

Microsoft®

Windows® 7

Desktop Support and Administration

Real World Skills for MCITP Certification and Beyond



Exams 70-685 and 70-686

Darril Gibson



SERIOUS SKILLS.

Windows® 7 Desktop Support and Administration

**Real World Skills for
MCITP Certification and Beyond**



Darril Gibson



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Best regards,

A handwritten signature in black ink, appearing to read 'Neil Edde', with a stylized, flowing script.

Neil Edde
Vice President and Publisher
Sybex, an Imprint of Wiley

To Nimfa, my wife of over 18 years who also reminds me how much better life is when it is shared with a loved one. I'm looking forward to 18 more.

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About the Author

Darril Gibson is the CEO of Security Consulting and Training, LLC. He has been a Microsoft Certified Trainer (MCT) for more than 10 years and has taught a wide variety of courses to both public and private clients. He has taught courses on MCSE (NT 4.0, Windows Server 2000, Windows Server 2003), MCITP (Windows Vista, Windows Server 2008, and SQL Server), MCSD (Visual Basic), networking fundamentals, and network security.

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Darril has authored, coauthored, or contributed on more than 10 IT books. These include books on Microsoft Windows Server 2008, SQL Server, Windows Vista, CompTIA's Security+, and risk management.

When not writing or teaching, he can often be found with his wife and two dogs at their country getaway. It's a little place on 20 acres where he spends a lot of time enjoying quiet country walks.

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Introduction

Windows is the number 1 desktop operating system worldwide. With Windows XP close to the end of its successful lifetime and Windows Vista not fully embraced, Windows 7 is sure to be a huge success.

Microsoft has created several exams for Windows 7. These include the following:

- 70-680: Microsoft Certified Technology Specialist (MCTS): Windows 7, Configuration
- 70-685: Microsoft Certified Professional (Pro): Windows 7, Enterprise Desktop Administrator
- 70-686: Microsoft Certified Professional (Pro): Windows 7, Enterprise Desktop Support Technician
- 70-682: Microsoft Certified Professional (Pro): Upgrading to Windows 7 MCITP Enterprise Desktop Support Technician



You can view the objectives for each of these exams with the following links:
<http://www.microsoft.com/learning/en/us/exam.aspx?ID=70-680>,
<http://www.microsoft.com/learning/en/us/exam.aspx?ID=70-682>,
<http://www.microsoft.com/learning/en/us/Exam.aspx?ID=70-685>, and
<http://www.microsoft.com/learning/en/us/Exam.aspx?ID=70-686>.

If you pass the 70-680 exam, you'll earn the MCTS on Windows 7 Configuration certification. Two additional certifications are available:

- Microsoft Certified IT Professional (MCITP): Enterprise Desktop Support Technician 7
To earn this certification, you must pass the 70-680 exam and the 70-685 exam.
- Microsoft Certified IT Professional (MCITP): Windows 7, Enterprise Desktop Administrator

To earn this certification, you must pass the 70-680 exam and the 70-686 exam.

If you've previously earned either the Microsoft Certified Desktop Support Technician (MCDST) on Windows XP or the Enterprise Desktop Support Technician (EDST) certification on Windows Vista, you can take the 70-682 exam in place of both the 70-680 and the 70-686 exams.



Microsoft originally indicated that the MCITP Windows 7 Enterprise Desktop Support Technician certification would also require passing an HDI certification exam. That requirement has been dropped. You do not need to pass a third-party exam to earn either of the MCITP exams on Windows 7.

This book covers all of the objectives for the 70-685 and 70-686 exams. It doesn't include the more basic objectives for Windows 7 in the 70-680 exam.

Who Should Read This Book

This book was written for two primary audiences:

Administrators on the job This book is primarily written for administrators who need to install, deploy, and support Windows 7. It's intended to be an on-the-job reference book to help real-world administrators support Windows 7 from a desktop administrator or desktop support technician perspective.

Exam takers This book covers all of the objectives for the 70-685 and the 70-686 exams. If you're studying for either of these two exams, this book is an excellent supplement to other exam materials. It can help you master the objectives so that you will pass either of these exams the first time you take it.

