

Powershell And Wmi

PowerShell and WMI Covers 150 Practical Techniques Manning Publications

PowerShell scripts offer a handy way to automate various chores. Working with these scripts effectively can be a difficult task. This comprehensive guide starts from scratch and covers advanced-level topics along with tips to make you a PowerShell Core 6.0 scripting expert.

Summary Here's your chance to learn from the best in the business. PowerShell Deep Dives is a trove of essential techniques, practical guidance, and the expert insights you earn only through years of experience. Editors Jeffery Hicks, Richard Siddaway, Oisin Grehan, and Aleksandar Nikolic hand-picked the 28 chapters in the book's four parts: Administration, Scripting, Development, and Platforms. About the Technology PowerShell has permanently changed Windows administration. This powerful scripting and automation tool allows you to control virtually every aspect of Windows and most Microsoft servers like IIS and SQL Server. Here's your chance to learn from the best in the business. About this Book PowerShell Deep Dives is a trove of essential techniques and practical guidance. It is rich with insights from experts who won them through years of experience. The book's 28 chapters, grouped in four parts (Administration, Scripting, Development, and Platforms), were hand-picked by four section editors: Jeffery Hicks, Richard Siddaway, Oisin Grehan, and Aleksandar Nikolic. Whether you're just getting started with PowerShell or you already use it daily, you'll find yourself returning to this book over and over. What's Inside Managing systems through a keyhole The Ten Commandments of PowerShell scripting Scalable scripting for large datasets Adding automatic remoting

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Provisioning web servers and websites automatically to IIS 8
And 23 more fantastic chapters Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the AuthorsEditors Jeffery Hicks, Richard Siddaway, Oisin Grehan, and Aleksandar Nikolic are joined by PowerShell experts Chris Bellee, Bartek Bielawski, Robert C. Cain, Jim Christopher, Adam Driscoll, Josh Gavant, Jason Helmick, Don Jones, Ashley McGlone, Jonathan Medd, Ben Miller, James O'Neill, Arnaud Petitjean, Vadims Podans, Karl Prosser, Boe Prox, Matthew Reynolds, Mike Robbins, Donabel Santos, Will Steele, Trevor Sullivan, and Jeff Wouters. Table of Contents PART 1 POWERSHELL ADMINISTRATION Diagnosing and troubleshooting PowerShell remoting CIM sessions 22 Collecting and analyzing performance counter data TCP port communications with PowerShell Managing systems through a keyhole Using PowerShell to audit user logon events Managing and administering a certification authoritydatabase with PowerShell Using PowerShell to reduce Active Directory token bloat PART 2 POWERSHELL SCRIPTING The 10 PowerShell scripting commandments Avoiding the pipeline A template for handling and reporting errors Tips and tricks for creating complex or advancedHTML reports with PowerShell Using and "abusing" dynamic parameters PowerShell type formatting Scalable scripting for large data sets: pipelineand database techniques Building your own WMI-based cmdlets Turning command-line tools into PowerShell tools PART 3 POWERSHELL FOR DEVELOPERS Using Source Control Software with PowerShell Inline .NET code PowerShell and XML: better together Adding automatic remoting to advanced functionsand cmdlets Taming software builds (and other complicated processes)with psake PART 4 POWERSHELL PLATFORMS PowerShell and the SQL Server provider Creating flexible subscriptions in SSRS Inventory database

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table statistics using PowerShellSQL Server Management Objects WSUS and PowerShell Provisioning IIS web servers and sites with PowerShell Active Directory Group Management application

Your hands-on guide to Windows PowerShell scripting fundamentals Expand your expertise--and teach yourself the fundamentals of Windows PowerShell scripting, including features available in Windows PowerShell 5. If you are an IT professional, power user, or consultant, you'll get the guidance, exercises, and code you need to master core techniques for automating Windows setup, deployment, and management. Discover how to: Run cmdlets and command-line utilities Administer Windows-based servers and desktops with built-in cmdlets Use providers to access external information Write and run scripts from the Windows ISE Create functions that are easy to maintain Build standardized environments with profiles Automate Windows systems with WMI, CIM cmdlets, and remoting Automate Active Directory Domain Services (AD DS) Debug scripts and handle errors Run commands that survive interruptions Use Desired State Configuration (DSC) to manage software services and their environments Get powerful new modules from PowerShell Gallery About You This book is for: IT professionals and power users who want to get productive with Windows PowerShell, including new features in Windows PowerShell 5 Windows system administrators who want to be more efficient and productive Anyone pursuing Windows PowerShell certifications No experience with Windows PowerShell or other scripting technologies necessary

Summary PowerShell and WMI is an example-driven guide for administrators managing networks of Windows servers and desktops. With 150 practical examples, including ready-to-reuse scripts and techniques, you'll learn the ins and outs of automating WMI via PowerShell v3. You'll also find deep

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coverage of all aspects of Windows administration, including IIS, DNS and Hyper-V. About the Technology WMI, on its own, is simply a collection of Windows management facilities. Paired with PowerShell, however, WMI becomes a brilliant toolset for automating servers, networks, and remote Windows computers. About the Book PowerShell and WMI is an industrial-strength guide for administrators of Windows networks, servers, and desktops. You'll start with practical overviews of PowerShell and of WMI. Then you'll explore 150 specific examples—all with ready-to-use scripts—designed to simplify your day-to-day system management. Each tested technique is configured to load as part of a PowerShell module. A set of handy appendixes includes references for PowerShell and WMI. Prior exposure to PowerShell and WMI is helpful but not required. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. What's Inside Managing Windows, IIS, and Hyper-V Remote desktops and devices Logs, jobs, and performance New PowerShell v3 WMI functionality

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PART 3 THE FUTURE: POWERSHELL V3 AND WMI WMI over WSMAN Your own WMI cmdlets CIM cmdlets and sessions Covers the installation and components of WMI, its interactions and subsystems, query language facilities, class schemas, method design, and developing management and

.NET management applications.

