

(英文原版)

MCSD:

Visual Basic 6 Distributed Applications 学习指南

MCSD: Visual Basic 6 Distributed Applications Study Guide

微软认证的软件开发专家考试系列丛书之六

〔美〕Michael Lee Clark Christensen 著



電子工業出版社

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MCSD: Visual Basic 6
Distributed Applications
STUDY GUIDE

MCSD

学习指南系列

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系列丛书之六

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微软认证考试系列丛书出版说明

当前，计算机系统的开发、管理、使用及维护需要大量不同层次的专业技术人员，评价各种技术人员的水平是一件既复杂又必不可少的工作。为考查、评测有关人员对于微软操作系统、软件和网络系统的理解和熟练使用程度，Microsoft公司设计了如下几种认证考试方案：

Microsoft Certified Professional (MCP, 微软认证专业人员)

Microsoft Certified Professional+Internet (MCPI, 微软认证的MCP及Internet专业人员)

Microsoft Certified Solution Developer (MCSO, 微软认证软件开发专家)

Microsoft Certified System Engineer (MCSE, 微软认证系统工程师)

Microsoft Certified System Engineer+Internet (MCSEI, 微软认证MCSE及Internet工程师)

Microsoft Certified DataBase Administrator (MCDBA, 微软认证数据库管理员)

Microsoft Certified Trainer (MCT, 微软认证培训师)

为帮助国内的技术人员学好、用好微软的产品，顺利通过有关的考试，我们分别以翻译和英文原版重印的形式推出了“MCSE学习指南系列”（中文译本）、“MCSE考试指南系列”（英文原版）和“MCSO学习指南系列”（英文原版）三个系列书。

MCSE考试

MCSE是Microsoft Certified Systems Engineer（微软认证系统工程师）的缩写形式。MCSE证书意味着持有者具有较高层次的Windows NT、微软操作系统和相关产品的知识。获得MCSE证书需要有良好的计算机基础知识，还需要对操作系统、网络系统和信息化产品有深刻全面的了解，需要经过认真甚至是艰苦的学习和实践过程。由于该证书取之不易，一旦获得便足以说明证书持有者的技术水平，所以该证书得到了普遍的认可，几乎成为许多国外大公司录用人员、提升职务，甚至是提高薪金的依据，所以MCSE考生人数逐年上升。

要获得MCSE证书，需要通过4项必考科目和两项自选科目考试。具体情况如下：

表0.1 MCSE考试内容与可选科目

必考科目	考试内容	可选择科目
#1	网络操作系统	Windows NT Server 3.51或Windows NT 4.0
#2	企业网系统应用	Windows NT Server (3.51或4.0) in the Enterprise
#3	网络基础知识	Networking Essentials
#4	微软操作系统知识	Windows 3.1、Windows 3.11 for Workgroups Windows 95、Windows NT Workstation、 <u>Windows 98</u>
自选科目	考试内容	可选择科目
#5	微软信息服务器产品	SQL Server、SNA Server、Exchange Server或 Internet Information Server等十余个科目
#6	微软公司有关TCP/IP 方面的产品	TCP/IP for NT Server 4

注释：表中号码#1、#2等仅为叙述方便，与微软考试科目编号无关。表中带有下划线的部分为新增选项

为配合国内读者学习掌握计算机基础知识、操作系统、网络系统及信息化产品，我们推出了两套MCSE考试系列丛书，即：

- MCSE学习指南系列（中文译本），目前推出11种
- MCSE考试指南系列（英文原版），目前推出8种

MCSE学习指南系列

由于MCSE考试的技术水平高，要求考生概念清晰、基础知识牢固、能灵活地运用所学知识，并具有丰富的实践经验。显而易见，MCSE的学习、考试用书也应具备上述特点，介绍MCSE的书籍不但适用于MCSE考生，同时也适用于希望学习、掌握相关知识的普通技术人员。为此我们翻译了本系列丛书，现已推出或将要推出（黑体标识者）的书籍如下：

