System Information Retrieval PowerShell Script

Sharjeel Faiq

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1 Introduction

This document presents a PowerShell script that retrieves system information, including the operating system version, computer name, processor information, and available disk space.

2 PowerShell Script

```powershell
# Get operating system version
$osVersion = (Get-CimInstance -Class Win32_OperatingSystem).Caption

# Get computer name
$computerName = $env:COMPUTERNAME

# Get processor information
$processor = (Get-CimInstance -Class Win32_Processor).Name

# Get available disk space
$disk = Get-CimInstance -Class Win32_LogicalDisk -Filter "DeviceID='C:'"
$availableDiskSpace = "{0:N2} GB" -f ($disk.FreeSpace / 1GB)

# Output the system information
Write-Host "Operating System Version: $osVersion"
Write-Host "Computer Name: $computerName"
Write-Host "Processor: $processor"
Write-Host "Available Disk Space: $availableDiskSpace"
```

3 Explanation

The provided PowerShell script retrieves system information as follows:

1. The `Get-CimInstance` cmdlet is used to retrieve system information using Common Information Model (CIM) classes.

2. The `Win32_OperatingSystem` class is used to get the operating system version by accessing the `Caption` property.

3. The `$env:COMPUTERNAME` variable is used to get the computer name.

4. The `Win32_Processor` class is used to get the processor information by accessing the `Name` property.

5. The `Win32_LogicalDisk` class is used to get disk information for the C: drive (`'DeviceID='C:'`).

6. The available disk space is calculated by dividing the free space by 1GB and formatting it with two decimal places using the `'\{0:N2\}'` format specifier.

7. The system information is output using the `Write-Host` cmdlet, displaying the operating system version, computer name, processor information, and available disk space.

This script can be used to retrieve basic system information in a PowerShell environment.