Windows® Feature Comparison

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Overview

This white paper helps customers compare Windows Vista® advancements with Microsoft® Windows® XP Professional. Using this comparison, customers can adjust their expectations for the security, management, deployment, mobility, and productivity of either operating system.

During the past year, Microsoft and its ecosystem has made great progress in improving the overall quality and performance of Windows Vista, making the Windows Vista Service Pack 1 (SP1) release a key milestone for broad enterprise deployments of Windows Vista. Microsoft recommends that all business customers who have not started to evaluate Windows Vista should start deployment planning and piloting Windows Vista with SP1. Windows Vista offers customers unique value—from increased security and data protection to improved mobility and productivity to capabilities that customers can use to optimize desktop infrastructures and reduce management costs.

Microsoft knows that many customers will adopt Windows Vista gradually, through hardware refreshes (i.e., attrition). During hardware refresh, customers will co-manage Windows Vista and Windows XP. Enhancements to Windows XP with Service Pack 3 (SP3), such as Network Access Protection (NAP), make it easier for customers to more securely integrate both operating systems into their environments. During the transition, using Windows XP with SP3 will help ensure that client computers still running the Windows XP operating system have the most recent security and software updates.

The remaining sections in this white paper compare the following features and capabilities of Windows XP with SP3 and Windows Vista with SP1: security, management, deployment, mobility, and productivity. For each feature or capability, each section compares key Windows Vista advancements against Windows XP.