表0.2 MCSE系列丛书（学习指南系列）

中文书名	丛书编号	适用的考试科目
MCSE: NT Server 4学习指南	MCSE系列丛书之一	表0.1 #1
MCSE: NT Server 4 in the Enterprise学习指南	MCSE系列丛书之二	表0.1 #2
MCSE: 网络基础学习指南	MCSE系列丛书之三	表0.1 #3
MCSE: Windows NT Workstation学习指南	MCSE系列丛书之四	表0.1 #4
MCSE: Windows 95学习指南	MCSE系列丛书之五	表0.1 #4
MCSE: TCP/IP学习指南	MCSE系列丛书之六	表0.1 #6
MCSE: Microsoft Internet Information Server学习指南	MCSE系列丛书之七	表0.1 #5
MCSE: Windows 98学习指南	MCSE系列丛书之十六	表0.1 #4
MCSE: SQL Server 7学习指南	MCSE系列丛书之十七	表0.1 #5
MCSE: Microsoft Internet Information Server 4学习指南	MCSE系列丛书之十八	表0.1 #5
MCSE: TCP/IP for NT Server 4学习指南	MCSE系列丛书之十九	表0.1 #6

MCSE考试指南系列

如果说学习指南系列的特点是，十分注重原理介绍、概念阐述和外沿知识的说明；那么，新的考试指南系列则注意了必须了解的知识、结论，强调了正确的操作方法和实际处理问题的能力，同时介绍了许多MCSE考试的经验和技巧，并附有考试例题。

考虑到考试指南系列书注重结论、致力于支持读者通过MCSE考试等特点，加之MCSE考生英语水平普遍很高（考试本身需用英语完成），我们以英文重印形式推出了如下的考试指南系列书，详见表0.3所示。

表0.3 MCSE系列丛书（考试指南系列）

中文书名	丛书编号	适用的考试科目
MCSE: NT Server 4考试指南	MCSE系列丛书之八	表0.1 #1
MCSE: NT Server 4 in the Enterprise考试指南	MCSE系列丛书之九	表0.1 #2
MCSE: Networking Essentials考试指南	MCSE系列丛书之十	表0.1 #3
MCSE: NT Workstation 4考试指南	MCSE系列丛书之十一	表0.1 #4
MCSE: TCP/IP for NT Server 4考试指南	MCSE系列丛书之十二	表0.1 #6
MCSE: Microsoft Internet Information Server 4考试指南	MCSE系列丛书之十三	表0.1 #5
MCSE: SQL Server 7考试指南	MCSE系列丛书之十四	表0.1 #5
MCSE: Windows 98考试指南	MCSE系列丛书之十五	表0.1 #4

MCSD考试

持有MCSD证书，说明持有者具有熟练使用微软操作系统、开发工具和相关技术的能力。因而许多MCSE考生把MCSD考试作为MCSE考试的准备阶段，或者在获取了MCSE证书后再考取MCSD证书。要获取MCSD证书，需要通过如下四种考试（见表0.4）：

表0.4 MCSD必考科目与选科目

必考科目	可选择内容
#1 系统分析及 解决方案	Analyzing Requirements and Defining Solution Architectures
#2 桌面应用程序开发 (二择其一)	Designing and Implementing Desktop Applications with Visual Basic 6.0 Designing and Implementing Desktop Applications with Visual C++ 6.0
#3 分布式应用程序开发 (二择其一)	Designing and Implementing Distributed Applications with Visual Basic 6.0 Designing and Implementing Distributed Applications with Visual C++ 6.0
自选科目	考试内容可选择内容
#4 具体应用科目 (任选其一)	Implementing a Database Design on Microsoft SQL Server 6.5 Designing and Implementing a Database Design with Microsoft SQL Server 7.0 Designing and Implementing Data Warehouses with Microsoft SQL Server 7.0 Developing Application with Visual C++ Using Microsoft Foundation Class Library Designing and Implementing Web Site with Microsoft FrontPage 98 Designing and Implementing Commerce Solutions with Microsoft Site Server 3.0 Designing and Implementing Web Solutions with Microsoft Visual InterDev 6.0

