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Scripting Exercise

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1. Open the PowerShell ISE. Open the Sysevents.ps1 file.

a. The top pane displays the script file. What advantages does this pane have over Notepad? -

Keywords are color coded and I can view the code while running cmdlets in the PowerShell terminal

b. The bottom pane is a PowerShell window. What will display in this window?

The result of the script that is run – or any command / cmdlet that we type. Also it is used for debugging

2. Lookup PowerShell ISE debug online.

a. What are breakpoints used for in debugging?

A designated spot in a script where you would like operation to pause so that you can examine the current state of the variables and envrionment

b. What types of breakpoints are available?

Line Breakpoints are where it pauses at a specified line; Variable breakpoint is where the program pauses when a designated variables value changes; and Command Breakpoints pause before a specific command is run

c. What item do you select in the Debug menu to launch debugging?

Toggle Breakpoint – then Run / Continue

d. In the Debug menu, what does Step Over do?

Executes the Current statement and stops at the next statement; if current statement is a function or script call then debugger executes the whole function and stops at the next statement after the function call.

e. What does Step Into do?

Executes Current and Stops at Next; if current statement is a function or script, the debugger steps into that function or script, otherwise it stops at the next statement

f. What does Step Out do?

Steps out of the current function and up one level if the function is nested. If in the main body the script is executed to the end ro the the next breakpoint. Skipped statements are executed, but not stepped through.

3. Lookup set-psbreakpoint online.

a. What is the syntax to set a breakpoint on a line?

Set-PSBreakpoint -Script “sample.ps1” -Line 5

b. What is the syntax to set a breakpoint on a command?

Set-PSBreakpoint -Command “Increment” -Script “sample.ps1”

c. What is the syntax to set a breakpoint on a variable?

Set-PSBreakpoint -Script “sample.ps1” -Variable “Server” -Mode ReadWrite

d. For variable breakpoints, what Modes are available?

Read – stops when the value is read; Write – immediately after a new value is written to the variable; and ReadWrite – Stops for variable read or write.

4. Place the cursor on the line "if ($e.EntryType -eq "Error") {" and select Debug -> Toggle Breakpoint.

a. Select Debug > Run/Continue. What happens?

A security warning popped up; PS Terminal (below) displays [DBG] before the prompt; Displays that it Hit Line breakpoint and displays the path and that it was line 10

b. In the bottom pane, enter $e.EntryType at the prompt. What is displayed?

Error

c. At this point, which item in the if-elseif structure will resolve? What will happen?

“Error events: $err” – it will incriment the $err variable up 1 and write the current total to the screen

5. How many times will a Foreach block normally run?

It will run as many times as there are items in an array, or however many times it is specified to run