Windows PowerShell Get-Help on Cmdlet 'Enable-NetAdapterChecksumOffload'

PS:\>Get-HELP Enable-NetAdapterChecksumOffload -Full

NAME

   Enable-NetAdapterChecksumOffload

SYNOPSIS

   Enables checksum offloads on the network adapter.

SYNTAX

       Enable-NetAdapterChecksumOffload   [-Name]   <String[]>   [-AsJob]   [-CimSession   <CimSession[]>]   [-Confirm]
[-IncludeHidden] [-IpIPv4] [-NoRestart] [-PassThru] [-TcpIPv4]

   [-TcpIPv6] [-ThrottleLimit <Int32>] [-UdpIPv4] [-UdpIPv6] [-WhatIf] [<CommonParameters>]

       Enable-NetAdapterChecksumOffload   [-AsJob]   [-CimSession   <CimSession[]>]   [-Confirm]   [-IncludeHidden]
-InterfaceDescription <String[]> [-IpIPv4] [-NoRestart] [-PassThru]

   [-TcpIPv4] [-TcpIPv6] [-ThrottleLimit <Int32>] [-UdpIPv4] [-UdpIPv6] [-WhatIf] [<CommonParameters>]

   Enable-NetAdapterChecksumOffload [-AsJob] [-CimSession <CimSession[]>] [-Confirm] -InputObject <CimInstance[]>
[-IpIPv4] [-NoRestart] [-PassThru] [-TcpIPv4]

   [-TcpIPv6] [-ThrottleLimit <Int32>] [-UdpIPv4] [-UdpIPv6] [-WhatIf] [<CommonParameters>]

DESCRIPTION

The Enable-NetAdapterChecksumOffload cmdlet enables checksum offloads on the network adapter. When specified IPv4, TCPv4, or TCPv6 can be enabled in transmission,

receive, or both directions. By default all checksums are enabled in both directions. Physical network adapters have various checksum offloads in which the checksum

calculations occur in the network adapter and not in the main processor. This reduces processor utilization and can increase network throughput. This cmdlet enables

the various checksum offload settings, including IPv4, TCPv4, TCPv6, UDPv4, and UDPv6. Checksum offloading is also required for other stateless offloads to work

including receive side scaling (RSS), receive segment coalescing (RSC), and large send offload (LSO).

PARAMETERS

-AsJob [<SwitchParameter>]

Runs the cmdlet as a background job. Use this parameter to run commands that take a long time to complete. The cmdlet immediately returns an object that

represents the job and then displays the command prompt. You can continue to work in the session while the job completes. To manage the job, use the `*-Job`

cmdlets. To get the job results, use the Receive-Job (https://go.microsoft.com/fwlink/?LinkID=113372)cmdlet. For more information about Windows PowerShellr

background jobs, see about_Jobs (https://go.microsoft.com/fwlink/?LinkID=113251).

Required?   false

Position?   named

Default value   False

Accept pipeline input?   False

Accept wildcard characters? false

-CimSession <CimSession[]>

Runs the cmdlet in a remote session or on a remote computer. Enter a computer name or a session object, such as the output of a New-CimSession

[Get-CimSession](https://go.microsoft.com/fwlink/p/?LinkId=227966)cmdlet. The default is the current session

on the local computer.

Required?   false

Position?   named

Default value   None

Accept pipeline input?   False

Accept wildcard characters? false

-Confirm [<SwitchParameter>]

Prompts you for confirmation before running the cmdlet.

Required?   false

Position?   named

Default value   False

Accept pipeline input?   False

Accept wildcard characters? false

-IncludeHidden [<SwitchParameter>]

Indicates that the cmdlet includes both visible and hidden network adapters in the operation. By default only visible network adapters are included. If a wildcard

character is used in identifying a network adapter and this parameter has been specified, then the wildcard string is matched against both hidden and visible

network adapters.

Required?   false

Position?   named

Default value   False

Accept pipeline input?   False

Accept wildcard characters? false

-InputObject <CimInstance[]>

Specifies the input to this cmdlet. You can use this parameter, or you can pipe the input to this cmdlet.   *Page 3/8*

Required?   true

Position?   named

Default value   None

Accept pipeline input?   True (ByValue)

Accept wildcard characters? false

-InterfaceDescription <String[]>

Specifies an array of network adapter interface descriptions. For a physical network adapter this is typically the name of the vendor of the network adapter

followed by a part number and description, such as `Contoso 12345 Gigabit Network Device`.

