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Windows Server 2008 For Dummies

**by Ed Tittel and Justin
Korelc**



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About the Authors

Ed Tittel is an increasingly grizzled, if not wizened, veteran of the publishing game, with over a thousand magazine articles and more than 140 books to his credit. Ed has worked on numerous *For Dummies* books, including *HTML 4 For Dummies*, 5th Edition (with Mary Burmeister) and *XML For Dummies*, 4th Edition (with Lucinda Dykes), as well as books on many other topics. Ed runs a small professional IT practice in Round Rock, TX, that specializes in network-oriented training, writing, and consulting. When Ed's not busy writing, he likes to spend time with his wife, Dina, and son, Gregory. He also likes to shoot pool, cook, and read sci-fi. You can reach Ed by e-mail at etittel@yahoo.com or through his Web page at www.edtittel.com.

Justin Korelc has been working with computers and technology for over 15 years. Justin is an independent consultant working as a writer and trainer. His work focuses on security, Windows and Linux operating systems, and PC hardware. Justin has coauthored several books on media PCs, including *Build the Ultimate Home Theater PC* (an *ExtremeTech BuildIt Guide*) and *Hacking MythTV* (an *ExtremeTech* title). He has developed online training materials on information security, PC tune-ups, file transfer technologies, and more. Justin's computer knowledge is self-taught and based on nearly 20 years of hands-on experience. He spends his spare time practicing the fine art of bricolage, playing with

computers, and improving his culinary skills. You can reach Justin by e-mail at jusphikor@yahoo.com.

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—ET

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—JPK

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Introduction

Welcome to *Windows Server 2008 For Dummies*, the book that helps anyone who's unfamiliar with Windows Server 2008 (or Windows-based networks) find his or her way around a Windows Server 2008-based network. In a wired world, networks provide the links that tie all users together. This book tells you what's going on, in basic, straightforward terms.

Although a few fortunate individuals may already be acquainted with Windows Server 2008 and the networks it supports, many more people are not only unfamiliar with server-based networking but downright scared of it. To those who may be concerned about facing new and difficult technologies, we say, "Don't worry. Be happy." Using a server-based network isn't beyond anyone's wits or abilities — it's mostly a matter of using a language that ordinary people can understand.

Ordinary folks are why this book talks about using Windows Server 2008 and networks in simple — and deliberately irreverent — terms. Nothing is too highfalutin to be mocked, nor too arcane to state in plain English. And when we do have to get technical, we warn you and make sure to define our terms to boot.

This book aims to help you meet your needs. You'll find everything you need to know about Windows Server 2008 in here, so you'll be able to find your way around —

without having to learn lots of jargon or obtain an advanced degree in computer science along the way. We want you to *enjoy* yourself. Because server-based networking really is a big deal, it's important that you be able to get the most out of it. We really want to help!

About This Book

This book is designed so you can pick it up and start reading at any point — like you might read a reference book. In Parts I and II, we cover server basics: concepts and terminology in Part I, and the installation and deployment of Windows Server 2008 in Part II. In Parts III through V, you'll find tons of information on how to run or build a Windows Server 2008-based network. Part III covers running a Windows Server 2008-based network, whereas Part IV describes how you might design, build, and use a do-it-yourself network server PC. Part V includes tips and tricks to help smooth out installing, configuring, and using Windows Server 2008.

Each chapter is divided into freestanding sections, each one relating to the chapter's major theme. For example, the chapter on installing Windows Server 2008, contains the following collection of information:

- ✓ The differences between an upgrade install and a clean install
- ✓ How to make sure your hardware is suitable for use as a server

- ✓ A step-by-step walkthrough of the installation process
- ✓ What to do when installation completes
- ✓ Troubleshooting installation problems
- ✓ Automating the Windows Server 2008 installation process

You don't have to memorize the contents of this book. Each section supplies just the facts you need to make networking with Windows Server 2008 easy to use. On some occasions, however, you may want to work directly from the book to make sure you keep things straight.

How to Use This Book

This book works like a reference, so start with a topic that interests you. You can use the table of contents to identify general areas of interest or broad topics. The index, however, is your best tool for identifying detailed concepts, related topics, or particular Windows Server 2008 capabilities, tools, or controls.

After you find what you need, you can close the book and tackle whatever task you've set for yourself — without having to grapple with unrelated details.

If you've never worked with a Windows Server operating system before, it's a good idea to read Parts I and II in their entirety. Likewise, if you're new to administering a

Windows Server 2008-based network, you might want to read all of Part III. If the idea of building your own server PC from scratch sounds interesting, you'll definitely dig Part IV. Otherwise, dig in wherever your fancy moves you!

When you need to type something at the keyboard, you'll see text that looks like this: **Type this**. You're expected to enter this text at the keyboard and then press the Enter key. Because typing stuff can sometimes be confusing, we always try to describe what it is you're typing and why you need to type it.

