Powershell 3 Lab Chapter 14

1. **What class can you use to view the current IP address of a network adapter? Does the class have any methods that you could use to release a DHCP lease? (Hint: network is a good keyword here.)**

The class root/cimv2/Win32\_NetworkAdapterConfiguration can be used to view the IP address of a network adapter. This data is stored in its IPAddress property. This class has a method named ReleaseDHCPLease that can be used to release a DHCP lease.

1. **Create a table that shows a computer name, operating system build number, operating system description (caption), and BIOS serial number. (Hint: you’ve seen this technique, but you’ll need to reverse it a bit and query the OS class first, then query the BIOS second.)**

PS> Get-WMIObject -Computer Polonius, Claudius -Class Win32\_OperatingSystem | Format-Table @{l='Computer Name'; e={$\_.\_\_Server}}, @{l='OS Build Number'; e={$\_.BuildNumber}}, @{l='OS Description'; e={$\_.Caption}}, @{l='BIOS Serial Number'; e={Get-WMIObject -Class Win32\_BIOS -Computer $\_.\_\_SERVER | Select-Object -Expand SerialNumber}}

Computer Name OS Build Number OS Description BIOS Serial Number

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POLONIUS 10586 Microsoft Windows 10 Ente... VMware-56 4d aa...

CLAUDIUS 9600 Microsoft Windows Server ... VMware-56 4d 84...

1. **Query a list of hotfixes using WMI. (Hint: Microsoft formally refers to these as quick fix engineering.) Is the list different from that returned by the Get-Hotfix cmdlet?**

PS> Get-WMIObject -Class Win32\_QuickFixEngineering

Source Description HotFixID InstalledBy InstalledOn

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POLONIUS Update KB3161102 NT AUTHORITY\SYSTEM 10/04/2016

POLONIUS Security Update KB3172729 NT AUTHORITY\SYSTEM 11/03/2016

POLONIUS Update KB3173428 NT AUTHORITY\SYSTEM 10/05/2016

POLONIUS Security Update KB3174060 NT AUTHORITY\SYSTEM 9/07/2016

POLONIUS Update KB3181403 NT AUTHORITY\SYSTEM 11/03/2016

POLONIUS Security Update KB3201860 NT AUTHORITY\SYSTEM 11/03/2016

POLONIUS Security Update KB3192441

The results of this WMI command are identical to the results of the Get-Hotfix command.

1. **Display a list of services, including their current statuses, their start modes, and the accounts they use to log on.**

PS> Get-WMIObject -Class Win32\_Service | Format-Table @{l='Service Name'; e={$\_.Name}}, @{l='Current Status'; e={$\_.Status}}, @{l='Start Mode'; e={$\_.StartMode}}, @{l='Account'; e={$\_.StartName}}

Service Name Current Status Start Mode Account

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AJRouter OK Manual NT AUTHORITY\LocalService

ALG OK Manual NT AUTHORITY\LocalService

AppIDSvc OK Manual NT Authority\LocalService

Appinfo OK Manual LocalSystem

AppMgmt OK Manual LocalSystem

AppReadiness OK Manual LocalSystem

AppXSvc OK Manual LocalSystem

AudioEndpointBuilder OK Auto LocalSystem

Audiosrv OK Auto NT AUTHORITY\LocalService

AxInstSV OK Manual LocalSystem

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1. **Can you find a class that will display a list of installed software products? Do you consider the resulting list to be complete?**

PS> Get-WMIObject -Class Win32\_Product

IdentifyingNumber : {5FCE6D76-F5DC-37AB-B2B8-22AB8CEDB1D4}

Name : Microsoft Visual C++ 2008 Redistributable - x64...

Vendor : Microsoft Corporation

Version : 9.0.30729.6161

Caption : Microsoft Visual C++ 2008 Redistributable - x64...

IdentifyingNumber : {5C5E90A9-353E-42BB-A7E7-E3851DFF806B}

Name : VMware Tools

Vendor : VMware, Inc.

Version : 10.0.6.3595377

Caption : VMware Tools

IdentifyingNumber : {1F1C2DFC-2D24-3E06-BCB8-725134ADF989}

Name : Microsoft Visual C++ 2008 Redistributable - x86...

Vendor : Microsoft Corporation

Version : 9.0.30729.4148

Caption : Microsoft Visual C++ 2008 Redistributable - x86...

The Win32\_Product WMI Object has three instances, describing three programs installed on the lab machine. The Programs and Features section of the Control Panel displays the same three programs. The list of installed programs returned by the Win32\_Product object appears to be complete.