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About This Book

Welcome to *MCSA/MCSE Self-Paced Training Kit (Exams 70-292 and 70-296): Upgrading Your Certification to Microsoft Windows Server 2003*. We have designed this book to prepare you effectively for the MCSE upgrade examinations and, along the way, to share with you knowledge about what it takes to implement Windows Server 2003 in your enterprise network. We hope that by helping you understand the underlying technologies, the variety of options for configuring feature sets, and the complex interaction between components, you are better equipped to tackle the challenges that you face in the trenches of information technology (IT). We also hope to serve the community at large—to elevate the worth of the MCSE moniker—so that behind each certification is a knowledgeable, experienced, capable professional.



Note For more information about becoming a Microsoft Certified Professional, see the “The Microsoft Certified Professional Program” section later in this introduction.

Intended Audience

This book was developed for IT professionals who plan to take the related Microsoft Certified Professional exams 70-292 and 70-296 as well as IT professionals who administer computers running Windows Server 2003.



Note Exam skills are subject to change without prior notice and at the sole discretion of Microsoft.

Prerequisites

This training kit requires that students meet the following prerequisites:

- Twelve to eighteen months of experience administering Microsoft Windows technologies in a network environment
- Understanding of Active Directory directory services and related technologies, including Group Policy
- Existing Windows 2000 MCSA or MCSE certification

About the CD-ROM

For your use, this book includes a Supplemental CD-ROM, which contains a variety of informational aids to complement the book content, including:

- The Microsoft Press Readiness Review Suite Powered by MeasureUp. This suite of practice tests and objective reviews contains questions of varying degrees of complexity and offers multiple testing modes. You can assess your understanding of the concepts presented in this book and use the results to develop a learning plan that meets your needs.
- An electronic version of this book (eBook). For information about using the eBook, see the “The eBooks” section later in this introduction.
- An eBook of the *Microsoft Encyclopedia of Networking*, Second Edition, and an eBook of the *Microsoft Encyclopedia of Security*. These eBooks provide complete and up-to-date reference materials for networking and security.
- Sample chapters from several Microsoft Press books. These chapters give you additional information about Windows Server 2003 and introduce you to other resources that are available from Microsoft Press.

A second CD-ROM contains a 180-day evaluation edition of Microsoft Windows Server 2003, Enterprise Edition.



Caution The 180-day Evaluation Edition provided with this training kit is not the full retail product and is provided only for the purposes of training and evaluation. Microsoft Technical Support does not support this evaluation edition.

For additional support information regarding this book and the CD-ROM (including answers to commonly asked questions about installation and use), visit the Microsoft Press Technical Support Web site at <http://www.microsoft.com/mspress/support/>. You can also e-mail tkinput@microsoft.com or send a letter to Microsoft Press, Attention: Microsoft Press Technical Support, One Microsoft Way, Redmond, WA 98052-6399.

Features of This Book

This book has two parts. Use Part 1 to learn at your own pace and practice what you've learned with hands-on exercises. Part 2 contains questions and answers you can use to test yourself on what you've learned.

Part 1: Learn at Your Own Pace

Each chapter identifies the exam objectives that are covered within the chapter, provides an overview of why the topics matter by identifying how the information is applied in the real world, and lists any prerequisites that must be met to complete the lessons presented in the chapter.

The chapters contain a set of lessons. Lessons contain practices that include one or more hands-on exercises. These exercises give you an opportunity to use the skills being presented or explore the part of the application being described.

After the lessons, you are given an opportunity to apply what you've learned in a case scenario exercise. In this exercise, you work through a multistep solution for a realistic case scenario. You are also given an opportunity to work through a troubleshooting lab that explores difficulties you might encounter when applying what you've learned on the job.

Each chapter ends with a summary of key concepts and a short section listing key topics and terms you need to know before taking the exam. This section summarizes the key topics you've learned, with a focus on demonstrating that knowledge on the exam.



Real World Helpful Information

You will find sidebars like this one that contain related information you might find helpful. “Real World” sidebars contain specific information gained through the experience of IT professionals just like you.

