



# Recreate MOF based DSC resources

as Class based DSC resources



# Get-Help –Name 'about\_Presenter'

- Who Does Not Know Who I Am?
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# 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
61 function Set-TargetResource
62 {
63     [CmdletBinding()]
64     [OutputType([System.Collections.Hashtable])]
65     param
66     (
67         [Parameter(Mandatory)]
68         [ValidateSet("Present", "Absent")]
69         [System.String]$Ensure,
70
71         [ValidateSet("NonSecure", "Secure")]
72         [System.String]$UserAuthentication
73     )
74
75     switch ($Ensure) {
76         "Present" {[System.Byte]$fDenyTSConnections = 0}
77         "Absent" {[System.Byte]$fDenyTSConnections = 1}
78     }
79
80     switch ($UserAuthentication) {
81         "NonSecure" {[System.Byte]$UserAuthentication = 0}
82         "Secure" {[System.Byte]$UserAuthentication = 1}
83     }
84
85     $GetEnsure = (Get-ItemProperty -Path "HKLM:\System\CurrentControlSet\Control\TerminalD
86     $GetUserAuthentication = (Get-ItemProperty -Path 'HKLM:\System\CurrentControlSet\Control\TerminalD
87
88     #The make it so section
89     if ($Ensure -ne $GetEnsure) {
90         Set-ItemProperty -Path 'HKLM:\System\CurrentControlSet\Control\TerminalD
91     }
92     if ($UserAuthentication -ne $GetUserAuthentication) {
93         Set-ItemProperty -Path 'HKLM:\System\CurrentControlSet\Control\TerminalD
94     }
95 }
```



# 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](https://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](http://PowerShell.org)
- [Microsoft Virtual Academy](http://MicrosoftVirtualAcademy.com)
- [PowerShell Magazine](http://PowerShellMagazine.com)
- [GitHub](https://github.com)
- [User Groups & Blogs](#)
- [Twitter](#)
- [Windows Desired State Configuration Revealed book](#)
- [Learning PowerShell DSC book](#)
- [The DSC Book](#)



# Get-Contact –Identity ‘Presenter’

- Blog: [mikefrobbins.com](http://mikefrobbins.com) (or MrPowerShell.com)



- Twitter: [@mikefrobbins](https://twitter.com/mikefrobbins)

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