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Microsoft

WINDOWS[®] COMMAND-LINE 管理员必备指南

William R. Stanek

China Edition

Published by Shanghai World Publishing Corporation

世界图书出版公司

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**Microsoft® Windows®
Command-Line
Administrator's
Pocket Consultant**

William R. Stanek

图书在版编目(CIP)数据

Microsoft Windows Command - Line 管理员必备指南: 英文/
(美)斯坦内克著. —上海: 上海世界图书出版公司, 2007. 6

ISBN 978 - 7 - 5062 - 8327 - 4

I. M… II. 斯… III. 窗口软件, Windows - 英文 IV. TP316.7

中国版本图书馆 CIP 数据核字(2007)第 082298 号

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Original English language edition © 2004 by William R.
Stanek. All rights reserved. Published by arrangement with the
original publisher, Microsoft Corporation, Redmond, Washington,
U. S. A.

Microsoft Windows Command - Line 管理员必备指南

[美] 威廉·斯坦内克 著

上海世界图书出版公司 重印发行

上海市尚文路 185 号 B 楼

邮政编码 200010

(公司电话: 021 - 63783016 转发行部)

上海场南印刷厂印刷

如发现印装质量问题, 请与印刷厂联系

(质检科电话: 021 - 56680797)

各地新华书店经销

开本: 850 × 1168 1/32 印张: 13 字数: 500 000

2007 年 6 月第 1 版 2007 年 6 月第 1 次印刷

ISBN 978 - 7 - 5062 - 8327 - 4 / T · 152

图字: 09 - 2007 - 443 号

定价: 98.00 元

<http://www.wpcsh.com>

Acknowledgments

Wanting to do something fundamentally different than it's been done before turned out to be much harder than I ever thought and completely rewarding for you the reader, I hope. You see, there were plenty of books for Windows administrators and plenty of books for people who wanted to script Windows; but no one had really sat down before and written an entire book on Windows administration from the command line that was really focused on administration and not the commands themselves. So I hope the result of all the hard work is that the book you hold in your hands is something unique. This isn't the kind of command-line book that says "here's the Edit command; you use this command to do this and this; and here are its parameters." Sure there's some of that—as there is any book for administrators—but rather than that being the focus this is a book that uses the command line in the context of everyday administration. It teaches you how to perform the daily administrative procedures and details how those procedures are implemented from the command line. So whether you want to learn how to use the command line to manage daily operations, track Windows performance, view the event logs, partition disks, configure TCP/IP, or perform hundreds of other tasks, this book has the answers.

As I've stated in *Microsoft Windows Server 2003 Administrator's Pocket Consultant* and in *Microsoft IIS 6.0 Administrator's Pocket Consultant*, the team at Microsoft Press is top-notch. Valerie Woolley was instrumental throughout the writing process. She helped me stay on track and coordinated the materials after I submitted chapters. 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! Susan McClung headed up the editorial process for nSight, Inc. As the project manager for this and many other pocket consultants I've written, she wears many hats and always helps out in many ways. Thank you!

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. Jim Johnson was the technical editor for the book. I believe this was the first time we worked together and it turned out to be a wonderful experience. He was very thorough and helped with testing to ensure things worked as expected on both Windows XP Professional and Windows Server 2003. I'd also like to thank Peter Tietjen for his careful copy editing of this book.

As ever I would also like to thank Michael Bolinger, Anne Hamilton, and Juliana Aldous Atkinson. They've helped out at many points of my writing career and been there when I needed them the most. Thank you also for shepherding my many projects through the publishing process!

Thanks also to Studio B literary agency and my agents, David Rogelberg and Neil Salkind. David and Neil are great to work with.

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

Introduction

Microsoft Windows Command Line Administrator's Pocket Consultant is designed to be a concise and compulsively usable resource for Windows administrators. This is the readable resource guide that you'll want on your desk or in your pocket at all times. The book discusses everything you need to perform the core administrative tasks using the Windows command line. Because the focus is directed to providing you with the maximum value in a pocket-sized guide, you don't have to wade through hundreds of pages of extraneous information to find what you're looking for. Instead, you'll find exactly what you need to get the job done.

In short, the book is designed to be the one resource you consult whenever you have questions regarding Windows command-line administration. To this end, the book concentrates on daily administration procedures, frequently used tasks, documented examples, and options that are representative but not necessarily inclusive. One of the goals is to keep the content so concise that the book remains compact and easy to navigate while ensuring that the book is packed with as much information as possible—making it a valuable resource. Thus, instead of a hefty 1,000-page tome or a lightweight 100-page quick reference, you get a valuable resource guide that can help you quickly and easily perform common tasks, solve problems, and implement such advanced administration areas as automated monitoring, memory leak analysis, disk partitioning, Active Directory management, and network troubleshooting.

Who Is This Book For?

