Award-winning author and Windows administration expert

精通 Windows Server 2008

China Edition
Published by Shanghai World Publishing Corporation

- The ultimate, in-depth reference
- Hundreds of timesaving solutions
- Supremely organized book

28.图长出版公司

图书在版编目(CIP)数据

精通 Windows Server 2008:英文/(美)斯坦内克著. - 上海:上海世界图书出版公司,2008.10 ISBN 978-7-5062-9294-8

I. 精··· II. 斯··· III. 服务器 - 操作系统(软件), Windows Server 2008 - 英文 Ⅳ. TP316.86

中国版本图书馆 CIP 数据核字(2008)第 159888 号

© 2008 by Microsoft Corporation. All rights reserved.

Original English language edition © 2008 by William Stanek. All rights reserved. Published by arrangement with the original publisher, Microsoft Corporation, Redmond, Washington, U.S.A.

精通 Windows Server 2008

[美]威廉・斯坦内克 著

开本:787×960 1/16 印张:95 字数:3000 000 2008 年 10 月第 1 版 2008 年 10 月第 1 次印刷 ISBN 978-7-5062-9294-8/T・181 图字:09-2008-627 号 定价:288.00 元 http://www.wpcsh.com.cn

http://www.mspress.com.cn

Your All-in-One Resource

On the CD that accompanies this book, you'll find additional resources to extend your learning. The reference library includes the following fully searchable titles:

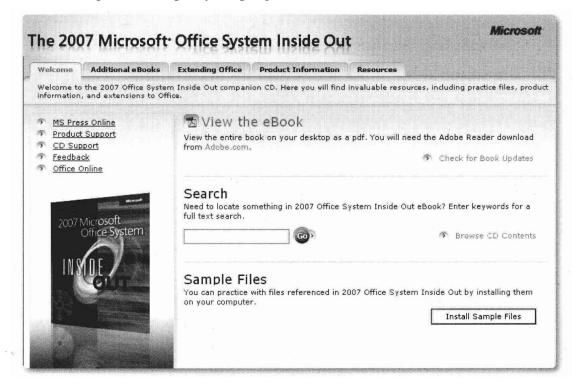
- Microsoft Computer Dictionary, 5th ed.
- First Look 2007 Microsoft Office System by Katherine Murray
- Windows Vista Product Guide

Also provided are a sample chapter and poster from Look Both Ways: Help Protect Your Family on the Internet by Linda Criddle.

The CD interface has a new look. You can use the tabs for an assortment of tasks:

- Check for book updates (if you have Internet access)
- Find links to helpful tools and resources
- Go online for product support or CD support
- Send us feedback

The following screen shot gives you a glimpse of the new interface.



About the Author

William R. Stanek (http://www.williamstanek.com/) has over 20 years of hands-on experience with advanced programming and development. He is a leading technology expert, an award-winning author, and a pretty-darn-good instructional trainer. Over the years, his practical advice has helped millions of technical professionals all over the world. He has written more than 65 books, including Microsoft Exchange Server 2007 Administrator's Pocket Consultant, Windows Vista Administrator's Pocket Consultant, Windows Server 2008 Administrator's Pocket Consultant, and IIS 7.0 Administrator's Pocket Consultant.

William has been involved in the commercial Internet community since 1991. His core business and technology experience comes from over 11 years of military service. He has substantial experience in developing server technology, encryption, and Internet solutions. He has written many technical white papers and training courses on a wide variety of topics. He frequently serves as a subject matter expert and consultant.

William has an MS with distinction in information systems and a BS magna cum laude in computer science. He is proud to have served in the Persian Gulf War as a combat crewmember on an electronic warfare aircraft. He flew on numerous combat missions into Iraq and was awarded nine medals for his wartime service, including one of the United States of America's highest flying honors, the Air Force Distinguished Flying Cross. Currently, he resides in the Pacific Northwest with his wife and children.

What do you think of this book?

We want to hear from you!

Do you have a few minutes to participate in a brief online survey?

Microsoft is interested in hearing your feedback so we can continually improve our books and learning resources for you.

