Build the tools that will allow you to better administer your Windows server and client products.

In this course, you will learn to build reusable tools by using Windows PowerShell 5.0/5.1. This course focuses on the Windows PowerShell scripting language and on the concepts and techniques needed to design tools, including and output requirements and functional requirements. You will learn functions to deal with anticipated errors using standard PowerShell patterns and practices. By course completion, you will be armed with the knowledge and skills to better administer a wide variety of server and client products and technologies that offer Windows PowerShell integration, including Microsoft Exchange Server, Microsoft Windows Active Directory Domain Services, Microsoft SharePoint Server, and more.

I just completed the Global Knowledge course on Windows PowerShell Scripting and Toolmaking. Fantastic course, entirely met all of my expectations for what I would get. I feel like I have the necessary to build my own tools for my team in PowerShell now, I just need to exercise what I’ve learned.

The GK instructor was excellent, really knew what he was doing. He was a good speaker—kept things entertaining but focused. He knew the material at such a depth that if people got hung up, he was always able to help them understand the material by explaining it in different ways, showing different methods of attaining the same result, and all ways of demonstrating mastery of the material.

GK uses Zoom now for their remote learning platform, and that was stable and clear the entire time. I never lost connection to the course during the entire 5 days, it never crashed or garbled the instructor’s words—really great choice for this. The Labs were a little inconsistent early on in day 1, but once we got on they remained available and were configured in such a way that the course materials worked in that environment exactly as expected every time.

All around excellent experience. I would highly recommend the course to anyone looking to take a deep dive into building tools with PowerShell.

JONATHAN BONDE
Check out additional reviews of Global Knowledge on REVIEWS.IO

Learn more about this topic. View the recorded webinar Taking Advantage of Microsoft PowerShell

What You’ll Learn
• Write tools, including scripting, parameterizing commands, and providing verbose output
• Debug tools and provide error handling within tools
• Combine tools into script and manifest modules
• Create custom formatting views
• Create tools that are consistent in naming and operation with native Windows PowerShell tools

Who Needs to Attend
• Administrators that have little or no programming experience but who have a working knowledge of Windows PowerShell and who are able to use Windows PowerShell to run complex, interactive commands. Students of this course may administer a wide variety of server and client products and technologies that offer Windows PowerShell integration, including Microsoft Exchange Server, Microsoft Windows Active Directory Domain Services, Microsoft SharePoint Server, and more.

Prerequisites
• 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
WINDOWS POWERSHELL SCRIPTING AND TOOLMAKING

Course Code: 6544

VIRTUAL CLASSROOM LIVE $2,995 USD 5 days

Virtual Classroom Live Outline

1. Preparing for Scripting
   • Securing the Scripting Environment
   • Understanding Variables and Operators
   • Understanding Scripting Constructs and Scope

2. Parameterizing a Command
   • Designing Parameters
   • Implementing Parameters

3. Creating a Script Module
   • Designing Script Modules
   • Implementing Script Modules

4. Handling Errors
   • Designing Error Handling
   • Implementing Error Handling

5. Writing Commands that Use Pipeline Input and Output
   • Understanding Pipeline Parameter Binding
   • Implementing Pipeline Parameter Input
   • Implementing Pipeline Parameter Input

6. Creating Hierarchical Command Output
   • Designing Complex Command Output
   • Implementing Complex Command Output
   • Using Object Hierarchies

7. Debugging Scripts
   • Designing Scripts for Debugging
   • Implementing Script Debugging
8. Customizing Default Formatting
   • Designing Formatting
   • Implementing Custom Formatting
9. Adding Advanced Parameter Attributes and Command Documentation
   • Implementing Advanced Parameter Attributes
   • Implementing Help Documentation
10. Creating Controller Scripts
    • Designing Script Execution
    • Implementing a Controller Script
11. Creating HTML-Based Reports
    • Creating Basic HTML Reports
    • Creating Enhanced HTML Reports
12. Creating Basic Workflows
    • Understanding Workflows
    • Implementing Workflows
13. Working with XML Data
    • Understanding XML
    • Implementing XML Manipulation
14. Using Advanced Scripting Techniques
    • Using External Functionality
    • Adding Graphical User Interface Elements
15. Creating Proxy Functions
    • Designing Proxy Functions
    • Implementing Proxy Functions
16. Building Tools in Windows PowerShell
    • Designing the Tool
    • Implementing the Tool
    • Testing the Tool

