

Advanced Automated Administration with Windows PowerShell

Duration: 3 Days

Description

Participants learn to automate administrative tasks using Windows PowerShell 5.1. The course develops scripting skills such as creating advanced functions, writing controller scripts and resolving script errors. It also covers Windows PowerShell Workflow, REST APIs, and XML and JSON data files.

Participants learn how to use Desired State Configuration (DSC) and Just Enough Administration (JEA) to configure and secure servers.

Who Should Attend?

IT professionals with general experience in Windows Server and Windows client administration. Basic Windows PowerShell knowledge is recommended.

What Will You Learn?

- Creating advanced functions
- Using the Microsoft .NET Framework and REST APIs in Windows PowerShell
- Writing controller scripts
- Handling script errors
- Working with XML, JSON and custom-formatted data
- Extending server management with DSC and JEA
- Analyzing and debugging scripts
- Windows PowerShell workflows

Outline

Creating Advanced Functions

- Converting a Command into an Advanced Function
- Creating a Script Module
- Defining Parameter Attributes and Input Validation
- Writing Functions that Accept Pipeline Input
- Producing Complex Function Output

- Documenting Functions by using Content-Based Help

Using Microsoft .NET Framework and REST API in Windows PowerShell

- Using Microsoft .NET Framework in Windows PowerShell
- Using REST API in Windows PowerShell

Writing Controller Scripts

- Understanding Controller Scripts
- Writing Controller Scripts that Show a User Interface

Handling Script Errors

- Understanding Error Handling
- Handling Errors in a Script

Using XML, JSON, and custom-formatted data

- Reading, Manipulating and Writing Data in XML- formatted data
- Reading, Manipulating and Writing Data in JSON- formatted data
- Reading, Manipulating and Writing Data in custom- formatted data

Enhancing Server Management with Desired State Configuration and Just Enough Administration

- Understanding Desired State Configuration
- Creating and Deploying a DSC Configuration
- Implementing Just Enough Administration

Analyzing and Debugging Scripts

- Debugging in Windows PowerShell
- Analyzing and Debugging and Existing Script

Understanding Windows PowerShell Workflow

Prerequisites

There are no formal prerequisites. Basic Windows PowerShell knowledge is recommended, as described in the course overview.