Take advantage of everything Microsoft's new PowerShell 7 has to offer PowerShell 7 for IT Pros is your guide to using PowerShell 7, the open source, cross-platform version of Windows PowerShell. Windows IT professionals can begin setting up automation in PowerShell 7, which features many improvements over the early version of PowerShell Core and Windows PowerShell. PowerShell 7 users can enjoy the high level of compatibility with the Windows PowerShell modules they rely on today. This book shows IT professionals—especially Windows administrators and developers—how to use PowerShell7 to engage in their most important tasks, such as managing networking, using AD/DNS/DHCP, leveraging Azure, and more. To make it easy to learn everything PowerShell 7 has to offer, this book includes robust examples, each containing sample code so readers can follow along. Scripts are based on PowerShell 7 running on Windows 10 19H1 or later and Windows Server 2019. • Learn to navigate the PowerShell 7 administrative environment • Use PowerShell 7 to automate networking, Active Directory, Windows storage, shared data, and more • Run Windows Update, IIS, Hyper-V, and WMI and CIM cmdlets within PowerShell 7 • Understand how to handle reporting in the new PowerShell 7 environment PowerShell 7 for IT Pros provides exclusive coverage of using PowerShell with both cloud-based systems and virtualized environments (Hyper V and Azure). Written by PowerShell veteran Thomas Lee, this is the only book you'll need to get started with PowerShell 7.

The perfect resource for learning from the ground up, Eckert's HANDS-ON MICROSOFT WINDOWS SERVER 2019 is designed to build a foundation in basic server administration -- no prior server experience required. It covers all of the core Windows Server 2019 features using a logical topic flow and

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step-by-step exercises that can be performed within a home or college lab environment, making it an ideal choice for a Windows Server 2019 administration course. It teaches you how to deploy Windows Server 2019 in a variety of settings, including data center and cloud environments that rely on virtualization and containers. It also covers configuring and managing server storage, troubleshooting performance issues as well as working with common Windows Server technologies and network services, including Active Directory, DNS, DHCP, IPAM, file sharing, printing and remote access. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

This Cookbook by Windows PowerShell team developer Lee Holmes provides hundreds of tested scripts that you can use right away to get Microsoft's new tool working for you. More than 150 recipes, combined with a concise task-based introduction to the Windows PowerShell scripting language and environment, make it the perfect look-up guide when you encounter a thorny problem, or need a quick solution. The ideal companion to any tutorial or reference, this book meets the needs of system administrators at any level. Microsoft has revolutionized the world of system management and command-line shells with its release of Windows PowerShell, and Lee Holmes gives you practical tools and inside advice that will make you a more productive user and administrator. You will be able to solve everything from automating routine tasks, working with files, event logs and other forms of structured data, to managing the users and resources of complex Windows networks. Each recipe includes a focused piece of code plus discussion of how and why it works, so that you can apply the solution to similar tasks. You get an array of recipes covering PowerShell fundamentals, common tasks, and administrator tasks, including: Pipelines, variables,

objects, looping and flow control, strings and unstructured text, calculations and math Simple files; structured files; Internet-enabled scripts; code reuse; lists, arrays and hashtables; user feedback; error management; environmental awareness; script signing; and more Files and directories, registry manipulation, comparing data, event logs, process cmdlets, service cmdlets, Active Directory, enterprise computer management, and more Those who administer Microsoft's Exchange 2007 and System Center Operations Manager (formerly MOM) will also benefit from this book, with separate chapters devoted to these servers. All Windows administrators will appreciate the appendices that include a PowerShell language quick reference, and a reference to the .NET, WMI and COM objects that PowerShell scripters will use often. With working scripts, tutorials, and references all in one volume, Windows PowerShell Cookbook will turbocharge the productivity of any Windows administrator.

Summary Discover how scripting is different from command-line PowerShell, as you explore concrete hands-on examples in this handy guide. The book includes and expands on many of the techniques presented in Learn PowerShell Toolmaking in a Month of Lunches. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Automate it! With Microsoft's PowerShell language, you can write scripts to control nearly every aspect of Windows. Just master a few straightforward scripting skills, and you'll be able to eliminate repetitive manual tasks, create custom reusable tools, and build effective pipelines and workflows. Once you start scripting in PowerShell, you'll be amazed at how many opportunities you'll find to save time and effort. About the Book Learn PowerShell Scripting in a Month of Lunches teaches you how to expand your command-line PowerShell skills into effective scripts and tools. In 27 bite-size lessons,