Part 2: Exam Preparation

Part 2 helps to familiarize you with the types of questions you will encounter on the MCP exam. By reviewing the objectives and sample questions, you can focus on the specific skills you need to improve on before taking the exam.



See Also For a complete list of MCP exams and their related objectives, go to <http://www.microsoft.com/traincert/mcp>.

Part 2 is organized by the exam's objectives. Each chapter covers one of the primary groups of objectives, referred to as *Objective Domains*. Each chapter lists the tested skills you need to master to answer the exam questions, and it includes a list of further readings to help you improve your ability to perform the tasks or skills specified by the objectives.

Within each Objective Domain, you will find the related objectives that are covered on the exam. Each objective provides you with several practice exam questions. The answers are accompanied by explanations of each correct and incorrect answer.



Note These questions are also available on the Supplemental CD as an objective-by-objective review.

Informational Notes

Several types of reader aids appear throughout the training kit.

- **Tip** contains methods of performing a task more quickly or in a not-so-obvious way.
- **Important** contains information that is essential to completing a task.
- **Note** contains supplemental information.
- **Caution** contains valuable information about possible loss of data; be sure to read this information carefully.
- **Warning** contains critical information about possible physical injury; be sure to read this information carefully.
- **See also** contains references to other sources of information.
- **Planning** contains hints and useful information that should help you to plan the implementation.
- **On the CD** points you to supplementary information or files you need that are on the companion CD.
- **Security Alert** highlights information you need to know to maximize security in your work environment.
- **Exam Tip** flags information you should know before taking the certification exam.
- **Off the Record** contains practical advice about the real-world implications of information presented in the lesson.

Notational Conventions

The following conventions are used throughout this book:

- Characters or commands that you type appear in **bold** type.
- *Italic* in syntax statements indicates placeholders for variable information. *Italic* is also used for book titles.
- Names of files and folders appear in Title caps, except when you are to type them directly. Unless otherwise indicated, you can use all lowercase letters when you type a file name in a dialog box or at a command prompt.
- File name extensions appear in all lowercase.
- Acronyms appear in all uppercase.
- Monospace type represents code samples, examples of screen text, or entries that you might type at a command prompt or in initialization files.
- Square brackets [] are used in syntax statements to enclose optional items. For example, [*filename*] in command syntax indicates that you can choose to type a file name with the command. Type only the information within the brackets, not the brackets themselves.
- Braces { } are used in syntax statements to enclose required items. Type only the information within the braces, not the braces themselves.

Keyboard Conventions

- A plus sign (+) between two key names means that you must press those keys at the same time. For example, “Press ALT+TAB” means that you hold down ALT while you press TAB.
- A comma (,) between two or more key names means that you must press each of the keys consecutively, not together. For example, “Press ALT, F, X” means that you press and release each key in sequence. “Press ALT+W, L” means that you first press ALT and W at the same time, and then release them and press L.

Getting Started

This training kit contains hands-on exercises to help you learn about implementing, supporting, and troubleshooting Windows Server 2003 technologies. Use this section to prepare your self-paced training environment.

To complete some of these procedures, you must have two networked computers or be connected to a larger network. Both computers must be capable of running Windows Server 2003, Standard Edition or Enterprise Edition.



Caution Several exercises might require you to make changes to your servers. These changes might have undesirable results if you are connected to a larger network. Check with your Network Administrator before attempting these exercises.

Hardware Requirements

Each computer must have the following minimum configuration. All hardware should be in the Windows Server Catalog at <http://www.microsoft.com/windows/catalog/server/>, and should meet the requirements listed at <http://www.microsoft.com/windowsserver2003/evaluation/sysreqs/>.

- Minimum CPU: 133 MHz for x86-based computers (733 MHz is recommended) and 733 MHz for Itanium-based computers
- Minimum RAM: 128 MB (256 MB is recommended)
- Disk space for setup: 2.0 GB for x86-based computers and 2.0 GB for Itanium-based computers
- Display monitor capable of 800 x 600 resolution or higher
- CD-ROM drive
- Microsoft Mouse or compatible pointing device

Software Requirements

The following software is required to complete the procedures in this training kit.

