

# Introducing Windows Server 2008

*Mitch Tulloch with the  
Microsoft Windows Server  
Team*

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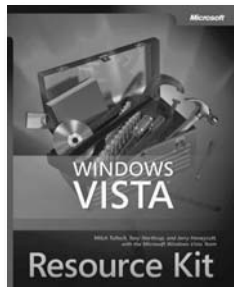
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## Chapter 1

# Introduction

Well, you've made it past the table of contents and have arrived at the Introduction, so I guess I better start introducing this book to you and explaining what it's about. This is the first book about Microsoft Windows Server 2008 published by Microsoft Press, and let me be straight with you right from the beginning. What? A book about Windows Server 2008 is being published when the product is only in Beta 3? Won't it have inaccuracies? (Sure.) Aren't features still subject to change? (Yup.) Doesn't that make this a "throwaway" book? (Not on your life, you'll see.) And why would Microsoft Press publish a book about a product that's not even finished yet?

The short answer to that final question is that Microsoft Press has always done this sort of thing. Remember *Introducing Windows Vista* by William Stanek? Or *Introducing Microsoft Windows Server 2003* by Jerry Honeycutt? Or *Introducing Microsoft .NET* by David S. Platt? See? I told you. Why does Microsoft Press do this? To get you excited about what's coming down the product pipeline from Microsoft. To help you become familiar with new products while they're still in the development stage. And, of course, to get you ready to buy other books from them once the final version of the product is released. After all, you know what it's like. You have a business and have to make money—so do they.

But isn't a book that's based on a pre-release version (in this case, close to Beta 3) going to be full of inaccuracies and not reflect the final feature lineup in the RTM version of the product? Well, not really, for several reasons. First, I've had the pleasure (sometimes the intense pleasure) of interacting daily with dozens of individuals on the Windows Server 2008 product team at Microsoft during the course of writing this book. And they've been generous (sometimes too generous) in supplying me with insights, specifications, pre-release documentation, and answers to my many, many questions—the answers to some of which I was actually able to understand (sometimes). It's been quite an experience interacting with the product team like this; they're proud of the features they're developing and they have good reason to be. And all this interaction with the product group should mean that a lot of technical errors and inaccuracies will have been avoided for many descriptions of features in this book.

In addition, the product team has generously given their time (occasionally after repeated, badgering e-mails on my part) to review my chapters in draft and to make comments and suggestions (sometimes a lot of suggestions). This, too, should result in a lot of technical gaffs being weeded out. To understand what it means for these individuals to have given their time like this to poring over my chapter drafts, you've got to understand something about the stress of developing a product like Windows Server 2008 and getting it out the door as bug-

free as possible and into customers' hands while working under heavy time constraints. After all, the market won't stand still if a product like Windows Server 2008 is delayed. There are competitors—we won't mention their names here, but they're out there and you know about them.

Another reason this book has a high degree of technical accuracy (especially for a pre-release title) is because a lot of it is actually written by the product team themselves! You'll find scattered throughout most of the chapters almost a hundred sidebars (95 at last count) whose titles are prefixed "From the Experts." These sidebars are a unique feature of this book (and especially for a pre-release book), and they provide valuable "under the hood" insights concerning how different Windows Server 2008 features work, recommendations and best practices for deploying and configuring features, and tips on troubleshooting features. These sidebars range from a couple of paragraphs to several pages in length, and most of them were written by members of the Windows Server 2008 product team at Microsoft. A few were written by members of other teams at Microsoft, while a couple were contributed by contractors and vendors who work closely with Microsoft. And more than anything else, the depth of expertise provided by these sidebars makes this book a "keeper" instead of a "throwaway," as most pre-release books usually are.

I'll get you a list of all the names of these sidebar writers in a minute to acknowledge them, but maybe I better show you what a sidebar actually looks like if you've never seen one before (or if you've seen them in other titles but didn't know what they were called). Here's an example of a sidebar:

### **From the Experts: Important Disclaimer!**

The contents of this book are based on a pre-release version of Windows Server 2008 and are subject to change. The new features and enhancements described in the chapters that follow might get pulled at the last minute, modified (especially the GUI), tweaked, twisted, altered, adjusted, amended—press Shift+F7 in Microsoft Office Word for more. Nothing written here is written in stone, and the product group (and myself) have tried not to promise anything or describe features that might not make it into RTM. So while we've made our best effort to ensure this book is a technically accurate description of Windows Server 2008 at the Beta 3 milestone (and hopefully well beyond), we disclaim and deny and renounce and repudiate and whatever (Shift+F7 again) any and all responsibility for anything in this book that is no longer accurate once the final release of Windows Server 2008 occurs. Thanks for understanding.