What You Need

This book leads you through the paces of managing and supporting Windows 7. It includes many exercises that require you to have Windows 7 installed on your system.

Chapter 9, "Managing Windows 7 in a Domain," includes exercises that allow you to create a virtual environment using Windows Virtual PC (VPC). These exercises lead you through the process of installing Windows Server 2008 in the virtual environment and creating a virtual domain. Both VPC and a trial version of Windows Server 2008 can be downloaded for free. Your system will perform best if you have at least 4 GB of RAM installed.

What Is Covered in This Book

Windows 7 Desktop Support and Administration: Real World Skills and Knowledge for MCITP Certification and Beyond is organized to provide the knowledge you'll need to support Windows 7. It includes the following chapters:

Chapter 1: Planning for the Installation of Windows 7 covers some basics about the Windows 7 editions used in the enterprise. You'll learn how the User State Migration Tool can be used to ensure users have the same data and settings after an upgrade or migration as they did before the upgrade or migration. You'll also learn about different virtualization technologies including Windows XP Mode. This chapter closes with important details on licensing and activation including Multiple Activation Keys and the Key Management Service server.

Chapter 2: Automating the Deployment of Windows 7 covers the different types of images used to deploy Windows 7 using lite-touch and zero-touch installations. It includes details on how to use the Windows Automated Installation Kit and Windows Deployment Services to capture and deploy images. It also provides an overview on the Microsoft Deployment Toolkit.

Chapter 3: Using the Command Prompt and PowerShell covers the basics of the command prompt and the newer PowerShell. This is an invaluable chapter for administrators who aren't familiar with these tools but need to learn them to master important troubleshooting and administrative skills.

Chapter 4: Managing the Life Cycle—Keeping Windows 7 Up to Date includes details on the different types of updates available for Windows 7 and how to keep systems up to date. You'll learn how to use free auditing tools such as the Microsoft Baseline Security Analyzer to check your systems. You'll also learn how to use Windows Server Update Services to automate the deployment of updates to clients on your network.

Chapter 5: Maintaining and Troubleshooting Windows 7 covers many of the common tools used to identify and resolve performance issues. It includes basic tools such as the Event Viewer, the new Action Center, the Services applet, and different power plans. It includes details on the new Windows Recovery Environment and how it can be used to resolve many common Windows 7 problems. This chapter closes with information on managing hardware in Windows 7 and troubleshooting boot issues.

Chapter 6: Configuring and Troubleshooting Application Issues includes details on requirements to install and configure software. If the application isn't supported on Windows 7, you can use one of several different virtual strategies including Windows XP Mode. The deployment of applications can be automated with Group Policy or System Center Configuration Manager. You'll also learn about various methods to identify and resolve software failure issues.

Chapter 7: Networking with Windows 7 includes details related to connecting a Windows 7 system in a network. These include basic connectivity in any enterprise and how names are resolved to IP addresses. You'll learn how to use the Network and Sharing Center to check and verify connectivity. You'll also learn how to troubleshoot network connectivity problems.

Chapter 8: Accessing Resources on a Network covers how resources are accessed in a network. This includes the basics of how you can connect to shared resources and how permissions can control who can connect. You'll also learn how to identify and resolve common network printer issues.

Chapter 9: Managing Windows 7 in a Domain shows you how Windows 7 functions in a domain. It includes exercises to help you create a virtual network of a domain controller and a Windows 7 client computer. You'll learn how to join a domain and basic differences between authentication and authorization. This chapter details how to identify and resolve logon issues and how different profiles are used. It ends with the basics on anti-malware software.

Chapter 10: Managing Windows 7 with Group Policy covers important concepts related to Group Policy. You'll learn about the scope of a GPO, the order of precedence, and how to configure advanced settings like Block Inheritance, Enforced, and Loopback Processing. You'll also see several of the Group Policy settings that you can use to control Windows 7 behavior in a domain.