you'll discover instantly useful techniques for writing efficient code, finding and squashing bugs, organizing your scripts into libraries, and much more. Advanced scripters will even learn to access the .NET Framework, store data long term, and create nice user interfaces. What's Inside Designing functions and scripts Effective pipeline usage Dealing with errors and bugs Professional-grade scripting practices About the Reader Written for devs and IT pros comfortable with PowerShell and Windows. About the Authors Don Jones is a PowerShell MVP, speaker, and trainer who has written dozens of books on information technology topics. Jeffery Hicks is a PowerShell MVP and an independent consultant, trainer, and author. Don and Jeff coauthored Manning's Learn Windows PowerShell in a Month of Lunches, Learn PowerShell Toolmaking in a Month of Lunches, and PowerShell in Depth. Table of Contents PART 1 - INTRODUCTION TO SCRIPTING Before you begin Setting up your scripting environment WWPD: what would PowerShell do? Review: parameter binding and the PowerShell pipeline Scripting language crash course The many forms of scripting (and which to use) Scripts and security PART 2 - BUILDING A POWERSHELL SCRIPT Always design first Avoiding bugs: start with a command Building a basic function and script module Going advanced with your function Objects: the best kind of output Using all the pipelines Simple help: making a comment Dealing with errors Filling out a manifest PART 3 - GROWN-UP SCRIPTING Changing your brain when it comes to scripting Professional-grade scripting An introduction to source control with git Pestering your script Signing your script Publishing your script PART 4 - ADVANCED TECHNIQUES Squashing bugs Making script output prettier Wrapping up the .NET Framework Storing data-not in Excel! Never the end

A guide to using Windows PowerShell to script Windows

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administrative tasks and control Windows from the command line.

Summary Learn Windows PowerShell in a Month of Lunches, Third Edition is an innovative tutorial designed for busy IT professionals. This updated edition covers PowerShell features that run on Windows 7, Windows Server 2008 R2 and later, PowerShell v3 and later, and includes v5 features like PowerShellGet. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology PowerShell is both a scripting language and an administrative shell that lets you control and automate nearly every aspect of Windows. It accepts and executes commands interactively and you can write scripts to manage most Windows servers like Exchange, IIS, and SharePoint, as well as online services like Azure and Office 365. About the Book Learn Windows PowerShell in a Month of Lunches, Third Edition is an innovative tutorial designed for busy IT professionals. Just set aside one hour a day - lunchtime would be perfect - for a month, and you'll be automating Windows tasks faster than you ever thought possible. This updated edition covers PowerShell features that run on Windows 7, Windows Server 2008 R2 and later, PowerShell v3 and later, and includes v5 features like PowerShellGet. What's Inside Learn PowerShell from the beginning, no experience required! Covers PowerShell v3 and up, Windows 7, and Windows Server 2008 R2 and later Each lesson takes you an hour or less About the Reader Experience with Windows administration is helpful. No programming or scripting experience needed. About the Author Veteran PowerShell MVPs Don Jones and Jeffery Hicks bring years as successful trainers to this concise, easy-to-follow book. Table of Contents Before you begin Meet PowerShell Using the help system Running commands Working with providers The pipeline: connecting commands

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Adding commands Objects: data by another name The pipeline, deeper Formatting - and why it's done on the right Filtering and comparisons A practical interlude Remote control: one-to-one, and one-to-many Using Windows Management Instrumentation and CIM Multitasking with background jobs Working with many objects, one at a time Security alert! Variables: a place to store your stuff Input and output Sessions: remote control with less work You call this scripting? Improving your parameterized script Advanced remoting configuration Using regular expressions to parse text files Additional random tips, tricks, and techniques Using someone else's script Never the end PowerShell cheat sheet Scripting gurus Jones and Hicks teach readers PowerShell from the ground up. They cover its underlying technologies, flexible scripting language, and enough of the .NET Framework to be effective in PowerShell scripting. (Computer Books)

How do you use PowerShell to navigate the filesystem, manage files and folders, or retrieve a web page? This introduction to the PowerShell language and scripting environment provides more than 400 task-oriented recipes to help you solve all kinds of problems. Intermediate to advanced system administrators will find more than 100 tried-and-tested scripts they can copy and use immediately. Updated for PowerShell 5.1 and Open Source PowerShell up to 7.0 and beyond, this comprehensive cookbook includes hands-on recipes for common tasks and administrative jobs that you can apply whether you're on the client or server version of Windows. You also get quick references to technologies used in conjunction with PowerShell, including regular expressions, the XPath language, format specifiers, and frequently referenced .NET, COM, and WMI classes. Learn how to use PowerShell on Windows 10 and Windows Server 2019 Tour PowerShell's core features, including the

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command model, object-based pipeline, and ubiquitous scripting Master fundamentals such as the interactive shell, pipeline, and object concepts Perform common tasks that involve working with files, internet-connected scripts, user interaction, and more Solve tasks in systems and enterprise management, such as working with Active Directory and the filesystem

Master the art of automating and managing your environment using PowerShell About This Book Find quick solutions to automate your environment with ease Work with large amounts of data effortlessly with PowerShell data types and secure them Packed with real-world examples to automate and simplify the management of your Windows environment Who This Book Is For If you are a system administrator who wants to become an expert in controlling and automating your Windows environment, then this book is for you. It is also for those new to the PowerShell language. What You Will Learn Optimize code through the use of functions, switches, and looping structures Install PowerShell on your Linux system Utilize variables, hashes, and arrays to store data Work with Objects and Operators to test and manipulate data Parse and manipulate different data types Write .NET classes with ease within the PowerShell Create and implement regular expressions in PowerShell scripts Deploy applications and code with PowerShell's Package management modules Leverage session-based remote management Manage files, folders, and registries through the use of PowerShell In Detail PowerShell scripts offer a handy way to automate various chores. Working with these scripts effectively can be a difficult task. This comprehensive guide starts from scratch and covers advanced-level topics to make you a PowerShell expert. The first module, PowerShell Fundamentals, begins with new features, installing PowerShell on Linux, working with parameters and objects, and also how you can work with

.NET classes from within PowerShell. In the next module, you'll see how to efficiently manage large amounts of data and interact with other services using PowerShell. You'll be able to make the most of PowerShell's powerful automation feature, where you will have different methods to parse and manipulate data, regular expressions, and WMI. After automation, you will enter the Extending PowerShell module, which covers topics such as asynchronous processing and, creating modules. The final step is to secure your PowerShell, so you will land in the last module, Securing and Debugging PowerShell, which covers PowerShell execution policies, error handling techniques, and testing. By the end of the book, you will be an expert in using the PowerShell language. Style and approach This practical guide covers all the advanced PowerShell functionalities that an administrator needs to learn to automate their environments.

