Sales Opportunities

What are the revenue opportunities around Ghost Solution Suite (GSS) and Vista?

Windows Vista migrations present a huge opportunity for Symantec Ghost Solution Suite 2.0. The vast majority of customers today knows Symantec Ghost purely as an imaging tool, and has minimal awareness of the product’s broader capabilities.

Symantec Ghost™ Solution Suite provides sales and services opportunities with any OS migration including Windows Vista. Help your customers throughout their Vista migration with Ghost, as it can help in all three stages of an OS migration.

1. During pre-migration, the OS hardware filters enable you to help identify which systems meet the minimum OS requirements and set budget.
2. During the migration stage, you can help create deployment images, capture each individual “PC personality”, and use the multicasting technology to deploy the images to many systems with the management console.
3. During post-migration, help your customers stay current by using Ghost to deploy applications, security patches or updates. For those systems that do not make the transition, securely retire those systems in accordance with the strict standards of the Department of Defence.

Microsoft offers free downloadable tools for the Windows Vista Operating System (Business Desktop Deployment 2007 Solution Accelerator, or BDD) and there is a risk that customers incorrectly perceive that the Microsoft BDD tools (ImageX, USMT etc) are equivalent to or supersede the need for Ghost.

Please note the shield symbol throughout this document identifies GSS competitive strengths against a Microsoft claim or product positioning.

What’s New with GSS 2.0?

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<th>Feature</th>
<th>Description</th>
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<td>Windows Vista Support</td>
<td>New! Support for Windows Vista using the Ghost Console/Client architecture:</td>
<td>• Confidence in using Ghost to successfully migrate to the latest Microsoft OS.</td>
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<td>• Imaging/deployment</td>
<td>• Simplified Vista image management with one image able to be used for multiple machine types</td>
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<td>• HW independent Vista images</td>
<td>• Optimized for Windows Vista whilst retaining and remaining consistent with the functionality available historically.</td>
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<td>• Management of systems</td>
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<td>Windows Vista Migration Tools</td>
<td>New! Minimum Vista specification inventory filters</td>
<td>• Simplify identification of Vista capable machines and provide fast and easy targeting of machines for deployment</td>
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<td>• Built-in Vista Migration software tutorials</td>
<td>• Easy to learn and assists organizations in training users.</td>
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Feature | Description | Benefits
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Integrated User Migration Functionality | New! - Integration
• An administrator can now configure a single task to create a backup image, capture the user data and settings, deploy a new OS, post-clione configure, and restore the user data and settings.
• Peer to Peer migration wizard
• Simplified user migration using templates | • Integration allows administrators to have a single-click seamless migration operation using the standard Task interface.
• Peer to Peer migration wizard allows customers to undertake full user migrations on computers that do not have access to the Ghost™ server or corporate network.

Ability to Edit NTFS, FAT and EXT2/3 Images | New! – NTFS Editing
• Easily add, remove, and modify files and folders within Ghost™ images regardless of the underlying file-system. | • Significantly reduces the overhead of image management as there is no longer the need to create a completely new image each time an update is applied.

GPT (GUID Partition Table) Support | New!
• Allows Ghost™ to image even larger partitions.
• GPT uses modern logical block addressing (LBA) in place of the cylinder-head-sector (CHS) addressing used with MBR. | • This means that the 2TB limit of MBR is no longer a constraint under GPT.
• With GPT, customers are not limited to four primary partitions.
• Further, Windows Vista can take advantage of the additional functionality that GPT offers.

Preconfigured RAID Array Support under Windows Preinstallation Environment (WinPE) | New!
• Use Ghost™ to create and deploy images of hardware RAID arrays under WinPE. | • Administrators are able to create images of partitions that are much larger than any single drive can provide

Why would I use GSS over Microsoft’s free Vista tools (BDD)?