Chapter 11: Managing Security in Windows 7 covers many of the important security capabilities that come with Windows 7. You'll learn about the improved User Account Control (UAC) feature and how you can modify its default behavior. You'll learn about many of the security policies that can be used to lock down any system including Windows 7 and the new Removable Storage Access Policy used to control removable devices. This chapter includes information on BitLocker, with a focus on how to recover keys needed to restore an enterprise user's data. It concludes with information on Windows Firewall.

Chapter 12: Supporting Mobile Windows 7 Users covers mobile and remote users. Windows 7 includes many security features that can help secure connections to wireless networks. It also includes support for several tunneling protocols used for virtual private networks (VPNs), including the newer IKEv2 tunneling protocol. You'll learn about DirectAccess, which can be used in place of VPNs. Last, this chapter covers BranchCache, which can improve performance for Windows 7 users in remote locations.

Chapter 13: Administering Internet Explorer covers Internet Explorer version 8 (IE 8). You'll learn about many of the new features including InPrivate Browsing. This chapter also covers many of the new and basic security features for IE 8. It closes with tips on troubleshooting different issues with IE 8.

Appendix A includes a mapping of all the 70-685 and 70-686 exam objectives to the chapter where the objective is covered. This appendix includes both the chapter and the section title for each objective.

Appendix B identifies the contents of the companion disk and how to use it.

The **Glossary** is a list of relevant terms covered in the book.



The companion CD is home to all the demo files, samples, and bonus resources mentioned in the book. See Appendix B for more details on the contents and how to access them.

How to Contact the Author

I welcome feedback from you about this book or about books you'd like to see from me in the future. You can reach me by writing to Darril@mcitypsuccess.com. For more information about my work, please visit my website at mcitypsuccess.com or search "Darril Gibson" on Amazon.com.

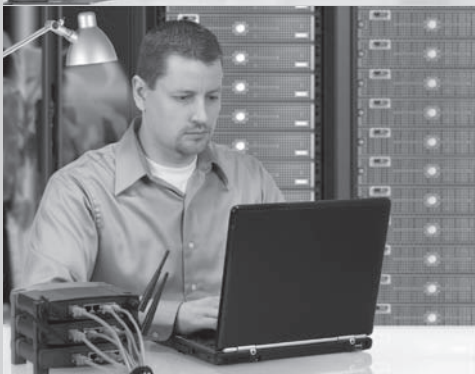
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Chapter 1

Planning for the Installation of Windows 7

TOPICS COVERED IN THIS CHAPTER INCLUDE

- ✓ Choosing a Windows 7 edition
- ✓ Performing a local installation of Windows 7
- ✓ Designing User State Migration
- ✓ Considering virtualization
- ✓ Planning and managing client licensing and activation





One of the first steps you need to take when planning a migration to Windows 7 is choosing which edition of Windows 7 to deploy. For an enterprise, your choice is limited to Windows 7

Professional, Windows 7 Enterprise, or Windows 7 Ultimate. To make the right choice, you'll need to know what features are available in each edition.

Once you identify the edition you'll use, you need to come up with a migration plan. Because many organizations will be upgrading existing Windows XP computers to Windows 7, having a solid plan to migrate users' data is very important. The User State Migration Tool (USMT) can simplify this process for you with the use of `ScanState` and `LoadState`.

Although virtualization wasn't common on end users' desktops in the past, the new Windows XP Mode available in Windows 7 is sure to change this for many users. It's now possible for end users to run applications on a Windows 7 system in a transparent virtual instance of Windows XP.

Activation of Windows 7 can be done individually, with a Multiple Activation Key or with a Key Management Service server. Whereas home users will always use individual activation, you may need to use one of the other methods in larger or isolated enterprises.

Choosing a Windows 7 Edition

When planning a migration or tech refresh, a simple question to ask is what Windows 7 edition is needed. Windows 7 offers six editions, but you'll quickly whittle down the choice to just three for an enterprise because the first three are too basic for a work environment.



Microsoft lists this topic in some documentation as "Choosing a SKU (Stock Keeping Unit)." An SKU is the number associated with the bar code you see on just about any product these days.

These are the three basic editions that you won't see in an enterprise:

Windows 7 Starter Some original equipment manufacturers (OEMs) preinstall this edition on specialized computers. It includes the fewest features, and it will not be available in 64-bit versions.