Eight Ways Better Software Deployment and Management Can Save You Money

Introduction

Software management and deployment are perhaps among the most difficult and time-consuming activities undertaken by your IT team. Software, in many ways, is at the root of many IT problems. As applications start to proliferate, as versions become inconsistent, and as users are missed by upgrade cycles, the environment becomes less stable and more difficult to support.

In fact, it's more accurate to say that software management practices are at the root of those IT problems. Software management is difficult, and operating systems rarely provide effective tools to make that management easier. But with the right capabilities in your environment, you can save money, reduce overhead and improve your users' work experiences.

The key is to acknowledge that software deployment—merely getting the software in place to begin with—is just the start of a complex, ongoing lifecycle. Learning to manage that lifecycle effectively can deliver many benefits, including the eight presented in this guide.

The software management and deployment process is difficult, and operating systems rarely provide effective tools to make it easier. But with the right tools and processes, you can save money, reduce overhead and enhance user satisfaction and productivity. This white paper explains eight key benefits of effective software management and deployment, and details the key capabilities you need in a tool to realize each of those benefits.

With an easily-accessible, web-based portal through which users can browse available software applications, request the ones they need, and have those applications deployed, you can reduce or eliminate IT overhead.

Benefit 1: Reduced IT overhead

Effective software distribution and installation across an organization is the first step in improving productivity and reducing IT overhead.

Unfortunately, approving and deploying applications is too often a manual task within IT. Complex change management procedures and IT request processes compound the problem by adding overhead and making it unnecessarily difficult for users to simply get the applications they need.

The answer is self-service software deployment. With an easily-accessible, web-based portal through which users can browse available software applications, request the ones they need, and have those applications deployed, you can reduce or eliminate IT overhead. Users get what they need—within the framework of permissions and approvals that you create—and IT doesn't need to be personally involved in every transaction.

The main concern with self-service software distribution is the associated licensing costs. That's why a self-service portal still needs to include policy-based workflow and approvals—but it doesn't necessarily need to involve IT. Business managers approve their users' software "purchases" from IT, putting the business in control of its expenses and leaving IT to do what it does best: manage the infrastructure.

Core capabilities needed

In order to realize this benefit, you'll need a few key capabilities:

- A policy-based, workflow-controlled self-service system that lets users request software on their own
- The ability to initiate software deployments based upon approved self-service requests

Benefit 2: More accurate deployment with automated packaging

Most organizations struggle with the actual packaging of software content. Each application will have its own setup routines, of course, and each one tends to offer a different set of options for automating that setup process. Even different versions of the same application may require different installation syntax, alternate parameters and varying deployment conditions.

Administrators almost invariably end up spending an immense amount of time mining for answers on vendor and community web sites. Their findings may not be entirely accurate or applicable, resulting in additional trial and error attempts before they hit upon the correct way to deploy an application.

A software deployment solution can help by integrating that kind of intelligence directly into the deployment toolset. For example, a catalog of applications and their deployment requirements and syntax can act as a central knowledge base, enabling administrators to more quickly create the right deployment packages, with less trial and error—and less risk of negative impact on users.

Core capabilities needed

You'll need:

- An integrated catalog of applications and versions that includes accurate deployment syntax and parameters
- Continual updates that include revised applications and versions, corrected syntax and other technical details

Benefit 3: Right-sized licensing

Right-sized licensing begins by having a better software deployment process that can accurately target computers and provide detailed reports on successful deployments, essentially telling you how many licenses you should have purchased for that software.

But right-sizing also includes integrated software metering capabilities, so that you can accurately assess who is using the software you deployed. When you detect installations not in active use, the ability to remove them—and to recover or reallocate those software licenses—can help reduce overall licensing expenses.

Core capabilities needed

Adding these capabilities to your environment can help you save money:

- Targeted deployments so that only the desired computers receive an application
- Ongoing software usage tracking to help identify unused software
- Accurate reports so that you can modify software distributions to accurately reflect usage patterns

Benefit 4: Better user experiences

A common user complaint about traditional software deployment and management is the impact on them. Organizations often prefer to deploy and update software during off hours, but there can be challenges in doing so: users taking laptops home for the night, turning off computers, and so on. In some cases, deployments have to be sent out during business hours, which can hurt users' productivity.

A better approach is to involve users in the deployment and update process. Some deployments may in fact be critical, and you may want them deployed as close to "immediately" as possible, regardless of what users are doing. In those cases, you may also want the ability to communicate with users to let them know what's happening. In other scenarios, you may want to give users the ability to defer software deployments until a more convenient time—and again, you'll want a way to communicate with users about what's happening and what their options are.

Core capabilities needed

A few foundation capabilities can help achieve this better user experience:

- The ability for administrators to mark deployments as deferrable, perhaps until a specified deadline
- Tools for creating pre- and post-deployment user communications
- Options to mark deployments as non-deferrable, for critical application updates

Benefit 5: Better remote user service

Remote users have always been a bit left out of the traditional software deployment process. When you're at a main office, where all the software is actually stored, receiving new applications and application updates is easy. When you're at the wrong end of a wide area network (WAN) link, or when you spend most of your time on the road, software doesn't come easily. Many organizations spend an excessive amount of time managing the availability of deployment packages at remote locations, trying to get software to the users that need it. It's overhead that the IT team simply can't spare.