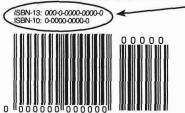
To participate in our survey, please visit:

www.microsoft.com/learning/booksurvey/

...and enter this book's ISBN-10 or ISBN-13 number (located above barcode on back cover*). As a thank-you to survey participants in the United States and Canada, each month we'll randomly select five respondents to win one of five \$100 gift certificates from a leading online merchant. At the conclusion of the survey, you can enter the drawing by providing your e-mail address, which will be used for prize notification only.

Thanks in advance for your input. Your opinion counts!

*Where to find the ISBN on back cover



Microsoft Press

Example only. Each book has unique ISBN

No purchase necessary. Void where prohibited. Open only to residents of the 50 United States (includes District of Columbia) and Canada (void in Quebec). For official rules and entry dates see:

Acknowledgments

Few projects have ever been as challenging or as fun as writing Windows Server 2008 Inside Out. Why? When I set out to write Windows Server 2008 Inside Out, I decided I would try to detail every quirk, every insider secret, and every sticky detail that I've learned about Windows Server 2008 since I started working with it in 2002—back when Windows Server 2008 was known as Windows Longhorn. As nearly six years have passed since I began working with Windows Server 2008, it is my sincere hope that the book you hold in yours hands is the best of its class when it comes to managing a Windows Server 2008 implementation and handling everyday administration. I also hope the result of all the hard work is that Windows Server 2008 Inside Out is something unique. It takes into account all the experiences I've had while consulting, conducting training courses, and writing books about Windows Vista and Windows Server 2008. As this is my 35th Windows-related book and I've helped millions of people learn Windows over my 20+-year career, I hope that counts for an awful lot. But no man is an island and this book couldn't have been written without help from some very special people.

Without the support of my wife and children, this book would not have been possible. As I literally was writing every day since I signed on to this project—holidays included—my wife had to manage everything else and the little ones had a lot more responsibilities around the house. Thank you for your support and your extraordinary ability to put up with the clackety-clackety of my keyboard.

As I've stated in Windows Server 2008 Administrator's Pocket Consultant and in Windows Vista Administrator's Pocket Consultant, the team at Microsoft Press is top-notch. Karen Szall was instrumental throughout the writing process. Martin DelRe was the acquisitions editor for the project. He believed in the book and my unique approach and was really great to work with. Completing and publishing the book wouldn't have been possible without their help! Thanks also to Lucinda Rowley!

Curt Philips headed up the editorial process for Publishing.com. As the project manager for this and other Pocket Consultants I've written, he wore many hats and helped out in many ways. Thank you! I'd also like to add that everyone was very understanding—writing a book of this length is very fun but also very exhausting.

Unfortunately for the writer (but fortunately for readers), writing is only one part of the publishing process. Next came editing and author review. I must say, Microsoft Press has the most thorough editorial and technical review process I've seen anywhere—and I've written a lot of books for many different publishers. Randall Galloway was the technical editor for the book. Rozanne Whalen served as the copyeditor and was particularly thorough in her edits, which was much appreciated. I also want to thank Andrea Fox for her careful proofreading of the pages.

I want to thank a number of other people at Microsoft who provided technical reviews and insights, including Jose Luis Auricchio, Craig Threadgill, Jackson Robinson, Sasa Vidanovic, Anders Brabæk, Chris Gregory, Pat Telford, Monica Ene-Pietrosanu, Jose Renato Roda, Robert Hoover, Deepak Shenoy, Akshat Kesarwani, Shawn Travers, Heath Aubin, David Kennedy, Greg Cottingham, Sanjay Pandit, Lesley Kipling, Bernardo Castaneda Leon, Mark Kradel, and Robert Mitchell. Robert Mitchell in particular went above and beyond. Thank you!

I'd also like to thank Valerie DeGiulo and the Microsoft Press Creative Team for their contributions.

Hopefully, I haven't forgotten anyone but if I have, it was an oversight. Honest.;-)

About the CD

The companion CD that ships with this book contains many tools and resources to help you get the most out of your *Inside Out* book.

