



# PowerShell 7 Workshop : Learn How to Program with PowerShell 7 on Windows, Linux, and the Raspberry Pi /

Parlow, Nick,  
author

Monografía

Exercises -- Further reading -- Chapter 5: PowerShell Control Flow - Conditionals and Loops -- An introduction to IDEs and VS Code -- Installing VS Code -- Configuring VS Code for PowerShell -- Conditional control - if, else, elseif, and switch -- The if statement -- The switch statement -- Loops - foreach, do while, do until, while, for -- The foreach loop statement -- The do while and do until loop statements -- The while loop -- The for loop -- Breaking and continuing -- The break statement -- The continue statement -- Let's play a game -- Summary -- Exercises -- Further reading

<https://rebiunoda.pro.baratznet.cloud:28443/OpacDiscovery/public/catalog/detail/b2FpOmNlbGVicmF0aW9uOmVzLmJhcmF0ei5yZW4vMzUzNzU5NDAA>

---

**Título:** PowerShell 7 Workshop Learn How to Program with PowerShell 7 on Windows, Linux, and the Raspberry Pi Nick Parlow

**Edición:** 1st ed

**Editorial:** Birmingham, England Packt Publishing [2024] 2024

**Descripción física:** 1 online resource (468 pages)

**Nota general:** Description based upon print version of record

**Contenido:** Cover -- Title Page -- Copyright and Credits -- Contributors -- Table of Contents -- Preface -- Part 1: PowerShell Fundamentals -- Chapter 1: Introduction to PowerShell 7 - What It Is and How to Get It -- Technical requirements -- What is PowerShell 7? -- What is PowerShell 7 used for? -- Scripting languages versus system programming languages -- Getting PowerShell 7 -- Installation from an .msi file -- Installation from the .zip file -- Installation with winget -- Other ways to install -- Running PowerShell 7 -- Running PowerShell with administrator privileges -- Autocomplete -- Getting help -- Get-Command -- Get-Help -- Get-Member -- Summary -- Exercises -- Further reading -- Chapter 2: Exploring PowerShell Cmdlets and Syntax -- Technical requirements -- What are cmdlets? -- Exploring cmdlet structure -- The correct use of aliases -- Understanding cmdlet syntax -- How to find more cmdlets -- Finding modules and cmdlets on your machine -- Finding new modules and cmdlets -- Working interactively with PowerShell -- Windows Terminal - an alternative terminal emulator -- Installing Windows Terminal from Microsoft Store -- Summary -- Exercises -- Chapter 3: The PowerShell Pipeline - How to String Cmdlets Together -- How to bring cmdlets together - the pipeline -- What is an object? -- Selecting and sorting