MCSD学习指南系列

为配合广大读者学习MCSD方面的知识，考取MCSD证书，我们以英文重印形式，首先推出如下MCSD学习指南系列书（黑体标识者为最新推出或近期推出），见表0.5。

表0.5 MCSD系列丛书（学习指南系列）

中文书名	丛书编号	适用的考试科目
MCSD: SQL Server 6.5 Database Design学习指南	MCSD系列丛书之四	表0.4 #4
MCSD: Visual Basic 6 Desktop Application学习指南	MCSD系列丛书之五	表0.4 #2
MCSD: Visual Basic 6 Distributed Application学习指南	MCSD系列丛书之六	表0.4 #3
MCSD: Analyzing Requirements and Defining Solution Architecture学习指南	MCSD系列丛书之七	表0.4 #1
MCSD: Visual C++ 6 Desktop Application学习指南	MCSD系列丛书之八	表0.4 #2
MCSD: Visual C++ 6 Distributed Application学习指南	MCSD系列丛书之九	表0.4 #3
MCSD: SQL Server 7 Database Design学习指南	MCSD系列丛书之十	表0.4 #4

由于采用“重印”方式：即从**SYBEX**公司购买版权，同时获取该书的文本文件和图形文件，在国内重新排版印刷，这样做的优势在于：

- 降低了图书价格，重印书比原版图书便宜许多。
- 缩短了制作周期，重印书与原版书的“出版时差”不足两个月。
- 提高了制作质量，使用原文件排版，印刷质量明显优于各种影印外文原版书。

综上所述诸多优势，不难想象，重印系列书会受到广大读者的欢迎。

由于**MCSE**、**MCSD**及考试科目和软件版本在不断地增加或升级，因此我们推出的品种也会随之增加或调整。请读者留意书店内的销售广告或本系列书中的最新说明（恕不另行通知）。

最后，向支持和喜爱我们图书的广大读者表示感谢，并肯请读者对书中存在的问题提出批评和指正。

1999年·春

To all of the teachers and trainers who have granted to us their knowledge and wisdom over the years. Thank you for the inspiration.

Acknowledgments

This project, like all worthwhile pursuits, has been a team effort. To all of those involved, I wish to express my sincere gratitude. The Sybex team is the very best in the business. In my many projects with Sybex, I have had such positive experiences, and every new project is a delight. Special thanks to Peter Kuhns, Brenda Frink, Ed Copony, and Neil Edde for giving me the opportunities to grow personally and professionally with this and other projects.

Our editor for this project, Sally Engelfried, has been a pleasure to work with. Thanks to the entire editorial team including Ed Larkin, the technical editor, and the artists and proofreaders. I appreciate your dedication to perfection. Thanks for the time that you have spent on this project. Thanks also to Clark Christensen, who worked with me on this book. You came through when it counted, and I appreciate your hard work and devotion to excellence.

Special thanks to my wife Raelynn for her sacrifices. Whenever I tackle a new book project, it always comes at her expense. This book is no exception. Thanks for reminding me that there is more to life than work. Your support makes it all possible. This year, I'll be home for Christmas.

I owe much to those who have influenced me as teachers and mentors. My parents and colleagues are always there with encouragement and support. Bob Taylor from Productivity Point International has been a mentor and role model for me from the very beginning of my professional IT career. Jon Hansen, my friend and comrade, has been my greatest supporter over the years. Thanks to both of you for the encouragement and guidance.

Finally, thanks to you, the reader, for your interest in this volume. I appreciate the trust that you have placed in us to help guide you through to your certification goals. Without you, none of this is possible.

—Michael Lee

My thanks to those who have given me hope and chances to grow. To my parents for planting my feet firmly on the ground and teaching me the love of learning. Also to my older brother, Richard, for exemplifying the passion for science and technology. I have had many teachers and mentors over the years, and I am grateful to all of you.

The folks at Sybex have been great to work with: competent, professional, and sociable. It doesn't get much better than that.

I would like to give particular thanks to my wife, for sacrificing so that I could be a part of this project. For roughly half my life she has been supporting me, encouraging me, and traveling the journey of life with me. Without her I am nothing.

Finally, I owe a huge debt of thanks to Mike Lee, an old and dear friend, who has supported my transition into a formal IT career in more ways than I can count. More explicitly, I'm grateful that Mike gave me the chance to be a part of this project. I trust and respect Mike tremendously, both personally and professionally.

Whatever the reasons for your reading this book, I hope this volume meets your needs.

—Clark Christensen

Introduction

Microsoft is a company for and about developers. Even though developer tools represent a small portion of Microsoft's total revenues, Microsoft has a firm strategic commitment to the developer market. Every year, Microsoft sponsors events such as the Professional Developer's Conference (PDC) and Developer Days for the purpose of getting Microsoft technology in the hands of developers. In addition, Microsoft participates in countless third-party events targeted at the developer audience. Microsoft also makes available every development tool, operating system, and BackOffice product in the Microsoft Developer Network and competitively prices them. In other words, their developer support is enormous.

