

**Microsoft®**

MCSA/MCSE Self-Paced Training Kit (Exam 70-290):

# **Managing and Maintaining a Microsoft® Windows Server™ 2003 Environment, Second Edition**

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# About This Book

Welcome to *MCSA/MCSE Self-Paced Training Kit (Exam 70-290): Managing and Maintaining a Microsoft Windows Server 2003 Environment*, Second Edition. We have designed this book to prepare you effectively for the MCSE examination 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 among components, you are better equipped to tackle the challenges that you face in the information technology (IT) trenches. 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.

## Intended Audience

This book was developed for IT professionals who plan to take the related Microsoft Certified Professional (MCP) exam 70-290, *Managing and Maintaining a Microsoft Windows Server 2003 Environment*, as well as for IT professionals who administer computers running Microsoft 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:

- A minimum of 12 to 18 months of experience administering Windows technologies in a network environment
- An understanding of Microsoft Active Directory directory service and related technologies, including Group Policy

## About the CD-ROM

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

- The Microsoft Press Readiness Review Suite Powered by MeasureUp. This suite of practice tests and objective reviews contains questions of varying degrees of

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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 section, “The eBook,” later in this introduction.
- An eBook of *Microsoft Windows Scripting Self-Paced Learning Guide* by Ed Wilson.
- Sample chapters from several Microsoft Press books give you additional information about Windows Server 2003 and introduce you to other resources that are available from Microsoft Press.
- An overview of Windows Server 2003 Service Pack 1 and Windows Server 2003 R2.
- Documents about Windows x64 and 64-bit computing with Windows Server 2003.
- Bonus material covering Software Update Services (SUS) and using VBScript to automate user and group administration.
- Sample chapters from several Microsoft Press books that give you additional information about Windows Server 2003 and introduce you to other resources that are available from Microsoft Press.
- Links to free e-Learning courses and clinics.

Two additional CD-ROMs contain a 180-day Evaluation Edition of Windows Server 2003 with SP1 and R2, Enterprise Edition. You will use SP1 to complete this training kit. R2 is for you reference only; do not install R2 until you have completed the training kit exercises.



**Note** 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](mailto: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 practical exercises. Part 2 contains questions and answers that 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 in the chapter, provides an overview of why the topics matter by identifying how the information applies 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. Each lesson also has a set of review questions to test your knowledge of the material covered in that lesson. The answers to the questions are found in the "Questions and Answers" section at the end of each chapter.

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 that you need to know before taking the exam, summarizing the key points with a focus 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: Prepare for the Exam

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

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**See Also** For a complete list of Microsoft certification exams and their related objectives, go to <http://www.microsoft.com/learning/mcp/default.asp>.

Part 2 is organized by the exam's objectives. Each chapter covers one of the primary groups of objectives, called *Objective Domains*. Each chapter lists the tested skills you must master to answer the exam questions and 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.



**On the CD** These questions are also available on the companion CD as a practice test.

## 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.
- **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. You can complete most of the exercises on a single test computer in a lab environment. Several optional exercises require a second computer running Windows Server 2003 or Windows XP, which must be connected to each other on a network.

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**Caution** Exercises, as well as the changes you make to your test computer, might have undesirable results if you are connected to a larger network. Check with your network administrator before attempting these exercises.

## Hardware Requirements

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

- Minimum CPU: 133 MHz processor (733 MHz is recommended)
- Minimum RAM: 128 MB (256 MB is recommended; 64 GB maximum)
- Disk space for setup: 1.5 GB to 2.0 GB
- Free disk space for installation of WSUS: 10 GB
- Display monitor capable of 800 × 600 resolution or higher
- CD-ROM or DVD-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 SP1, Enterprise Edition, (A 180-day Evaluation Edition of Windows Server 2003 with SP1 and R2, Enterprise Edition, is included on the CD-ROM.)
- Windows XP Professional (Not included on the CD-ROM. Required in optional hands-on exercises only.)