Learn PowerShell from the inside out, right from basic scripting all the way to becoming a master at automating, managing, and maintaining your Windows environment About This Book Use proven best practices to optimize code and automate redundant tasks Get to grips with PowerShell's advanced functions and effectively administer your system Create a variety of PowerShell scripts to automate your environment Who This Book Is For If you are a system administrator who wants to become an expert in automating and managing your Windows environment, then this course is for you. Some basic understanding of PowerShell would be helpful. What You Will Learn Discover PowerShell commands and cmdlets and understand PowerShell formatting Solve common problems using basic file input/output functions Use .NET classes in Windows PowerShell and C# and manage Exchange Online Use PowerShell in C# to manage Exchange Online and work with .NET classes in PowerShell Automate LYNC clients, consuming client-side object models to

administrate SharePoint Online Optimize code through the use of functions, switches, and looping structures Manage files, folders, and registries through the use of PowerShell Discover best practices to manage Microsoft systems In Detail Are you tired of managing Windows administrative tasks manually and are looking to automate the entire process? If yes, then this is the right course for you. This learning path starts your PowerShell journey and will help you automate the administration of the Windows operating system and applications that run on Windows. It will get you up and running with PowerShell, taking you from the basics of installation to writing scripts and performing web server automation. You will explore the PowerShell environment and discover how to use cmdlets, functions, and scripts to automate Windows systems. The next installment of the course focuses on gaining concrete knowledge of Windows PowerShell scripting to perform professional-level scripting. The techniques here are packed with PowerShell scripts and sample C# code to automate tasks. You will use .NET classes in PowerShell and C# to manage Exchange Online. In the final section, you will delve into real-world examples to learn how to simplify the management of your Windows environment. You will get to grips with PowerShell's advanced functions and how to most effectively administer your system. This Learning Path combines some of the best that Packt has to offer in one complete, curated package. It includes content from the following Packt products: Getting Started with PowerShell by Michael Shepard Windows PowerShell for .Net Developers Second Edition by Chendrayan Venkatesan and Sherif Talaat Mastering Windows PowerShell Scripting by Brenton J.W. Blawat Style and approach This is a step-by-step course to help you effectively administer and maintain your development environment with PowerShell.

If you are a system administrator who wants to become an expert in controlling and automating your Windows environment, then this book is for you.

Prior knowledge of PowerShell's core elements and applications is required for this book.

Enhance your skills in expert module development, deployment, security, DevOps, and cloud Key Features A step-by-step guide to get you started with PowerShell Core 6.0 Harness the capabilities of PowerShell Core 6.0 to perform simple to complex administration tasks Learn core administrative concepts such as scripting, pipelines, and DSC Book Description Beginning with an overview of the different versions of PowerShell, Learn PowerShell Core 6.0 introduces you to VSCode and then dives into helping you understand the basic techniques in PowerShell scripting. You will cover advanced coding techniques, learn how to write reusable code as well as store and load data with PowerShell. This book will help you understand PowerShell security and Just Enough Administration, enabling you to create your own PowerShell repository. The last set of chapters will guide you in setting up, configuring, and working with Release Pipelines in VSCode and VSTS, and help you understand PowerShell DSC. In addition to this, you will learn how to use PowerShell with Windows, Azure, Microsoft Online Services, SCCM, and SQL Server. The final chapter will provide you with some use cases and pro tips. By

the end of this book, you will be able to create professional reusable code using security insight and knowledge of working with PowerShell Core 6.0 and its most important capabilities. What you will learn

- Get to grips with Powershell Core 6.0
- Explore basic and advanced PowerShell scripting techniques
- Get to grips with Windows PowerShell Security
- Work with centralization and DevOps with PowerShell
- Implement PowerShell in your organization through real-life examples
- Learn to create GUIs and use DSC in production

Who this book is for If you are a Windows administrator or a DevOps user who wants to leverage PowerShell to automate simple to complex tasks, then this book is for you. Whether you know nothing about PowerShell or just enough to get by, this guide will give you what you need to go to take your scripting to the next level. You'll also find this book useful if you're a PowerShell expert looking to expand your knowledge in areas such as PowerShell Security and DevOps.