This support is emphasized in the Microsoft Certified Solution Developer (MCSD) certification. This certification, the first of its kind in the industry, gives developers the opportunity to showcase their skills and familiarity with Microsoft platforms and development tools. The industry response has been significant. MCSD certification provides a way for developers to prove their skills and adds credibility to their job applications and promotions.

For database developers and administrators, Microsoft's support has never been stronger. With the announcement of the Microsoft Certified Database Administrator (MCDBA) certification, Microsoft has committed to supporting all aspects of the database professional's role. The certification exam supports both the MCSD and MCDBA certifications.

About This Book

Writing this book was an exercise in trade-offs. With a subject as large as this, we had to make some sacrifices and judgment calls about the important content for this book. First of all, this is not a book for beginners. Although Chapter 6 does cover some basic form development concepts, you will not find introductory discussions in this book about the Visual Basic language and syntax. This knowledge is assumed. This book also assumes that you have some experience with relational database design. Some experience with Microsoft SQL Server is helpful, but not required.

Although we have tried to be as comprehensive as possible, writing a book that covers every aspect of distributed application development is almost impossible. Since this is a study guide, we focus on certification. Every effort has been made to cover the exam objectives in plenty of detail; in addition, we provide a little extra information that will make you a more productive developer but we don't burden you with unnecessary detail.

To do all of the exercises in this book, you will need to install a significant amount of software. The installation requirements include:

- Microsoft Windows NT Server 4 Service Pack 4 or later
- Microsoft Windows NT 4 Option Pack including:
 - Microsoft Transaction Server 2
 - Microsoft Internet Information Server 4
- Microsoft Internet Explorer 4 Service Pack 1 or later
- Microsoft Visual Basic 6
- Microsoft Office 97 Professional
- Microsoft SQL Server 7

Your Key to Passing Exam 70-175

This book provides you with the key to passing Exam 70-175, Designing and Implementing Distributed Applications with Microsoft Visual Basic 6.0. Inside, you'll find information and practice questions relevant to this exam, all designed to make sure that when you take the exam, you are ready.

To help you prepare for certification exams, Microsoft provides a list of exam objectives for each test. This book is structured according to the objectives for Exam 70-175, which is designed to measure your understanding of Windows architecture and development.

Is This Book for You?

If you are interested in preparing for the Designing and Implementing Distributed Applications with Microsoft Visual Basic 6.0 exam, this book is for you. If you are trying to complement your general understanding of Microsoft development tools and procedures, this book is also for you. For both of these purposes, this book covers a wide array of topics in substantial detail without overburdening you with unnecessary information.

Understanding Microsoft Certification

Microsoft offers several levels of certification for anyone who has or is pursuing a career as a network professional working with Microsoft products:

- Microsoft Certified Professional (MCP)
- Microsoft Certified Professional + Internet
- Microsoft Certified Solution Developer (MCSD)
- Microsoft Certified Systems Engineer (MCSE)
- Microsoft Certified Systems Engineer + Internet
- Microsoft Certified Database Administrator (MCDBA)
- Microsoft Certified Trainer (MCT)

(Internet certification qualifies professionals to enhance, deploy, and manage intranet and Internet solutions.)

Microsoft Certified Professional (MCP)

This certification is for individuals with expertise in one specific area. MCP certification is often a stepping stone to MCSE certification and allows you some benefits of Microsoft certification after just one exam.

You can become an MCP by passing one core exam, meaning any Microsoft exam except Networking Essentials.