**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 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/learning/support/books/>. You can also e-mail [tkinput@microsoft.com](mailto:tkinput@microsoft.com) or send a letter to Microsoft Press, Attn: Microsoft Press Technical Support, One Microsoft Way, Redmond, WA 98052-6399.

## Setup Instructions

Set up your computer according to the manufacturer's instructions. The server should be configured as follows:

- Windows Server 2003 SP1, Enterprise Edition



**Important** The evaluation edition software provided with this training kit includes Service Pack 1. Install Service Pack 1 (CD1) to complete the exercises in this training kit. Do not install R2 (CD2) until you have completed the exercises. This version of R2 is for your reference only. It is not covered in the 70-290 exam and therefore is not covered in this training kit.

- Computer name: Server01
- Domain controller in the domain *contoso.com*
- 1 GB of unpartitioned disk drive space

If you are very comfortable with the installation of Windows Server 2003, you may configure the server using the above guidelines. Otherwise you may use the more comprehensive setup instructions that are provided in Chapter 1, “Introducing Microsoft Windows Server 2003.”

The second computer will act as a second server or a Windows XP client for the optional hands-on exercises in the course. Chapters that require a second computer will provide configuration guidance in the “Before You Begin” section of the chapter.



**Caution** If your computers are connected to a larger network, you must verify with your network administrator that the computer names, domain names, and other information used in setting up Windows Server 2003, as described above and in Chapter 1, do not conflict with network operations. If they conflict, ask your network administrator to provide alternative values and use those values throughout all the exercises in this book.

### The Microsoft Press Readiness Review Suite

The CD-ROM includes a practice test of 300 sample exam questions and an 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 companion CD-ROM into your CD-ROM drive.



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**On the CD** 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 and follow the prompts.

**The eBook**

The CD-ROM includes an electronic version of this training kit, an eBook for the *Microsoft Windows Scripting Self-Paced Learning Guide* by Ed Wilson, and bonus material, including sample chapters from several Microsoft Press books and relevant white papers. The eBook and the bonus materials are in Portable Document Format (PDF) and can be viewed using Adobe Reader.

**To use the eBook**

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



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

2. Click eBook on the user interface menu. You can also review any of the other PDFs that are provided.

**The Microsoft Certified Professional Program**

The Microsoft certifications provide 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 Microsoft certifications, go to <http://www.microsoft.com/learning/itpro/default.asp>.

## 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:

E-mail: [tkinput@microsoft.com](mailto:tkinput@microsoft.com)

Postal Mail: Microsoft Press  
Attn: *MCSA/MCSE Self-Paced Training Kit (Exam 70-290): Managing and Maintaining a Microsoft Windows Server 2003 Environment*, Second Edition, Editor  
One Microsoft Way  
Redmond, WA 98052-6399

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/learning/support/books>. To connect directly to the Microsoft Press Knowledge Base and enter a query, visit <http://www.microsoft.com/mspress/support/search.asp>. For support information regarding Microsoft software, please connect to <http://support.microsoft.com/>.

## 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 with SP1 and R2, Enterprise Edition, that is 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 R2, 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/learning/support/books/>). 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>.

## Microsoft Press Online: Resources for Microsoft Windows Server 2003 Training Kits, Second Edition

This site provides you with resources that work with your training kit to keep you current and help you prepare for one of the core MCSA (Microsoft Certified Systems Administrator) or MCSE (Microsoft Certified Systems Engineer) certification exams.

Go to <http://www.microsoft.com/learning/books/windowsserver2003trainingkits/> to find:

- Updated information for your training kit, when available
- Sample content from additional Microsoft Press books
- A brief survey to provide feedback about your books
- Special offers

At the site, you may also join the Microsoft Press Insiders' club, with the following additional benefits:

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- Discounts on popular Microsoft Press books
- Updates on changes to the certification exam covered by this Training Kit, when available

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