Shell Improvements

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THE GLOBAL LEADER IN PROFESSIONAL COMPUTER TRAINING

Shell Improvements

- Side-by-Side PowerShell engines

- Simplified syntax

- Console enhancements to make it even easier to manage from a command prompt

improve

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Side By Side Engines

- PowerShell v2 and v3 can co-exist on the same system
- PowerShell v2 is an optional feature on Windows Server 2012
- Start PowerShell with –Version
  - PS C:\> PowerShell –version 2
  - Use $PSVersionTable to check version

- Only one version of the ISE (v3)

```
PS C:\> $psversiontable

Name                          Value
----                          -----
PSVersion                     3.0
WSManStackVersion             3.0
SerializationVersion          1.1.0.1
CLRVersion                    4.0.30319.17929
BuildVersion                  6.2.9200.16384
PSCompatibleVersions          {1.0, 2.0, 3.0}
PSRemotingProtocolVersion     2.2
```

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Simplified Syntax

No longer need to use $_ in some expressions
Where-Object
- PS C:\> get-service | where status -eq running

ForEach-Object
- PS C:\> get-service | foreach Displayname

Only works with simple, single property and operator expressions

You can also use $PSItem in place of $_
- PS C:\> get-process | where path | foreach {
  split-path -Path $psitem.path -Parent} |
  select -Unique | sort

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Default Parameter Values

– Set default values for frequently used cmdlet parameters
– Per session settings
– Can be overwritten

Defined with a hash table: $PSDefaultParameterValues
- $PSDefaultParameterValues = @{"<cmdlet
  name>:<parameter>"="<default value>"}

- PS C:\> $PSDefaultParameterValues = @{
  "Get-WMIObject:class"="Win32_Computersystem";
  "Import-Module:verbose"=$True}

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Stream Redirection

Stream redirection now supported

Stream	Description
*	Everything
1	Success
2	Error
3	Warning
4	Verbose
5	Debug

Use > to direct to a file
Use >> to append to a file

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Stream Redirection

– You can redirect individual streams
  - `PS C:\> get-acl foo 2>err.txt`
  - `PS C:\> import-module grouppolicy -verbose 4>gpverbose.txt`
  - `PS C:\> get-ciminstance win32_logicaldisk -ComputerName $computers -verbose 1>ok.txt 2>err.txt 4>verb.txt`
– You can merge redirected streams
– But you can only merge to success streams
  - `PS C:\> ps notepad,Powershell,foo 2>&1> c:\work\results.txt`

Read About_Redirection

Operator Changes

–In
  - Test whether a value is IN a collection
  - PS C:\> 4 -in 2,4,6,8,10
    True

-NotIn
  - Test whether a value is NOT IN a collection
  - PS C:\> 4 -notin 2,4,6,8,10
    False

Tab Completion Enhancements

– No more midline wipeouts

– Tab completion for parameter values

– Tab completion for parameter enumerations

– Better Intellisense in the ISE

New Accelerators

[ordered]
- Create a hash table where key order is maintained
- [ordered]@{Name="Jeff";Title="MVP";Company="TrainSignal"}

[pscustomobject]
- No longer need to use New-Object
- Pass any hash table of properties
- Can use with [ordered]
- PS C:\> $me =
  [pscustomobject][ordered]@{Name="Jeff";Title="MVP";Company
  ="TrainSignal"}

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Shell Improvement Demo

Try It for Yourself

- Get in the habit of using tab completion

- Stream redirection will take some trial and error

- Recommend sticking with $_ to maintain consistency and backwards compatibility

TRY IT!

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