

Introduction

Over the years, we've written numerous books on applications, operating systems, messaging systems, and security products. All that time we were intimately aware of the fact that there was a lack of focus on how the desktop operating system was involved in these other items. As such, when we were approached with the idea of a Microsoft Vista book that was focused on management and administration, we immediately found our outlet for sharing concepts of how the desktop was involved in the larger Information Technology picture.

Vista brought with it a lot of controversy over where it was drawing the line between security and user convenience. Early adopters often let the lack of third-party driver support overshadow the breakthroughs that Vista was bringing with it. IT workers were understandably concerned about how existing systems would interact with Vista and how they would fold Vista into their existing compliance and security rules.

This book is intended to help those IT personnel integrate Vista into their existing environment as well as help those who are starting from scratch and want to begin with the "latest, greatest" operating system from our friends in Redmond.

This book is organized so that topics can easily be looked up and a complete set of instructions found for implementing or understanding a particular function. Each chapter is meant to stand on its own but will often reference another chapter for further information on a particular topic.

It is the wish of the authors that readers gather not only a basic set of how-to instructions but that they additionally receive advice and recommendations based on the experiences of using and deploying Vista in real production environments.

The book is organized into seven parts, with each part containing related chapters:

Part I: Windows Vista Health Check

- **Chapter 1, “Windows Vista Technology Primer”**—This chapter is an introductory chapter to Windows Vista and covers the basic functions of Vista, such as what’s new and different compared to Windows XP, the different versions of Vista (Home, Business, Enterprise, Ultimate), features that are focused toward business productivity, features that are focused toward home entertainment, and so on.
- **Chapter 2, “Getting to Understand Your Windows Vista System”**—This chapter provides a step-by-step guide on how to do an assessment on a Windows Vista system relative to which version of Vista is installed, performance metrics on how the system is operating, configuration settings on key components such as auto update and firewall functions, how to determine the User Account Control setting for the user, and so on. The goal of this chapter is to provide the reader with the ability to assess a system configuration (that is, creating a baseline understanding) so that functionality can be added or modified to meet the needs of the user and/or organization. This chapter also covers the Windows Shell options (classic versus Vista), the ability to restrict configurations, force prompting, and control functions such as item sharing, PC to PC sharing, and folder redirection.
- **Chapter 3, “Understanding Windows Vista Performance Optimization”**—This chapter provides an in-depth view on assessing the characteristics of a system relative to performance, such as how much memory the system has and how much disk space is in the system. It provides recommendations on how to tune, optimize, or even assess a user’s needs so that an appropriate system can be purchased to meet the requirements of the user. This includes doing a system requirements assessment on the applications, tasks, and functions of a user’s applications to determine appropriate configuration needs. Also included is the assessment of where 64-bit Windows comes into play regarding a user’s requirements.

Part II: Security for Windows Vista Systems

- **Chapter 4, “Securing a Windows Vista System”**—This chapter focuses on basic Windows Vista security, such as password protection, Internet Explorer protected mode hardening, Windows Defender,

Windows Firewall, Windows malicious software removal tool, and so on. Also included in this chapter are topics on Device Installation Control and Network Access Protection.

- **Chapter 5, “Patching and Keeping Windows Vista Up-to-Date”**—This chapter focuses on the basics of patching and keeping a Windows Vista system up-to-date, such as the use of auto updates as well as internal and network-based patching and updating options that turn passive (pull) updates into a more active (push) update process.
- **Chapter 6, “Using User Account Control to Establish System Security”**—This chapter covers the new User Account Control (UAC) privileges, what rights the Standard, Standard with Admin Password, Admin Approval with Restricted Elevation, and Admin Approval roles provide, how to configure different UAC levels, how to apply UAC to different users, and how to delegate privileges to administrators to temporarily elevate user rights.
- **Chapter 7, “Implementing BitLocker Drive Encryption to Improve Data Privacy”**—This chapter focuses on BitLocker and the capability to encrypt the content of a system’s hard drive. This topic covers the installation, configuration, best practice management, and recovery of lost keys for the operation of BitLocker. Also covered are the capability to do automated key backup to Active Directory, Group Policy integration to support BitLocker, and the capability to wipe keys and repurpose systems.

Part III: Windows Vista Mobility

- **Chapter 8, “Configuring and Using Offline Files”**—This chapter focuses on offline files and the capability for a user to configure files for offline access, the proper synchronization of files, how offline files work with server shares, personal shares, encrypted content, and DFS replicated content, as well as how to manage offline files and folders. This chapter also addresses the uniform namespace found with the “ghosting” functionality of cached files and cache encryption.
- **Chapter 9, “Configuring Mobile Functionality in Windows Vista”**—This chapter covers the basic functions of mobility for a Windows Vista system, such as configuring basic wireless access settings, mobile to mobile device sync, basic VPN settings, and so on.
- **Chapter 10, “Creating a Secured Mobile Communications Configuration”**—This chapter covers the setup and installation of mobility functions on a Windows Vista system, such as configuration

of PEAP-TLS, WPA2, 802.1x, EAP-TLS, L2TP, IPSec, and other secured communications for mobile systems. Also covered are the setup of Radius servers, wireless group policies, and user and computer authentication for secured communications.