Security

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Security Development Lifecycle (SDL)	Developed for Windows XP with SP2.	The Microsoft SDL makes security a top priority throughout the development cycle by mandating a repeatable engineering process that every developer must follow, and by verifying that process before product release. The SDL is an evolving process that implements rigorous standards of secure design, coding, testing, review, and response for all Microsoft products. The SDL helps remove vulnerabilities and minimize the surface area for attacks, improves system and application integrity, and helps organizations more securely manage and isolate their networks.	• Although Microsoft has used the SDL extensively on several key products, Windows Vista is the first client operating system to be developed from start to finish using this new approach.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Defense in depth	Buffer overruns trick software into running code that has been placed in areas of the computer's memory that are set aside for data storage. The Data Execution Prevention (DEP) feature, which uses the no-execute (NX) feature of some processors, can reduce the impact of such vulnerabilities. Windows XP with SP3 supports DEP but does not enable it by default.	In Windows Vista, DEP is enabled by default for most components. Windows Vista introduces additional DEP policies that allow software developers to enable DEP in code, independent of system-wide compatibility-enforcement controls. This capability enables a higher percentage of NX-protected code in the software ecosystem. DEP works best with Address Space Layout Randomization (ASLR), another defense capability in Windows Vista that makes it more difficult for malicious code to exploit a system function. ASLR randomly assigns executable images, such as .dll and .exe files, to one of 256 possible locations in memory. This makes it more difficult for malicious code to locate and take advantage of functionality inside the executables. Because system services typically run with high system rights, these services have been a major target for malicious software attacks. To mitigate the threat, Windows Vista has introduced the concept of restricted services, or *service hardening.* Restricted services can run under only the most restrictive rights possible, and they limit their activities to the minimum local computer or network resources that are required to fulfill their task.	• In Windows Vista, DEP is enabled by default for most components, and the operating system allows developers to enable DEP in their code. • Windows Vista includes ASLR, which makes it difficult for malicious code to exploit system functions. • Windows Vista introduces service hardening, which restricts the rights available to some system services.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Windows BitLocker™ Drive Encryption	N/A	BitLocker Drive Encryption is a new data-protection feature in the Windows Vista Enterprise and Windows Vista Ultimate operating systems. The feature provides whole-volume encryption and supports encryption of multiple partitions. BitLocker Drive Encryption addresses the very real threats of data theft and data disclosure from lost, stolen, or inappropriately decommissioned computer hardware. This tightly integrated solution also provides for integrity checking of early boot components. Because businesses use of portable computers increases each year, the potential exposure of data on users' computers presents a growing problem for organizations. Organizations can use BitLocker Drive Encryption to realize the benefits of mobile computing while helping to reduce risk and enable better compliance with corporate data-protection best practices.	• Windows Vista helps secure data by providing whole-volume encryption and protection of early boot components. • BitLocker Drive Encryption supports encryption of multiple volumes.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Windows Firewall	Windows XP provides firewall functionality that is enabled by default and that begins protecting users' computers as soon as the operating system starts. In Windows XP, Windows Firewall includes inbound filtering.	Windows Vista provides firewall functionality that is enabled by default and that begins helping to protect a user's computer as soon as Windows starts. Windows Firewall includes both inbound and outbound filtering and can prevent data from entering or leaving the computer. Windows Firewall also allows information technology (IT) professionals and home users to block applications, such as peer-to-peer sharing or instant messaging applications, from contacting or responding to other computers. Windows Firewall in Windows Vista is fully manageable through Group Policy and is dynamic, based on network type. Administrators can put different firewall rules into effect, depending on whether the computer is connected to a corporate (domain) network, a private (home) network, or a public (hotspot) network.	• Both operating systems include firewall functionality, but Windows Vista includes inbound *and* outbound filtering, whereas Windows XP includes only inbound filtering. • Windows Firewall in Windows Vista can dynamically apply rules based on the current network type, making the computer more secure on public networks.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Windows Internet Explorer® 7 Protected Mode	N/A	Internet Explorer 7 Protected Mode in Windows Vista provides additional defenses against malicious attackers who attempt to take over a user's Web browser and run malicious code by using elevated rights. In Protected Mode, Internet Explorer 7 runs with reduced rights to help prevent user or system files and settings from being changed without the user's explicit permission. The new Web browser architecture also introduces a *broker* process that helps existing applications more securely *elevate* themselves above Protected Mode, if necessary. This additional defense helps verify that scripted actions or automatic processes are prevented from downloading data outside low-rights directories such as the Temporary Internet Files folder.	• Using Internet Explorer 7 to browse the Internet is more secure in Windows Vista than in Windows XP.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Microsoft ActiveX® Installer Service	N/A	Many organizations must install ActiveX controls on client computers to ensure that vital programs work properly. However, most ActiveX controls must be installed by a member of the Administrators group, and many organizations have configured or want to configure their users to run as standard users. As a result, organizations must repackage and deploy the ActiveX controls to the users. In addition, many of these ActiveX controls must be regularly updated. Many organizations find this to be a difficult and costly process to manage for standard users. With Windows Vista, IT pros can now easily deploy and update ActiveX controls in a standard user environment. The ActiveX Installer Service enables IT pros to use Group Policy to define approved host URLs that standard users can then use to install ActiveX controls.	• In Windows Vista, organizations can deploy, update, and manage ActiveX controls in environments that use standard user accounts. • In Windows Vista, organizations can use Group Policy to manage the installation of ActiveX controls.

