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

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

NAME

Set-NetAdapterChecksumOffload

SYNOPSIS

Sets the various checksum offload settings.

SYNTAX

Set-NetAdapterChecksumOffload [-Name] <String[]> [-AsJob] [-CimSession <CimSession[]>] [-Confirm] [-IncludeHidden] [-IpIPv4Enabled {Disabled | TxEnabled | RxEnabled |

RxTxEnabled}] [-NoRestart] [-PassThru] [-TcpIPv4Enabled {Disabled | TxEnabled | RxEnabled | RxTxEnabled}] [-TcpIPv6Enabled {Disabled | TxEnabled | RxEnabled |

RxTxEnabled}] [-ThrottleLimit <Int32>] [-UdpIPv4Enabled {Disabled | TxEnabled | RxEnabled | RxTxEnabled}] [-UdpIPv6Enabled {Disabled | TxEnabled | RxEnabled |

RxTxEnabled}] [-WhatIf] [<CommonParameters>]

Set-NetAdapterChecksumOffload [-AsJob] [-CimSession <CimSession[]>] [-Confirm] [-IncludeHidden] -InterfaceDescription <String[]> [-IpIPv4Enabled {Disabled | TxEnabled

| RxEnabled | RxTxEnabled}] [-NoRestart] [-PassThru] [-TcpIPv4Enabled {Disabled | TxEnabled | RxEnabled | RxTxEnabled}] [-TcpIPv6Enabled {Disabled | TxEnabled |

RxEnabled | RxTxEnabled}] [-ThrottleLimit <Int32>] [-UdpIPv4Enabled {Disabled | TxEnabled | RxEnabled | RxTxEnabled}] [-UdpIPv6Enabled {Disabled | TxEnabled |

RxEnabled | RxTxEnabled}] [-WhatIf] [<CommonParameters>]

Set-NetAdapterChecksumOffload [-AsJob] [-CimSession <CimSession[]>] [-Confirm] -InputObject <CimInstance[]> [-IpIPv4Enabled {Disabled | TxEnabled | RxEnabled |

RxTxEnabled}] [-NoRestart] [-PassThru] [-TcpIPv4Enabled {Disabled | TxEnabled | RxEnabled | RxTxEnabled}] [-TcpIPv6Enabled {Disabled | TxEnabled | RxEnabled |

RxTxEnabled}] [-ThrottleLimit <Int32>] [-UdpIPv4Enabled {Disabled | TxEnabled | RxEnabled | RxTxEnabled}] [-UdpIPv6Enabled {Disabled | TxEnabled | RxEnabled |

RxTxEnabled}] [-WhatIf] [<CommonParameters>]

DESCRIPTION

The Set-NetAdapterChecksumOffload cmdlet sets the state of the checksum offload properties. The network adapter computes the checksums, therefore reducing processor

utilization because the processor is not performing this computation. This cmdlet sets the various checksum offload settings, including IPv4, TCPv4, TCPv6, UDPv4, and

UDPv6. This cmdlet enables a few types of checksums while disabling others. If only setting the enabled state, run the Enable-NetAdapterChecksumOffload or

Disable-NetAdapterChecksumOffload cmdlet.

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 (https://go.microsoft.com/fwlink/p/?LinkId=227967) or [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.

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

-IpIPv4Enabled <Direction>

Specifies the direction of the IP traffic for IPv4. The acceptable values for this parameter are:

- Disabled

- RxTxEnabled

- RxEnabled

- TxEnabled.

If RxEnabled or TxEnabled is selected, then the opposite direction (transmit or receive, respectively) is disabled. Such as if the state is RxEnabled, then

checksum calculations for receive traffic is enabled and for transmit traffic is Disabled.

Required? false

Position? named

Default value None

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

-TcpIPv4Enabled <Direction>

Specifies the direction of the TCP traffic for IPv4. The acceptable values for this parameter are:

- Disabled

- RxTxEnabled

- RxEnabled

- TxEnabled

If RxEnabled or TxEnabled is selected, then the opposite direction (transmit or receive, respectively) is disabled. Such as if the state is RxEnabled, then

checksum calculations for receive traffic is enabled and for transmit traffic is Disabled.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-TcpIPv6Enabled <Direction>

Specifies the direction of the TCP traffic for IPv6. The acceptable values for this parameter are:

- Disabled

- RxTxEnabled

- RxEnabled

- TxEnabled

If RxEnabled or TxEnabled is selected, then the opposite direction (transmit or receive, respectively) is disabled. Such as if the state is RxEnabled, then

checksum calculations for receive traffic is enabled and for transmit traffic is Disabled.

Required? false

Position? named

Default value None

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

-UdpIPv4Enabled <Direction>

Specifies the direction of the UDP traffic for IPv4. The acceptable values for this parameter are:

- Disabled

- RxTxEnabled

- RxEnabled

- TxEnabled

If RxEnabled or TxEnabled is selected, then the opposite direction (transmit or receive, respectively) is disabled. Such as if the state is RxEnabled, then

checksum calculations for receive traffic is enabled and for transmit traffic is Disabled.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-UdpIPv6Enabled <Direction>

Specifies the direction of the UDP traffic for IPv6. The acceptable values for this parameter are:

- Disabled

- RxTxEnabled

- RxEnabled

- TxEnabled.

If RxEnabled or TxEnabled is selected, then the opposite direction (transmit or receive, respectively) is disabled. Such as if the state is RxEnabled, then

checksum calculations for receive traffic is enabled and for transmit traffic is Disabled.

Required? false

Position? named

Default value None

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_NetAdapterChecksumOffloadSettingData[]

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_NetAdapterChecksumOffloadSettingData[]

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 for both receive and transmit directions on all network adapters

PS C:\> Set-NetAdapterChecksumOffload -Name "*" -IpIPv4Enabled RxTxEnabled

This command enables the IPv4 checksum offload for both receive and transmit directions on all visible network adapters.

Example 2: Enable IPv4, UDPv4, and TCPv4 checksums for both receive and transmit directions on all network adapters

PS C:\> Set-NetAdapterChecksumOffload -Name "MyAdapter" -IpIPv4Enabled RxTxEnabled -TcpIpv4Enabled RxTxEnabled -UdpIpv4Enabled RxTxEnabled

This command enables the IPv4 checksum, the UDPv4 checksum, and the TCPv4 checksum in both receive and transmit directions on the network adapter named MyAdapter.

RELATED LINKS

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

Disable-NetAdapterChecksumOffload

Enable-NetAdapterChecksumOffload

Get-NetAdapterChecksumOffload