This is today's definitive hands-on guide to automating Windows setup, deployment, and management with Windows PowerShell. Microsoft senior consultant Ed Wilson ("The Scripting Guy") fully illuminates every key PowerShell technique -- especially the major improvements and new cmdlets introduced with PowerShell 5.0. Wilson's positive and humorous approach has made him one of the world's most popular PowerShell instructors. His

practical examples and insights will help you maximize productivity and quality in all your IT operations, and integrate automated workflows throughout any traditional or cloud environment. Windows PowerShell Step by Step, Third Edition offers more labs and structured learning exercises than any other PowerShell 5.0 tutorial. Wilson guides you step-by-step through building every script he demonstrates. He reinforces key concepts with step-by-step exercises, including "One Step Further" exercises that deepen your understanding, so you can solve your unique problems. All examples and starter files are downloadable at the TechNet Script Center Script Repository. Coverage includes: Basic PowerShell concepts and cmdlets Key providers: Alias, Certificate, Environment, File System, Function, Registry, Variable, and WSMAN Remoting, jobs, scripts, functions, and modules Windows PowerShell ISE and snippets Creating, organizing, and running PowerShell profiles WMI: objects, namespaces, providers, classes, and queries Remoting WMI and calling WMI methods via CIM Automating Active Directory and AD Domain Services Debugging scripts and handling errors Defining complex workflows Using Desired State Configuration (DSC) to quickly enforce or restore configuration settings Finding and using the PowerShell Gallery's powerful new resources Each chapter concludes with a convenient quick

reference, and Wilson presents detailed appendices on coding conventions and regular expressions. If you're upgrading from any earlier version of PowerShell, a new "Start Here" section identifies the most valuable PowerShell features you haven't already learned, so you can focus your efforts where they'll make you most productive.

Get to grips with a new technology, understand what it is and what it can do for you, and then get to work with the most important features and tasks. If you're a keen administrator who wishes to learn more about Windows Management Instrumentation and the use of Cmdlets, then this book is the perfect Starter guide for experienced professionals. This book combines an easy-to-learn approach with practical examples using the powerful Powershell 3.0 in Windows. This book is great for system administrators who would like to learn how to remotely manage systems utilizing PowerShell 3.0. It is assumed that you already have experience with previous versions of PowerShell but the book will provide easy-to-learn, practical examples of how to use the new features included in PowerShell 3.0. Your hands-on, step-by-step guide to automating Windows administration with Windows PowerShell 3.0 Teach yourself the fundamentals of Windows PowerShell 3.0 command line interface and scripting language—one step at a time. Written by a leading scripting expert, this practical tutorial delivers learn-

by-doing exercises, timesaving tips, and hands-on sample scripts for performing administrative tasks on both local and remote Windows systems. Discover how to: Use built-in cmdlets to execute commands Write scripts to handle recurring tasks Use providers to access information beyond the shell environment Configure network components with Windows Management Instrumentation Manage users, groups, and computers with Active Directory services Execute scripts to administer and troubleshoot Microsoft Exchange Server 2010 With more than 250 ready-to-use recipes, this solutions-oriented introduction to the Windows PowerShell scripting environment and language provides administrators with the tools to be productive immediately.

Summary PowerShell in Depth, Second Edition is the go-to reference for administrators working with Windows PowerShell. Every major technique, technology, and tactic is carefully explained and demonstrated, providing a hands-on guide to almost everything an admin would do in the shell. Written by three experienced authors and PowerShell MVPs, this is the PowerShell book you'll keep next to your monitor—not on your bookshelf! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Book A Windows admin using PowerShell every day may not have the time to search the net every time

he or she hits a snag. Wouldn't it be great to have a team of seasoned PowerShell experts ready to answer even the toughest questions? That's what you get with this book. PowerShell in Depth, Second Edition is the go-to reference for administrators working with Windows PowerShell. Every major technique, technology, and tactic is carefully explained and demonstrated, providing a hands-on guide to almost everything an admin would do in the shell. Written by PowerShell MVPs Don Jones, Jeffrey Hicks, and Richard Siddaway, each valuable technique was developed and thoroughly tested, so you'll be able to consistently write production-quality, maintainable scripts while saving hours of time and effort. This book assumes you know the basics of PowerShell. What's Inside Automating tasks Packaging and deploying scripts Introduction to Desired State Configuration PowerShell security Covers PowerShell version 3 and later About the Authors Don Jones, Jeffery Hicks, and Richard Siddaway are Microsoft MVPs, trainers, and administrators. Collectively, they've authored nearly three dozen books on PowerShell and Windows administration. Table of Contents PART 1 POWERSHELL FUNDAMENTALS Introduction PowerShell hosts Using the PowerShell help system The basics of PowerShell syntax Working with PSSnapins and modules Operators Working with objects The PowerShell pipeline Formatting PART 2

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Grasp advanced PowerShell 7.1 functionalities for
effective automation of your environment Key
Features Automate complex tasks, manipulate data,
and secure your environment Work with dual code
for PowerShell 7 and Windows PowerShell to
maintain compatibility with older versions See
PowerShell in action, from learning the fundamentals

to creating classes, scripts, and modules

Book Description PowerShell scripts offer a convenient way to automate various tasks, although working effectively with these scripts can be challenging. *Mastering PowerShell Scripting* helps you to navigate through PowerShell's capabilities. This extensively revised edition includes new chapters on debugging and troubleshooting and creating GUIs (online chapter). Learn the new features of PowerShell 7.1 by working with parameters, objects, and .NET classes from within PowerShell 7.1. This comprehensive guide starts with the basics before moving on to advanced topics, including asynchronous processing, desired state configuration, using more complex scripts and filters, debugging issues, and error-handling techniques. Explore how to efficiently manage substantial amounts of data and interact with other services using PowerShell 7.1. This book will help you to make the most of PowerShell's automation features, using different methods to parse data, manipulate regular expressions, and work with Windows Management Instrumentation (WMI). What you will learn

- Optimize code with functions, switches, and looping structures
- Test and debug your scripts as well as raising and catching errors
- Work with objects and operators to test and manipulate data
- Parse and manipulate different data types
- Use jobs, runspaces, and runspace pools to run code asynchronously