Management

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Group Policy settings	Group Policy helps IT professionals manage client computer configurations by allowing them to enforce thousands of Windows and application security and configuration settings. Examples include standard configuration enforcement, security settings and controls (ranging from public key policies to password policies), resource access, wireless networking, software installation, and user experience.	Managing client computer configurations with Windows Vista takes less time and is more effective, because hundreds more settings that target more scenarios are available in Group Policy. Areas with richer settings include wireless networking, removable storage device installation and use, Internet Explorer 7, printers, and power management.	• Windows Vista has more than 500 additional Group Policy settings compared to Windows XP. • In Windows Vista, Group Policy settings are better targeted at specific scenarios, such as wireless networking, power management, removable storage, and printer management.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Standard user accounts	Deploying standard user accounts was traditionally impractical, partly because users can't change many common settings and partly because many applications require Administrator access to portions of the registry or file system (for example, C:\Program Files). As a result, many companies deploy Administrator accounts to users, reducing manageability and increasing security risk. Some companies overcome these challenges by deploying standard user accounts, and then punching specific holes in access control lists (ACLs), at a significant cost.	Windows Vista User Account Control (UAC) makes it more practical for companies to allow users, running under standard user accounts, to run applications and perform many common system configuration tasks, such as changing the time zone or installing a supported printer. Limiting the use of Administrator accounts to true administrators helps prevent users from making unauthorized system changes or installing unapproved programs that may contain a virus or spyware. In addition, file and registry redirection (virtualization) enables older applications to run in a standard user environment by redirecting the writes to a virtual store, thereby helping applications run as expected without modification. This capability provides application compatibility for earlier applications.	• Windows Vista makes using standard user or least-privilege user accounts more practical than in the past. • UAC notifies standard users and administrators before an administrative action is performed. • File and registry redirection helps ensure that applications write to user-specific file locations.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Reliability and diagnostics	Windows XP includes basic troubleshooting tools. However, a limited number of these tools automatically detect and repair common support problems. Windows XP can send basic telemetry data that helps Microsoft diagnose customer problems.	Windows Vista includes built-in diagnostics that automatically detect and diagnose common support problems and help users resolve the problems on their own. Problems that Windows Vista diagnostics address include failing disks, degraded performance, lack of network connectivity, and failure to start up properly. Windows Vista provides a broad set of troubleshooting tools, such as the following: • Windows Recovery Environment • Performance Monitor Also, Windows Vista can optionally send telemetry data, including reliability data, which helps Microsoft improve customers' experience with the operating system. Examples are the Customer Experience Improvement Program (CEIP) and Windows Error Reporting (WER), both of which are opt-in.	• Windows Vista automatically detects and repairs more support problems than Windows XP does, helping reduce support costs. • Windows Vista provides advanced troubleshooting tools, such as WER. • Windows Vista telemetry data helps Microsoft better identify and diagnose issues that affect customers.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Event management	Windows XP provides basic event management through Event Viewer. By using Event Viewer, users can view, filter, and archive events. Event logging in Windows XP remains largely unchanged from earlier Windows versions, and many Windows components still store event information in scattered text files.	Event Viewer has been completely rewritten to allow IT pros to create custom views that combine events from individual logs, discover events more easily, and link to scheduled tasks or scripts that should run when an event occurs. This new Windows Eventing system makes it much more practical for IT pros to use the event log to troubleshoot users' problems. Windows Eventing also provides a central unified event store that developers can easily use for their applications, continuing to make troubleshooting easier for IT pros. And events are based on XML, which enables better integration with management tools. By using event forwarding, IT pros can centrally manage events from their computers, more easily and proactively identifying problems and correlating problems that affect multiple computers. Customers can forward events to computers running the Windows Server® 2008 operating system.	• Windows Vista introduces event forwarding, a new Event Viewer, and event automation. • In Windows Vista, XML-based events enable better integration with management tools. • Windows Vista consolidates events from most Windows components in the event log instead of in text files.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Task scheduling	The Task Scheduler in Windows XP provides essential scheduling capabilities. Users can schedule jobs to run daily, weekly, and so on. IT pros cannot easily create and manage tasks by using scripts, however. Instead, they must use a command-line program to manage tasks.	The Windows Vista Task Scheduler is backward-compatible with Windows XP. IT pros can also schedule tasks to launch in situations including the following: • When a specific event occurs • When users lock or unlock sessions • When the computer is idle • When the computer is on the corporate network In addition, tasks can be run in sequence, enabling IT pros to schedule multiple tasks with the confidence that the tasks will not run simultaneously. To improve security and reduce maintenance related to password expirations, IT pros can run a task by using domain credentials instead of a local account that needs to be managed.	• Windows Vista enables IT pros to script tasks. • Windows Vista provides new scheduling options and the ability to run tasks in sequence.