Microsoft Windows Command Line Administrator's Pocket Consultant covers Windows Server 2003 and Windows XP Professional. The book is designed for

- Current Windows Server 2003 administrators
- Support staff who maintain Windows XP Professional systems
- Accomplished users who have some administrator responsibilities
- Administrators upgrading to Windows Server from previous versions
- Administrators transferring from other platforms

To pack in as much information as possible, I had to assume that you have basic networking skills and a basic understanding of Windows and that Windows is already installed on your systems. With this in mind, I don't devote entire chapters to understanding Windows architecture, installing Windows, or Windows startup and shutdown. I do, however, cover scheduling tasks, monitoring Windows systems, managing accounts, administering network services, and much more.

I also assume that you are fairly familiar with Windows commands and procedures as well as the Windows user interface. If you need help learning Windows basics, you should read the Windows documentation.

How Is This Book Organized?

Microsoft Windows Command Line Administrator's Pocket Consultant is designed to be used in the daily administration of Windows systems, and as such, the book is organized by job-related tasks rather than by Windows features. If you are reading this book, you should be aware of the relationship between Pocket Consultants and Administrator's Companions. Both types of books are designed to be a part of an administrator's library. While Pocket Consultants are the down-and-dirty, in-the trenches books, Administrator's Companions are the comprehensive tutorials and references that cover every aspect of deploying a product or technology in the enterprise.

Speed and ease of reference are an essential part of this hands-on guide. The book has an expanded table of contents and an extensive index for finding answers to problems quickly. Many other quick reference features have been added as well. These features include quick step-by-step instructions, lists, tables with fast facts, and extensive cross-references. The book is organized into both parts and chapters. Each part contains an opening paragraph or two about the chapters contained in that part.

Part I, "Windows Command Line Fundamentals," reviews the fundamental tasks you need for command-line administration. Chapter 1 provides an overview of command-line administration tools, techniques, and concepts. Chapter 2 is designed to help you get the most out of the command shell. It details techniques for starting up the command shell using parameters, how to control command path settings, what redirection techniques are available, and how to use multiple commands in sequences. Chapter 3 discusses the essentials for creating command-line scripts. You'll learn how to set variables, work with conditional controls, and create procedures. Chapter 4 explains how to automate common administrative tasks using the command line.

Microsoft Windows provides many command-line tools to help in the management of daily operations. Part II, "Windows Systems Administration," discusses the core tools and techniques you'll use to manage Windows systems. Chapter 5 discusses many of the key administration tools, including those that help you gather system information, work with the Windows registry, configure Windows services, and shut down systems remotely. Chapter 6 examines tools that help you track information that is written to the Windows event logs, including warnings and errors. You'll also learn how to write events to the system and application logs. In Chapter 7, you'll learn about tools and techniques for monitoring applications, examining processes, and maintaining performance.

The book continues with Part III, "Windows File System and Disk Administration." Users depend on hard disk drives to store their word-processing documents, spreadsheets, and other types of data. If you've worked with Windows XP or Windows Server 2003 for any length of time, you've probably used the Disk Management tool. The command-line counterpart of Disk

Management is the disk partition utility (DiskPart). You can use DiskPart to handle most disk management tasks as well as to perform some additional tasks that cannot be performed in the GUI. Chapter 8 provides an introduction to DiskPart and also discusses FSUtil, CHKDSK, and CHKNTFS. Chapter 9 discusses partitioning basic disks. Chapter 10 examines dynamic disks and how they are used. The chapter also examines implementing, managing, and troubleshooting RAID.

In Part IV, “Windows Active Directory and Network Administration,” concentrates on the core commands you’ll use for configuring, managing, and troubleshooting Active Directory, print services, and TCP/IP networking. Chapter 11 discusses many of the key directory services administration tools, including tools that help you gather directory information. Chapter 12 examines tools that help you create and manage computer accounts in Active Directory. You’ll also learn how to configure domain controllers as global catalogs and operations masters. Chapter 13 completes the directory services discussion with a look at creating and managing accounts for users and groups in Active Directory. Chapter 14 examines network printing and print services. Chapter 15 discusses configuring, maintaining, and troubleshooting TCP/IP networking from the command line.

Conventions Used in This Book

I’ve used a variety of elements to help keep the text clear and easy to follow. You’ll find code terms and listings in monospace type, except when I tell you to actually type a command. In that case, the command appears in **bold** type. When I introduce and define a new term, I put it in *italics*.

Other conventions include

Notes To provide details on a point that needs emphasis



Best Practices To examine the best technique to use when working with advanced configuration and administration concepts



Cautions To warn you when there are potential problems you should look out for



More Info To provide more information on the subject



Real World To provide real-world advice when discussing advanced topics



Security Alerts To point out important security issues



Tips To offer helpful hints or additional information



I truly hope you find that *Microsoft Windows Command Line Administrator's Pocket Consultant* provides everything that you need to perform essential administrative tasks as quickly and efficiently as possible. You're welcome to send your thoughts to me at williamstanek@aol.com. Thank you.

Support

Every effort has been made to ensure the accuracy of this book and of the contents of the companion disc. Microsoft Press provides corrections for books through the World Wide Web at the following address:

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