Required?   true

Position?   named

Default value   None

Accept pipeline input?   True (ByPropertyName)

Accept wildcard characters? false

-IpIPv4 [<SwitchParameter>]

Indicates that this cmdlet enables checksum offload for IPv4 traffic.

Required?   false

Position?   named

Default value   False

Accept pipeline input?   False

Accept wildcard characters? false

-Name <String[]>

Specifies an array of network adapter names.

Required?   true

Position?   0

Default value   None

Accept pipeline input?   True (ByPropertyName)

Accept wildcard characters? false

-NoRestart [<SwitchParameter>]

Indicates that the cmdlet does not restart the network adapter after completing the operation. Many advanced properties require restarting the network adapter

before the new settings take effect.

Required?   false

Position?   named

Default value   False

Accept pipeline input?   False

Accept wildcard characters? false

-PassThru [<SwitchParameter>]

Returns an object representing the item with which you are working. By default, this cmdlet does not generate any output.

Required?   false

Position?   named

Default value   False

Accept pipeline input?   False

Accept wildcard characters? false

-TcpIPv4 [<SwitchParameter>]

Indicates that the cmdlet enables checksum offload for TCP IPv4 traffic.

Required?   false

Position?   named

Default value   False

Accept pipeline input?   False

Accept wildcard characters? false

-TcpIPv6 [<SwitchParameter>]

Indicates that the cmdlet enables checksum offload for TCP IPv6 traffic.

Required?   false

Position?   named

Default value   False

Accept pipeline input?   False

Accept wildcard characters? false

-ThrottleLimit <Int32>

Specifies the maximum number of concurrent operations that can be established to run the cmdlet. If this parameter is omitted or a value of `0` is entered, then

Windows PowerShellr calculates an optimum throttle limit for the cmdlet based on the number of CIM cmdlets that are running on the computer. The throttle limit

applies only to the current cmdlet, not to the session or to the computer.

Required?   false

Position?   named

Default value   None

Accept pipeline input?   False

Accept wildcard characters? false

-UdpIPv4 [<SwitchParameter>]

Indicates that the cmdlet enables checksum offload for UDP IPv4 traffic.

Required?   false

Position?   named

Default value   False

Accept pipeline input?   False

Accept wildcard characters? false

-UdpIPv6 [<SwitchParameter>]

Indicates that the cmdlet enables checksum offload for UDP IPv6 traffic.

Required?   false

Position?   named

Default value   False

Accept pipeline input?   False

Accept wildcard characters?   false

-WhatIf [<SwitchParameter>]

Shows what would happen if the cmdlet runs. The cmdlet is not run.

Required?   false

Position?   named

Default value   False

Accept pipeline input?   False

Accept wildcard characters?   false

<CommonParameters>

This cmdlet supports the common parameters: Verbose, Debug,

ErrorAction, ErrorVariable, WarningAction, WarningVariable,

OutBuffer, PipelineVariable, and OutVariable. For more information, see

about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).

INPUTS

Microsoft.Management.Infrastructure.CimInstance#ROOT/StandardCimv2/MSFT_NetAdapter

ChecksumOffloadSettingData[]

The `Microsoft.Management.Infrastructure.CimInstance` object is a wrapper class that displays Windows Management

Instrumentation (WMI) objects. The path after the

pound sign (`#`) provides the namespace and class name for the underlying WMI object.

OUTPUTS

Microsoft.Management.Infrastructure.CimInstance#ROOT/StandardCimv2/MSFT_NetAdapter

ChecksumOffloadSettingData

The `Microsoft.Management.Infrastructure.CimInstance` object is a wrapper class that displays Windows Management Instrumentation (WMI) objects. The path after the

pound sign (`#`) provides the namespace and class name for the underlying WMI object.

NOTES

Example 1: Enable IPv4 checksum offloads on all network adapters

PS C:\> Enable-NetAdapterChecksumOffload -Name "*" -TcpIPv4 -UdpIPv4 -IpIPv4

This command enables all IPv4 checksum offloads on all visible network adapters and restarts the network adapters.

Example 2: Enable all checksum offloads on all network adapters

PS C:\> Enable-NetAdapterChecksumOffload -Name "*"

This command enables all checksum offloads on all visible network adapters and restarts the network adapters.

RELATED LINKS

Online Version: https://learn.microsoft.com/powershell/module/netadapter/enable-netadapterchecksumoffload?view=windowsserver2022-ps &wt.mc_id=ps-gethelp

Disable-NetAdapterChecksumOffload

Get-NetAdapterChecksumOffload

Set-NetAdapterChecksumOffload