Deployment

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Image-based setup (IBS)	Windows XP is not delivered as an image. Instead, the Setup program installs and configures each Windows component. Non-Microsoft imaging tools are available for creating images, but these products are predominantly sector based. Tools included in the Windows Automated Installation Kit (Windows AIK) and Microsoft Deployment Toolkit (MDT) 2008 do support creating file-based Windows XP images, but these images are not componentized in a way that allows IT pros to inject drivers, updates, and other packages offline. This usually means that Windows XP images require frequent updates.	Windows Vista is distributed using the new file-based image format, Windows Imaging Format (WIM). This file format supports multiple images in a single, highly compressed file. A key benefit of WIM with Windows Vista is that it helps enable hardware independence because it's a file-based image format. Hardware independence helps significantly reduce the number of images that corporate customers must maintain and deploy. The WIM file format also enables IT pros to service images offline, adding optional components such as device drivers and updates without having to continually recapture or create a new image. This capability dramatically improves maintenance and reduces costs.	• Windows Vista is distributed as a WIM image file and is installed by using IBS, resulting in a quicker and more streamlined installation process that requires fewer operating system images. • Windows XP is not distributed as a WIM image, nor does it use IBS. Microsoft tools support the creation of WIM images of Windows XP but don't offer the offline-servicing benefits of Windows Vista images.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Deployment, compatibility, and asset-inventory tools	The Windows XP Corporate Deployment Tools (deploy.cab) ship on the Windows XP media and are available from the Microsoft Download Center. These tools include Setup Manager, the System Preparation Tool (Sysprep), and the *Microsoft Windows Corporate Deployment Tools User's Guide*. Also, MDT 2008 and the Microsoft System Center products support imaging and deployment of Windows XP. Customers can use many of the Windows Vista deployment tools, including those in the Windows AIK, to deploy Windows XP. For example, customers can use Windows Preinstallation Environment (Windows PE) 2.1, ImageX, Windows Deployment Services, Microsoft Deployment, and the Application Compatibility Toolkit (ACT) 5.0 to deploy Windows XP. However, not all Windows Vista capabilities are available when using these tools with Windows XP.	Windows Vista provides a new set of deployment tools. Some of these tools, such as Sysprep, now ship as core parts of the operating system. The remaining tools are in the Windows AIK and include Windows PE 2.1, Windows System Image Manager (Windows SIM), and ImageX. These tools are optimized so that business customers can reduce the number of images they maintain and so that servicing those images is easier. And MDT 2008—the next version of Microsoft Business Desktop Deployment (BDD)—takes full advantage of Windows Vista's deployment improvements while integrating and extending the capabilities of the Windows AIK tools. Still other tools are available to streamline the Windows Vista deployment process: • Windows Deployment Services • ACT • Microsoft Assessment and Planning Solution Accelerator	• Windows Vista imaging and installation tools support WIM and take full advantage of WIM benefits, enabling a more consistent, reliable experience across different deployment scenarios. Additionally, with Windows PE 2.1, administrators can co-manage Windows Vista and Windows XP in a unified way, allowing for better management of heterogeneous environments.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Windows Setup	In Windows XP, Windows Setup installs and configures components on the destination computer. The process does not use IBS and does not support all the scenarios that organizations use to deploy the Windows operating system, such as scenarios that require non-destructive installation (e.g., Computer Refresh or In-place Wipe and Load scenarios, in which user files and settings remain local on the computer). Windows XP uses multiple answer files, each with different formats and syntax, for various installation phases. For example, Windows XP uses unattend.txt for installation from the distribution media and uses sysprep.inf for image installation. Using multiple answer files that contain similar settings leads to more difficult maintenance. Setup Manager, the tool that creates and edits unattend.txt files, does not support all the settings available and does not validate the contents of those files. Other than editing unattend.txt, Setup Manager provides only basic capabilities to create and manage distribution shares.	Windows Vista uses IBS, providing a more consistent and streamlined installation. It supports all the deployment scenarios that most companies use when deploying the Windows operating system, including those that require non-destructive installation. Windows Vista installation can be faster than Windows XP installation because Windows Vista uses IBS. Windows Setup uses an XML-based answer file (unattend.xml) for all configuration passes. This drives consistency across all passes. Also, Windows Vista supports more settings in unattend.xml than Windows XP supported in unattend.txt, so deploying the correct configuration requires nothing more than a properly configured answer file. Windows SIM is the tool that creates and edits unattend.xml files and distribution shares in a simple graphical user interface (GUI). Windows SIM supports all the settings that each Windows component exposes during deployment and helps to create and manage distribution shares.	• Windows Vista uses IBS and supports more deployment scenarios than Windows XP does. • Windows Vista uses a single XML-based answer file, providing a more consistent installation; Windows XP uses multiple text-based answer files. • Windows SIM supports all the settings that Windows Vista exposes for deployment for all configuration passes, while Setup Manager supports only a subset of Windows XP settings.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Worldwide single-image deployment	Windows XP provided nominal help for reducing the number of images that organizations maintain. For example, Sysprep prepares images to support computers with a variety of mass-storage devices. However, organizations must prepare one image for each type of hardware abstraction layer (HAL) in the production environment. Additionally, organizations must prepare an individual image for each language. MDT 2008 helps organizations using Windows XP get closer to thin-image strategies. Guidance and tools are provided to reduce image count, but the limitations of HAL- and language-dependence remain.	Windows Vista includes advanced features and capabilities that help organizations reduce the number of images they maintain. First, Windows Vista is hardware agnostic. Therefore, organizations don't need to create images for each type of HAL in the production environment. Second, Windows Vista Enterprise and Windows Vista Ultimate enable organizations to deploy a single image that contains multiple Microsoft user interface languages, enabling worldwide deployment to all client computers by using a single image. MDT 2008 enables organizations to use thin-imaging and deploy-time customization techniques to deploy and customize a single worldwide image. For example, during deployment, organizations can target virtual private network (VPN) software to portable computers and accounting software to the Accounting department.	• Windows Vista enables organizations to create and deploy a single worldwide image, whereas Windows XP often requires numerous images for a worldwide deployment. • MDT 2008 enables companies to use thin-imaging techniques to reduce both Windows XP and Windows Vista image counts.

