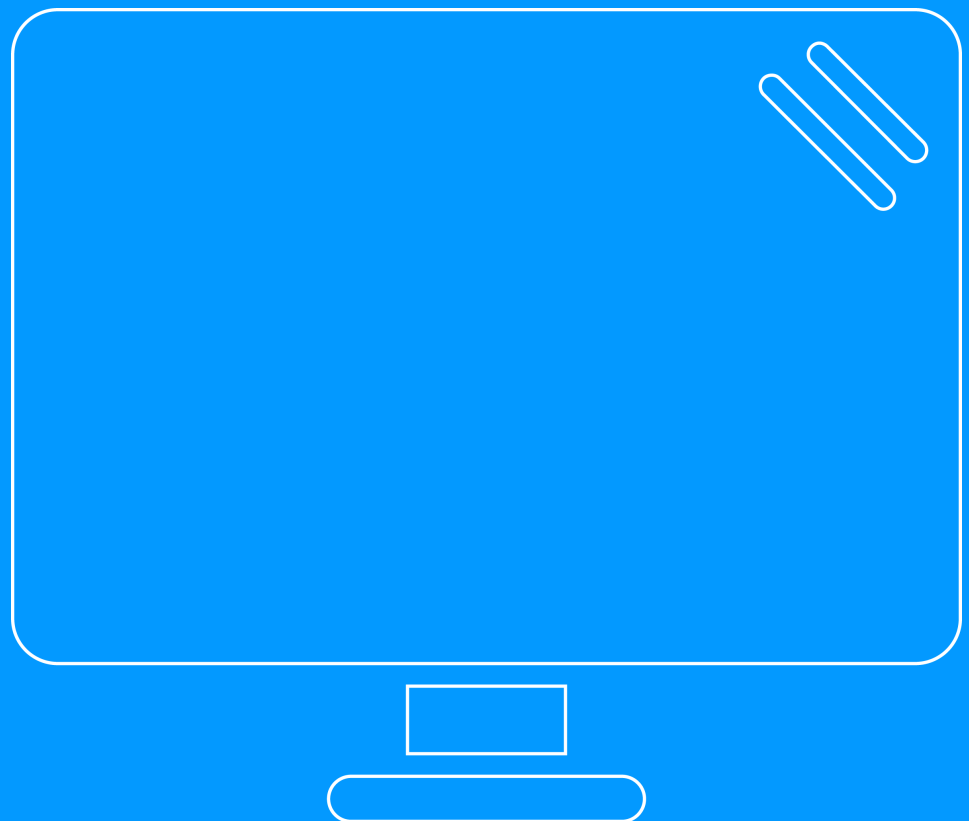Sponsored by smartdeploy

Thurrott Technical Brief

Computer Imaging Solutions Showdown

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OVERVIEW

Computer provisioning is a fact of IT life, and recent technology changes have made systems deployment and recovery even more challenging. SmartDeploy offers a solution that was built on a deep understanding of the current technology environment, in a way that rethinks and solves some of the traditional headaches of reimaging computer, like handling device driver packages and golden "hardware independent" master images, and packages it in an easy to use software solution that takes a fraction of the time to set up as traditional image deployment options.

CONTEXT

Systems imaging really came into prominence in the late 1990s and early 2000s. Corporate campuses were the hub and the central nervous system of the business. Client IT consisted of a lot of desktop computers; road warriors with laptops dialed in to corporate campuses. In those days, the replacement cycle of a desktop PC was much longer due to the significant cost of PCs at the time. Disk imaging tools were first built in a world where reimaging occurred infrequently and a tool only needed to be slightly better than the alternative – installing everything manually.

Times have changed; the corporate campus is still there but a large and increasingly growing contingent of workers are doing their daily work from home on computers that may not connect to the true corporate campus network on any sort of regular basis. Road warriors are still present, but they want to use their own devices – not only smartphones and tablets, but many of them want to have their own laptops that work with their own styles and preferences. The corporate IT department, however, still needs to support them. How will IT touch them and how long does IT before those systems go back on the road? Add in the hardware revolutions and evolutions that are coming at such a pace today, and the recovery in the economy is translating into many businesses expanding and hiring, and it all means that deployment and provisioning is still a challenge.

Unfortunately, the tool landscape has largely not evolved to meet these changing needs. The Microsoft native deployment tools are broad but not deep. Windows Deployment Services (WDS) and the Microsoft Deployment Toolkit (MDT) take a while to configure, and then one must build deployments for different hardware configurations or deal with slipstreaming drivers into the deployments as they happened. Multicasting has always been a challenge. Another popular solution, Symantec Ghost, seems more oriented at recovery rather than initial provisioning. Most other third party tools do not seem to have been updated with the changing ecosystem, and few appear to have seriously reimagined imaging in today's world with its inherent challenges and heterogeneous environments.

Even though imaging is mature, its importance as a critical piece of the IT administrator's arsenal is perhaps more elevated than ever. Whether it's moving from systems with BIOSes to systems with a UEFI foundation, or maybe systems with new Kaby Lake processors that don't work with tried and true Windows 7, or something else, the bottom line is that IT needs computer imaging tools that understand today's challenges with hardware and shifting platforms and supported operating systems, and tools that help you with that initial provisioning. Proper imaging tools should maximize your department's efficiency, reduce downtime that end users experience in the event systems need to be reimaged, and significantly cut down on the provisioning workload during those times.