What's on the CD

The companion CD is loaded with useful tools and links to help you with your Windows Server 2008 installation. The CD includes:

- Complete e-book An electronic version of Windows Server 2008 Inside Out in PDF format.
- Product information Links to information about the features and capabilities of Windows Server 2008 as well as product guides to help you optimize Windows Server 2008 in your enterprise.
- Resources Links to white papers, guides, webcasts, test labs and more to help you
 use and troubleshoot the features of Windows Server 2008.
- Scripts More than 700 sample scripts to help you automate management and maintenance tasks.
- **Tools** Many links to tools for IIS, PowerShell, System Center Data Operations, and more that you can put to use right away.
- **Sample chapters** Chapters from 15 other Windows Server 2008 books contain a wealth of information and provide a preview look at books that were recently published or will be published in the near future.

System Requirements

The following are the minimum system requirements necessary to run the CD:

- Microsoft Windows Vista, Windows XP with Service Pack (SP) 2, Windows Server 2003 with SP1, or newer operating system
- 500 megahertz (MHz) processor or higher
- 2 gigabyte (GB) storage space (a portion of this disk space will be freed after installation if the original download package is removed from the hard drive)
- 256 megabytes (MB) RAM
- CD-ROM or DVD-ROM drive
- 1024×768 or higher resolution monitor

- Microsoft Windows or Windows Vista-compatible sound card and speakers
- Microsoft Internet Explorer 6 or newer
- Microsoft Mouse or compatible pointing device

Digital Content for Digital Book Readers: If you bought a digital-only edition of this book, you can enjoy select content from the print edition's companion CD. Visit http://go.microsoft.com/fwlink/?LinkId=107443&clcid=0x409 to get your downloadable content. This content is always up-to-date and available to all readers.

Viewing the E-Book

The electronic version of the book and some of the other documentation included on this CD is provided in Portable Document Format (PDF). To view these files, you will need Adobe Acrobat or Acrobat Reader. For more information about these products or to download the Acrobat Reader, visit the Adobe Web site at http://www.adobe.com.

Support Information

Every effort has been made to ensure the accuracy of the contents of the book and of this CD. As corrections or changes are collected, they will be added to a Microsoft Knowledge Base article. Microsoft Press provides support for books and companion CDs at the following Web site:

http://www.microsoft.com/learning/support/books/

If you have comments, questions, or ideas regarding the book or this CD, or questions that are not answered by visiting the site above, please send them via e-mail to:

mspinput@microsoft.com

You can also click the Feedback or CD Support links on the Welcome page. Please note that Microsoft software product support is not offered through the above addresses. If your question is about the software, and not about the content of this book, please visit the Microsoft Help and Support page or the Microsoft Knowledge Base at:

http://support.microsoft.com

In the United States, Microsoft software product support issues not covered by the Microsoft Knowledge Base are addressed by Microsoft Product Support Services. Location-specific software support options are available from:

http://support.microsoft.com/gp/selfoverview/

Microsoft Press provides corrections for books through the World Wide Web at http://www.microsoft.com/mspress/support/. To connect directly to the Microsoft Press Knowledge Base and enter a query regarding a question or issue that you may have, go to http://www.microsoft.com/mspress/support/search.htm.

Find Additional Content Online

As new or updated material becomes available that complements your book, it will be posted online on the Microsoft Press Online Windows Server and Client Web site. Based on the final build of Windows Server 2008, the type of material you might find includes updates to book content, articles, links to companion content, errata, sample chapters, and more. This Web site will be available soon at www.microsoft.com/learning/books/online/serverclient, and will be updated periodically.

How to Reach the Author

E-mail: williamstanek@aol.com

Web: http://www.williamstanek.com/

Conventions and Features Used in This Book

This book uses special text and design conventions to make it easier for you to find the information you need.

Text Conventions

Convention	Meaning	
Abbreviated menu commands	For your convenience, this book uses abbreviated menu commands. For example, "Click Tools, Track Changes, Highlight Changes" means that you should click the Tools menu, point to Track Changes, and click the Highlight Changes command.	
Boldface type	Boldface type is used to indicate text that you enter or type.	
Initial Capital Letters	The first letters of the names of menus, dialog boxes, dialog box elements, and commands are capitalized. Example: the Save As dialog box.	
Italicized type	Italicized type is used to indicate new terms.	
Plus sign (+) in text	Keyboard shortcuts are indicated by a plus sign (+) separating two key names. For example, Ctrl+Alt+Delete means that you press the Ctrl, Alt, and Delete keys at the same time.	

