Course Overview

Students will learn how to remotely manage single or multiple Windows-based servers and automate day-to-day management and administration tasks.

Who Should Attend

This course is intended for IT Professionals already experienced in general Windows Server and Windows Client administration or already experienced in administrating and supporting Application servers and services including Exchange, SharePoint, SQL etc. It is broadly intended for 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.

Course Objectives

After completing this course, students will be able to:
<li>Understand the basic concepts behind Windows PowerShell
<li>Work with the Pipeline
<li>Understand How the Pipeline Works
<li>Use PSProviders and PSDrives
<li>Format Output
<li>Use WMI and CIM
<li>Prepare for Scripting
<li>Moving From a Command to a Script to a Module
<li>Administer Remote Computers
<li>Put the various Windows PowerShell components together
<li>Use Background Jobs and Scheduled Jobs
<li>Use Advanced PowerShell Techniques and Profiles

Other Prerequisites

Before attending this course, students must have: •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 Outline
1 Getting Started with Windows PowerShell
Overview and Background
Finding and Running Commands
Lab : Configuring Windows PowerShell
Lab : Finding and Running Basic Commands

2 Working with the Pipeline
Working with the Pipeline
Exporting, Importing and Converting Data
Filtering Objects Out of the Pipeline
Enumerating Objects in the Pipeline
Lab : Working with the Pipeline
Lab : Exporting, Importing and Converting Data
Lab : Filtering Objects Out of the Pipeline
Lab : Enumerate Objects in the Pipeline

3 Understanding How the Pipeline Works
Passing Data in the Pipeline ByVal
Passing Data in the Pipeline ByPropertyName
Lab : Working with Pipeline Parameter Binding

4 Using PSProviders and PSDrives
Understanding PSProviders and PSDrives
Using PSDrives
Lab : PSProviders and PSDrives

5 Formatting Output
Using Basic Formatting
Using Advanced Formatting
Redirecting Formatted Output
Lab : Formatting Output

6 Using WMI and CIM
Understanding WMI/CIM
Querying Data with WMI/CIM
Making Changes with WMI/CIM
Lab : Working with WMI and CIM

7 Prepare for Scripting
Using Variables
Scripting Security
Working with Alternate Credentials
Lab : Working with Security in PowerShell
8  Moving From a Command to a Script to a Module
Moving From Command to Script
Moving From Script to Function to Module
Implementing Basic Error Handling
Using Basic Scripting Constructs
Further Exploration in Scripting
Lab : Moving From Command to Script
Lab : Moving From Script to Function to Module
Lab : Implementing Basic Error Handling
Lab : Adding Logic to a Script

9  Administering Remote Computers
Using Basic Remoting
Using Remote Sessions
Using Remoting for Delegated Administration
Lab : Working with Remoting
Lab : Working with PSSessions
Lab : Remoting for Delegated Administration

10 Putting it All Together
Planning the Script
Lab : Configuring a New Server Core Installation

11 Using Background Jobs and Scheduled Jobs
Using Background Jobs
Using Scheduled Jobs
Lab : Working with Background Jobs
Lab : Working with Scheduled Jobs

12 Using Advanced PowerShell Techniques and Profiles
Using Advanced PowerShell Techniques
Creating Profile Scripts
Lab : Practicing Advanced Techniques