（英文原版）

MCSD:
SQL Server 6.5 Database Design
学习指南

MCSD: SQL Server 6.5 Database Design Study Guide

微软认证的软件开发专家考试系列丛书之四

〔美〕Kevin Hough 著

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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 Solution Developer（MCSD，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 Trainer（MCT，微软认证培训员）

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“MCSD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
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

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

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7种
- MCSE考试指南系列（英文原版），目前推出5种

MSCE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，并首先推出其中的7本，具体如下：

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：Windows 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考试指南系列

如果说学习指南系列（MCSE系列丛书之一至之七）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五本考试指南系列书，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

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必考科目与可选科目

必考科目	考试内容	可选择内容
#1	Windows Architecture I	/
#2	Windows Architecture II	/
自选科目	**考试内容**	**可选择内容**
#3	编程语言	Microsoft Visual Basic 5.0
		Developing application With C++ and MFC
#4	数据库编程	Microsoft Access for Windows 95
		Implementing a Database Design on Microsoft SQL Server 6.5
		Microsoft FoxPro 3.0

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，首先推出四本MCSD学习指南系列书，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: Windows Architecture I学习指南	MCSD系列丛书之一	表0.4 #1
MCSD: Windows Architecture II学习指南	MCSD系列丛书之二	表0.4 #2
MCSD: Visual Basic 5 学习指南	MCSD系列丛书之三	表0.4 #3
MCSD: SQL Server 6.5 Database Design学习指南	MCSD系列丛书之四	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。

综上诸多优势，不难想象，重印系列书会受到广大读者的欢迎。

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。

此为试读，需要完整PDF请访问：www.ertongbook.com

Introduction

Today, more and more business enterprises have adopted Microsoft SQL Server 6.5 as their main server platform. As a result, the demand for qualified software developers who can design and implement SQL Server database solutions continues to soar.

Gaining MCSD certification in SQL Server 6.5 demonstrates to employers and business associates alike that you are a professional in your field, and that you possess the necessary knowledge to deliver a total business solution that incorporates the complex design and implementation aspects of SQL Server 6.5.

This book is designed specifically for you. It contains objective, hands-on exercises and challenging test questions that will assist you in your pursuit of becoming a certified SQL Server 6.5 database designer and help you prepare for the Microsoft Certification Exam.

Your Key to Passing Exam 70-027

This book provides you with the key to passing Exam 70-027, Implementing a Database Design on Microsoft® SQL Server™ 6.5. Inside, you'll find information relevant to this exam and practice questions, 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 70-027, designed to measure your understanding of Microsoft SQL Server 6.5 and development.

Is This Book for You?

If you want to become certified as an MCSD, this book is for you. Attaining MCSD certification is an excellent way to let everyone know that you possess the necessary knowledge and skills to design, create, and manage Microsoft's development tools.

This book is designed and written to provide you with a solid foundation of

knowledge in SQL Server 6.5 database implementation. You'll find detailed information, extensive examples, and challenging exercises to guide you through the learning process.

What Does This Book Cover?

This book is your personal instructor, guiding you through the MCSD SQL Server 6.5 Database Implementation exam by providing training for all of the exams objectives, including:

- Data modeling
- System databases and tables
- Data definition
- Retrieving data
- Retrieving data (advanced topics)
- Modifying data
- Indexes
- Using views, defaults, and rules
- Programmability
- Triggers
- Replication
- Application development and open data services (ODS)

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

The one you choose depends on your area of expertise and your career goals.

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.

By passing one core exam (meaning an operating system exam), you become an MCP.

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:

1. Windows Architecture I
2. Windows Architecture II
3. Elective
4. Elective

Some of the electives include:

- Microsoft Visual Basic 5.0
- Microsoft Access for Windows 95
- Implementing a Database Design on Microsoft SQL Server 6.5
- Developing application with C++ and MFC
- Microsoft FoxPro 3.0

Microsoft Certified Systems Engineer (MCSE)

For network professionals, the MCSE certification requires commitment. 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 MCSEs.

The following list applies to the NT 4.0 track. Microsoft still supports a track for 3.51, but 4.0 certification is more desirable because it is the current operating system.

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

1. Networking Essentials (waived for Novell CNEs)
2. Implementing and Supporting Microsoft Windows NT Workstation 4.0 (or Windows 95)
3. Implementing and Supporting Microsoft Windows NT Server 4.0
4. Implementing and Supporting Microsoft Windows NT Server 4.0 in the Enterprise
5. Elective
6. Elective

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 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. You must also demonstrate that you have prepared adequately for each new class. This can be done by either 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.
- Online training is an alternative to instructor-led 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, get out your credit card because each exam costs $100. (If you've used this book to prepare yourself thoroughly, chances are you'll only have to shell out that $100 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. It 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 results to Microsoft. If you don't pass, it's another $100 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 are some tips that can help you achieve success.

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 the time before the exam. Once your exam starts, it will not 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 Windows NT 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

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, beware 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!)

Prometric Testing Centers take the test taking process and the test validation very seriously.

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 then 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 provides 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, note 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 don't want to make 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. 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 certifi-

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cation has its own logo), which look great on letterhead and business cards.

- An MCP 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.

What's on the CD?

The Sybex MCSD ExamReady CD contains the following tools to help you prepare for exam 70-027:

- Sybex Exam Ready Test Engine. The fastest way to prepare for the real exam. Contains the practice test questions and answers from each chapter.
- MCSD on the Web. Links to the best MCSD sites on the Web.
- Microsoft Offline Update. Microsoft's latest-breaking information on the MCP Certification Program.
- Internet Explorer 4. Latest Microsoft browser which you will need to read the Microsoft Offline Update included on the CD.

For details on how to install and run these programs, see the front inside cover of this book.

About the Author

Kevin Hough is a Microsoft Certified Solutions Developer (MCSD), author, and consultant who specializes in high-level client/server applications written in Visual Basic and SQL Server. He is co-author of the recently released, *Visual Basic 5 Developer's Handbook*, published by Sybex, Inc., and has written several corporate technical manuals and conducted numerous in-house software training seminars for corporate users. His advanced custom controls have been used in large-scale commercial projects and custom software applications. He has designed, written, and delivered business systems for large corporations in the Houston area, including Koch Industries, Compaq, Exxon, and Pennzoil and is president of Hough Technology, Inc., a Houston-based consulting firm specializing in custom software development.

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