

# PowerShell Scripting Best Practices

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Level: Intermediate



# Agenda

- The New Paradigm
- Scripting vs Interactive
- Scripts vs Functions
- Scripting Best Practices

# The New Paradigm

- No more text parsing
- Object based shell
- PowerShell built on strengths of many other shells
- Pipelined objects using cmdlets

# Scripting vs the Shell

- PowerShell is first an interactive management shell
- A PowerShell script is a list of PowerShell commands
- No difference between a shell session and a script except typing.

# Scripting vs the Shell

- PowerShell scripts tend to be more complicated
- Include error handling and trapping
- Include logic and looping constructs
- Include logging
- Support parameters
- ..but you can also do all of this in the shell

# Scripts or Functions?

- Both can be “advanced”
  - Cmdlet binding
  - Comment based help
  - parameterized
- Write scripts for automated work flow
- Write functions for modular re-use
- Source functions in your profile or scripts

# Scripting Best Practices

- Document from the very beginning
- Use cmdlets whenever possible and avoid "raw" .NET.
- No aliases\*
- Use full parameter names
- Leverage the pipeline

\*There are always exceptions

# Scripting Best Practices

- Build in trace and/or debug messages from the beginning
- Use Write-Host for messages (or Write-Progress)
- Use Write-Output for data
- Focus on re-use and modularization (remember to leverage the pipeline)
- Let PowerShell handle formatting



# Scripting Best Practices

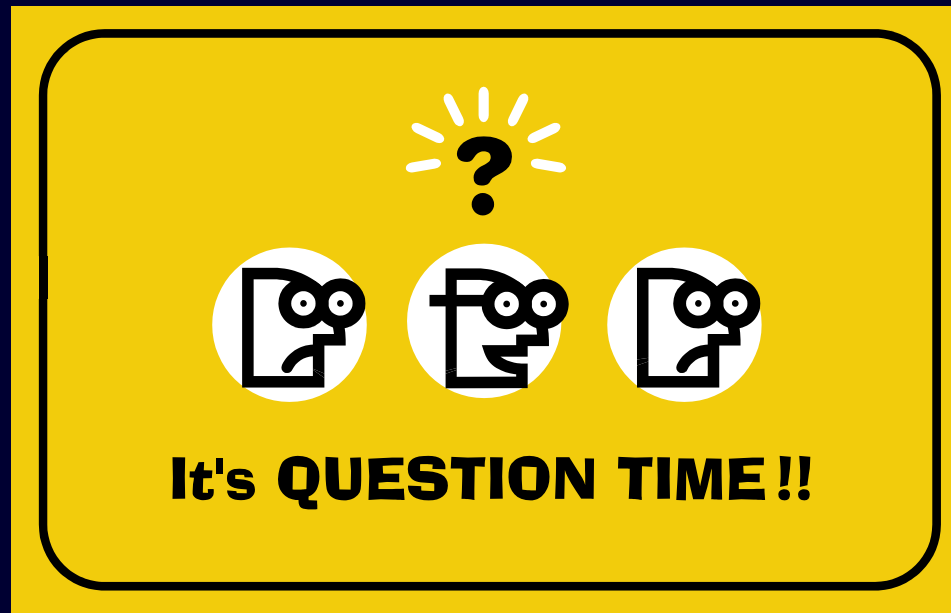
- Use standard naming conventions
- Cast script and function variables
- Think “objects in the pipeline”, not “returning values”
- Optional: Use Source Control
- Optional: Support script signing

# Practicum

- The evolution of a PowerShell script



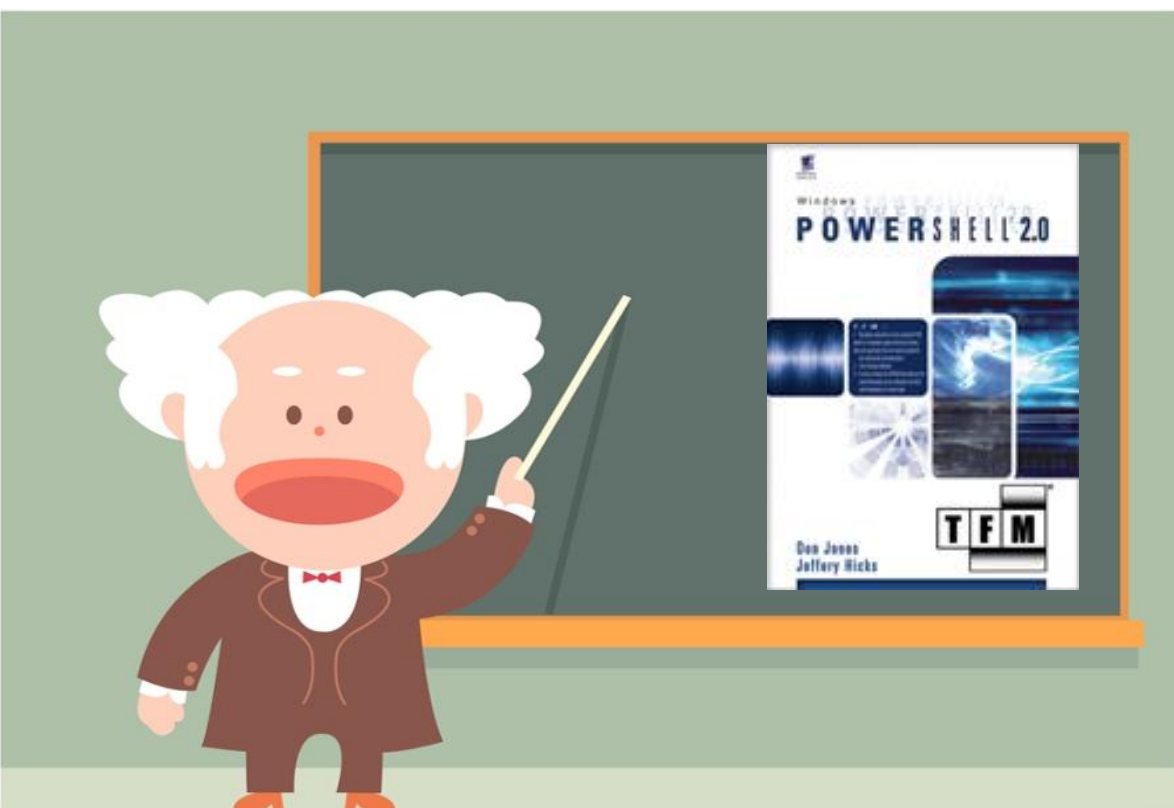
# Questions & Answers



# Recommendations

- Invest in the best script editor you can afford
- Invest in training material and books
- Think “object”-ively
- Use PowerShell every day

# Resources



The illustration shows a cartoon professor with white hair, a brown suit, and a red bow tie, holding a pointer stick. He is standing in front of a chalkboard. On the chalkboard, there is a book cover for 'Windows PowerShell 2.0' by Don Jones and Jeffery Hicks, published by TFM. The book cover features a blue and white design with a lightning bolt and a gear.

- Prof. PowerShell (MCPMag.com)
- Jdhitsolutions.com/blog

# Thank You!

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