- Windows Server 2003, Enterprise Edition (A 180-day evaluation edition of Windows Server 2003, Enterprise Edition, is included on the CD-ROM.)



Caution The 180-day Evaluation Edition provided with this training is not the full retail product and is provided only for the purposes of training and evaluation. Microsoft Technical Support does not support these evaluation editions. For additional support information regarding this book and the CD-ROMs (including answers to commonly asked questions about installation and use), visit the Microsoft Press Technical Support Web site at <http://www.microsoft.com/mspress/support/>. You can also e-mail tkinput@microsoft.com or send a letter to Microsoft Press, Attn: Microsoft Press Technical Support, One Microsoft Way, Redmond, WA 98502-6399.

Setup Instructions

Set up your computers according to the manufacturer's instructions.

The first computer should be configured as follows:

- Windows Server 2003, Enterprise Edition
- Computer name: Server01
- IP Address: 192.168.0.1
- Subnet Mask: 255.255.255.0
- The computer should be configured as a stand-alone (workgroup) server. It will be promoted to a domain controller in Chapter 2.

The second computer should be configured as follows:

- Windows Server 2003, Enterprise Edition
- Computer name: Server02
- IP Address: 192.168.0.2
- Subnet Mask: 255.255.255.0
- The computer should be configured as a stand-alone (workgroup) server. It will be promoted to a domain controller in Chapter 2. Server02 will be used as a member server and a domain controller for various exercises in the training kit.
- For the optional Automated System Recovery exercises in Chapter 13, you need about 2 GB of free disk space and a second physical hard disk.

Because most exercises require networked computers, you need to make sure the two servers can communicate with each other.



Caution If your computers are part of a larger network, you *must* verify with your network administrator that the computer names, domain name, and other information used in setting up Windows Server 2003 as described in this section do not conflict with network operations. If they do conflict, ask your network administrator to provide alternative values and use those values throughout all of the exercises in this book.

The Readiness Review Suite

The CD-ROM includes a practice test made up of 300 sample exam questions and an objective-by-objective review with an additional 125 questions. Use these tools to reinforce your learning and to identify any areas in which you need to gain more experience before taking the exam.

► To install the practice test and objective review

1. Insert the Supplemental CD-ROM into your CD-ROM drive.



Note If AutoRun is disabled on your machine, refer to the Readme.txt file on the CD-ROM.

2. Click Readiness Review Suite on the user interface menu.

The eBooks

The CD-ROM includes an electronic version of the training kit, as well as eBooks for both the *Microsoft Encyclopedia of Security* and the *Microsoft Encyclopedia of Networking*, Second Edition. The eBooks are in portable document format (PDF) and can be viewed using Adobe Acrobat Reader.

► To use the eBooks

1. Insert the Supplemental CD-ROM into your CD-ROM drive.



Note If AutoRun is disabled on your machine, refer to the Readme.txt file on the CD-ROM.

2. Click Training Kit eBook on the user interface menu. You can also review any of the other eBooks that are provided for your use.

The Microsoft Certified Professional Program

The Microsoft Certified Professional (MCP) program provides the best method to prove your command of current Microsoft products and technologies. The exams and corresponding certifications are developed to validate your mastery of critical competencies as you design and develop, or implement and support, solutions with Microsoft products and technologies. Computer professionals who become Microsoft certified are recognized as experts and are sought after industry-wide. Certification brings a variety of benefits to the individual and to employers and organizations.



See Also For a full list of MCP benefits, go to <http://www.microsoft.com/traincert/mcp/mcp/benefits.asp>.