1) Multicasting (simultaneous one-to-many deployment) provides significantly faster deployment than Microsoft’s unicast approach (one-to-one) as well as dramatically reduced network traffic.
2) Ghost provides a single central management console for all migration tasks.
3) Ghost is fast and easy to install, configure and use – main components typically install in approximately 30 minutes. Does not require expensive professional consultancy services for setup. Highly intuitive GUI and comprehensive software tutorials
4) Ghost provides support for mixed Windows and Linux environments.
5) Broad application support for user migration, including popular applications well beyond Symantec and Microsoft.
6) Ghost provides rapid ROI – Ghost is powerful and highly affordable – starting at US$39.20 MSRP for 10-24 users.
7) Integrated User Migration – providing automation and ease of use.
8) Ghost32.exe provides faster image creation and restoration than ImageX.
9) Ghost leverages and enhances Windows Vista. It improves upon Microsoft’s own best practices (BDD) by providing fewer and more integrated tools.
10) Ghost provides market proven and trusted technology based on over 10 years of industry-leading experience. Ghost is the industry’s most widely-used corporate system imaging, deployment and management solution.
How does GSS compare with Microsoft’s Business Desktop Deployment 2007 (BDD) Solution Accelerator?

Microsoft’s Business Desktop Deployment 2007 (BDD) Solution Accelerator is a collection of downloadable Windows Vista deployment tools (including Windows PE 2.0, ImageX, Windows System Image Manager, and USMT 3.0) and documentation explaining how to use them in an end-to-end process. BDD is the glue that ties all of Microsoft’s tools together. It provides best practice guidelines for the planning, building, and deploying of Windows Vista and the 2007 Office system. BDD offers Zero Touch deployment using Microsoft Systems Management Server (SMS) 2003 Operating System Deployment Feature Pack Update (eliminating the need for a technician to be on-site to deploy the desktop) and Lite Touch deployment for those using just BDD. BDD will offer monitoring so it will be possible to see how deployments are proceeding. BDD requires multiple tools and components for Vista migration.

With Ghost all migration tasks can be performed from the central Ghost console and in addition Ghost offers significantly accelerated deployments and reduced network traffic with multicasting. Ghost’s cloning, Ghost and PCDOS, logically equate to Microsoft’s WinPE and ImageX tools. Ghost’s User Migration equates to Microsoft’s USMT tool, however in Ghost user migration is integrated and can be automated via central Ghost console. The Windows System Image Manager facilitates image related tasks such as create answer files, add drivers and software packages to an image. Ghost delivers similar capabilities using File Transfer / Command Execution and AutoInstaller (AI).

Ghost provides fewer and more integrated tools to improve upon Microsoft’s own best practices (BDD). A key differentiator between GSS and BDD (with or without SMS) is that Microsoft does not support Multicast (1 to Many deployments) only Unicast (1 to 1 deployments). BDD has no single standard interface to integrate all of the separate tools. BDD uses 4 different consoles and 2 command-line tools to handle migrations. It is not easy to install with the following components needed to install and use BDD (Business Desktop Deployment): Active Directory, ACT, DHCP, MSXML Services 6.0, DNS, Windows AIK, NEW 2.0, USMT, RIS, Office 2003 Resource Kit and SQL.

Hardware and Software Inventory

What criteria are used in Ghost’s built-in Vista Inventory Filters?

Ghost Solution Suite version 2.0 provides built-in inventory filters based on minimum Vista OS specifications. They are located under Filters -> Hardware and are for identifying and targeting both ‘Vista Capable’ and ‘Vista Premium Ready’ machines. Vista Capable systems meet the basic OS requirements, and ‘Vista Premium Ready’ systems provide support for Microsoft’s new Aero 3D graphics and meet specification for graphics capabilities such as pixel shading. Customers are able to edit these filters to meet their own individual requirements. Ghost’s Inventory is based on Microsoft’s Windows Management Instrumentation (W.M.I). W.M.I provides access to a vast range of Windows management data such as the size of a computer
hard disk, version of a software application, installed operating system, amount of RAM and so on. Any value available from WMI can be used in Ghost Views, Filters and Reports.

**Imaging**

**How large is a typical Windows Vista image?**

With Windows XP and Windows 2000 it was possible to create images that would easily fit on a single CD (less than 700MB). With Windows Vista, image size begins at around 3GB for 32-Bit and 4GB for 64-Bit – compressed. Once this image is deployed; the size can be around 5GB or more. If you add additional applications, drivers, or other files, this image will obviously grow.