Mobility

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Windows Mobility Center	Windows XP does not provide a central location for managing common mobility settings. Instead, users must open various programs and Control Panel items to manage mobility settings.	Windows Mobility Center, which original equipment manufacturers (OEMs) can customize, puts the most frequently used portable-computer settings in a single location. Now, users can change and synchronize display brightness, volume, power plan, wireless network, desktop wallpaper, external display (such as a network projector or additional monitor), all from one location. Presentation Mode allows users to quickly turn off the screen saver, turn off system notifications, and prevent the portable computer from going to sleep. This feature enables users to prepare quickly for giving presentations. Users can customize additional presentation settings, such as the desktop background and volume level. When using a Tablet PC, users can rotate their displays. No more hunting through Control Panel or notification area icons to find what you need. All the important mobile settings are in Windows Mobility Center. Windows Mobility Center is available only on portable computers.	• Windows Vista provides one location for managing common mobility settings, whereas Windows XP requires users to open various Control Panel items to change these settings.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Sync Center	Windows XP provides the ability to synchronize offline files or mobile devices, but the operating system does not provide a central location for managing all sync relationships. Users must use different programs to synchronize different devices.	Windows Vista gives users one place—the new Sync Center—to manage data synchronization between computers, between computers and servers, and between computers and devices. This capability has become increasingly important as the range of computers, devices, locations, and data sources that customers want to synchronize has expanded. Until now, there has been no easy way to manage all these individual sync relationships, so users have had to deal with many different sync experiences, depending on their devices or data sources.	• Windows Vista provides a single location for managing sync relationships, whereas Windows XP users must rely on different programs for different devices.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Offline files	Offline files and folders allow users to create a sync relationship between their computers and a remote location. The sync infrastructure and user interface (UI) track changes between the local version and the remote version and enable users to reconcile versions if conflicts exist. Users can specify which network-based files and folders they would like to use when working offline. In addition, offline folders can be encrypted to provide a higher level of security. The entire file is synchronized, even if a user made only a few changes. This can make synchronization a time-consuming process, especially when users have many documents to sync.	Windows Vista improves offline files and folders. First, it makes the sync process for offline folders much faster, with support for Delta Sync. Delta Sync synchronizes only the changed blocks of a file, rather than the whole file, when users synchronize client changes to the server. The advanced sync algorithm in Windows Vista is also better at determining which files or directories need to be synchronized, adding even more efficiency. This efficiency enables the synchronization of additional larger files, such as Microsoft Office Outlook® .pst and .ost files. Second, Windows Vista supports *ghosting* of online files and folders. When users make only a few files from a directory available offline, Windows Vista creates ghosted entries of the remaining items to preserve the online context for users. When users are not connected to the remote data source and navigate to the remote location, they see these ghosted online items alongside the offline files. Third, Windows Vista makes managing offline files and folders easier. Users manage sync relationships by using the Sync Center. Users can see the offline status of any file or folder in Windows Explorer. And the transition between online and offline is now completely transparent and seamless.	