

10325 Automating Administration with Windows PowerShell v2.0

Days of Training: 5

Overview

This five-day instructor-led course provides students with the knowledge and skills to use Windows PowerShell cmdlets and write PowerShell scripts for routine tasks and bulk operations. This course is intended for IT Professionals already experienced in general Windows Server and Windows Client administration, including Active Directory administration.

Prerequisites

- 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.

At Course Completion

Upon successful completion of this course, students will be able to:

- Use Windows PowerShell as an interactive, command-line shell.
- Utilize advanced PowerShell pipeline techniques, particularly pipeline parameter binding and in-pipeline object manipulation.
- Understand how the PowerShell formatting subsystem works and how they can manipulate it to customize the output they see.
- Describe Windows Management Instrumentation (WMI) and how it can be used from within Windows PowerShell.
- Invoke WMI methods to accomplish configuration changes and other tasks.
- Retrieve, create, modify, move, and remove objects in the Active Directory, particularly user, group, and computer objects.
- Write basic PowerShell scripts that execute batches of commands.
- Parameterize scripts in order to make them more flexible in a variety of situations.
- Work with Windows PowerShell's background jobs and remote administration functionality.
- Create, monitor and manage local background jobs and receive results from completed jobs.
- Understand concepts and techniques related to structured scripting and programming within PowerShell.
- Administer tasks related to Windows Server 2008 R2.

MS10325

Lesson 1: Fundamentals for Using Windows PowerShell v2

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

Lesson 2: Core Windows PowerShell cmdlets

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

Lesson 3: The Windows PowerShell Formatting Subsystem

Understanding the Formatting Subsystem
Using the Formatting Subsystem

Lesson 4: Windows Management Instrumentation

Windows Management Instrumentation Overview
Using Windows Management Instrumentation
Advanced Windows Management Instrumentation Techniques

Lesson 5: Automating Active Directory Administration

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

Lesson 6: Windows PowerShell Scripts

Script Security
Basic Scripts
Parameterized Scripts

Lesson 7: Background Jobs and Remote Administration

Working with Background Jobs
Using Windows PowerShell Remoting

Lesson 8: Intermediate Scripting

Variables, Arrays, Escaping, Scope and More Operators
Scripting Constants

Lesson 9: Error Handling, Debugging, and Modularization

Variables, Arrays, Escaping and More Operators
Debugging Techniques
Modularization

Lesson 10: Automating Windows Server 2008 R2 Administration

Windows Server 2008 R2 Modules
Server Manager cmdlets Overview
Group Policy cmdlets Overview

Lesson 11: Advanced Windows PowerShell Tips and Tricks

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

Lesson 12: Practical Administrative Automation

Practical Labs Overview
New User Provisioning Lab