Systems Management: Best Practices for Optimization of PC Life-Cycle Configuration Management
White Paper: Client Management

Systems Management: Best Practices for Optimization of PC Life-Cycle Configuration Management

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Introduction
Symantec Ghost™ Solution Suite, the industry’s most widely used corporate imaging and image deployment solution, can significantly reduce the time and cost associated with managing devices within local area networks (LANs). With minimal setup time and cost, systems can be remotely managed and routine IT tasks automated. The solution provides imaging, hardware and software inventory, software deployment, user migration, secure system retirement, and many other features.

This paper outlines the use of Symantec Ghost Solution Suite as a best-of-breed solution for PC life-cycle configuration management.

PC life-cycle configuration management challenges
IT departments are under more pressure than ever to do more with less, given smaller budgets. Other challenges include constant firefighting, remote and mobile workforce management, an ever-expanding number of IT projects, and keeping up with security and software updates.

Today’s constantly changing environments require new technology, hardware, and software. The need to upgrade software and to install drivers and patches escalates the cost of maintaining a network of desktops and laptops, especially for remote and mobile systems.

With both local and remote users, there is a requirement to recover immediately from hardware and software failures and to keep users up and running with minimal downtime. This includes recovery not only of the software, but also of PC personality and user data.

Many companies find it challenging to track or manage software and hardware asset data within their environment. The ability to identify which systems require upgrades or need to be retired prior to an IT project such as an operating system migration is crucial for effective planning and budgeting.

Many companies also struggle with the secure retirement of hardware once it has become obsolete. Frequently, they use software to delete data (not file references) and they physically destroy disks, or they outsource responsibility for data wiping and disposal to an external company. Both approaches, however, pose potential legal and compliance issues. This area of life-cycle management often becomes lower priority due to competing activities, although ongoing publicity about client and financial details being recovered from donated or retired PCs highlights the importance of this task. There can also be long delays in the process, or no action taken, leaving obsolete hardware stored securely but with critical corporate data not securely wiped.
**Best-of-breed solutions**
Small and mid-sized companies generally prefer to use best-of-breed products for life-cycle management as opposed to integrated solutions. For many, the integrated solutions available on the market today fall short compared with individual point products. They are too expensive in terms of initial software purchase as well as time and cost intensive for correct setup and configuration. Return on investment (ROI) for such a solution is not easily justified. In contrast, best-of-breed solutions offer the following benefits:

- Reliability
- Rapid, simple setup without the need for expensive consulting services
- Ease of use and learning
- Affordable pricing

**Using Symantec Ghost Solution Suite for PC life-cycle configuration management**
Symantec Ghost Solution Suite offers a solution for many of the life-cycle configuration challenges facing IT departments today. It is already familiar to many as the industry’s most widely used corporate imaging, deployment, and management solution.

While primarily recognized as the best-of-breed tool for imaging, Symantec Ghost Solution Suite offers a far wider range of capabilities. It provides remote management of computers throughout their life cycle via a central management console—from bare metal provisioning to secure system retirement. During the computer’s life cycle, Symantec Ghost Solution Suite can perform an inventory of hardware and software assets, deploy individual files and applications, roll out upgrades and executables, and more. One of the suite’s strengths is that it is easy to install and does not require extensive setup and training to get up and running. The majority of companies that implement Ghost Solution Suite achieve 100 percent ROI with their first project.

Symantec Ghost Solution Suite offers the following benefits:

- Industry-leading imaging
- Demonstrable, rapid ROI
- Reduction in IT total cost of ownership
- Reduced time and cost in rolling out new hardware and software
- Minimized end-user downtime when upgrading
- Remote management of client computers
- Accelerated deployments and reduced network traffic with multicasting
• Network bandwidth management to guarantee optimum system performance
• Hardware and software asset management
• Low footprint on client computers
• Secure system retirement to meet the industry’s highest standards (DOD 5220.00-M)
• Active Directory integration

Symantec Ghost Solution Suite case studies

Holland & Knight
Holland & Knight use Symantec Ghost Solution Suite as a troubleshooting tool. If a computer is not working properly, it is reimaged from a library of standard desktop and laptop images. Approximately US$90,000 is saved annually on troubleshooting PCs by reimaging the operating system and applications. Holland & Knight also uses Symantec Ghost Solution Suite for server provisioning, allowing it to deploy a new HP® ProLiant server in less than one hour compared with a four-hour build using more traditional methods.

Berdon LLP
Berdon LLP use Symantec Ghost Solution Suite to prevent disruptions to operations due to security threats. About 97 percent less time is spent restoring corrupted desktops thanks to Ghost Solution Suite. The eight hours previously spent restoring desktops has been cut to 15 minutes.

Symantec Ghost Solution Suite features
Most existing users of Symantec Ghost Solution Suite are familiar with its imaging functionality. Table 1 lists additional capabilities that can help reduce the cost, time, and effort of managing end-point life cycles.
Table 1. Symantec Ghost Solution Suite features and benefits