• Synchronizing changes in offline files and folders is much faster in Windows Vista than in Windows XP because Delta Sync synchronizes only changed files blocks instead of the entire file. • Windows Vista supports ghosting, which provides a context for offline files and folders. • Windows Vista provides an improved UI for using and managing offline files and folders.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Network Projection	N/A	Windows Vista makes it easy to give a presentation from a portable computer. By using the Connect to a Network Projector Wizard, users can connect to any Windows-compatible network projector over a wireless or wired network. A network projector is a shared resource much like a printer on a network. Users can also use this feature in Windows Meeting Space, enabling them to stream content to a Windows Meeting Space session.	• Windows Vista makes it easier to give presentations from users' computers.
Secure Sockets Tunnel Protocol (SSTP)	Windows XP supports Point-to-Point Tunneling Protocol (PPTP) and Layer-2 Tunneling Protocol (L2TP) VPN connections. In both cases, users often cannot connect successfully through some network configurations, such as those in public locations.	SSTP is a new tunneling protocol that uses Hypertext Transfer Protocol (HTTP) encapsulation over a Secure Sockets Layer (SSL) channel. Because SSTP uses SSL traffic (TCP port 443), SSTP can be used in many different network configurations—for example, when VPN clients or servers are behind network address translation (NAT) devices, firewalls, or proxy servers. SSTP requires Windows Server 2008 and Windows Vista with SP1.	• By supporting SSTP, Windows Vista enables users to create VPN connections in locations where they can't connect when using Windows XP.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Power management	Windows XP made great strides in improving power management. However, data about remaining battery power was not always accurate. Also, standard users were not able to change power settings.	By intelligently monitoring CPU state, Windows Vista can reduce the amount of power it uses. Windows Vista also provides more accurate data about the amount of power a computer has left, helping prevent a system from shutting down prematurely. Also, the operating system allows standard users to change power settings. In addition, Windows Vista enables organizations to use Group Policy to manage power settings.	• Windows Vista reduces power consumption. • Windows Vista provides more accurate reports about remaining power. • Windows Vista enables standard users to change power settings. • Windows Vista enables Group Policy management of power settings.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Wireless networking	Windows XP provides support for the most recent wireless networking standards and security. It also includes device drivers from most popular wireless network adapters in the box.	Windows Vista improves the wireless network experience in several ways. Users' data is also more secure because of enhanced support for the most recent wireless security protocols, including Wi-Fi Protected Access 2 (WPA2). Windows Vista helps users avoid connections to fraudulent wireless networks that seem to be legitimate hotspots but are not. Windows Vista also provides an easy way to create ad hoc wireless networks to use peer-to-peer applications such as file sharing and application collaboration. Windows Vista introduces other networking innovations. The new networking stack can auto-tune key performance settings, such as the TCP receive window. It also adds support for a dual IP layer architecture that supports both TCP/IP version 4 (IPv4) and version 6 (IPv6). Windows Vista provides new ways to manage wireless networking by using Group Policy and command-line configuration tools. Wireless networking is now standard across hardware vendors.	• In Windows Vista, Network Awareness automatically chooses the best network connection to use when multiple connections are available to applications. • Windows Vista helps protect users from connection to malicious wireless networks that masquerade as public wireless networks. • Windows Vista has a new networking stack that supports auto-tuning and a dual IP (IPv4 and IPv6) layer architecture. • Windows Vista has an improved UI for creating and managing wireless network connections.

