5 Days

10961C: Automating Administration with Windows PowerShell

Automating Administration with Windows PowerShell training provides fundamental knowledge and skills to use Windows PowerShell 4.0 for administering and automating administration of Windows based servers.

This five-day course lays emphasizes on primary Windows PowerShell command-line features and techniques, and will provide pre-requisite skills supporting a broad range of Microsoft products, including Windows Server, Exchange Server, Windows Client, SQL Server, SharePoint Server, System Center, and more.

During the training period, participants will learn to execute and monitor scripts more efficiently through more robust workflow capabilities, session connectivity, enhanced job scheduling, and Windows PowerShell Web Access.

The course has been built upon Windows Server 2012 R2 and Windows 8.1 and though it focuses on Windows PowerShell v4.0, it is also relevant in v2.0 and v3.0 Windows PowerShell environments.

Completion of this training course will enable candidates in:

- Understanding the basic concepts behind Windows PowerShell
- Understanding How the Pipeline Works
- Working with the Pipeline
- Using PSProviders and PSDrives
- Preparing for Scripting
- Formatting Output
- Using WMI and CIM
- Administering Remote Computers
- Using Advanced PowerShell Techniques and Profiles
- Using Background Jobs and Scheduled Jobs
- Putting the various Windows PowerShell components together

Course Details

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Course Outline

Module 1: Getting Started with Windows PowerShell

- Overview and Background of Windows PowerShell

- Running Commands

- Finding and Learning Commands

Lab: Configuring Windows PowerShell
Lab: Finding and Running Basic Commands

Module 2: Working with the Pipeline

- Understand the Pipeline

- Select, Sort, and Measure Objects

- Convert, Export, and Import Objects

- Filter Objects Out of the Pipeline

- Enumerate Objects in the Pipeline

Lab: Using the Pipeline
Lab: Converting, Exporting, and Importing Objects
Lab: Filtering Objects
Lab: Enumerating Objects

Module 3: Understanding How the Pipeline Works

- Pass Data in the Pipeline by Value

- Pass Data in the Pipeline by Property Name

Lab: Working with Pipeline Parameter Binding

Module 4: Using PSProviders and PSDrives

- Use PSProviders

- Use PSDrives

Lab: Use PSProviders and PSDrives

Module 5: Formatting Output

- Use Basic Formatting

- Use Advanced Formatting

- Redirect Formatted Output

Lab: Formatting Output

Module 6: Querying Management Information by Using CIM and WMI

- Understand WMI and CIM

- Query Data with WMI and CIM

- Make Changes by Using WMI and CIM

Lab: Working with WMI and CIM

Module 7: Preparing for Scripting

- Use Variables

- Script Security

Lab: Working with Security in Windows PowerShell

Module 8: Moving from a Command to Script to Module

- Move from Command to Script

- Move from Script to Function to Module

- Implement Basic Error Handling

- Use Basic Scripting Constructs

- Explore Other Scripting Features

Lab: Moving from Command to Script
Lab: Moving from Script to Function to Module
Lab: Implementing Basic Error Handling
Lab: Creating an Advanced Function

Module 9: Administering Remote Computers

- Use Basic Remoting

- Use Advanced Remoting Techniques

- Use Remoting Sessions

Lab: Using Basic Remoting
Lab: Using Remoting Sessions

Module 10: Putting it All Together

- Provision a New Server Core Instance

Module 11: Use Background Jobs and Scheduled Jobs

- Use Background Jobs

- Use Scheduled Jobs

Lab: Using Background Jobs
Lab: Using Scheduled Jobs

Module 12: Use Profiles and Advanced PowerShell Techniques

- Use Advanced PowerShell Techniques

- Create Profile Scripts

- Work with Alternative Credentials

Lab: Practicing Advanced Techniques

Who Should Attend

The Automating Administration with Windows Powershell Training course is primarily beneficial for:

- IT Professionals having experience in general Windows Server and Windows Client administration

- System, Infrastructure and Application Administrators who are working in a Windows or Windows hybrid environment

- IT Professionals who are wanting to build upon existing Windows PowerShell knowledge to build their own tools for broader general use in their organization.

Pre Requisite

Before attending this course, candidates must have:

- Knowledge and experience of network adapter configuration,

- Experience in general Windows Server and Windows Client administration,

- Experience in administering and supporting Application servers,

Exams

Microsoft Certified Professional (MCP) []

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