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>New—Windows Vista™ support</td>
<td>Provides full Windows Vista support for imaging, deployment, and system management. Use Symantec Ghost to plan for, migrate to, and perform ongoing management of Windows Vista systems.</td>
</tr>
<tr>
<td>New—Symantec user migration integration with Ghost Console</td>
<td>Supercedes the Move the User feature. Migrate application settings and user files when upgrading software or hardware. Reduce the amount of manual work required when rolling out a new operating system or upgrading to new hardware.</td>
</tr>
<tr>
<td>New—Symantec User Migration Wizard</td>
<td>Enables the transfer of PC personality, including user data, application settings, and Windows® configuration settings, to get end users up and running as quickly as possible following a system refresh or migration.</td>
</tr>
<tr>
<td>New—NTFS image editing</td>
<td>Provides the ability to modify images with new/updated content and to add or delete content simply by dragging and dropping. Administrators can update or inject updates such as patches and drivers or replace files within the image itself. This allows them to keep the standard operating environment up to date and ready to apply to any new machines that enter the organization and require provisioning.</td>
</tr>
<tr>
<td>New—GUID Partition Table (GPT) support</td>
<td>Supports systems that are formatted with a GUID Partition Table.</td>
</tr>
<tr>
<td>New—64-bit operating system support</td>
<td>Supports provisioning and management of 64-bit platforms. The drivers built into 32-bit pre-operating system environments enable support for these advanced systems.</td>
</tr>
<tr>
<td>Imaging</td>
<td>Create images of computers that can be used to provision new hardware and to assist in disaster recovery. Images can be stored locally, on a network location, or on removable media, for example, a DVD. When used in conjunction with Microsoft® Sysprep, Symantec Ghost can create hardware-independent images, allowing deployment of a single image to multiple machine types. Symantec Ghost also provides a tool to manage unique security identifiers (SIDs) in the imaging process. As well as the proprietary Ghost Walker tool, Symantec Ghost is integrated with Sysprep to manage SIDs when imaging. Using model computer images, you can create and recover computers according to a standard environment. Symantec Ghost Solution Suite includes both file-based and sector-based imaging tools.</td>
</tr>
<tr>
<td>Client staging area</td>
<td>Use a directory on the client computer as a repository for Symantec Ghost image files, application packages, user profiles, or other files. Symantec Ghost Solution Suite minimizes the use of bandwidth by storing resources locally. For example, an image file can be stored in the client staging area on a local computer. User data and the PC personality can be stored in the client staging area before computer imaging and preserved locally during the imaging process.</td>
</tr>
<tr>
<td>Central management of systems</td>
<td>Remotely manage all client computers from a central console and execute tasks on client computers from either the console or the client. With the console, there is no requirement to physically visit systems to perform tasks available using Ghost.</td>
</tr>
<tr>
<td>Multicast file transfer</td>
<td>Accelerate the deployment of files, applications, and images to multiple systems simultaneously while minimizing network traffic.</td>
</tr>
<tr>
<td>Remote file transfer and command execution</td>
<td>Transfer files to, and execute commands on, client computers from the Ghost Console. For example, a current sales price book can be pushed out to sales computers so that sales teams always have up-to-date pricing information.</td>
</tr>
</tbody>
</table>
Symantec Ghost Solution Suite 2.0

Symantec Ghost Solution Suite 2.0 is a corporate imaging, deployment, and management suite designed primarily for small to mid-sized businesses with 500 to 1,000 clients. Included in the suite are the following products that can assist you in PC life-cycle management:

- Symantec Ghost
- Symantec DeployCenter™
- Symantec User Migration

Note: Norton Ghost™ is a separate consumer product designed for home user backup and recovery requirements.

**Symantec Ghost**

Symantec Ghost is a comprehensive computer management tool for imaging, operating system deployment, and software distribution as well as ongoing management of systems. It includes the following features:

- File-based imaging
- Remote installation of software and file transfer

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**Table 1. Symantec Ghost Solution Suite features and benefits (continued)**

<table>
<thead>
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<th>Feature</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Hardware and software inventory</td>
<td>Manage hardware and software inventory from the centralized Ghost Console. Built-in filters allow you to report and group systems that are Windows Vista ready. This functionality provides asset management so that you can create detailed reports from fully customizable filters and views, including reports on current patch status. This is useful for identifying systems that require upgrade or replacement for budgetary purposes before an operating system migration. Create dynamic folders to manage a group of target computers based upon hardware or software attributes to streamline operating system migration.</td>
</tr>
<tr>
<td>Patch remediation</td>
<td>Discover computers that are missing designated patches using the software inventory feature. For example, you can target computers running Microsoft Windows XP and ensure that they have a current patch installed. Using the console file transfer and command execution features, you can transfer the patch executable to those computers that are not current with an instruction to run the executable.</td>
</tr>
<tr>
<td>Uniform Network Device Interface (UNDI) template</td>
<td>Create a single boot package for every computer on your network regardless of the different network cards. The UNDI driver supports most PXE-capable network cards.</td>
</tr>
</tbody>
</table>
• Hardware and software inventory
• Built-in inventory filters for minimum operating system specifications
• Client staging area
• Support for Windows Vista
• Highly flexible generic tasks
• Central management console
• Multicast, unicast, and directed broadcast file transfer
• Patch remediation
• Image file editing, regardless of the underlying file system
• Secure disk retirement
• Disk and partition management
• Universal network driver support
• Microsoft Sysprep support

**Symantec DeployCenter**
Symantec DeployCenter is a collection of tools for Windows deployment, migration, and system refresh. It includes the following features:

• Sector-based imaging, which lets you retain any Windows optimizations
• Simultaneous image deployment
• Image file editing
• Microsoft Sysprep support
• Diagnostic reporting
• Diagnostic and utility support

**Symantec User Migration**
Symantec User Migration is a secure software solution that empowers IT administrators to migrate operating system and application settings and user data quickly and cost-effectively. It includes the following features:

• Assistance in performing migrations
• Broad range of supported applications
• Application updating
• Automated transfer of settings and user data
More information

For more information and to download trialware for Symantec Ghost Solution Suite 2.0, visit www.symantec.com/Products/enterprise?c=prodinfo&refId=865&cid=1025.
About Symantec

Symantec is a global leader in infrastructure software, enabling businesses and consumers to have confidence in a connected world. The company helps customers protect their infrastructure, information, and interactions by delivering software and services that address risks to security, availability, compliance, and performance. Headquartered in Cupertino, Calif., Symantec has operations in 40 countries. More information is available at www.symantec.com.