Design Conventions

INSIDE OUT

This statement illustrates an example of an "Inside Out" heading

These are the book's signature tips. In these tips, you'll get the straight scoop on what's going on with the software—inside information about why a feature works the way it does. You'll also find helpful hints, timesaving tricks, and handy workarounds to deal with software problems or alternative procedures related to the task being discussed.

TROUBLESHOOTING

This statement illustrates an example of a "Troubleshooting" problem statement

Look for these sidebars to find solutions to common problems you might encounter. Troubleshooting sidebars appear next to related information in the chapters. You can also use the Troubleshooting Topics index at the back of the book to look up problems by topic.

CAUTION

Cautions identify potential problems that you should look out for when you're completing a task or problems that you must address before you can complete a task.

Note

Notes offer additional information related to the task being discussed.

Sidebars

The sidebars sprinkled throughout these chapters provide ancillary information on the topic being discussed. Go to the sidebars to learn more about the technology or a feature.

Cross-references point you to other locations in the book that offer additional information about the topic being discussed.

Contents at a Glance

Part 1: Windows Server 2008 Overview and Planning	Part 3: Managing Windows Server 2008 Storage and File Systems
Chapter 1 Introducing Windows Server 2008 3	Chapter 13 Boot Configuration
Chapter 2 Planning for Windows Server 200827	Chapter 14 Storage Management
Chapter 3 Installing Windows Server 2008 69	Chapter 15 TPM and BitLocker Drive Encryption
Part 2: Managing Windows Server 2008 Systems	Chapter 16 Managing Windows Server 2008 File Systems497
Chapter 4 Managing Windows Server 2008105	Chapter 17 File Sharing and Security547
Chapter 5 Configuring Windows Server 2008129	Chapter 18 Using Volume Shadow Copy587
Chapter 6 Windows Server 2008 MMC Administration	Chapter 19 Using Remote Desktop for Administration
Chapter 7 Configuring Roles, Role Services, and Features	Part 4: Managing Windows Server 2008 Networking and Print Services
Chapter 8 Managing and Troubleshooting Hardware 211	Chapter 20 Networking with TCP/IP627
Chapter 9 Managing the Registry	Chapter 21 Managing TCP/IP Networking657
Chapter 10 Software and User Account Control Administration	Chapter 22 Managing DHCP685 Chapter 23
Chapter 11 Performance Monitoring and Tuning303	Architecting DNS Infrastructure
Chapter 12 Comprehensive Performance Analysis	Implementing and Managing DNS767

Chapter 25 Implementing and Maintaining WINS823	Chapter 34 Deploying Read-Only Domain
Chapter 26	Controllers
Deploying Print Services841	Chapter 35
Chapter 27 Managing and Maintaining Print Services 879	Managing Users, Groups, and Computers
Chapter 28 Deploying Terminal Services919	Chapter 36 Managing Group Policy
Part 5: Managing Active Directory	Chapter 37 Active Directory Site Administration 1283
and Security	
Chapter 29 Active Directory Architecture	Part 6: Windows Server 2008 Disaster Planning and Recovery
Chapter 30 Designing and Managing the Domain	Chapter 38 Planning for High Availability1309
Environment1007	Chapter 39
Chapter 31	Preparing and Deploying Server Clusters 1323
Organizing Active Directory	Chapter 40 Disaster Planning1369
Chapter 32	
Configuring Active Directory Sites and Replication1071	Chapter 41 Backup and Recovery
Chapter 33 Implementing Active Directory Domain Services	

Table of Contents

	Acknowledgments	xxvii
	About the CD	
	What's on the CD	
	System Requirements	
	Support Information	
	Conventions and Features Used in This Book	
	Text Conventions	
	Design Conventions	
	_	
Part 1: \	Windows Server 2008 Overview and Plannir	ng
Chapter 1:	Introducing Windows Server 2008	
	What's New in Windows Server 2008	
	Windows Server 2008 Standard	
	Windows Server 2008 Enterprise	
	Windows Server 2008 Datacenter	
	Windows Web Server 2008	
	64-Bit Computing	
	Virtualized Computing	
	Windows Vista and Windows Server 2008	
	Windows Vista Editions	
	Windows Vista and Active Directory	
	Architecture Improvements	
	Kernel Architecture	
	Boot Environment	
	Support Architecture	

What do you think of this book? We want to hear from you!