*—Mitch Tulloch with the Windows Server Team at Microsoft*

That's what a sidebar looks like. Sure hope you've read it!

And having a disclaimer like that shouldn't be a problem, right? For example, if the UI changes for some feature between now and RTM, that shouldn't decrease the technical value of this book much, should it? After all, you're IT pros, so you're pretty smart and can figure out a UI, right? And if a feature has to be dropped at the last minute or changed to make it meet some emerging standard, interoperate better with products from other vendors, or simply to ensure the highest possible stability of the final product, you'll understand, won't you? I mean, you're IT pros, so you know all about how the software development process works, right?

Thanks for cutting us some slack on this. I'm sure you won't be disappointed by what you find between these covers. And whatever flaws or errors or gaps you do happen to find, feel free to fill them in yourself with extra reading and hands-on experimenting with the product. You have the power—you're IT pros. You rock. You rule.

## What's Between the Sheets

I guess I should have said "what's between the covers," but sheets are pages, right? Lame attempt at humor there, but I guess you want to know what I'm going to be covering in this book. Well, I could start talking about the "three pillars of Windows Server 2008," which are (Warning! The Marketing Police insist on Init Caps here!) More Control, Increased Protection, and Greater Flexibility. But if I started talking like that you'd probably clap your hands tightly over your ears and start shouting, "Augh! Marketing fluff! Shut it off! Shut it off!!" and run away screaming madly to the server room.

I know that's not being fair to those who work in marketing (poor souls), but we all need to pick on somebody sometimes, don't we? And since you are an IT pro (the target audience of this book), what you want is technical "meat," not marketing "fluff"—and that's exactly what we (myself together with the product team at Microsoft) have tried to bring you. So instead of talking about "pillars," we're going to focus on "features" and "enhancements" (changes to features found on previous Windows Server platforms) so that you can derive the utmost benefit from reading this book.

Windows Server 2008 has a lot of new features and a ton of enhancements to existing ones. Unfortunately, in a book this size (there's no point writing a 1500-page book about pre-release software) this means some features have to get more prominence than others. So some features and enhancements have their own separate chapters, while others get unceremoniously lumped together for coverage. Don't read more into this than is intended, however, as some features simply interest me more than others and some are closer to being finished at the time of writing this than others. Features closer to being finished generally have more internal documentation (the raw source material for much of this book) available and that documentation is usually in near-finished condition.

Anyway, for personal reasons or otherwise, the following new features and enhancements have been chosen by me (and me alone) to be showcased within their own separate chapters:

- The Windows server core installation option of Windows Server 2008
- New and improved server management tools
- Identity and Access (IDA) enhancements to Active Directory
- Clustering enhancements
- Terminal Services enhancements
- Network Access Protection (NAP)
- Internet Information Services 7.0
- Deployment tools

These features all got their own chapters, while most everything else has been lumped together into Chapter 12, “Other Features and Enhancements”—not because they’re any less important, but simply for reasons of my personal interest in things, limited time and resources, and convenience.

I’ll also talk briefly in Chapter 2, “Usage Scenarios” about why you *will* (the Marketing Police insisted on my using italics there) want to deploy Windows Server 2008 in your enterprise. Thus, Chapter 2 will briefly talk about various scenarios where the new features and enhancements found in Windows Server 2008 can bring your enterprise tangible benefits. So there’s a bit of marketing content in that chapter, but it’s important for reasons of planning and design. Otherwise, the rest of the book is pure geek stuff.