Virtual Classroom Live Labs
Lab 1: Parameterizing a Command
    • Identify changeable values
    • Declare parameters
    • Use parameters in place of changeable values
    • Test the script
Lab 2: Creating a Script Module
    • Creating a Script Module
    • Saving the script module
    • Adding a module-level variable
• Controlling module member visibility
• Testing the script module

Lab 3: Handling Errors
• Using the Try...Catch Construct
• Handling Command Errors
• Handling Non-Command Errors
• Logging Errors to a File
• Displaying Warning Messages

Lab 4: Writing Commands that Use Pipeline Input and Output
• Adding Pipeline Input Capability to Parameters
• Working with Pipeline Input
• Creating Custom Output Objects
• Outputting Objects to the Pipeline

Lab 5: Creating Hierarchical Command Output
• Retrieving and Enumerating Data
• Creating Child Objects
• Creating the Parent Object
• Displaying and Object Hierarchy
• Persisting an Object Hierarchy

Lab 6: Debugging Scripts
• Using Write-Debug
• Using PSBreakpoints

Lab 7: Customizing Default Formatting
• Adding a Custom Type Name to an Object
• Creating a DefaultDisplayPropertySet Type Extension
• Creating a Custom View
• Adding Type Extensions and Views to Modules and Creating a Module Manifest

Lab 8: Adding Advanced Parameter Attributes and Command Documentation
• Defining Aliases and Help Messages
• Defining Parameter Validation
• Adding Comment-Based Help
• Writing a Command that Uses -Confirm and -WhatIf

Lab 9: Creating Controller Scripts
• Creating a Controller Script
• Parameterizing a Controller Script
• Testing a Controller Script
• Debugging a Controller Script

Lab 10: Creating Reports by using HTML
• Creating Reports by using HTML
• Converting Objects into HTML Fragments
• Combining HTML Fragments
• Adding Basic Formatting
• Creating Enhanced HTML Fragments
• Applying Conditional Formatting

Lab 11: Creating Basic Workflows
• Importing the PSWorkflow Module
• Converting a Function to a Basic Workflow
• Parallelizing Commands

Lab 12: Working with XML Data
• Loading XML
• Manipulating XML as an Object Hierarchy
• Selecting XML Elements by using XPath
• Modifying XML
• Saving XML

Lab 13: Creating Proxy Functions
• Generating a Proxy Function Template
• Modifying the Template
• Using the Proxy Function
• Bypassing a Proxy Function

Lab 14: Building Tools in Windows PowerShell
• Designing the Tool
• Implementing the Tool
• Testing the Tool

• Sep 14 - 18, 2020 | 8:30 AM - 4:30 PM EST
• Sep 21 - 25, 2020 | 9:30 AM - 5:30 PM EST
• Oct 5 - 9, 2020 | 11:30 AM - 7:30 PM EST
• Oct 19 - 23, 2020 | 8:30 AM - 4:30 PM EST
• Oct 26 - 30, 2020 | 8:30 AM - 4:30 PM EST
• Nov 9 - 13, 2020 | 9:30 AM - 5:30 PM EST
• Nov 16 - 20, 2020 | 8:30 AM - 4:30 PM EST
• Dec 7 - 11, 2020 | 8:30 AM - 4:30 PM EST
• Dec 14 - 18, 2020 | 11:30 AM - 7:30 PM EST
• Jan 18 - 22, 2021 | 11:30 AM - 7:30 PM EST
• Jan 25 - 29, 2021 | 8:30 AM - 4:30 PM EST
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PRIVATE GROUP TRAINING 5 days

Visit us at www.globalknowledge.com or call us at 1-866-716-6688.

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