

# Introduction

When I first started working on the *PowerShell Unleashed* book, I happened to be reading a book on public key infrastructure (PKI). Although the materials in the book gave good background and reference information about PKI, they lacked details on how to apply PKI in an environment. Applied presentation is a component I have often wished was included in many technical books. With this realization, I decided I would try to approach the subject matter in the PowerShell book in a way different from most other technical books.

The outcome of this realization is the book you're now reading. Although this book contains detailed reference information about what PowerShell is, I made an effort to show readers how PowerShell can be applied to meet their specialized needs. This approach might not be new or groundbreaking, but I hope it helps you gain a unique perspective on one of the most impressive Microsoft products to be recently released.

That last statement is by no means free marketing for Microsoft. The PowerShell team has truly created a shell that's enjoyable, easy, fun, and, yes, powerful. I can't wait to see what's in store for the future of PowerShell and what products will embrace its use.

## **Who Is This Book's Intended Audience?**

This *Unleashed* book is intended for an intermediate level of systems administrators who have invested time and energy in learning Windows scripting and want to translate those skills into PowerShell skills while learning how it can meet their real-world needs. This book has been written so that anyone with a scripting background can understand what PowerShell is and how to use it, but by no means is it meant to be a complete PowerShell reference. Instead,

think of it as a resource for learning how PowerShell can be applied in your own environment. Therefore, the structure of this book reflects that focus by including numerous command examples and working scripts.

## How This Book Is Organized

The book is divided into the following three parts:

- *Part I, “Introduction to PowerShell”*—This part introduces you to what PowerShell is and how to use it. Topics covered include why PowerShell came into existence, general use of PowerShell, an in-depth review of code signing, and PowerShell best practices.
- *Part II, “Translating Your Existing Knowledge into PowerShell”*—This part dives into a point-by-point comparison of how existing Windows scripting knowledge can be translated to learning PowerShell scripting. Topics covered include working with the Windows file system, Registry, Windows Management Instrumentation (WMI), and Active Directory Services Interfaces (ADSI). To assist you, examples of performing automation tasks and working scripts in both VBScript and PowerShell are included.
- *Part III, “Using PowerShell to Meet Your Automation Needs”*—The goal of this part is to expand on how PowerShell can be used to manage systems. Topics covered include using PowerShell to meet security needs, automating changes across numerous systems, and managing Exchange Server 2007 with PowerShell.

## Conventions Used in This Book

Commands, scripts, and anything related to code are presented in a special monospace computer typeface. Bolding indicates key terms being defined, and italics are used to indicate variables and sometimes for emphasis. Great care has been taken to be consistent in letter case, naming, and structure, with the goal of making command and script examples more readable. In addition, you might find instances in which commands or scripts haven't been fully optimized. This lack of optimization is for your benefit, as it makes those code samples more intelligible and follows the practice of writing code for others to read. For more details about the layout, conventions, and practices used for commands and scripts in this book, see Chapter 5, “PowerShell Scripting Best Practices.”

Other standards used throughout this book are as follows:

### Black Code Boxes

**These code boxes contain commands that run in a PowerShell or Bash shell session.**

### Gray Code Boxes

These code boxes contain source code from scripts, configuration files, or other items that aren't run directly in a shell session.

### CAUTION

Cautions alert you to actions that should be avoided.

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### NOTE

Notes give you additional background information about a topic being discussed.

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