Part IV: Backup and Recovery of Information

- **Chapter 11, “Using Shadow Copy to Recover Lost or Damaged Files”**—This chapter focuses on the configuration, use, and recovery of files using the Shadow Copy function. This includes creating snapshots of data, sharing folder content, and recovering files.
- **Chapter 12, “Backing Up and Recovering Windows Vista Information”**—This chapter focuses on the basic backup and restore function built in to Windows Vista, using the basic Windows Backup utility. Covered in this chapter are Volume Shadow Copy Service, backup to optical media (UDFS), and the use of the Windows Recovery Environment for offline repair or restore.
- **Chapter 13, “Using the Complete PC Backup Utility”**—This chapter expands on the backup function of Windows Vista and covers the Complete PC backup and restore options for block-level backup to local and remote devices for better administrative control of data for centralized backup and remote restores. This chapter covers Windows Recovery Environment (Windows RE), and the use of the VHD format.
- **Chapter 14, “Microsoft Vista System Restore”**—This chapter focuses on the System Restore capability of Windows Vista that allows for the full rollback of an entire system. This includes incremental recovery of data from block level increments and picking restore points for recovery.

Part V: Managing Vista

- **Chapter 15, “Setting Up Users and Computers in Windows Vista”**—This chapter focuses on the best practices, tips, and tricks at configuring users, user accounts, computer settings, and basic day-to-day administration of Windows Vista.
- **Chapter 16, “Establishing Printer Management in Windows Vista”**—This chapter focuses on Printer Management in Windows Vista, such as the capability to deploy printers to machines and users using policies, per-machine shared use configurations, per-user

configurations where printers follow users, rollout of trusted printer drivers, preventing and allowing the installation of trusted printer devices only, and the delegation of printer installation rights.

- **Chapter 17, “Troubleshooting Windows Vista”**—This chapter focuses on common issues that can occur with Vista and how to troubleshoot them. It will introduce the new tools available in Vista to troubleshoot problems with the operating system itself.
- **Chapter 18, “Using Internet Explorer 7”**—This chapter focuses on the new features of Internet Explorer 7 and will help administrators prepare their users for the transition from older versions of Internet Explorer to the current version.

Part VI: Deploying Vista

- **Chapter 19, “Creating Windows Vista Images”**—This chapter will focus on the new image-creation tools for Vista.
- **Chapter 20, “Imaging Tools and Processes”**—This chapter demonstrates ways to deploy Vista in an automated fashion. This includes systems that will be recycled as well as “net new” machines.
- **Chapter 21, “Deploying Windows Vista in an Automated Fashion”**—This chapter demonstrates how to properly upgrade an existing XP system to Vista and shows the pros and cons of upgrading versus replacing.

Part VII: Windows Vista in an Active Directory Environment

- **Chapter 22, “Understanding Group Policy Basics to Manage Windows Vista Systems”**—This chapter focuses on the basic group policies new in Windows Vista, including device installation and usage, Internet Explorer policies that are now exposed to GPOs, IPsec and firewall policies, UAC, Defender, Remote Assist, Terminal Services, globalization support, shell, tablet, and other GPO options. This chapter covers not only what the policies are but how a network administrator sets policies at the Active Directory level and applies policies to Windows Vista devices.
- **Chapter 23, “Expanding on the Use of Group Policies to Better Manage Windows Vista Systems”**—This chapter goes beyond the basics of group policies and addresses the new search and filter functionality, use of Group Policy templates, use of WMI for expanded policy support, and so on.

The real-world experience we have had in working with Microsoft Vista and our commitment to writing this book based on the combined years of field experience in early adopter environments allows us to bring you information that we genuinely hope will benefit you in planning for and implementing Microsoft Vista in your environments.

Conventions Used in This Book

Code lines, commands, statements, and any other code-related terms appear in a monospace typeface. Placeholders (which stand for what you should actually type) appear in italic monospace. When a line of code is too long to fit on one line of text, we wrap it to the next line and precede the continuation with a code-continuation arrow. For example:

```
SYSTEMINFO [/S system [/U username [/P [password]]]]  
➤[/FO format] [/NH]
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This book uses several extra elements:

Note

Notes give extra information on the current topic.

Tip

Tips offer advice or describe an additional way of accomplishing something.

Caution

Cautions signal you to be careful of potential problems and give you information on how to avoid or fix them.