



Automating Administration with Windows PowerShell:

COURSE OVERVIEW

In this training course, you will gain the fundamental knowledge and skills to use Windows PowerShell for automating the administration of your Windows-based servers. You will focus on primary Windows PowerShell command line features and techniques. Learn to execute and monitor scripts more efficiently with more robust session connectivity, workflow capabilities, improved job scheduling, and Windows PowerShell Web Access.

This course incorporates materials from the Official Microsoft Learning Product M10961: Automating Administration with Windows PowerShell, and is taught by official Microsoft instructors.

WHAT YOU'LL LEARN

- Basic concepts behind Windows PowerShell
- Work with the Windows PowerShell Pipeline
- Use PSProviders and PSDrives to work with other forms of storage
- 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

OUTLINE

Windows PowerShell

- Overview and Background
- Finding and Running Commands

Cmdlets for administration

- Active Directory administration cmdlets
- Network configuration cmdlets
- Other server administration cmdlets

Working with the Windows PowerShell Pipeline

- Selecting, Sorting, and Measuring Objects
- Exporting, Importing, and Converting Data
- Filtering Objects Out of the Pipeline
- Enumerating Objects in the Pipeline

How the Pipeline Works

- Passing the Pipeline Data
- Advanced Considerations for Pipeline Data

Using PSProviders and PSDrives

- PSProviders and PSDrives

Querying System Information Using WMI and CIM

- Querying Data with WMI/CIM
- Making Changes with WMI/CIM

Working with Variables, Arrays, and Hash Tables

- Using Variables
- Manipulating Arrays and Hash Tables

Basic Scripting

- Introduction to Scripting
- Scripting Constructs
- Importing Data from Files

Advanced Scripting

- Accepting User Input
- Overview of Script Documentation
- Troubleshooting and Error Handling
- Functions and Modules

Administering Remote Computers

- Using Basic Windows PowerShell Remoting
- Using PSSessions
- Using Advanced Remoting Techniques

Using Background Jobs and Scheduled Jobs

- Using Background Jobs
- Using Scheduled Jobs

Using Advanced PowerShell Techniques and Profiles

- Using Advanced PowerShell Techniques
- Creating Profile Scripts

PREREQUISITES

Students who attend this training can meet the prerequisites by obtaining equivalent knowledge and skills through practical experience as a Windows system administrator.

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

WHO SHOULD ATTEND

- IT Professionals already experienced in general Windows Server and Windows Client administration or already experienced in administering and supporting application servers and services, including Exchange, SharePoint, SQL, etc.
- 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.