Certifications

The Microsoft Certified Professional program offers multiple certifications, based on specific areas of technical expertise:

- *Microsoft Certified Professional (MCP)*. Demonstrated in-depth knowledge of at least one Microsoft Windows operating system or architecturally significant platform. An MCP is qualified to implement a Microsoft product or technology as part of a business solution for an organization.
- *Microsoft Certified Solution Developer (MCSD)*. Professional developers qualified to analyze, design, and develop enterprise business solutions with Microsoft development tools and technologies, including the Microsoft .NET Framework.
- *Microsoft Certified Application Developer (MCAD)*. Professional developers qualified to develop, test, deploy, and maintain powerful applications using Microsoft tools and technologies, including Microsoft Visual Studio .NET and XML Web services.
- *Microsoft Certified Systems Engineer (MCSE)*. Qualified to effectively analyze the business requirements, and design and implement the infrastructure for business solutions based on the Microsoft Windows and Microsoft Server 2003 operating system.
- *Microsoft Certified Systems Administrator (MCSA)*. Individuals with the skills to manage and troubleshoot existing network and system environments based on the Microsoft Windows and Microsoft Server 2003 operating systems.

- *Microsoft Certified Database Administrator (MCDBA)*. Individuals who design, implement, and administer Microsoft SQL Server databases.
- *Microsoft Certified Trainer (MCT)*. Instructionally and technically qualified to deliver Microsoft Official Curriculum through a Microsoft Certified Technical Education Center (CTEC).

Requirements for Becoming a Microsoft Certified Professional

The certification requirements differ for each certification and are specific to the products and job functions addressed by the certification.

To become a Microsoft Certified Professional, you must pass rigorous certification exams that provide a valid and reliable measure of technical proficiency and expertise. These exams are designed to test your expertise and ability to perform a role or task with a product, and they are developed with the input of professionals in the industry. Questions in the exams reflect how Microsoft products are used in actual organizations, giving them “real-world” relevance.

- Microsoft Certified Product (MCPs) candidates are required to pass one current Microsoft certification exam. Candidates can pass additional Microsoft certification exams to further qualify their skills with other Microsoft products, development tools, or desktop applications.
- Microsoft Certified Solution Developers (MCSDs) are required to pass three core exams and one elective exam. (MCSD for Microsoft .NET candidates are required to pass four core exams and one elective.)
- Microsoft Certified Application Developers (MCADs) are required to pass two core exams and one elective exam in an area of specialization.
- Microsoft Certified Systems Engineers (MCSEs) are required to pass five core exams and two elective exams.
- Microsoft Certified Systems Administrators (MCSAs) are required to pass three core exams and one elective exam that provide a valid and reliable measure of technical proficiency and expertise.
- Microsoft Certified Database Administrators (MCDBAs) are required to pass three core exams and one elective exam that provide a valid and reliable measure of technical proficiency and expertise.
- Microsoft Certified Trainers (MCTs) are required to meet instructional and technical requirements specific to each Microsoft Official Curriculum course they are certified to deliver. The MCT program requires on-going training to meet the requirements for the annual renewal of certification. For more information about becoming a Microsoft Certified Trainer, visit <http://www.microsoft.com/traincert/mcp/mct/> or contact a regional service center near you.

Technical Support

Every effort has been made to ensure the accuracy of this book and the contents of the companion disc. If you have comments, questions, or ideas regarding this book or the companion disc, please send them to Microsoft Press using either of the following methods:

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Postal Mail: Microsoft Press
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Certification to Microsoft Windows Server 2003, Editor
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Evaluation Edition Software Support

The 180-day Evaluation Edition provided with this training is not the full retail product and is provided only for the purposes of training and evaluation. Microsoft and Microsoft Technical Support do not support this evaluation edition.



Caution The Evaluation Edition of Windows Server 2003, Enterprise Edition, included with this book should not be used on a primary work computer. The evaluation edition is unsupported. For online support information relating to the full version of Windows Server 2003, Enterprise Edition, that *might* also apply to the Evaluation Edition, you can connect to <http://support.microsoft.com/>.

Information about any issues relating to the use of this evaluation edition with this training kit is posted to the Support section of the Microsoft Press Web site (<http://www.microsoft.com/mspress/support/>). For information about ordering the full version of any Microsoft software, please call Microsoft Sales at (800) 426-9400 or visit <http://www.microsoft.com>.