Automating Administration with Windows PowerShell (10961)

ID MS-10961  Price US$ 2,895  Duration 5 days

Who should attend
- IT Professionals experienced in general Windows Server and Windows Client administration
- IT Professionals experienced in administering and supporting Application servers and services including Exchange, SharePoint, SQL
- Students who want to use Windows PowerShell to automate administrative tasks from the command line, using any Microsoft or independent software vendor (ISV) product that supports Windows PowerShell manageability.

Prerequisites
- Previous Windows Server and Windows Client management knowledge and hands on experience.
- Experience Installing and Configuring Windows Server into existing enterprise environments, or as standalone installations.
- Knowledge and experience of network adapter configuration, basic Active Directory user administration, and basic disk configuration.
- Knowledge and hands on experience specifically with Windows Server 2012 and Windows 8 would be of benefit but is not essential.

Course Objectives

- Understand the basic concepts behind Windows PowerShell
- Work with the Pipeline
- Understand How the Pipeline Works
- Use PSProviders and PSDrives
- Format Output
- Use Windows Management Instrumentation (WMI) and Common Information Model (CIM)
- Prepare for Scripting
- Moving From a Command to a Script to a Module
- Administer Remote Computers
- Put the various Windows PowerShell components together
- Use Background Jobs and Scheduled Jobs
- Use Advanced PowerShell Techniques and Profiles

Course Content

This five-day, hands-on course will teach you to use Windows PowerShell 4.0 for administering and automating administration of Windows based servers. This course covers Windows PowerShell command-line features and techniques, prerequisite skills supporting many different Microsoft products (Windows Server, Windows Client, Exchange Server, SharePoint Server, SQL Server, System Center), and how to execute and monitor scripts more efficiently through more robust session connectivity, workflow capabilities, improved job scheduling, and Windows PowerShell Web Access.
You will also learn Windows PowerShell with greater ease through improved cmdlet discovery and simplified, consistent syntax across all cmdlets and how to write Windows PowerShell scripts quicker and more intuitively through the new Integrated Scripting Environment (ISE) that enables script sharing, which connects IT pros to a larger Windows PowerShell user community.

**Detailed Course Outline**

**Module 1: Getting Started with Windows PowerShell**
- Overview and background
- Find and run commands

**Module 2: Working with the Pipeline**
- Export, import and conver data
- Filter objects out of the Pipeline
- Enumerate objects in the Pipeline

**Module 3: Understanding how the Pipeline works**
- Pass data to the Pipeline:
  - ByValue
  - ByPropertyName

**Module 4: Using PSP Provid ers and PSDrives**
- PSP Provid ers and PSDrives
- Use PSDrives

**Module 5: Formatting Output**
- Basic formatting
- Advanced formatting
- Redirect formatted output

**Module 6: Using WMI and CIM**
- Overview of WMI/CIM
- Query data
- Make changes

**Module 7: Prepare for Scripting**
- Using Variables
- Scripting Security
- Working with Alternate Credentials

**Module 8: Moving From a Command to a Script to a Module**
- Migration from command to script
- Move from script to function to module
- Implement basic error handling
- Basic scripting constructs
- Advanced scripting

**Module 9: Administering Remote Computers**
- Basic remoting
- Remote sessions
- Use remoting for delegated administration

**Module 10: Plan the Script and Putting it All Together**

**Module 11: Using Background Jobs and Scheduled Jobs**
Module 12: Using Advanced PowerShell Techniques and Profiles

- Advanced PowerShell techniques
- Create Profile Scripts

Labs

- Configuring Windows PowerShell
- Finding and Running Basic Commands
- Working with the Pipeline
- Exporting, Importing and Converting Data
- Filtering Objects Out of the Pipeline
- Enumerate Objects in the Pipeline
- Working with Pipeline Parameter Binding
- PSP provid ers and PSDrives
- Formatting Output
- Working with WMI and CIM
- Working with Security in PowerShell
- Moving From Command to Script
- Moving From Script to Function to Module
- Implementing Basic Error Handling
- Adding Logic to a Script
- Working with Remoting
- Working with PS Sessions
- Remoting for Delegated Administration
- Configuring a New Server Core Installation
- Working with Background Jobs
- Working with Scheduled Jobs
- Practicing Advanced Techniques