
Automating Administration with Windows PowerShell™ 2.0

Duración: 5 Días Código del Curso: M10325 Version: A

Temario:

This course provides students with the knowledge and skills to utilize Windows PowerShell for administering and automating administration of Windows based servers.

Dirigido a:

This course is intended for IT Professionals already experienced in general Windows Server and Windows Client administration, including Active Directory administration. No prior experience with any version of Windows PowerShell, or any scripting language, is assumed.

Objetivos:

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| <ul style="list-style-type: none">■ After completing this course, students will be able to:■ Explain how Windows PowerShell works.■ Use Windows PowerShell as an interactive, command-line shell.■ Use Core Windows PowerShell cmdlets for everyday purpose.■ Customize the output using Windows PowerShell Formatting Subsystem.■ Explain what Windows Management Instrumentation (WMI) is and how it can be used from Windows PowerShell.■ Manage Active Directory objects using Windows PowerShell cmdlets. | <ul style="list-style-type: none">■ Write basic Windows PowerShell scripts that execute batches of commands.■ Work with Windows PowerShell's background jobs and remote administration functionality.■ Master the scripting language of Windows PowerShell.■ Use advanced techniques related to structured programming within Windows PowerShell.■ Automate Windows Server 2008 R2 Administration using Windows PowerShell.■ Identify the best practices for working with Windows PowerShell. |
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Prerequisites:

Before attending this course, students must have:

- Experience with Windows networking technologies and implementation.
 - Experience with Windows Server administration, maintenance, and troubleshooting
 - Experience with Active Directory technologies and implementation, including Group Policy.
 - Experience with Windows Server 2008 Web application server technologies and implementation.
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Contenido:

Module 1: Fundamentals for Using Windows

PowerShell v2

This module provides background on Windows PowerShell v2 and where it fits into the Windows technology family. It also covers installation and configuration of Windows PowerShell. It familiarizes students with the interactive shell console, and shows how to operate and interpret the built-in help system. This module focuses on shell's discoverability features, including the online help system and cmdlet inventory. Finally, this module describes how the Windows PowerShell pipeline works at a basic level.

- Windows PowerShell Technology Background and Overview
- Windows PowerShell as an Interactive Command-Line Shell
- Using the Windows PowerShell Pipeline

Module 2: Understanding and Using the Formatting System

This module explains how the PowerShell formatting subsystem works, and shows how to customize the output of cmdlets. It covers the rules that the shell follows for formatting objects by default, and explains how to use the four formatting cmdlets – and their parameters – to customize and control the output displayed on-screen or written to a file, printer, or other output destination.

- Understanding the Formatting System
- Using the Formatting System

Module 3: Core Windows PowerShell Cmdlets

This module describes several core cmdlets that are used in many different administrative tasks. This module also covers the basics of filtering objects that are in the PowerShell pipeline. It explains advanced pipeline techniques including pipeline parameter binding and in-pipeline object manipulation.

- Core Cmdlets for Everyday Use
- Comparison Operators, Pipeline Filtering, and Object Enumeration
- Advanced Pipeline Techniques

Module 4: Windows Management Instrumentation

This module explains what Windows Management Instrumentation (WMI) is, how it works, and how it can be used from within Windows PowerShell. It describes the structure and security of WMI, and how to query WMI information both from local and remote computers. It also explains how to invoke WMI methods to accomplish configuration changes

Module 5: Automating Active Directory Administration

This module introduces the concept of Active Directory administrative automation. It explains how to retrieve, create, modify, move, and remove objects in the Active Directory. It focuses on PowerShell-centric techniques rather than scripting, and heavily leverages on basic and advanced pipeline techniques covered in previous modules.

- Active Directory Automation Overview
- Managing Users and Groups
- Managing Computers and Other Directory Objects

Module 6: Windows PowerShell Scripts

This module introduces basic Windows PowerShell scripts that execute a batch of shell commands in a single operation. It points out the security concerns associated with scripting, and how to configure and control the shell's security settings that relate to scripting. It also explains how to write basic scripts that execute batches of commands, and how to parameterize scripts in order to make them more flexible in a variety of situations.

- Script Security
- Basic Scripts
- Parameterized Scripts

Module 7: Background Jobs and Remote Administration

This module explains how to work with Windows PowerShell's background jobs and remote administration functionality. It shows how to create, monitor, and manage local background jobs, and receive results from completed jobs. It also covers how to configure Windows PowerShell remoting both locally and in a domain environment. This module describes how to create and manage session connections to remote computers, and explain how to use those session connections in one-to-one remote shell instances as well as one-to-many remote command invocation. Finally, it shows how to invoke remote commands as background jobs, and how to manage those jobs and receive results from them.

- Working with Background Jobs
- Using Windows PowerShell Remoting

Module 8: Advanced Windows PowerShell Tips and Tricks

This module introduces several advanced Windows PowerShell techniques. While these

Module 9: Automating Windows Server 2008 R2 Administration

This module gives an opportunity to complete several real-world administration tasks related to Windows Server 2008 R2. It provides minimal instruction in how to use the cmdlets and techniques required to accomplish the lab portion of this module; instead, it lets students rely on the skills they have learned in the preceding modules of this course.

- Windows Server 2008 R2 Modules Overview
- Server Manager Cmdlets Overview
- Group Policy Cmdlets Overview
- Troubleshooting Pack Overview
- Best Practices Analyzer Cmdlets Overview
- IIS Cmdlets Overview

Module 10: Reviewing and Reusing Windows PowerShell Scripts

One of the core skills administrators need is the ability to take a script that someone else has written, review that script to understand what it does, and identify areas of that script that may need to be modified to run in their environment. Those skills are exactly what this module tries to build.

- Example Script Overview
- Understanding Scripts

Module 11: Writing Your Own Windows PowerShell Scripts

This module explains the concepts and techniques related to structured scripting and programming within Windows PowerShell. It describes how to create, manage, and use variables. It introduces the complete "scripting language" of Windows PowerShell, which consists of several programming constructs. This module also covers advanced topics and techniques related to structured programming within Windows PowerShell. It explains how to trap and handle errors that occur during script execution, and also describes the proper techniques and practices for debugging a script that is not executing as expected. It shows how to modularize scripts into a variety of reusable functions, with the ultimate goal of producing a function that mimics the structure of a shell cmdlet.

- Variables, Arrays, Escaping, and More Operators
- What is Scope?
- Scripting Constructs
- Error Trapping and Handling
- Debugging Techniques
- Modularization

and other tasks, and how to write commands that respond to WMI events triggered by the operating system.

- Windows Management Instrumentation Overview
- Using Windows Management Instrumentation

techniques do not contribute directly to any particular business goal, they do enable more efficient use of the shell itself, which leads to more efficient administration and automation. It shows how to use profiles to consistently configure the shell environment, and how to use several techniques for effectively re-using and sharing existing modularized scripts. It also points out best practices and techniques related to script documentation.

- Using Profiles
- Re-Using Scripts and Functions
- Writing Comment-Based Help

Más información:

Para más información o para reservar tu plaza llámanos al (34) 91 425 06 60

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