But a properly managed software deployment and management process, combined with the right capabilities, can help immensely. For example, deployment packages can be automatically replicated to specified locations, giving IT administrators a single point of management while still getting software as physically close to your user populations as possible for faster quicker software deployment that doesn't end up congesting your network. You can even more easily support

Businesses need to be able to better manage the software licenses they purchase.

A robust software deployment and management process can help mitigate configuration drift and maintain a more readily supportable environment.

remote locations that lack any kind of IT presence, simply by designating a local software repository at those locations and letting the software deployment and management tools handle the rest.

Bandwidth-sensitive content replication is a must, as you don't want to run the risk of replication overwhelming small WAN links and hurting user productivity, particularly during business hours.

Core capabilities needed

You'll need a few core capabilities to implement better remote user service without raising IT overhead:

- Automated replication of software deployment content to designated remote locations
- Bandwidth- and schedule-sensitive replication capabilities
- Centralized management of software deployment content, regardless of where it will ultimately be replicated

Benefit 6: More consistent and supportable systems

One common goal in IT management is to reduce variation in IT assets. The reasoning is simple: when there are fewer variations to worry about, there's less to keep track of, and more shared knowledge about how to solve specific problems. Many IT organizations spend a great deal of time devising "locked down" environments that resist variation and change, primarily to help ensure a more consistent, more supportable environment.

Software tends to be the sticking point. While a computer can be 100 percent compliant when it is first deployed, configuration drift begins to set in almost immediately. Users call and report problems that IT seems to have solved over and over and over, often because they simply don't have the latest software or patches installed.

A robust software management and deployment process can help mitigate configuration drift and maintain a more readily supportable environment. Centralized deployment and targeting helps ensure that the right computers get the right software, while easy-to-use dashboards and reports help administrators keep track of which systems have completed their deployments. Integrated inventory lets administrators and technicians quickly verify the state of any computer, helping them solve user problems more quickly by knowing—rather than assuming—what's installed on the computer.

Core capabilities needed

You'll need just a few key capabilities to keep things more consistent:

- Integrated software inventory that tells you what is actually installed, compared to what should be installed
- Robust software deployment targeting, tracking and reporting

Benefit 7: Integrated OS patch management

The operating system of a computer is obviously a big piece of software in its own right, but traditional IT management practices tend to treat it entirely separately. IT organizations deploy one infrastructure to support their applications, and another independent infrastructure to support OS updates and patches. The duplication is unfortunate, because it divides the IT team's attention across two systems that should, for all intents and purposes, be providing more or less identical functionality.

A proper software deployment and management process integrates OS patch management right into the main software deployment system. While the actual patch binaries may originate with the OS manufacturer, those patches should be integrated into the main software deployment process. Administrators and technicians should be able to target computers for OS updates, and most importantly, track the progress of the deployment of those patches throughout the organization. The result is a cleaner, simpler environment that provides consistent functionality and less IT overhead.

Core capabilities needed

To achieve this benefit, you'll simply need a couple of capabilities in your environment:

- A software deployment system that can integrate OS vendor patches and track their deployment
- The ability to treat the OS itself, for most purposes, as another software application

Benefit 8: Healthier, more reliable systems

Obviously, everyone benefits when software is healthy. Users stay productive, IT can focus on important value-added projects, and the business runs more smoothly. In fact, one of the biggest benefits you can realize from an effective software deployment and management process is the ability to keep your software healthy and your computers more reliable.

A healthier environment starts with an effective inventory. Only when you know what software you have can you begin to manage it more effectively. The next step is to have a solution in place that can quickly and accurately deploy software updates to computers that require them. Being able to target specific computers for an update deployment helps you target your IT efforts on the computers and users that need them, especially when you're deploying a high-priority update that solves an immediate problem.

Core capabilities needed

Core capabilities needed to realize the benefit of healthier, more reliable systems include:

- The ability to accurately inventory deployed software
- A means of identifying computers requiring software updates and initiating deployment
- The ability to track deployment activity through to completion, which includes success and exception reports

Software management is not just about deployment.

Without the right tool for the task, effective software distribution and management across an organization can be time consuming and costly, expose your network to security holes and be disruptive to end users.

The Dell™ KACE™ K1000 Systems Management Appliance simplifies and automates software deployment and, more importantly, software lifecycle management. The K1000 streamlines:

- Distribution and installation of virtually any application, service pack, update, hotfix, or digital asset to Windows, Mac and Linux desktops and servers
- Management updates through the use of dynamic groups which allow control over groups of like machines
- Alignment of software deployment with employee structure using real-time Active Directory and/or LDAP integration
- Wake-On-LAN (WOL) support to schedule machines to power on to receive software updates or patches after hours, reducing downtime and maximizing energy efficiency
- Scheduling deployment of any software package to PCs and servers in flexible groups that you create
- Software license optimization to accurately track software usage. thereby enabling you to save money by harvesting and reallocating unused or underutilized software assets and avoid fines for unauthorized use.
- Keeping software up to date and secure with a solution that offers 100 percent WSUS content parity, plus Mac OS patching, and third-party application patching with patch roll back capabilities
- Elimination of productivity-killing software, as well as harmful and malicious software, while still maintaining user productivity

Conclusion

Too often, we think of software as a deployment problem: get the software out there so that users can start being productive. But deployment is only the first step in managing something that, in fact, has a complete and complex lifecycle. With the right solution in place and following the eight steps presented in this guide, you'll lower IT overhead, reduce expenses and vastly improve the user experience.

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