



Windows PowerShell Scripting and Toolmaking

Course 55039C

5 Days

Instructor-led, Hands on

Course Information

This 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.

With Microsoft's PowerShell language, you can write scripts to control nearly every aspect of Windows. Just master a few straightforward scripting skills, and you'll be able to eliminate repetitive manual tasks, create custom reusable tools, and build effective pipelines and workflows. Once you start scripting in PowerShell, you'll be amazed at how many opportunities you'll find to save time and effort.

At Course Completion

After completing this 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
- Manage data in a variety of formats
- Write automated tests for tools
- Debug tools

Prerequisites

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
- Course 10961, Automating Administration with Windows PowerShell is strongly recommended as a prerequisite

Contact ISInc for more information at 916.920.1700 or by visiting our website at <http://www.isinc.com>

Course Outline

Module 1: Introduction to Scripting

- Setting up your scripting environment
- WWPD: what would PowerShell do?
- Parameter binding and the PowerShell pipeline
- Scripting language crash course
- The many forms of scripting (and which to use)
- Scripts and security

Module 2: Building a PowerShell Script

- About design first
- Avoiding bugs: start with a command
- Building a basic function and script module
- Going advanced with your function
- Objects: the best kind of output
- Using all the pipelines
- Simple help: making a comment
- Dealing with errors
- Filling out a manifest

Module 3: Grown-Up Scripting

- Changing your brain when it comes to scripting
- Professional-grade scripting
- An introduction to source control with git
- Pester your script
- Signing your script
- Publishing your script

Module 4: Advanced Techniques

- Squashing bugs
- Making script output prettier
- Wrapping up the .NET Framework
- Storing data—not in Excel!
- Never the end