Write .NET classes with ease within PowerShell
Create and implement regular expressions in PowerShell scripts Make use of advanced techniques to define and restrict the behavior of parameters Who this book is for This book is for system administrators who want to automate and speed up their processes using PowerShell and Windows PowerShell. Some familiarity with operating systems would be useful, but not essential. Here's the complete guide to Windows PowerShell 2.0 for administrators and developers Windows PowerShell is Microsoft's next-generation scripting and automation language. This comprehensive volume provides the background that IT administrators and developers need in order to start using PowerShell automation in exciting new ways. It explains what PowerShell is, how to use the language, and specific ways to apply PowerShell in various technologies. Windows PowerShell is Microsoft's standard automation tool and something that every Windows administrator will eventually have to understand; this book provides the background necessary to apply PowerShell automation. Covers how to use the language and specific ways to apply PowerShell in a variety of scenarios Addresses new features in the latest version of PowerShell and the additional functionality delivered by new products that provided direct or indirect ways to use PowerShell for scripting and automation purposes Explores the language fundamentals and how to use PowerShell for desktop, server, server application, and virtualization/cloud situations This thorough guide goes well beyond theory to offer real-world information and new scripting techniques, enabling administrators and developers to make the most of

PowerShell 2.0.

Get started with this powerful Windows administration tool Automate Windows administration tasks with ease by learning the fundamentals of Windows PowerShell 3.0. Led by a Windows PowerShell expert, you'll learn must-know concepts and techniques through easy-to-follow explanations, examples, and exercises. Once you complete this practical introduction, you can go deeper into the Windows PowerShell command line interface and scripting language with Windows PowerShell 3.0 Step by Step. Discover how to: Create effective Windows PowerShell commands with one line of code Apply Windows PowerShell commands across several Windows platforms Identify missing hotfixes and service packs with a single command Sort, group, and filter data using the Windows PowerShell pipeline Create users, groups, and organizational units in Active Directory Add computers to a domain or workgroup with a single line of code Run Windows PowerShell commands on multiple remote computers Unleash the power of scripting with Windows Management Instrumentation (WMI)

Do you know how to use Windows PowerShell to navigate the filesystem and manage files and folders? Or how to retrieve a web page? This introduction to the PowerShell language and scripting environment provides more than 430 task-oriented recipes to help you solve the most complex and pressing problems, and includes more than 100 tried-and-tested scripts that intermediate to advanced system administrators can copy and use immediately. You'll find hands-on tutorials on fundamentals, common tasks, and administrative jobs that you can apply whether you're on a client or server version of Windows. You also get quick references to technologies used in conjunction with PowerShell, including format specifiers and frequently referenced registry keys to selected .NET, COM, and WMI classes. With Windows PowerShell

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Cookbook, you'll get more done in less time. Take a tour of PowerShell's core features, including the command model, object-based pipeline, and ubiquitous scripting Learn PowerShell fundamentals such as the interactive shell and fundamental pipeline and object concepts Perform common tasks that involve working with files, Internet-connected scripts, user interaction, and more Solve tasks in systems and enterprise management, such as working with Active Directory, the filesystem, registry, event logs, processes, and services

Learn the fundamentals of PowerShell to build reusable scripts and functions to automate administrative tasks with Windows About This Book Harness the capabilities of the PowerShell system to get started quickly with server automation Learn to package commands into a reusable script and add control structures and parameters to make them flexible Get to grips with cmdlets that allow you to perform administration tasks efficiently Who This Book Is For This book is intended for Windows administrators or DevOps users who need to use PowerShell to automate tasks.

Whether you know nothing about PowerShell or know just enough to get by, this guide will give you what you need to go to take your scripting to the next level. What You Will Learn Learn to verify your installed version of PowerShell, upgrade it, and start a PowerShell session using the ISE Discover PowerShell commands and cmdlets and understand PowerShell formatting Use the PowerShell help system to understand what particular cmdlets do Utilise the pipeline to perform typical data manipulation Package your code in scripts, functions, and modules Solve common problems using basic file input/output functions Find system information with WMI and CIM Automate IIS functionality and manage it using the WebAdministration module In Detail Windows PowerShell is a task-based command-line shell and scripting

Acces PDF Powershell And Wmi

language designed specifically for system administration. Built on the .NET Framework, Windows PowerShell helps IT professionals and power users control and automate the administration of the Windows operating system and applications that run on Windows. PowerShell is great for batch importing or deleting large sets of user accounts and will let you collect a massive amount of detailed system information in bulk via WMI (Windows Management Instrumentation). Getting Started with PowerShell is designed to help you get up and running with PowerShell, taking you from the basics of installation, to writing scripts and web server automation. This book, as an introduction to the central topics of PowerShell, covers finding and understanding PowerShell commands and packaging code for reusability, right through to a practical example of automating IIS. It also includes topics such as installation and setup, creating scripts, automating tasks, and using Powershell to access data stores, registry, and file systems. You will explore the PowerShell environment and discover how to use cmdlets, functions, and scripts to automate Windows systems. Along the way, you will learn to perform data manipulation and solve common problems using basic file input/output functions. By the end of this book, you will be familiar with PowerShell and be able to utilize the lessons learned from the book to automate your servers. Style and approach A practical learning guide, complete with plenty of activities, examples and screenshots.

