

Using the Common Information Model (CIM) Cmdlets to Inspect the Windows Operating System



Liam Cleary

Microsoft MVP and Microsoft Certified Trainer at SharePlicity

@helloitsliam | www.helloitsliam.com



Overview

Goal: Collect Data from Devices

- Using the Invoke-Command for querying
- Understanding CIM PowerShell commands
- Using the Get-CimInstance and Invoke-CimMethod commands



Using the Invoke-Command for Querying



Invoke-Command



Execute commands on local and remote computers

Returns all output from the commands, including errors

Supports executing script block as a command





Understanding CIM PowerShell Commands



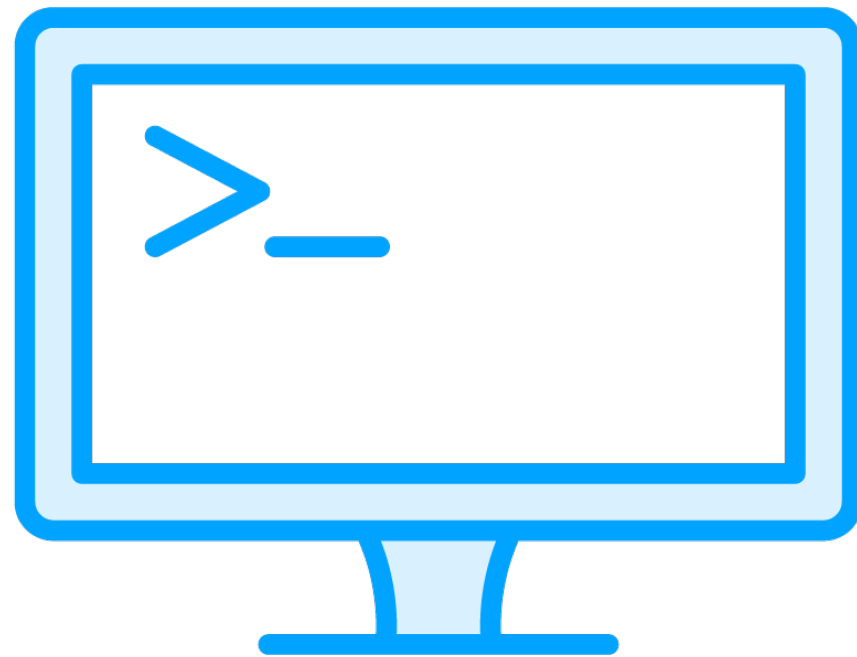
CIM Commands

The "Common Information Model" (CIM) is an open-source standard for accessing and displaying information about a computer.

Common Information Model (CIM) classes are the parent classes which WMI classes are built.



CIM Commands

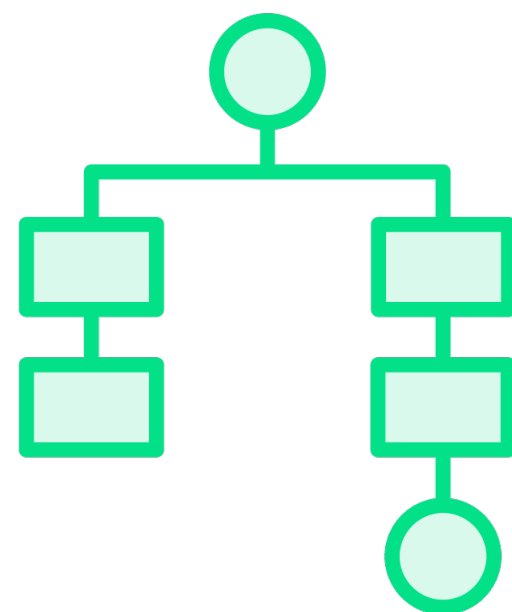


CIM data breaks down into CIM classes

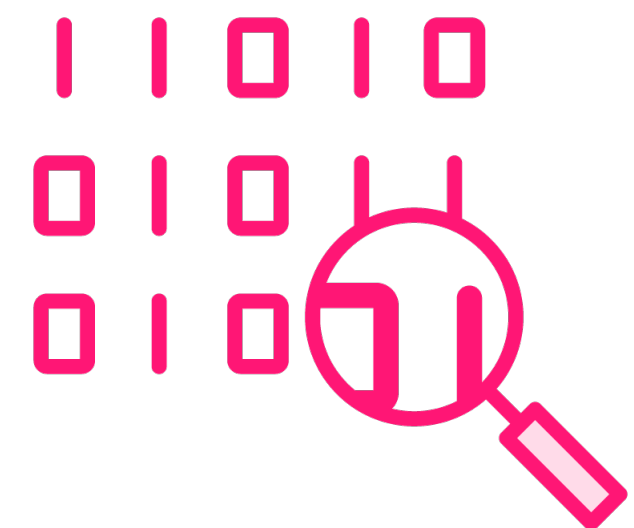
CIM classes hold categories of Windows information



