

#### Recreate MOF based DSC resources

as Class based DSC resources



### Get-Help -Name 'about\_Presenter'

- Who Does Not Know Who I Am?
- Mike F Robbins
- Microsoft MVP
- Mississippi PowerShell User Group
- Learn more about me @ mikefrobbins.com





## Requirements

- MOF
  - Windows PowerShell version 4 or higher
- Class
  - Windows PowerShell version 5 or higher
- PSDesiredStateConfiguration #Requires WMI
- DSC –notlike 'PowerShell Core'
  - Windows
  - Linux
  - macOS
- PowerShell Team Blog



#### Introduction

- xRemoteDesktopAdmin
  - Set-TargetResource
    - Compares a string to an integer
    - Variables
      - Ensure is a string
        - Present
        - Absent
      - GetEnsure
        - **0**
        - **1**
    - If = \$false (line 89)
- The Dark Ages



### xRemoteDesktopAdmin DSC resource

```
60 ≡#region SET RDP Settings
    function Set-TargetResource
62 ⊟ {
         [CmdletBinding()]
63
         [OutputType([System.Collections.Hashtable])]
64
65
66 F
             [Parameter(Mandatory)]
67
             [ValidateSet("Present", "Absent")]
68
           [System.String]$Ensure.
69 1
70
             [ValidateSet("NonSecure", "Secure")]
71
             [System.String]$UserAuthentication
72
73
74
         switch ($Ensure) {
75 E
             "Present" {[System.Byte]$fDenyT5Connections = 0}
76
             "Absent" {[System.Byte]$fDenyTSConnections = 1}
77
78
79
         switch ($UserAuthentication) {
80 🖃
             "NonSecure" {[System.Byte]$UserAuthentication = 0}
81
             "Secure" {[System.Byte]$UserAuthentication = 1}
82
83
84
        ▶$GetEnsure = (Get-ItemProperty -Path "HKLM:\System\Curr
85=
         $GetUserAuthentiation = (Get-ItemProperty -Path 'HKLM:\:
86
87
         #The make it so section
88
        rif ($Ensure -ne $GetEnsure) {
             Set-ItemProperty -Path 'HKLM:\System\CurrentControl:
90
91
         if ($UserAuthentication -ne $GetUserAuthentication) {
92 🖃
             Set-ItemProperty -Path 'HKLM:\System\CurrentControl:
93
94
```



#### Part 1 – MOF Based DSC Resource

- Demonstration of Process
  - Custom DSC Resource for RDP
  - **2014**
- Requirements
  - Windows PowerShell version 4.0 or higher
    - Introduction of DSC
    - Limited to MOF



#### Start-Process 'Demo'

Demo Code: github.com/mikefrobbins/Presentations





### **Naming Convention**

- **2014** 
  - Prefix
    - "c" for Community
    - "x" for Experimental (Microsoft Only)
- **2015** 
  - Let's Stop Using "c" Now
    - Steven Murawski
- **2017** 
  - DSC Naming Guidelines
    - PowerShell Team Blog



### Required Functions

- Get-TargetResource
  - Hashtable
- Set-TargetResource
  - Test-TargetResource Fails
  - Configure non-compliant Items
  - Null
- Test-TargetResource
  - Determine Compliance
  - Boolean



### Possible Improvements

- Private Functions
  - Eliminate Redundancy
  - Export-ModuleMember
  - FunctionsToExport



#### Part 2 – Class Based DSC Resources

- Requirements
  - Windows PowerShell version 5.0 or higher
- Required Methods
  - Get()
  - Set()
  - Test()
- Benefits
  - No MOF



# Part 3 – Refactoring

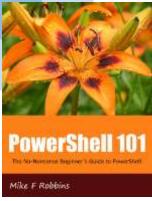
- Enumerations
- Challenges
  - Classes
    - Debugging
    - Versioning
    - Testing



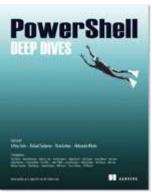
### Select-Object -Property 'Resources'

- PowerShell.org
- Microsoft Virtual Academy
- PowerShell Magazine
- GitHub
- User Groups & Blogs
- **■** Twitter
- Windows Desired State Configuration Revealed book
- Learning PowerShell DSC book
- The DSC Book









# Get-Contact –Identity 'Presenter'

■ Blog: mikefrobbins.com (or MrPowerShell.com)





- Twitter: @mikefrobbins
- LinkedIn: <u>www.linkedin.com/in/mikefrobbins</u>
- E-Mail: See <u>mikefrobbins.com/about/</u>
- User Group: <u>mspsug.com</u> (or MsPowerShell.com)