Microsoft Certified Solution Developer (MCSD)

The MCSD certification identifies developers with experience working with Microsoft operating systems, development tools, and technologies. To achieve the MCSD certification, you must pass four exams:

- Analyzing Requirements and Defining Solution Architectures
- A desktop application development exam selected from the following:
 - Designing and Implementing Desktop Applications with Visual Basic 6.0
 - Designing and Implementing Desktop Applications with Microsoft Visual C++ 6.0
- A distributed application development exam selected from the following:
 - Designing and Implementing Distributed Applications with Microsoft Visual Basic 6.0
 - Designing and Implementing Distributed Applications with Microsoft Visual C++ 6.0
- One elective exam. Some of the electives include:
 - Implementing a Database Design on Microsoft SQL Server 6.5
 - Designing and Implementing Databases with Microsoft SQL Server 7.0
 - Designing and Implementing Data Warehouses with Microsoft SQL Server 7.0
 - Developing Applications with Microsoft Visual C++ Using the Microsoft Foundation Class Library
 - Designing and Implementing Web Sites with Microsoft FrontPage 98
 - Designing and Implementing Commerce Solutions with Microsoft Site Server 3.0, Commerce Edition
 - Designing and Implementing Web Solutions with Microsoft Visual InterDev 6.0



Desktop and distributed application development exams for Microsoft Visual J++ 6 and Microsoft Visual FoxPro 6 are in development and will be available in 1999.

Microsoft Certified Systems Engineer (MCSE)

The MCSE certification requires commitment from network professionals. You need to complete all of the steps required for certification. Passing the exams shows that you meet the high standards that Microsoft has set for MSCEs.

To become an MCSE, you must pass a series of six exams:

- Networking Essentials (waived for Novell CNEs)
- Implementing and Supporting Microsoft Windows NT Workstation 4.0 (or Windows 95)
- Implementing and Supporting Microsoft Windows NT Server 4.0
- Implementing and Supporting Microsoft Windows NT Server 4.0 in the Enterprise
- Two elective exams. Some of the electives include:
 - Internetworking with Microsoft TCP/IP on Microsoft Windows NT 4.0
 - Implementing and Supporting Microsoft Internet Information Server 4.0
 - Implementing and Supporting Microsoft Exchange Server 5.5
 - Implementing and Supporting Microsoft SNA Server 4.0
 - Implementing and Supporting Microsoft Systems Management Server 1.2
 - Implementing a Database Design on Microsoft SQL Server 6.5
 - System Administration for Microsoft SQL Server 6.5

Microsoft Certified Database Administrator (MCDBA)

The MCDBA certification is the premier certification for database support and development professionals. This certification requires four core exams in the subjects of Microsoft SQL Server 7 and Windows NT platform support. The core exams include:

- Implementing and Supporting Microsoft Windows NT 4.0
- Implementing and Supporting Microsoft Windows NT 4.0 in the Enterprise
- System Administration of Microsoft SQL Server 7.0
- Designing and Implementing a Database with Microsoft SQL Server 7.0

In addition, you must pass one elective exam. Some of the more popular include:

- Designing and Implementing Distributed Applications with Microsoft Visual Basic 6.0
- Designing and Implementing Distributed Applications with Microsoft Visual C++ 6.0
- Designing and Implementing Data Warehouses with Microsoft SQL Server 7.0
- Implementing and Supporting Microsoft Internet Information Server 4.0
- Internetworking with Microsoft TCP/IP on Microsoft Windows NT 4.0

Microsoft Certified Trainer (MCT)

As an MCT, you can deliver Microsoft certified courseware through official Microsoft channels. The number of exams you are required to pass depends on the number of courses you want to deliver. Certification is granted on a

course-by-course basis.

In addition to passing exams for the courses that you want to deliver, you must also attend a trainer skills course that is approved by Microsoft and demonstrate that you have prepared adequately for each new class. This can be done either by attending the class or completing a self-study checklist and sending it to Microsoft.



For the most up-to-date certification information, visit Microsoft's Web site at www.microsoft.com/train_cert.

Preparing for the MCSD Exams

To prepare for the MCSD certification exams, you should try to work with the products as much as possible. In addition, a variety of resources from which you can learn about the products and exams are available:

- You can take instructor-led courses.
- You can participate in online training as an alternative to instructorled courses. This is a useful option for people who cannot find any courses in their area or who do not have the time to attend classes.
- If you prefer to use a book to help you prepare for the MCSD tests, you can choose from a wide variety of publications. These include study guides, such as the Network Press *MCSD Study Guide* series, which cover the core MCSD exams and key electives.



For more MCSD information, point your browser to the Sybex Web site, where you'll find information about the MCP program, job links, and descriptions of other quality titles in the Network Press line of MCSD-related books. Go to <http://www.sybex.com>, and click on the MCSD logo.