Productivity

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
Search	Windows XP provides a basic, indexed search feature that can help users find files by name or content.	Windows Vista introduces enhanced desktop search and organization that helps users locate files and emails on their computers. If users remember anything about a file, Windows Vista can instantly find it. Users can add and change metadata for files, and then use that metadata to find and organize files regardless of location. (Different file types have different metadata, but examples include the title and author for a document.) Users can edit metadata in the Common File dialog box, Details Pane of Windows Explorer, Windows Media® Player 11, Windows Photo Gallery, and so on. Additionally, Windows Vista allows users to save search queries as Search Folders. Opening a Search Folder displays the files that match the search query. For example, users can create a Search Folder that finds files created within a certain date range, containing a specific keyword, or authored by a particular person. Search is extensible. For example, Windows Vista allows third-party content and file types to be included in the system index so that they can also be searched.	• In Windows Vista, Search integrates completely into the user interface. For example, users can search their computers instantly from the Start menu. • In Windows Vista, users can tag files with metadata, and then use that metadata to quickly find files on their computers. • In Windows Vista, users can save a search as a Search Folder, and then quickly repeat that query by opening the Search Folder.

Feature	Windows XP with SP3	Windows Vista with SP1	Key differences
User interface and navigation	N/A	Microsoft designed Windows Vista to provide easier access to the applications and information users want. From the Start Menu to the files in Explorers, users can more easily access what they need and complete tasks more directly. User interface improvements include the following: • **Start Menu.** Streamlined to make browsing (looking for a specific application, file, email, Control Panel item, or Internet favorite) easier. • **Explorers.** A streamlined and consistent set of tools for finding, viewing, and managing information and resources. • **Dialog boxes and wizards.** Redesigned to be clearer and more functional, and easier for developers to customize to optimize the user experience. • **Programs Explorer and Control Panel.** Programs Explorer (which replaces the Add or Remove Programs control) and Control Panel use the Explorer interface to help users more easily and quickly manage applications and settings. Within Explorers, Windows provides numerous user interface and navigation improvements. For example, the Command Bar is a new bar that displays contextual, one-click tasks based on the content displayed. The Details Pane enables users to view and change metadata on one or more files without having to open the Properties dialog box. Live Icons show the actual first page of a document and the actual photo, video screen capture, or album art for individual songs (rather than generic icons).	• Windows Vista improves significant parts of the UI, such as the Start Menu, Explorers, dialog boxes and wizards, and the Control Panel. • Windows Vista improves Explorer user interface and navigation with features such as the Command Bar, Details Pane, Live Icons, and an improved address bar.

Summary

This white paper compares the capabilities of key features in Windows XP with SP3 and Windows Vista with SP1 to help organizations as they are evaluating Windows Vista and planning deployment in their company. For more information about Windows Vista, see the following resources:

- Windows Vista TechCenter at http://technet.microsoft.com/en-us/windowsvista/default.aspx
- Springboard Series: The On-Ramp for IT Pros at www.microsoft.com/springboard
- Windows Vista Product Overview for IT Professionals at http://technet.microsoft.com/en-us/windowsvista/aa906027.aspx
- Windows Vista: Common Deployment Questions Answered at http://technet2.microsoft.com/WindowsVista/en/library/2d3a9d2b-a7b8-4b83-9fc1-120dacdc93711033.mspx?mfr=true
- What's New in Group Policy in Windows Vista at http://technet2.microsoft.com/WindowsVista/en/library/a8366c42-6373-48cd-9d11-2510580e48171033.mspx?mfr=true
- TechNet Virtual Labs: Windows Vista at http://technet.microsoft.com/en-us/bb539979.aspx
- Microsoft Desktop Optimization Pack for Software Assurance at http://www.microsoft.com/windows/products/windowsvista/enterprise/mdop/overview.mspx