## **Acknowledgments**

Anyway, before I jump in and start describing all the new features and enhancements found in Windows Server 2008, I’d first like to say “Hats off” to all those working inside Microsoft and others who contributed their valuable time and expertise. Their efforts in writing sidebars for this book, reviewing chapters in their draft form, answering questions, and providing me with access to internal documentation and specifications made this book the quality technical resource that I’m sure you’ll find it to be. In fact, let me acknowledge them by name now. I’ll omit their titles, as these can be found in the credits at the end of each sidebar. I know the compositor (the person who transforms my manuscript into pages) will probably hate this, but I’m going to put everyone’s name on a separate line to call them out and recognize them better for their invaluable contribution to this book. Here goes:

Aaron J. Smith

Ahmed Bisht

Ajay Kumar

Alain Lissoir

Alex Balcanquall  
Amit Date  
Amith Krishnan  
Andrew Mason  
Aruna Somendra  
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Elden Christensen  
Emily Langworthy  
Eric Deily  
Eric Fitzgerald  
Eric Holk  
Eric Woersching  
George Menzel  
Harini Muralidharan  
Harish Kumar Poongan Shanmugam  
Isaac Roybal  
Jason Olson  
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Jez Sadler  
Joel Sloss

John Morello  
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Kalpesh Patel  
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Kevin Rhodes  
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Manish Kalra  
Marcelo Mas  
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Mike Wilenzick  
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Samim Erdogan  
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Tolga Acar  
Tom Kelnar  
Tony Ureche  
Tres Hill  
Ulf B. Simon-Weidner  
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I hope I haven't missed anyone in the above list of reviewers, sidebar contributors, and other experts. If I have, I'm really sorry—e-mail me and I'll see that you get a free copy of my book!

And since we're acknowledging people here, let me also give credit to the editorial staff at Microsoft Press who helped bring this project to fruition. Thank you, Martin DelRe, Karen Szall, and Denise Bankaitis for your advice, patience, and prodding to help me get this book completed on time for TechEd '07. And thank you, Roger LeBlanc, for your skill and restraint in copyediting my writing and weeding out dangling participles, nested colons, and other grammatical horrors while maintaining my natural voice and rambling style of writing. Thank you to Waypoint Press for their editorial and production services. And thanks especially to Ingrid, my wife and business partner, who contributed many hours of research gathering and organizing material for this book and helped in many other ways every step of the way. She deserves to have her name on a separate page all by herself, but the compositor would probably choke if I tried this, so I'll just give her a whole line to herself, like this:

Thank you, Ingrid!

## One Last Thing—Humor

You've probably noticed by now that this chapter is written with a fairly light tone. After all, I'm a geek, so my wife usually doesn't find the jokes I tell to be funny, right? (I'm being ironic

actually and using “my wife” as a literary device here, but please don’t tell her in case she’s offended by this usage.) (More irony.)

OK, so maybe I’m not the most slapstick kind of guy. And why add humor, anyway, to a serious book about a serious product developed by a serious company like Microsoft? Well, apart from the fact that Microsoft can poke fun at itself sometimes (search the Internet for the “Microsoft iPod” video and you’ll see what I mean), the main reason I’ve tried to use humor is to better engage you, the reader. Yes, you’re an IT pro, a geek, and you read manuals all day long and get your kick out of finding errors in them. Well I am too—my father used to tell me a story about how, when I was in high school, he came down to see me in my room one evening and found me “reading a calculus textbook and chuckling in a superior way” about something I was reading. I can’t remember that particular incident, but I do recall getting a laugh over some of the textbooks I had to read in university. Such is the curse of being a geek.

And, hopefully, that describes you as well—because if you’re the totally wound-up and straight-laced type, you’re probably in the wrong business if you’re an IT pro. Software doesn’t always do what it’s supposed to do, and it’s usually best just to laugh about it and find a workaround instead of taking it out on the vendor.

Anyway, I’m telling you all this just so that you’re aware that I’ll be adding the occasional joke or giving lighthearted treatment to some of the features and enhancements discussed in this book. In fact, at one point I even thought of trying to add a Dilbert cartoon at the start of each chapter to set the stage for what I wanted to tell you concerning each feature. Unfortunately, I eventually abandoned this plan for three reasons:

- Reason #1: I had to write this book in a hurry so that it could be published in time for TechEd while still being based on builds as near to Beta 3 as possible. So, unfortunately, there was no time to wade through the red tape that Microsoft Legal would probably have required to make this happen.
- Reason #2: My project manager didn’t have the kind of budget to pay the level of royalties that United Feature Syndicate, Inc., would probably have demanded for doing this kind of thing.
- Reason #3: Scott Adams probably uses a Mac.