Using CIM Commands



Get-CimClass



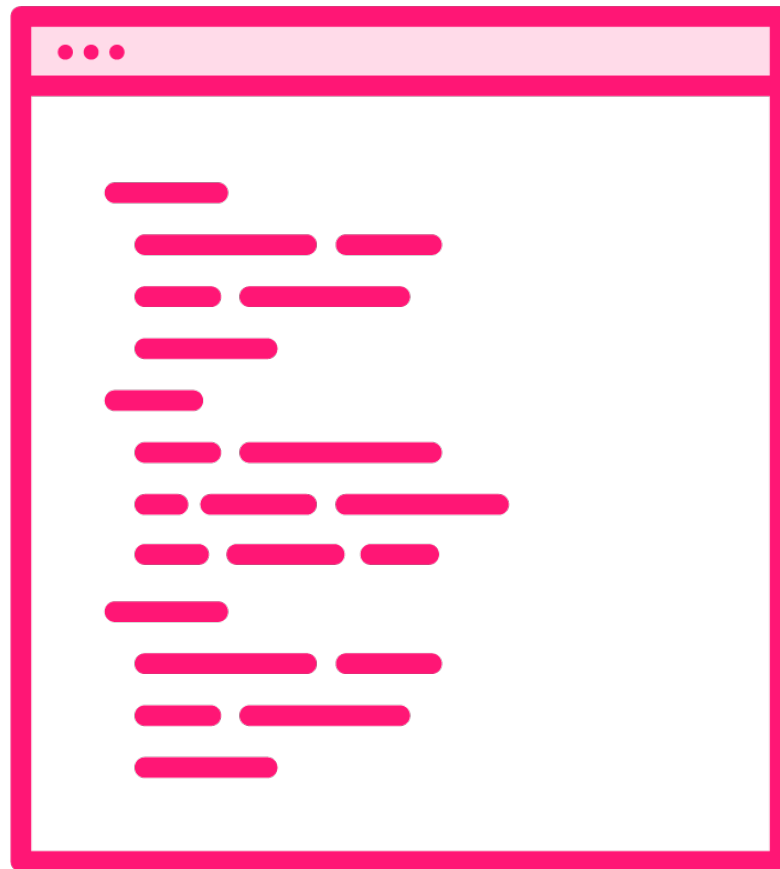
Get-CimInstance



Using the Get-CimInstance and Invoke-CimMethod Commands



Get-CimInstance



Retrieves the CIM instances of a class from a CIM server

Supports either the class name or a query

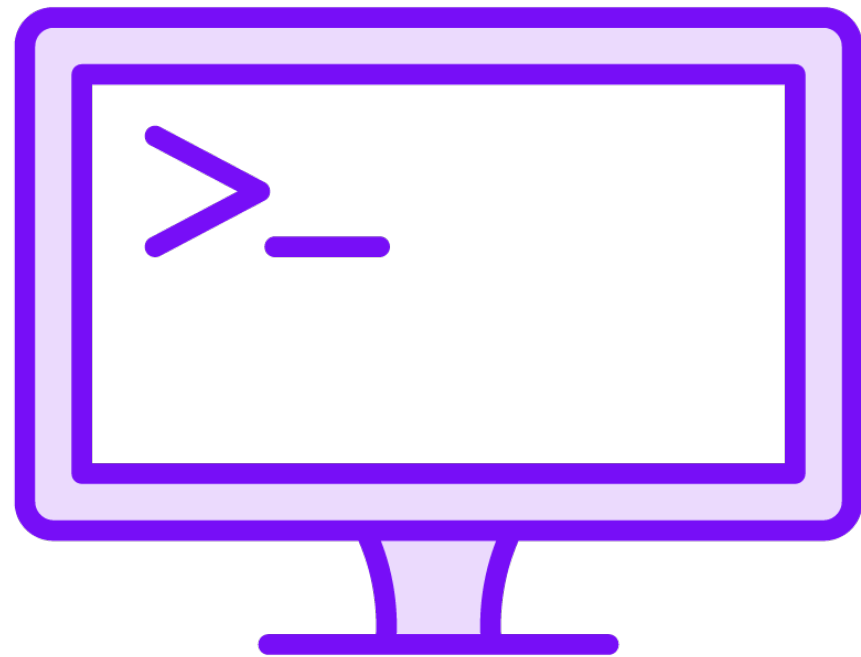
Returns one or more CIM instance objects

Uses Windows Management Instrumentation (WMI) using a Component Object Model (COM) locally

Uses CIM server if remote or using a session



Invoke-CimMethod



Invokes a method of a CIM class or CIM instance

Uses Windows Management Instrumentation (WMI) using a Component Object Model (COM) locally

Uses CIM server if remote or using a session



Summary

Goal: Collect Data from Devices

- Used the Invoke-Command to query specific classes
- Used the Get-CimInstance and Invoke-CimMethod commands to query server information, and control services



Up Next:

Collect Data from Multiple Machines for Analysis

