

Unix To PowerShell - Find



Joe Pruitt, 2009-29-04

PowerShell is definitely gaining momentum in the windows scripting world but I still hear folks wanting to rely on Unix based tools to get their job done. In this series of posts I'm going to look at converting some of the more popular Unix based tools to PowerShell.



find

The Unix “[find](#)” command searches through one or more directory trees of a file system, locating files based on some user specific criteria. By default, *find* returns all files below the current working directory. It also allows you to perform an action to be taken on each matched file.

In my PowerShell script I have only included the “file location” functions and will leave adding the action feature as an exercise for the reader.

This script starts out by calling the **Do-Find** function which basically just stuffs all the command line arguments into a hash table and calls the function **Find-InDirectory** with the given start location. **Find-InDirectory** will get all child items in the specified location and then iterate through that list. If the child item is a directory, the current depth is incremented, a recursive call to the **Find-InDirectory** is made for the child directory, and then the current depth is decremented. If the child item is a file, the **Get-IsMatch** function is called to determine whether the file matches the specified criteria from the command line arguments.

The Unix parameters map to the following in my PowerShell script:

Unix	PowerShell	Description
path	-start	The directory to start the search from (default = ".").
-maxdepth	-maxdepth	Descend at most "n" levels of directories below start path.
-mindepth	-mindepth	Do not apply tests at levels less than "n" levels below start path.
-amin	-amin	Only process files that were accessed more recently than "n" minutes ago.
-atime	-atime	Only process files that were accessed "n"*24 hours ago.
-empty	-empty	Only process empty files or directories.
-name	-name	Only process files where file name matches "name" pattern.
-path	-path	Only process files where the full path matches the "path" pattern.
-exec	-exec	Execute expression on each match. "{}" is replaced by file name in expr.

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