Chapter 14 Lab

Take some time to complete the following hands-on tasks. Much of the difficulty in using WMI is in finding the class that will give you the information you need, so much of the time you’ll spend in this lab will be tracking down the right class. Try to think in keywords (I’ll provide some hints), and use a WMI explorer to quickly search through classes (the WMI explorer we use lists classes alphabetically, making it easier for me to validate my guesses).

1. What class could be used to view the current IP address of a network adapter? Does the class have any methods that could be used to release a DHCP lease? (Hint: network is a good keyword here.)  
     
   You can use the Win32\_NetworkAdapterConfiguration class.  
   If you run Get-Wmiobject for this class and pipe to Get-Member you should see a number of DHCP related methods. You can also find this using a CIM cmdlet:   
   Get-CimClass win32\_networkadapterconfiguration | select -expand methods | where Name -match "dhcp"
2. 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).  
     
   get-wmiobject win32\_operatingsystem | Select BuildNumber,Caption,  
   @{l='Computername';e={$\_.\_\_SERVER}},  
   @{l='BIOSSerialNumber';e={(gwmi win32\_bios).serialnumber }} | ft –auto  
     
   or using the CIM cmdlets:  
   get-ciminstance win32\_operatingsystem | Select BuildNumber,Caption,  
   @{l='Computername';e={$\_.CSName}},  
   @{l='BIOSSerialNumber';e={(get-ciminstance win32\_bios).serialnumber }} | ft -auto
3. 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?
4. Display a list of services, including their current status, their start mode, and the account they use to log on.  
     
   get-wmiobject win32\_service | Select Name,State,StartMode,StartName  
   OR  
   get-ciminstance win32\_service | Select Name,State,StartMode,StartName
5. Can you find a class that will display a list of installed software products? Do you consider the resulting list to be complete?  
     
   get-wmiobject -list \*product