Chapter 16 Lab

In WMI, the Win32\_OperatingSystem class has a method called Win32Shutdown. It accepts a single input argument, which is a number that determines if the method shuts down, powers down, reboots, and logs off the computer.

Write a function called Set-ComputerState. Have it accept one or more computer names on a –ComputerName parameter. Also provide an –Action parameter, which accepts only the values LogOff, Restart, ShutDown, or PowerOff. Finally, provide a –Force switch parameter (switch parameters do not accept a value; they’re either specified or not).

When the function runs, query Win32\_OperatingSystem from each specified computer. Don’t worry about error handling at this point – assume each specified computer will be available. Be sure to implement support for the –WhatIf and –Confirm parameters, as outlined in this chapter. Based upon the –Action specified, execute the Win32Shutdown method with one of the following values:

* LogOff – 0
* ShutDown – 1
* Restart – 2
* PowerOff – 8

If the –Force parameter is specified, add 4 to those values. So, if the command was Set-ComputerState –computername localhost –Action LogOff –Force, then the value would be 4 (zero for LogOff, plus 4 for Force). The execution of Win32Shutdown is what should be wrapped in the implementing If block for –WhatIf and –Confirm support.

Here is a sample solution:

Function Set-Computerstate {

[cmdletbinding(SupportsShouldProcess=$True,ConfirmImpact="High")]

Param (

[Parameter(Position=0,Mandatory=$True,HelpMessage="Enter a computername")]

[ValidateNotNullorEmpty()]

[string[]]$Computername,

[Parameter(Mandatory=$True,HelpMessage="Enter an action state")]

[ValidateSet("LogOff","Shutdown","Restart","PowerOff")]

[string]$Action,

[Switch]$Force

)

Begin {

Write-Verbose "Starting Set-Computerstate"

#set the state value

Switch ($Action) {

"LogOff" { $Flag=0}

"ShutDown" { $Flag=1}

"Restart" { $Flag=2}

"PowerOff" { $Flag=8}

}

if ($Force) {

Write-Verbose "Force enabled"

$Flag+=4

}

} #Begin

Process {

Foreach ($computer in $Computername) {

Write-Verbose "Processing $computer"

$os=Get-WmiObject -Class Win32\_OperatingSystem -ComputerName $Computer

if ($PSCmdlet.ShouldProcess($computer)) {

Write-Verbose "Passing flag $flag"

$os.Win32Shutdown($flag)

}

} #foreach

} #Process

End {

Write-Verbose "Ending Set-Computerstate"

} #end

} #close function

Set-Computerstate localhost -action LogOff -WhatIf -Verbose