About This Book

Welcome to *MCSA/MCSE Self-Paced Training Kit (Exam 70-291): Implementing, Managing, and Maintaining a Microsoft Windows Server 2003 Network Infrastructure*, Second Edition. This book prepares you for the 70-291 exam by teaching you how to configure, manage, and troubleshoot various aspects of a Microsoft Windows Server 2003 Service Pack 1 (SP1) network infrastructure. Each chapter walks you through the hands-on deployment and management of these various aspects, including the network addressing, name resolution, routing, remote access, and security. After you read this book, answer the associated questions, and perform all the exercises, you will have gained a thorough understanding of the essential components supporting Windows Server 2003 networks.

Intended Audience

This book was developed for information technology (IT) professionals who plan to take the related Microsoft Certified Professional (MCP) exam 70-291, as well as for IT professionals who implement, administer, and support Windows Server 2003 networks.

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:

- Eighteen months of professional experience working with Windows networks
- Familiarity with networking concepts equivalent to that of a CompTIA Network+ certification

About the CD-ROM

This book includes a companion CD-ROM. This CD-ROM contains a variety of informational aids to complement the book’s content:

- An electronic version of this book (eBook). For information about using the eBook, see the section entitled “The eBook” later in this introduction.
- 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.

- A demo and a simulation that introduce you to Shadow Copies.
- A free demo: “Answering Simulation Questions.”
- 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.
- Lab files that you use to complete exercises in this training kit.
- Bonus material including white papers and links to a free e-learning course and clinic.

Two additional CD-ROMs contain a 180-day Evaluation Edition of Microsoft Windows Server 2003, Enterprise Edition, with SP1 and R2. You will use SP1 to complete this training kit. R2 is for your 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 supplemental 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 tkiput@microsoft.com or send a letter to Microsoft Press, Attn: 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 sets 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 the 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 in this book on the job.

Each chapter ends with a summary of key concepts, as well as a short section listing key topics and terms 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.

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

In each Objective Domain, you will find the related objectives that are covered on the exam. Each objective provides you with several practice exam questions. Explanations of each correct and incorrect answer accompany the answers.
Informational Notes

The following 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, URLs, and key words and terms when they are first introduced.
- 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 filename in a dialog box or at a command prompt.
- Filename 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 filename 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 deploying, managing, and troubleshooting a network infrastructure. Use this section to prepare your self-paced training environment.

To complete some of these procedures, you must have two networked computers and a means of connecting both computers to the Internet. Both computers must also be capable of running Windows Server 2003 SP1.

Caution Many of these exercises require you to configure settings that will affect addressing and other features your network. For this reason, it is not recommended that you perform these exercises on computers that are connected to a larger network.

Hardware Requirements

Each computer must have the following minimum configuration. All hardware should meet the requirements listed at http://www.microsoft.com/windowsserver2003/evaluation/sysreqs/default.mspx.

Minimum 133-MHz processor; 550-MHz recommended; up to eight processors supported on one server.
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- 128 MB memory (256 MB is recommended; 64 GB maximum)
- Disk space: 1.25 to 2 GB of available hard disk space
- 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:


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-ROMs (including answers to commonly asked questions about installation and use), visit the Microsoft Press Technical Support Web site at http://mspress.microsoft.com/learning/support/books/. 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 98052-6399.

Setup Instructions

Set up your computer according to the manufacturer's instructions. For the exercises that require networked computers, you need to make sure the computers can communicate with each other. Once the computers are physically networked, install Windows Server 2003 SP1 on each computer.

Important  The Evaluation Edition software provided with this training 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 70-291 exam and therefore is not covered in this training kit.

Use the following table during installation to help you configure each computer when the Windows Setup Wizard is run:
Caution  In general, you should not perform these configurations on computers that are part of a larger network. However, if you do, you must verify with your network administrator that the addresses, computer names, domain name, and other settings used do not conflict with network operations.

The Microsoft Press Readiness Review Suite

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

To install the practice test and object 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, as well as bonus material that includes sample chapters from several Microsoft Press books and relevant white papers. The eBook and bonus materials are in PDF format and can be viewed using Adobe Acrobat Reader. For more information, see the Readme.txt file included in the root folder of the companion CD-ROM.

To use the eBook

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

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

The Microsoft Certified Professional Program

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 CD-ROM. If you have comments, questions, or ideas regarding this book or
the companion CD-ROM, please send them to Microsoft Press using either of the following methods:

E-mail:  tkinput@microsoft.com
Postal Mail:  Microsoft Press
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 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.


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.