Scheduling and Taking an Exam

Once you think you are ready to take an exam, call Prometric Testing Centers at (800) 755-EXAM (755-3926). They'll tell you where to find the closest testing center. Before you call, however, get out your credit card—each exam costs \$100.00. (If you've used this book to prepare yourself thoroughly, chances are you'll only have to shell out that \$100.00 once!)

You can schedule the exam for a time that is convenient for you. The exams are downloaded from Prometric to the testing center, and you show up at your scheduled time and take the exam on a computer.

Once you complete the exam, you will know right away whether you have passed or not. At the end of the exam, you will receive a score report that will list the six areas that you were tested on and how you performed. If you pass the exam, you don't need to do anything else—Prometric uploads the test re-

sults to Microsoft. If you don't pass, it's another \$100.00 to schedule the exam again, but at least you will know from the score report where you did poorly, so you can study that particular information more carefully.

Test-Taking Hints

If you know what to expect, your chances of passing the exam will be much greater. The following sections cover some tips that can help you achieve success. For greater detail on these and other test-taking strategies, see Appendix B.

Get There Early and Be Prepared This is your last chance to review. Bring your book and review any areas about which you feel unsure. If you need a quick drink of water or a visit to the restroom, take care of it before the exam. Once your exam starts, it cannot be paused for these needs.

When you arrive for your exam, you will be asked to present two forms of ID. You will also be asked to sign a piece of paper verifying that you understand the testing rules and that you will not disclose the content of the exam to others.

Before you start the exam, you will have an opportunity to take a practice exam. It is not related to the topic of your exam and is simply offered so that you will have a feel for the exam-taking process.

What You Can and Can't Take in with You First, be aware that Prometric Testing Centers take the test-taking process and the test validation very seriously. These are closed-book exams. The only thing you can take in is scratch paper provided by the testing center. Use this paper as much as possible to diagram the questions. Many times, diagramming questions will help make the answer clear. You will have to give this paper back to the test administrator at the end of the exam.

Many testing centers are very strict about what you can take into the testing room. Some centers will not even allow you to bring in items like a zipped purse. If you feel tempted to take in any outside material, be aware that many testing centers use monitoring devices such as video and audio equipment (so don't swear, even if you are alone in the room!)

Test Approach As you take the test, if you know the answer to a question, fill it in and move on. If you're not sure of the answer, mark your best guess, then mark the question.

At the end of the exam, you can review the questions. Depending on the amount of time remaining, you can view all of the questions again, or you can view only the questions about which you were unsure. Double-check your answers, just in case you misread any of the questions on the first pass. (Sometimes half of the battle is in trying to figure out exactly what the question is asking you.) You may find that a related question that you had no problem answering will provide a clue for a troublesome question.

Be sure to answer all questions. Unanswered questions are scored as incorrect and will count against you. There is no penalty for guessing. Also, make sure you keep an eye on the remaining time so that you can pace yourself accordingly.

If you do not pass the exam, write down everything that you can remember while the exam is still fresh on your mind. This will help you prepare for your next try. Although the next exam will not be exactly the same, the questions will be similar, and you want to avoid making the same mistakes.

After You Become Certified

Once you become an MCSD, Microsoft kicks in some goodies, including:

- A one-year subscription to the Microsoft Beta Evaluation program, which is a great way to get your hands on new software and be the first kid on the block to play with new and upcoming software.
- Access to a secured area of the Microsoft Web site that provides technical support and product information. This certification benefit is also available for MCP certification.
- Permission to use the Microsoft Certified Professional logos (each certification has its own logo), which look great on letterhead and business cards.
- An MCSD certificate (you will get a certificate for each level of certification you reach), suitable for framing or sending copies to Mom.
- A one-year subscription to *Microsoft Certified Professional Magazine*, which provides information on professional and career development.

How to Use This Book

All of the exercises in the book assume that products have been installed according to the defaults. No consideration is given for additional customizations that you have made on the installation.

As you work through this book, you may want to follow these general procedures:

1. Review the exam objectives as you work through each chapter. (You may want to check the Microsoft Train_Cert Web site at http://www.microsoft.com/train_cert to make sure the objectives haven't changed.)
2. Study each chapter carefully, making sure you fully understand the information.
3. Complete all hands-on exercises in each chapter, referring to the appropriate text so that you understand every step you take.
4. Answer the practice questions at the end of the chapter. (You will find the answers to these questions in Appendix A.)