objects -- Using Select-Object -- Ordering objects with Sort-Object -- Filtering objects -- Understanding comparison operators -- Understanding Where-Object advanced syntax -- Multiple filters in the advanced syntax -- Filter optimization -- Enumerating objects -- Parallel enumeration -- How the pipeline works - parameter binding -- Understanding ByValue parameter binding -- ByPropertyName parameter binding -- Troubleshooting the pipeline - pipeline tracing -- Summary -- Exercises -- Further reading Chapter 4: PowerShell Variables and Data Structures -- Understanding PowerShell variables -- Variables are not their contents -- Naming variables -- The three common types of PowerShell variable -- Exploring object types -- What is an object? - redux -- Discovering value types -- Booleans -- Integers -- Real numbers -- Char -- Typing explained -- Dynamic versus static typing -- Casting variables -- Navigating reference types -- Arrays -- Strings -- Hashtables -- Splatting - a cool use for hashtables -- Summary -- Exercises -- Further reading -- Chapter 5: PowerShell Control Flow - Conditionals and Loops -- An introduction to IDEs and VS Code -- Installing VS Code -- Configuring VS Code for PowerShell -- Conditional control - if, else, elseif, and switch -- The if statement -- The switch statement -- Loops - foreach, do while, do until, while, for -- The foreach loop statement -- The do while and do until loop statements -- The while loop -- The for loop -- Breaking and continuing -- The break statement -- The continue statement -- Let's play a game -- Summary -- Exercises -- Further reading -- Chapter 6: PowerShell and Files - Reading, Writing, and Manipulating Data -- Understanding formatting -- Format-List -- Format-Table -- Format-Wide -- Formatting gotchas -- Writing a text file -- Using ConvertTo- and Export- cmdlets -- CSV -- XML -- HTML -- Handling files -- A brief note about PSProviders and PSDrives -- Item- cmdlets -- Working with files -- Get-Content -- Import- cmdlets -- Let's have some fun - measuring the most frequent words in a text file -- Summary -- Exercises -- Further reading -- Chapter 7: PowerShell and the Web - HTTP, REST, and JSON -- Working with HTTP -- Why don't we see Forms information in PowerShell 7? -- Authentication -- Getting to grips with APIs -- RPC APIs -- SOAP APIs -- REST APIs -- WebSocket APIs Working with REST -- Invoke-RestMethod -- Working with JSON -- ConvertFrom-Json -- ConvertTo-Json -- Test-Json -- Let's have some fun - who is on the International Space Station? -- Summary -- Exercises -- Further reading -- Part 2: Scripting and Toolmaking -- Chapter 8: Writing Our First Script - Turning Simple Cmdlets into Reusable Code -- Introduction to scripting -- Why do we want to write scripts? -- Getting scripts -- Running scripts -- Writing a script -- Identifying changing values -- Working with parameters -- Creating useful parameters -- Specifying type -- Making parameters mandatory -- Taking values from the pipeline -- Switch parameters -- Providing help for our script -- Comments -- Comment-based help -- Write-Verbose -- Parameter help messages -- Summary -- Further reading -- Exercises -- Chapter 9: Don't Repeat Yourself - Functions and Scriptblocks -- Why do we care about repeating code? -- How to turn repeating code into a function -- What makes a function? -- Function parameters -- Filters -- The concept of scope -- Parent and child scopes -- Scope modifiers -- Exploring scriptblocks -- How to run a scriptblock -- Lambdas -- Let's do something useful -- Summary -- Further reading -- Exercises -- Chapter 10: Error Handling - Oh No! It's Gone Wrong! -- What is an error? -- Terminating and non-terminating exceptions and errors -- Understanding error actions -- The ErrorActionPreference variable -- The -ErrorAction parameter -- Catching errors -- Try/Catch/Finally -- Creating errors -- Exploring debugging -- Script instrumentation -- Debugging cmdlets -- Debugging with VS Code -- Summary -- Exercises -- Further reading -- Chapter 11: Creating Our First Module -- Working with modules -- Module locations -- Module autoloading -- Importing modules -- PowerShellGet -- Writing a simple module -- A word of caution - dot-sourcing Turning a script into a module -- Nested modules -- More modules -- Module manifests -- Using scaffolding tools such as Plaster -- Summary -- Exercises -- Further reading -- Chapter 12: Securing PowerShell -- Why is security so important? -- A PowerShell remoting whistlestop tour -- Enabling PowerShell remoting -- Creating a session -- Joining and leaving a session -- One-to-many sessions -- Securing PowerShell against inadvertent mistakes -- Execution policy -- Other features -- Running PowerShell securely -- Application control -- Language modes -- Security servicing criteria -- Software Bill of Materials -- Windows Antimalware Scan Interface support -- Secure Shell (SSH) remoting -- Just Enough Administration -- PowerShell logging -- Over the shoulder logging -- Deep script block logging -- Module logging -- Writing secure code -- Storing passwords securely -- Signing scripts -- Parameter security -- Summary -- Exercises -- Further reading -- Part 3: Using PowerShell -- Chapter 13: Working with PowerShell 7 and Windows -- Understanding PowerShell 7 and Windows PowerShell -- Exploring compatibility -- Which modules are compatible with PowerShell 7? -- What doesn't work with PowerShell 7 -- Managing machines with CIM and WMI -- Introduction to CIM and WMI -- Querying data -- Making changes -- Summary -- Exercises -- Further reading -- Chapter 14: PowerShell 7 for Linux and macOS -- Technical requirements -- Installing PowerShell 7 -- Installing PowerShell on Ubuntu 22.04 -- Installing PowerShell on CentOS 8 and 9 -- Installing PowerShell on CentOS 7 -- Installing VS Code -- Running

PowerShell on Linux -- Remoting with OpenSSH -- Checking that PowerShell has OpenSSH support -- Installing OpenSSH on Windows -- Installing OpenSSH on Linux -- Running remote sessions -- Authentication -- PowerShell for macOS -- Installing Homebrew on macOS Installing PowerShell on macOS -- Installing VS Code on macOS -- Summary -- Exercises -- Further reading -- Chapter 15: PowerShell 7 and the Raspberry Pi -- Technical requirements -- Introduction to the Raspberry Pi -- Installing PowerShell 7 and VS Code -- Installing PowerShell -- Installing VS Code -- Connecting remotely to the Pi -- Working with a headless Pi -- Connecting to the Pi with PowerShell -- Connecting to the Pi with VS Code -- Running PowerShell on Raspberry Pi OS -- Installing the IoT module -- Exploring the IoT module -- Simple physical computing -- Summary -- Questions -- Further reading -- Chapter 16: Working with PowerShell and .NET -- Exploring .NET -- Software frameworks explained -- Common language infrastructure -- Common language runtime - CoreCLR -- Framework Class Library - CoreFX -- .NET history -- The uses of .NET -- The components of .NET -- Assemblies -- Types -- Enumerations -- Classes -- Namespaces -- Members -- Versioning -- Working with .NET in PowerShell -- PowerShell assemblies -- Dynamic assembly loading -- Creating instances of types -- Using .NET -- An alternative to the Task Scheduler -- Creating GUI objects -- Summary -- Exercises -- Further reading -- Answers to Activities and Exercises -- Index -- Other Books You May Enjoy

**ISBN:** 1-80181-749-9

**Materia Título preferido:** Microsoft Windows (Computer file)

**Materia:** Windows PowerShell (Computer program language) Computer programming Scripting languages (Computer science)

**Enlace a formato físico adicional:** 9781801812986

---

## Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- [informa@baratz.es](mailto:informa@baratz.es)