The quick start guide for an advanced enterprise PowerShell framework About This Book Introduces industry-proven techniques that improve script efficiency and reliability Example-rich guide based on real-world scenarios Facilitates building a script that can fully scan a Windows server and identify components Who This Book Is For This book is for IT professionals and Windows administrators who would like to

gain intensive, hands-on knowledge and skills on PowerShell without spending hours and hours in learning. If you have been struggling to find the time to gain proficiency and confidence with PowerShell and everyday scripting tasks

What You Will Learn

- Create an advanced PowerShell scripting template that provides repeatable code to jumpstart all of your scripting projects
- Learn how to securely encrypt and store usernames, passwords, and other sensitive data in PowerShell scripts and answer files
- Understand how to optimize the performance of scripts to help process large datasets quickly and avoid time-consuming mistakes
- Develop a script to scan for non-standard Windows Server configurations and identify service accounts used on Windows Servers
- Gather a large list of data from a Windows server without locally or remotely logging in interactively

In Detail

Enterprise PowerShell Scripting Bootcamp explains how to create your own repeatable PowerShell scripting framework. This framework contains script logging methodologies, answer file interactions, and string encryption and decryption strategies. This book focuses on evaluating individual components to identify the system's function, role, and unique characteristics. To do this, you will leverage built-in CMDlets and Windows Management Instrumentation (WMI) to explore Windows services, Windows processes, Windows features, scheduled tasks, and disk statistics. You will also create custom functions to perform a deep search for specific strings in files and evaluate installed software through executable properties. We will then discuss different scripting techniques to improve the efficiency of scripts. By leveraging several small changes to your code, you can increase the execution performance by over 130%. By the end of this book, you will be able to tie all of the concepts together in a PowerShell-based Windows server scanning script. This discovery script will be able to scan a Windows server to

identify a multitude of components. Style and approach This book is all about fast and intensive learning. This means, we don't waste time in helping readers get started. The new content is about leveraging highly-effective examples to build new things, help solving problems in newer and unseen ways, and providing an enterprise-ready platform to create PowerShell Scripts.

This portable reference to Windows PowerShell 3.0 summarizes the command shell and scripting language, and provides a concise reference to the many tasks that make PowerShell so useful. If you're a busy Windows administrator, and don't have time to plow through huge books or search online, this is the ideal on-the-job tool.

Written by Microsoft PowerShell team member Lee Holmes, and excerpted from his Windows PowerShell Cookbook, this edition offers up-to-date coverage of PowerShell 3.0. You'll find information on the .NET classes and legacy tools you need to manage your system, along with chapters on how to write scripts, manage errors, and format output. Beginning with a guided tour of Windows PowerShell, this handy guide covers: PowerShell language and environment Regular expression reference XPath quick reference .NET string formatting .NET DateTime formatting Selected .NET classes and their uses WMI reference Selected COM objects and their uses Selected events and their uses Standard PowerShell verbs

This portable reference to Windows PowerShell summarizes both the command shell and scripting language, and provides a concise reference to the major tasks that make PowerShell so successful. It's an ideal on-the-job tool for Windows administrators who don't have time to plow through huge books or search online. Written by Microsoft PowerShell team member Lee Holmes, and excerpted from his Windows PowerShell Cookbook, Windows PowerShell Pocket

Reference offers up-to-date coverage of PowerShell's 1.0 release. You'll find information on .NET classes and legacy management tools that you need to manage your system, along with chapters on how to write scripts, manage errors, format output, and much more. Beginning with a whirlwind tour of Windows PowerShell, this convenient guide covers: PowerShell language and environment Regular expression reference PowerShell automatic variables Standard PowerShell verbs Selected .NET classes and their uses WMI reference Selected COM objects and their uses .NET string formatting .NET datetime formatting An authoritative source of information about PowerShell since its earliest betas, Lee Holmes' vast experience lets him incorporate both the "how" and the "why" into the book's discussions. His relationship with the PowerShell and administration community -- through newsgroups, mailing lists, and his informative blog Lee Holmes -- gives him insight into problems faced by administrators and PowerShell users alike. If you're ready to learn this powerful tool without having to break stride in your routine, this is the book you want.

A guide to using Windows PowerShell to script Windows administrative tasks and control Windows from the command line includes more than four hundred task-oriented recipes and more than one hundred scripts.

Expert recommendations, pragmatically applied. Automate system administration using Windows PowerShell best practices—and optimize your operational efficiency. With this practical guide, Windows PowerShell expert and instructor Ed Wilson delivers field-tested tips, real-world examples, and candid advice culled from administrators across a range of business and

technical scenarios. If you're an IT professional with Windows PowerShell experience, this book is ideal. Discover how to: Use Windows PowerShell to automate Active Directory tasks Explore available WMI classes and methods with CIM cmdlets Identify and track scripting opportunities to avoid duplication Use functions to encapsulate business logic and reuse code Design your script's best input method and output destination Test scripts by checking their syntax and performance Choose the most suitable method for running remote commands Manage software services with Desired State Configuration Prepare for the future of Microsoft automation with this no-nonsense guide Windows PowerShell 2 is the scripting language that enables automation within the Windows operating system. Packed with powerful new features, this latest version is complex, and Windows PowerShell 2 For Dummies is the perfect guide to help system administrators get up to speed. Written by a Microsoft MVP with direct access to the program managers and developers, this book covers every new feature of Windows PowerShell 2 in a friendly, easy-to-follow format. Windows PowerShell 2 is the updated scripting language that enables system administrators to automate Windows operating systems System administrators with limited scripting experience will find this book helps them learn the fundamentals of Windows PowerShell 2 quickly and easily Translates

the jargon and complex syntax of Windows PowerShell 2 Covers script debugging improvements, the ability to invoke commands remotely, and the new user interface Uses real-world applications to clarify the theory, fundamentals, and techniques of the scripting language Written by a Microsoft MVP with direct access to the developers of Windows PowerShell 2 Windows PowerShell 2 For Dummies makes this tool easily accessible to administrators of every experience level.