Microsoft is interested in hearing your feedback so we can continually improve our books and learning resources for you. To participate in a brief online survey, please visit:

www.microsoft.com/learning/booksurvey/

Chapter 2:	Planning for Windows Server 2008	27
	Overview of Planning	27
	The Microsoft Solutions Framework Process Model	28
	Your Plan: The Big Picture	29
	Identifying Your Organizational Teams	31
	Microsoft Solutions Framework Team Model	31
	Your Project Team	32
	Assessing Project Goals	33
	Identifying IT Goals	
	Examining IT-Business Interaction	
	Predicting Network Change	36 36
	Analyzing the Existing Network	30 37
	Evaluating the Network Infrastructure	38
	Assessing Systems	39
	Identify Network Services and Applications	40
	Identifying Security Infrastructure	41
	Reviewing Network Administration	
	Defining Objectives and Scope	45
	Specifying Organizational Objectives	45
	Setting the Schedule	46
	Shaping the Budget	4/
	Finalizing Project Scope	
	Defining the New Network Environment.	
	Defining Domain and Security Architecture	
	Changing the Administrative Approach	
	Thinking About Active Directory	54
	Planning for Server Usage	58
	Determining Which Windows Edition to Use	61
	Selecting a Software Licensing Program	63
	Retail Product Licenses	
	Volume-Licensing Programs	. <i>.</i> 64
	Final Considerations for Planning and Deployment	67
Chapter 3:	Installing Windows Server 2008	69
	Getting a Quick Start	
	Product Licensing	
	Preparing for Windows Server 2008 Installation	72
	System Hardware Requirements	
	How a Clean Installation and an Upgrade Differ	73
	Supported Upgrade Paths	74
	Using Windows Update	74
	Preinstallation Tasks	76
	Installing Windows Server 2008	<u>7</u> 7
	Installation on x86-Based Systems	
	Installation on 64-Bit Systems	78

	Planning Partitions	
	Installation Type	80
	Naming Computers	81
	Network and Domain Membership Options	82
	Performing a Clean Installation	
	Performing an Upgrade Installation	88
	Activation Sequence	
	Performing Additional Administration Tasks During Installation	90
	Accessing a Command Prompt During Installation	90
	Forcing Disk Partition Removal During Installation	94
	Creating, Deleting, and Extending Disk Partitions During Installation	95
	Troubleshooting Installation	96
	Start with the Potential Points of Failure	
	Continue Past Lockups and Freezes	
	Postinstallation	
	rosunstaliation	100
D4 2- I	Annania - Windows Co	
Part 2: I	Managing Windows Server 2008 Systems	
Chapter 4:	Managing Windows Server 2008	105
Chapter 4.		
	Working with the Administration Tools	
	Using Control Panel Utilities	
	Using Graphical Administrative Tools	106
	Using Command-Line Utilities	110
	Using the Initial Configuration Tasks Console	
	Working with Computer Management	
	Computer Management System Tools	115
	Computer Management Storage Tools	116
	Computer Management Services And Applications Tools	
	Working with Server Manager	
	Using Control Panel	
	Using the Appearance And Personalization Console	
	Using the Date And Time Utility	
	Using the Folder Options Utility	
	Using the Regional and Language Options Utility	
	Using the System Console	
Chapter 5:	Configuring Windows Server 2008	129
	Optimizing the Menu System	129
	Navigating the Start Menu Options	
	Modifying the Start Menu Content	
	Customizing the Desktop and the Taskbar	
	Configuring Desktop Items	
	Configuring the Taskbar	
	Optimizing Toolbars	
	Customizing the Quick Launch Toolbar	
	Displaying Other Custom Toolbars	149
	Creating Personal Toolbars	150