

Intro to PowerShell Scripting



BATON ROUGE USER GROUPS



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SQL Saturday Baton Rouge 2023



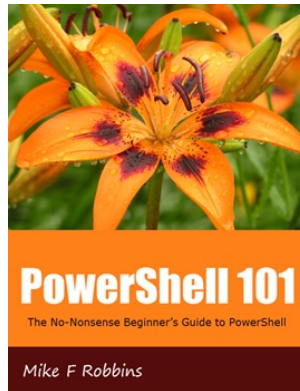
K U V A R E



Thank you, Sponsors!

Get-Help –Name 'about_Presenter'

- Mike F. Robbins
- Lead docs writer for Azure PowerShell at Microsoft



Write-Output 'Questions for Attendees'

- PowerShell
- Visual Studio Code (VS Code)
- One-Liners
- Scripts
- Functions
- Modules
- Source Control



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Set-Content 'Information to Cover'

- Getting Started with PowerShell
- The Help System
- Discovering objects, properties, and methods
- One-liners and the pipeline
- Formatting, aliases, and comparison operators
- Flow Control
- Remoting
- Functions
- Script Modules



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Start-Process 'Demo'

- Demo Code: github.com/mikefrobbins/Presentations



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Why PowerShell?

- Ease of Use
 - Discoverable Commands
 - Verb-Noun Syntax
- Object-Oriented
- Cross-Platform
- Remoting
- Security
- Community and Support



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Getting Started with PowerShell

- What do I need to get started with PowerShell?
- Where do I find PowerShell?
- How do I launch PowerShell?
 - User Access Control (UAC)
- What version of PowerShell am I running?
- Execution Policy
 - Restricted – Windows client operating systems
 - Remote Signed – Windows server operating systems



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The Help System

- Discoverability
 - Verb-Noun syntax
- The three core cmdlets
 - Get-Help (help)
 - Get-Command
 - Get-Member
- Updating help
- Extend the functionality of PowerShell
 - PowerShellGet (PSResourceGet in the future)
 - \$env:PSModulePath



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Windows PowerShell vs PowerShell7

- PowerShell 7 installs side-by-side
 - Help
 - Modules



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Discovering objects, properties, and methods

- Get-Member
 - Properties
 - Methods
 - Type of object



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One-liners and the pipeline

- One-Liners
- The pipeline
- Finding pipeline input the easy way
- Filtering Left
- Format right



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Formatting, aliases, and comparison operators

- Aliases
- Comparison Operators
- Variables



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Flow Control

- If
- Range Operator
- Looping
 - ForEach-Object
 - foreach
 - For
 - Do
 - Do While
 - Do Until
 - While
 - Break, Continue, and Return



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Remoting

- WinRM
- SSH
- One-To-One
- One-To-Many
- PowerShell sessions



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Functions

- Naming
- Parameters
- Functions vs Advanced Functions
- Parameter Validation
- Verbose Output
- Pipeline input
- Error Handling
- Comment-based help



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Script Modules

- Dot-Sourcing functions
- Script modules
- Module manifests
- Private and public functions



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Select-Object –Property ‘Resources’

- The PowerShell Best Practices and Style Guide: github.com/PoshCode/PowerShellPracticeAndStyle
- The Official Product Documentation for PowerShell: learn.microsoft.com/powershell/
- PowerShell.org
- PowerShell Podcast: powershellpodcast.podbean.com/



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