Use Windows PowerShell Desired State Configuration (DSC) to configure your infrastructure on-premises and in the cloud. In an environment where changes and deployments are happening all the time, DSC makes the necessary adjustments to the system so you don't have to. Pro PowerShell Desired State Configuration shows you how.

PowerShell Desired State Configuration (DSC) is a powerful configuration management platform that makes it easier than ever to perform configuration management of your infrastructure, whether on-premises or in the cloud. With Pro PowerShell Desired State Configuration, Ravikanth Chaganti revises and significantly expands his previous edition, bringing you a complete in-depth reference for applying this evolving technology in your day-to-day work. What's new in this edition? Get up-to-date, in-depth guidance on DSC in the data center Understand the central role that DSC plays in

DevOps today Integrate DSC into build and release management tools Learn to think and act like a developer when automating your configuration management, creating a testable, robust process that you can use again and again Find out why and how DSC has an important role to play in public and private cloud deployments Apply DSC in the cloud with Microsoft Azure or Amazon Web Services or Google Cloud Platform Who This Book Is For IT administrators, developers and DevOps engineers working in Windows-based data center environments. With a little prior PowerShell scripting experience, this book can be used as an in-depth reference to creating, customizing, and extending DSC in Windows. IT administrators with limited scripting experience will also find this book a useful overview of what DSC offers and how to use DSC resources to automate configuration management and deployment.

PowerShell gives Windows administrators immense power to automate and customize virtually any administrative task—saving time, increasing productivity, and giving you unprecedented flexibility. PowerShell 2.0 adds important new features that offer even greater control over Windows environments. Windows PowerShell Unleashed will not only give you deep mastery over PowerShell but also a greater understanding of the features being introduced in PowerShell 2.0—and show you how to

use it to solve your challenges in your production environment. The authors begin by systematically illuminating PowerShell's core concepts and techniques, helping you leverage whatever Windows scripting experience you may already have. Next, using complete, easy-to-adapt examples, they show how to use PowerShell to manage file systems, permissions, the Registry, WMI objects, Active Directory, Exchange Server, and many other elements of the Windows environment. More than half of this edition's material and examples have been completely rewritten for PowerShell 2.0, and the authors have added seven entirely new chapters—covering security, PowerShell application development, Systems Center Operations Manager 2007, and much more. Whatever Windows systems you manage, Windows PowerShell Unleashed contains the scripts and techniques you need to manage them far more effectively. Install, configure, and customize PowerShell 2.0 and master its command line interface Discover proven best practices for PowerShell scripting Make the most of PowerShell cmdlets—especially the new cmdlets included in PowerShell 2.0 Leverage PowerShell's deep .NET Framework integration Secure your scripts using code signing, execution policies, and PowerShell's built-in security Use custom script functions to manage permissions more efficiently Control the registry locally and remotely and use

PowerShell's powerful new registry transactions
Use PowerShell as a management interface
Automate Exchange Server 2007 administrative tasks
Automate the management of Microsoft's new System Center Operations Manager 2007 Preview
the forthcoming Graphical PowerShell scripting environment
Understand how to manage Active Directory using PowerShell
Master using PowerShell with WMI
Learn PowerShell 2.0 remoting
Use PowerShell to Streamline and Automate Your Most Time-Consuming Windows Administration Tasks
With Windows PowerShell, Microsoft brings innovative console-based system administration and scripting to Windows clients and servers. PowerShell combines the best features of traditional UNIX shells with the immense power of the .NET Framework, offering a consistent and easy-to-use replacement for both the Windows command line and the Windows Script Host. In *Essential PowerShell*, noted expert Holger Schwichtenberg gives Windows sysadmins all the knowledge and sample scripts they need to successfully administer production systems with PowerShell. Schwichtenberg begins by introducing the innovative PowerShell architecture, along with crucial PowerShell concepts such as pipelining and navigation. Next, he introduces the PowerShell Script Language, shows the secure execution of command sequences as scripts, and demonstrates how to use PowerShell to access

essential operating system interfaces such as COM, WMI, ADSI, and ADO.NET. After you've mastered the fundamentals, Schwichtenberg presents an extensive collection of PowerShell solutions for virtually every area of day-to-day administration. For each topic, he presents dozens of self-contained examples, all downloadable from a companion Web site. He covers both Microsoft's standard PowerShell commandlets and the free commandlets available as PowerShell Community Extensions. He also presents a full chapter of tips, tricks, and troubleshooting solutions. Coverage includes Understanding PowerShell's components and features Setting up your PowerShell scripting environment Creating and using commandlets Using object-oriented pipelining for filtering, sorting, grouping, comparisons, calculations, and more Mastering PowerShell's uniform navigation model and using it with all types of data Programming command sequences with the PowerShell Script Language Making the most of the PowerShell console and third-party tools Managing processes, event logs, and registry entries Controlling networking, printing, and software installation Manipulating Active Directory and other enterprise services with PowerShell Using PowerShell to enforce stronger system and network security Storing data in files, documents, and databases Preface xv Part I: Getting Started with PowerShell 1:

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