



To register or for more information call our office **(208) 898-9036** or email register@leapfoxlearning.com



MS— 10326Q Advanced Automating Administration with Windows Powershell v2.0

Duration:

Traditional Instructor Led Learning -3.00 Day(s)

Software Assurance Vouchers Accepted



Audience Profile

This course is designed for students who have attended Course 10325 Automating Administration with Windows Powershell v2.0 or have worked with Powershell for a year and have scripting/development background. Targeted Windows Server Technical Specialists (administrators) are responsible for hands-on deployment and day-to-day management of Windows-based servers and Windows-based client computers for enterprise organizations. These administrators manage file and print servers, network infrastructure servers, Web servers, and IT application servers, as well as supporting client computers. They use graphical administration tools as their primary interface but want to use Windows PowerShell cmdlets and write PowerShell scripts for routine tasks and bulk operations. They conduct most server management tasks remotely by using Remote Desktop, Server Manager, or other administration tools installed on their local workstation.

Course Prerequisites

In addition to their professional experience, students who attend this training should have the following technical knowledge:

- Experience with Windows networking technologies and implementation.
- Experience with Windows Server administration, maintenance, and troubleshooting.

Course Outline

Module 1: Windows PowerShell Scripts

The goal of this module is to introduce students to basic Windows PowerShell scripts that execute a batch of shell commands in a single operation. Students will learn about the security concerns associated with scripting, and how to configure and control the shell's security settings that relate to scripting. Students will learn 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.

Lesson 1: Script Security

Lesson 2: Basic Scripts

Lesson 3: Parameterized Scripts

Module 1 Lab: Writing Windows PowerShell Scripts

Duration: 30 minutes

Lab Goal: To configure shell execution policy and create one or more scripts that include one or more commands.

Lab Objective(s):

- Move frequently-run commands into a script
- Parameterize hardcoded values to make scripts more flexible
- Run parameterized scripts using named and positional parameters.

Module 2: Intermediate Scripting

The goal of this module is to teach students the concepts and techniques related to structured scripting and programming within Windows PowerShell. Students will learn to create, manage, and use variables. Students will also learn the complete “scripting language” of Windows PowerShell, which consists of several programming constructs.

Lesson 1: Variables, Arrays, Escaping, Scope, and More Operators***Lesson 2: Scripting Constructs******Module 2 Lab A: Using Variables and Arrays*****Duration: 30 minutes**

Lab Goal: To create, manage, and remove variables, and to access individual elements of array/collection variables.

Lab Objective(s):

- Create, modify, and remove variables from the current scope
- Demonstrate how variables work within the scope hierarchy
- Make comparisons using -like and -contains
- Assign collections of objects to variables and access individual objects from within the variables
- Create an array by using a comma-separated list
- Create and use hashtables

Module 2 Lab B: Using Scripting Constructs**Duration: 30 minutes**

Lab Goal: To write scripts that utilize logical decision-making and repetition, using the scripting constructs in Windows PowerShell.

Lab Objective(s):

- Use Windows PowerShell scripting statements and constructs, including If...ElseIf...Else, For, Switch, ForEach, Do/Until/Loop, and break
- Rewrite structured scripts as a single Windows PowerShell command pipeline

Module 3: Automating Windows Server 2008 R2 Administration

The goal of this module is to have students complete several real-world administration tasks related to Windows Server 2008 R2. Students will receive minimal instruction in how to use the cmdlets and techniques required to accomplish the lab portion of this module; instead, students will be introduced to the necessary PowerShell modules, and will then rely on the skills that have learned in the preceding modules of this course.

Lesson 1: Windows Server 2008 R2 Modules Overview***Lesson 2: Server Manager Cmdlets Overview******Lesson 3: Group Policy Cmdlets Overview***

Module 3 Lab A: Using Windows Server 2008 R2 Modules

Lab Goal: To familiarize the student with PowerShell modules in Windows Server 2008 R2 and give them experience in typical management tasks using not only the module cmdlets, but core PowerShell cmdlets as well.

Lab Objective(s):

- Import modules into the shell
- Identify cmdlets within a module
- Use R2 modules to accomplish basic administrative tasks.
- Use R2 cmdlets and core PowerShell cmdlets in a pipelined expression.

Module 3 Lab B: Using the Group Policy Cmdlets

Lab Goal: To give students experience in typical management tasks using Group Policy cmdlets

Lab Objective(s):

- List all the Group Policy Objects in the domain.
- Create a text-based report
- Create an HTML report
- Backup all Group Policy Objects.

Module 4: Advanced Windows PowerShell Tips and Tricks

The goal of this module is to round out students' Windows PowerShell skills and knowledge with several advanced techniques. While these 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. Students will learn to use profiles to consistently configure the shell environment, and will learn to use several techniques for effectively re-using and sharing the modularized scripts that they have written. Students will also learn best practices and techniques related to script documentation.

Lesson 1: Using Profiles

Lesson 2: Re-Using Scripts and Functions

Lesson 3: Writing Comment-Based Help

Module 4 Lab: Advanced PowerShell Tips and Tricks

Lab Goal: To create a Windows PowerShell profile, repackage a script as a script module, and write comment-based help for the functions in a script module. **Lab Objective(s):**

- Write and use profile scripts.
- Package scripts as script modules.
- Add comment-based help to functions and script modules.

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