

Classes and Broadcasts: Building a PowerShell Module for Instant Visual Settings

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About Me

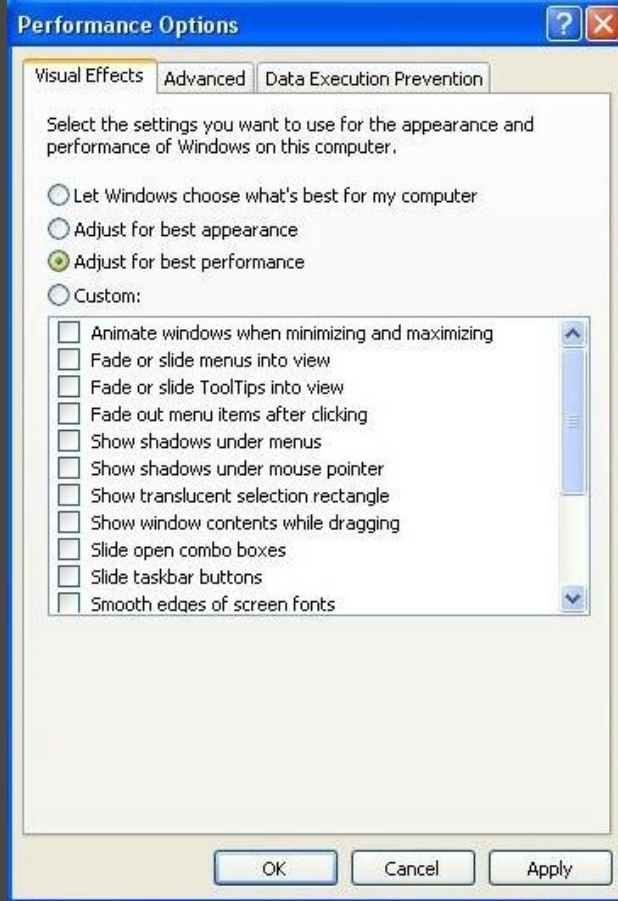
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Overview

- Making a PowerShell module to manage visual effects settings
- How Windows broadcast messages are used
- How we can use PowerShell classes

Goal



```
PowerShell
PS C:\> Get-VisualEffect

Name                Enabled Description
-----
Animation            False  Animate windows when minimizing and maximizing
ClientAreaAnimation False  Animate controls and elements inside windows
ComboBoxAnimation    False  Slide open combo boxes
CursorShadow          False  Show shadows under mouse pointer
DragFullWindows      False  Show window contents while dragging
DropShadow            False  Show shadows under windows
EnableAeroPeek        False  Enable Peek
FontSmoothing         True   Smooth edges of screen fonts
IconShadow            False  Use drop shadows for icon labels on the desktop
ListBoxSmoothScrolling False  Smooth-scroll list boxes
MenuAnimation         False  Fade or slide menus into view
SelectionFade         False  Fade out menu items after clicking
ShowThumbnails        False  Show thumbnails instead of icons
TaskbarAnimations     False  Animations in the taskbar
TaskbarThumbnailCache False  Save taskbar thumbnail previews
ToolTipAnimation      False  Fade or slide ToolTips into view
TranslucentSelect     False  Show translucent selection rectangle

PS C:\>
```

Requirements

- Changes should take effect immediately
- Flexibility
- Ability to use presets
- Compatibility with PowerShell 5 and later

Solutions

Existing methods:	Takes effect immediately	Flexible
Registry edits	✗	✓
Group policy	✗	✓
Modify default user profile	✓	✗

Demo

- So what are these registry entries?

API?

- SystemParametersInfo (SPI) function
- P/Invoke
- WM_SETTINGCHANGE

Demo

- Example API calls
- Visualizing broadcast messages

The code

- How to handle different types of settings
- Using classes
- Module structure and demo

Wrap up

- How Windows broadcast messages are used
- How we can use PowerShell classes
- Created the VisualEffects module

Where is it?

Project site: <https://github.com/janestreet/VisualEffects>

PowerShell Gallery

Q&A

THANK YOU

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