This book occasionally suggests that you consult the Windows Server 2008 online help, printed manuals, Resource Kit, and even Microsoft's Web site for additional information. In most cases, though, you find everything you need to know about a particular topic right here — except for some of the bizarre details that abound in Windows Server 2008.

If there's a topic we don't cover in this book that you need to know more about, we suggest you look for a book on that subject in the *For Dummies* series, published by Wiley Publishing. In addition, a whole world of Web information about Windows Server 2008 is available on the Internet, and the Microsoft Web site (at www.microsoft.com/windowsserver2008/default.aspx) isn't a bad place to start looking for such information.

Foolish Assumptions

We're going to climb out on a limb and make some potentially foolish assumptions about you, our gentle reader. You have or are thinking about getting a computer, a network, and at least one copy of Windows Server 2008. You know what you want to do with these things. You might even be able to handle all these things yourself, if somebody would only show you how. Our goal with this book is to decrease your need for such a somebody, but we don't recommend telling him or her that out loud — at least, not until you've finished this book!

How This Book Is Organized

The book is divided into five major parts, each of which consists of two to six chapters. Each chapter covers a major topic and is divided into sections, which discuss particular issues or concerns related to that topic. That's how things in this book are organized, but how you read it is up to you. Choose a topic, a section, a chapter, or a part — whatever strikes your fancy or suits your needs — and start reading.

Part I: Servers at Your Service

Part I provides an introduction to Windows Server 2008. You'll find a detailed description of Windows Server 2008 in Chapter 1 that includes its important features, functions, capabilities, and requirements. Chapter 2 takes a more general look at server-based networking and explains what makes servers special, hardware-wise; what kinds of things servers do; and what services they provide. Chapters 3 and 4 provide a speedy primer on network design and construction to help you decide where to put the pieces and parts that go into a network, including your server, and what to do with them when they're all interconnected. If you're already a seasoned networker or have worked with another Windows Server operating system, you can skip this part if you'd like, although you may still want to check out Chapter 1 to see what's new and interesting in this latest and presumably greatest of Windows Server operating systems.

Part II: Servers, Start Your Engines

Part II tackles Windows Server 2008 head on, starting with its installation and configuration. It covers the issues involved in installing and configuring network hardware specifically for Windows Server 2008. It also covers how to install and manage print servers and services on a Windows Server 2008-based network, how to handle Transmission Control Protocol/Internet Protocol (TCP/IP) addresses, and how to set up and manage directory services in a Windows Server 2008-based environment. Part II is where you figure out how to put the basic pieces of a network together using Windows Server 2008.

Part III: Running Your Network

Part III picks up where Part II leaves off — that is, it talks about living with and managing a Windows Server 2008-based network after the initial installation and configuration phase is complete. It begins with a discussion of how to manage users and groups on a Windows Server 2008-based network, including details on profiles, policies, and local and global groups. Next, it covers how Windows Server 2008 controls access to NTFS files and directories and how to manage network-accessible file system resources called *shares*.

After a network's users, groups, and data assets are in place, rebuilding such a setup from scratch can be a real pain. That's where a backup comes in handy, so Part III covers the ins and outs of backing up and restoring a Windows Server 2008 machine, plus other aspects of fault tolerance. After that, a review of network security principles and practices should help to prepare you to protect your data from accidental loss and from would-be hackers and crackers.

Part IV: Serve It Yourself

Part IV takes a detour away from the software side of servers to dig deeply into the hardware on which such software must run. You'll find out what kinds of pieces and parts go into a PC and what kinds of selections make the most sense when that PC is going to act as a network server. You'll also dig into the specifics involved in building a basic Intel-based PC for use with Windows Server 2008, where we guide you through options and selection rationales for choosing specific processors, motherboards, memory, disk drives, and so forth. Then we repeat that process for AMD-based PCs for those who might choose to opt for an Opteron processor instead.

Part V: The Part of Tens

Part V follows the grand tradition of *For Dummies* books, all of which include “The Part of Tens.” Here, you’ll find lists of information, tips, tricks, and suggestions, all organized into short and convenient chapters. This supplemental information is designed to be both helpful and informative and is supplied at no extra charge.

Part VI: Appendixes

If you'll recall, we said earlier that this book is divided into five major parts. By definition, that means the appendixes must be a minor part of the book, although there's nothing minor about the content you'll find covered here. In fact, we decided to include this material to provide our readers with additional information and resources on server hardware and developing good troubleshooting skills to help provide users with the best networking experiences possible.

Bonus Chapter

You'll find a bonus chapter titled "What Makes Servers Special" at this book's companion Web site at www.dummies.com/go/winserver2008. This chapter will quickly get you up to speed on server capabilities.

Icons Used in This Book

The icons used in this book point you to important (and not so important) topics in the text.



This icon lets you know that you're about to encounter information that's important to understand if you really want to *get* what's going on with Windows Server 2008. It may be painful at times, but you have to slog through it.