messages

“In terms of time/cost savings of the application distribution function, we have shaved weeks off of the process. Now we can create a software package and distribute it in minutes, with pinpoint accuracy to the exact desktops needed.”

ANTHONY COCCO

MANAGER OF IT OPERATIONS

NORTH PENN SCHOOL DISTRICT

on the client and set reboot options to smooth the software distribution process and limit impact on end users.

You can also define scheduling scripts. Automatically stage distributions to execute for only a certain number of targets at a time, regardless of the total selected. Choose when a package should be redistributed, or what conditions must be fulfilled before the script moves to the next set of targets. This automates staged distribution while giving you control over how and when tasks execute.

A simple UI directs you through the entire process. You can directly edit scripts with your own text editor for highest levels of control.

### Package chaining

Many software packages require that specific software or configurations exist prior to installation. As part of the package deployment scripting you can specify these software dependencies and provide instructions to automatically install any required software packages available to the management system.

By automating the process of bringing computers up to standard and ensuring that all required software packages are installed, LANDesk® software distribution helps simplify configuration management in diverse computing environments. Create individual distribution packages as configuration building blocks, then use package chaining to quickly and automatically bring computers up to the standards defined in your configuration management plan.

### Policy-based management

LANDesk® software distribution can both leverage directory service (LDAP) information to establish policies that automatically execute when members of a particular organizational unit log in, and use asset database query results to determine which computers a policy applies to.

Use this capability to deploy software to those who need it, to quickly provision new computers with specified applications, or to maintain a preferred state for either users or machines. LANDesk® Peer Download™ technology enables computers on the same subnet to efficiently maintain application policies without requiring downloads from a distribution server or the management core server.

Directory service integration makes it possible to establish a single set of application policies for an entire organizational unit. When you add a new user to that group, those applications can be installed on that user's next login—automatically. Define it once, then forget it. Distributing applications or updates becomes a simple matter of attaching the package to a set of user and/or machine policies. When combined with prerequisite checking and package chaining, this enables easy establishment and maintenance of complex computing environments with a minimum of IT intervention.

Policy-based management can also automate uninstalls. As users are added, removed, or change job functions, policy-based management can automatically add or remove software so there's no need to repurpose machines as organizational changes occur.

You define the policies and provide the software packages, then sit back and let LANDesk software distribution take care of the details.

### Deploy any package

LANDesk® software distribution can not only deploy packages built using the LANDesk package builder, but can also deploy packages, installers or executables such as setup.exe, RPM and MSI files. You can also distribute multi-file MSI packages along with their transform file enabling you to distribute large application packages.

“Since the first of this year, we have distributed more than 53,000 software packages. And as of August, I estimate that LANDesk Management Suite's software distribution and remote control features alone have saved our organization \$1.167 million! Any time you can show that the IT department is saving money rather than simply being overhead, it's a good thing”

ANDY NOSAL

SUPERVISOR OF LANDESK

OPERATIONS TECHNICAL SERVICES

RAYMOND JAMES FINANCIAL

Integration with InstallShield gives you direct access to its powerful package building and analysis features. If you don't use another package building technology, the LANDesk package builder provides powerful features to automate application install and maintenance on Windows computers. Set environment variables and installer behaviors. Create uninstall packages to ease version rollback or software uninstall. You can also create healing packages to automatically repair damaged applications.

### Mac OS X support

Macintosh computers are no longer refugees on the corporate network. Deploy Macintosh installer packages to OS X computers using patented LANDesk® Targeted Multicast™ technology. Leverage asset inventory information to select targets, and use policy-based management to ensure that the right software is automatically installed on Macintosh computers.

### Real-time status reporting

The task scheduler reports the status of each distribution. Instantly see whether packages have been installed, are in progress, or have failed. Easily redistribute failed deployments right from the task scheduler. Real-time status reporting puts the information at your fingertips, along with the power to act immediately.

### Support for mobile devices

Mobile computers create unique challenges for software distribution. They're often disconnected from the network, or connect for only short periods of time over dialup or slow remote connections.

LANDesk® software distribution includes features specifically oriented toward mobile devices. Byte-level checkpoint restart combines with automatic task completion to start interrupted distributions right where they left off. There's no need to redistribute when a mobile goes mobile. Bandwidth detection can hold off on a distribution until the mobile device is connected to a fast connection. Dynamic bandwidth throttling limits the total bandwidth a

distribution takes up, reserving needed network resource for other critical tasks.

Full support for PDAs and other handheld devices is built in to LANDesk software distribution, eliminating many manual installs and helping to reduce the total costs of maintenance for this rapidly growing set of computing devices.

### Rapid Results

LANDesk® software distribution gives you easy access to both user and machine information so you can quickly determine who needs what, then distribute the right applications or files immediately. There's no special configuration and no dedicated hardware so you can deploy software the moment the software distribution agents are installed.

Policy-based management makes it easy to define both user and machine policies and implement them quickly. Prerequisite checking and package chaining enables complex installs on target computers with minimal IT effort, and enables a building-block approach that simplifies configuration maintenance.

Because you can distribute existing installers without first converting them to a proprietary format, you can immediately begin distribution. LANDesk® Targeted Multicast™ technology gets packages to users across the network quickly and efficiently while minimizing bandwidth. LANDesk® Peer Download™ enables more efficient distribution and policy-based application management on the subnet.

LANDesk software distribution enables you to not only start distributing software quickly, but to finish the job quickly as well.

### Integrated Solution

LANDesk® software distribution is a feature of LANDesk® Management Suite, where it integrates fully with LANDesk asset management and OS deployment solutions to create easy, automated software distribution and maintenance.

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 first day of deployment.

<http://www.landesk.com>

LANDesk software distribution technology is also integrated into LANDesk® Security Suite and LANDesk® Patch Manager to enable efficient, effective patch deployment. LANDesk® Server Manager extends software distribution with on-demand technology.

## LANDesk—A Software Distribution Solutions Leader

LANDesk is an industry leading provider of easy to use, integrated solutions for desktop, server and mobile device management. LANDesk solutions are proven, with millions of managed nodes deployed worldwide.

Find out for yourself. Call or visit our Web site at <http://www.landesk.com> 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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