PERFORMANCE DATA

KEY TAKEAWAYS

SmartDeploy is a simple, easy to use tool to deploy systems. Set up new machines and complete operating system deployment tasks at least 47% faster than tools like Symantec Ghost, Acronis Snap Deploy, and Microsoft Deployment Toolkit.

Typical Windows deployment and imaging solutions involve a sector based copying solution that lays down Microsoft Windows imaging format images on target systems. This works acceptably well until you deploy multiple different hardware configurations, which require different driver files, Registry entries, and the like. At that point, multiple sector based images are required, one for each configuration. This can lead to a significant amount of overhead and time spent managing and maintaining each individual image. SmartDeploy's primary objective is to remove this roadblock and allow you to seamlessly deploy one image to any number of devices in your environment, regardless of HAL type, chipset, hardware configuration, and other differences in your target systems.

SmartDeploy is designed to be performant in a variety of scenarios, including a simple like to like deployment but also deploying a golden master image to a variety of target systems with different chip sets, drive sizes, processors, and the like. SmartDeploy captures the files stored on the disk as they are, so you can install not only the operating system but also your preferred suite of applications. SmartDeploy also allows you to customize the resulting target deployment from a driver perspective so you can keep one image for multiple target device types.

SmartDeploy allows you to store your reference, or golden master, images on network shares as well as local offline media, like DVDs or USB keys, making deployment a snap regardless of your scenario. You can boot target machines over the network using PXE and WDS, or boot them offline using a USB key or other media, and then kick off image deployments. SmartDeploy also offers an optional client that permits push deployments for scheduled overnight maintenance using wake-on-LAN technology and other similar scenarios.

Additionally, cloud services are a popular option in today's enterprise as IT is expected to support remote workers, and SmartDeploy's current beta supports storing images on popular cloud storage options like Google Drive, OneDrive, and DropBox. This is ideal for branch offices and home users, especially for transitioning operating systems from Windows 7 to Windows 10. The beta has optimizations that help transfer large files over the Internet while still maintaining performance, allowing deployment through the cloud with a push of a button without any on site IT support necessary.

HOW SMARTDEPLOY WORKS

SmartDeploy's unique wizard-driven process lets you create a virtual machine using Hyper-V, VMware, or Oracle Virtual Box, on which you install any supported version of Windows (including Windows Server) and any and all parts of the application stack you want on your target machines. You can also run Windows Update and any other tasks, and then simply shut the virtual machine down. SmartDeploy will handle removing unique security identifiers for accounts, the process known as "sysprepping," on its own automatically. Your role is simply to create the golden master image as you see fit and then shut down that virtual machine.

A MODERN APPROACH TO COMPUTER IMAGING

ONE IMAGE TO ANY DEVICE

GOLDEN IMAGE
YOU
CREATE

DRIVERS
WE CREATE

ANY COMPUTER MODEL
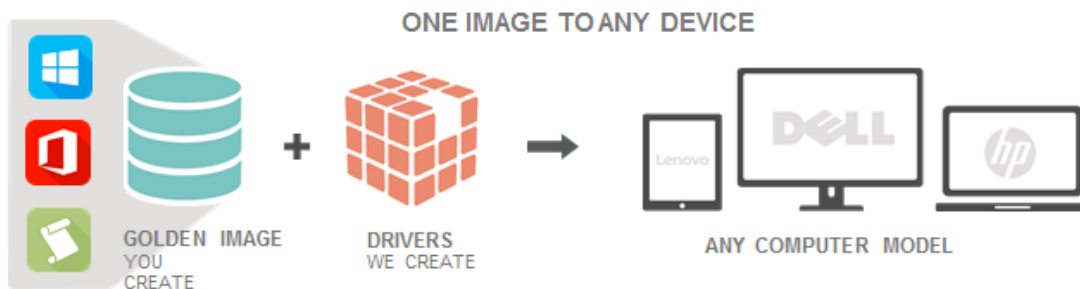
Part of SmartDeploy's magic is their technician-built device driver package and patented driver injection technology. Separately device driver management is handled by downloading a discrete file for each machine you want to deploy to, which lets you get the single image servicing benefits of virtual desktop infrastructure—the hardware independence—without having to worry about thin clients and hamstringing your users with underpowered hardware. If you are a business that has diverse hardware and has a common golden image baseline for different departments, then SmartDeploy will save you time and make your operations more efficient.

A library of over 1,000 Platform Packs is available from directly within the software. This means only the right drivers will be installed on the target device, which saves time and drive space, while increasing reliability. SmartDeploy also has an Answer File Wizard which makes zero-touch, automated deployments very easy.

Additional Information

- A free trial is available from the SmartDeploy website. It is a fully functional trial and extensions from the default two week expiration are available for interested parties.
- A PassMark Benchmark report comparing various imaging tools shows how SmartDeploy stacks up in terms of performance.
- Interested in trialing SmartDeploy? Use this Quick Start guide to orient yourself to the software and get started fast.

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