**How does GSS compare with Microsoft’s ImageX technology?**

ImageX is Microsoft’s new command-line tool (no GUI interface) which creates WIM, Windows Imaging format, images. The new Windows Vista imaging format (WIM) is file-based (as opposed to sector-based). Ghost images (GHO) are also file-based and thus offer the same capabilities as WIM (hardware independent images allowing a single image to be used for multiple machine types) but with significantly faster image creation and image restoration times. One of the reasons for ImageX’s slow imaging is that WIM images require extra processing compared to GHO images. Another reason is that partitions need to be created and formatted before restoring an image using ImageX. A common misconception regarding WIM Vista image files is that they are ready to deploy. WIM Vista images need to be installed to a machine (as per Windows XP) and then another image needs to be created from that for deployment.

Microsoft may try to position ImageX long image creation and restoration time positively based on WIM typically creating smaller images than images created by other tools. A typical WIM Vista image is around 10% or 300MB smaller than the same GHO Vista image. Microsoft’s logic is that you typically capture an image only once and then deploy it many times. Thus they claim that the extra imaging time trade-off is recovered later in network traffic savings during deployment. However this is not true. Microsoft doesn’t offer multicasting capabilities, they only offer unicast, meaning that they are also slower and generate more network traffic than Ghost from a deployment perspective.

**Will I need a unique Vista image for each hardware type / platform that I am deploying to?**

No, Ghost allows you to create a single hardware independent Vista image using Sysprep and deploy it to a Dell laptop, an HP desktop, an IBM laptop. You can deliver the same image to multiple architectures because the OS, Vista, automatically detects and installs the required HAL (hardware abstraction layer). This eliminates a lot of hardware compatibility issues.

**Can I edit Ghost images?**
Yes, Ghost Solution Suite 2.0 provides the ability to edit images regardless of the underlying file system (NTFS, FAT and EXT2/3). Previous versions of Ghost did not allow editing of NTFS images. GSS 2.0 provides the ability to easily add, remove, and modify files and folders within Ghost images. Editing of images allows administrators to significantly reduce the overhead of image management as there is no longer the need to create a completely new image each time an update is applied. These benefits are provided as a result of using file-based images which allow you to copy an image and edit it while retaining the original image. Because the images are individual files, you can easily manipulate them in the file system.

In addition, GSS images are file based which enables it to have the capability to edit images offline that are not running (without restoring and booting).

User State / Personality Migration

How does GSS compare with Microsoft’s USMT and Windows System Image Manager Tools?

Both Microsoft and Symantec solutions allow migration of user personality / state, allow for complete user migration while machines are not connected to a network and provide templates for easily capturing required data and settings.

Microsoft’s User State Migration Tool 3.0 (USMT) is an updated tool for capturing and restoring user state, supports Windows XP and Windows Vista, as well as all versions of Office including 2007. Windows System Image Manager is a tool for creating and modifying unattend.xml files.

Ghost Solution Suite 2.0 offers Symantec User Migration (SUM) which has been integrated into the central management console in addition to a peer-to-peer Migration Wizard. With user migration being fully integrated into the console in GSS 2.0 it is possible for an administrator to create a single task to create a backup image, capture the user data and settings, deploy a new OS, post-clone configure, and restore the user data and settings with a single click of the mouse. SUM provides a graphical user interface enabling simplified user migration.

The peer-to-peer Migration wizard is a stand-alone component that allows administrators to migrate user states / personalities even when the desktop machines are not connected to a network.

USMT (component of BDD) is limited to MS applications out of the box. USMT is command-line driven and uses text based personality capture. GSS 2.0 offers a more extensive list of applications that in addition to Microsoft applications includes Symantec applications and other popular non-Microsoft applications including a wide range of products from Adobe, AOL, Cisco, IBM (Lotus), Corel, Palm, WinZip, Yahoo and more.
**Deployments**

**How do GSS and Microsoft Deployment Approaches Compare?**

Multicasting is the most efficient means of distributing an image to multiple machines across a network. Ghost provides rapid and efficient deployment of individual files, applications and Operating Systems (OS’s) using targeted multicasting. Ghost can deploy to hundreds of machines across an enterprise simultaneously with the single click of a button from the centralized Ghost console. Ghost's multicasting is not only significantly faster but also minimizes network traffic e.g. one image of 3MB is sent simultaneously to 100 machines ~3MB versus one image of 3MB is sent to each of 100 machines ~ 300MB. Targeted multicasting draws on the power of Ghost’s built-in hardware and software inventory to target machines based on specific client attributes. Ghost also offers network bandwidth management ensuring optimum performance during deployments.

Microsoft does not offer or support multicasting with any of their deployment solutions, only unicasting capabilities (SMS and BDD).