

Szkolenie: Microsoft
MS-55039 Windows PowerShell Scripting and Toolmaking



DOSTĘPNE TERMINY

2026-05-11 | 5 dni | Kraków / Wirtualna sala
2026-06-15 | 5 dni | Warszawa / Wirtualna sala

Cel szkolenia:

This three- to five-day instructor-led is intended for IT professionals who are interested in furthering their skills in Windows PowerShell and administrative automation. The course assumes a basic working knowledge of PowerShell as an interactive command-line shell, and teaches students the correct patterns and practices for building reusable, tightly scoped units of automation.

After completing the course, students will be able to:

- Describe the correct patterns for building modularized tools in Windows PowerShell
- Build highly modularized functions that comply with native PowerShell patterns
- Build controller scripts that expose user interfaces and automate business processes

Audience profile:

This course is intended for administrators in a Microsoft-centric environment who want to build reusable units of automation, automate business processes, and enable less-technical colleagues to accomplish administrative tasks.

Plan szkolenia:

- Tool Design
 - Tools do one thing
 - Tools are flexible
 - Tools look native
- Start with a Command
 - Why start with a command?
 - Discovery and experimentation
- Build a Basic Function and Module
 - Start with a basic function
 - Create a script module

- Check prerequisites
- Run the new command
- Adding CmdletBinding and Parameterizing
 - About CmdletBinding and common parameters
 - Accepting pipeline input
 - Mandatory-ness
 - Parameter validation
 - Parameter aliases
- Emitting Objects as Output
 - Assembling information
 - Constructing and emitting output
 - Quick tests
- Changing Your Approach
 - Examining a script
 - Critiquing a script
 - Revising the script
- Using Verbose, Warning, and Informational Output
 - Knowing the six channels
 - Adding verbose and warning output
 - Doing more with verbose output
 - Informational output
- Comment-Based Help
 - Where to put your help
 - Getting started
 - Going further with comment-based help
 - Broken help
- Handling Errors
 - Understanding errors and exceptions
 - Bad handling
 - Two reasons for exception handling
 - Handling exceptions in our tool
 - Capturing the actual exception
 - Handling exceptions for non-commands
 - Going further with exception handling
 - Deprecated exception handling
- Basic Debugging

- Two kinds of bugs
- The ultimate goal of debugging
- Developing assumptions
- Write-Debug
- Set-PSBreakpoint
- The PowerShell ISE
- Going Deeper with Parameters
 - Parameter positions
 - Validation
 - Multiple parameter sets
 - Value from remaining arguments
 - Help messages
 - Aliases
 - More CmdletBinding
- Writing Full Help
 - External help
 - Using PlatyPs
 - Supporting online help
 - “About” topics
 - Making your help updatable
- Unit Testing Your Code
 - Sketching out the test
 - Making something to test
 - Expanding the test
 - Going further with Pester
- Extending Output Types
 - Understanding types
 - The Extensible Type System
 - Extending an object
 - Using Update-TypeData
- Analyzing Your Script
 - Performing a basic analysis
 - Analyzing the analysis
- Publishing Your Tools
 - Begin with a manifest
 - Publishing to PowerShell Gallery

- Publishing to private repositories
- Basic Controllers: Automation Scripts and Menus
 - Building a menu
 - Using UIChoice
 - Writing a process controller
- Proxy Functions
 - A proxy example
 - Creating the proxy base
 - Modifying the proxy
 - Adding or removing parameters
- Working with XML Data
 - Simple: CliXML
 - Importing native XML
 - ConvertTo-XML
 - Creating native XML from scratch
- Working with JSON Data
 - Converting to JSON
 - Converting from JSON
- Working with SQL Server Data
 - SQL Server terminology and facts
 - Connecting to the server and database
 - Writing a query
 - Running a query
 - Invoke-SqlCmd
 - Thinking about tool design patterns
- Final Exam
 - Lab problem
 - Break down the problem
 - Do the design
 - Test the commands
 - Code the tool

Wymagania:

Before attending this course, students must have:

- Experience at basic Windows administration

- Experience using Windows PowerShell to query and modify system information
- Experience using Windows PowerShell to discover commands and their usage
- Experience using WMI and/or CIM to query system information

Poziom trudności



Certyfikaty:

Certyfikat ukończenia **autoryzowanego kursu Microsoft.**

Prowadzący:

Microsoft Certified Trainer.