Windows PowerShell Get-Help on Cmdlet 'Set-NetIPv6Protocol'

PS:\>Get-HELP Set-NetIPv6Protocol -Full

NAME

Set-NetIPv6Protocol

SYNOPSIS

Modifies the IPv6 protocol configuration.

SYNTAX

Set-NetIPv6Protocol [-AddressMaskReply {Disabled | Enabled}] [-AsJob] [-CimSession <CimSession[]>] [-Confirm] [-DeadGatewayDetection <DeadGatewayDetection>]

[-DefaultHopLimit <UInt32>] [-DhcpMediaSense {Disabled | Enabled}] [-GroupForwardedFragments {Disabled | Enabled}] [-IcmpRedirects {Disabled | Enabled}] [-InputObject

<CimInstance[]>] [-MaxTemporaryDadAttempts <UInt32>] [-MaxTemporaryDesyncTime <TimeSpan>] [-MaxTemporaryPreferredLifetime <TimeSpan>] [-MaxTemporaryValidLifetime

<TimeSpan>] [-MediaSenseEventLog {Disabled | Enabled}] [-MldLevel {None | SendOnly | All}] [-MldVersion {Version1 | Version2}] [-MulticastForwarding {Disabled |

Enabled}] [-NeighborCacheLimitEntries <UInt32>] [-PassThru] [-RandomizeIdentifiers {Disabled | Enabled}] [-ReassemblyLimitBytes <UInt32>] [-RouteCacheLimitEntries

<UInt32>] [-SourceRoutingBehavior {Forward | DontForward | Drop}] [-TemporaryRegenerateTime <TimeSpan>] [-ThrottleLimit <Int32>] [-UseTemporaryAddresses {Disabled |

Enabled | Always}] [-WhatIf] [<CommonParameters>]

DESCRIPTION

The Set-NetIPv6Protocol cmdlet modifies the global IPv6 protocol configuration for a computer. If you do not specify any parameters for the cmdlet, the cmdlet sets

the default values for the IPv6 protocol configuration.

PARAMETERS

-AddressMaskReply <AddressMaskReply>

Specifies a value for address mask reply. The cmdlet modifies the value for this setting. Address mask reply specifies how the computer responds to ICMP address

mask packets. The acceptable values for this parameter are:

- Enabled. The computer responds to ICMP address mask packets. - Disabled. The computer does not respond to ICMP address mask packets.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-AsJob [<SwitchParameter>]

Runs the cmdlet as a background job. Use this parameter to run commands that take a long time to complete.

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

-DeadGatewayDetection <DeadGatewayDetection>

Specifies an array of values for dead gateway detection. The cmdlet gets IPv6 protocol configurations that have these values. Dead gateway detection is a feature

that identifies gateways that are not operating properly and switches the computer to a new default gateway if available. The acceptable values for this parameter

are:

- Enabled

- Disabled

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-DefaultHopLimit <UInt32>

Specifies a value for the default hop limit. The cmdlet modifies the value for this setting. This parameter sets the default value for the CurrentHopLimit

property in the IP interface. The current hop limit is the value that the IP interface writes in the hop limit field in all outbound IPv6 traffic. When routers

forward a packet, they decrement the hop limit by 1 and discard the packet when the hop limit is 0. The default value is 128.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-DhcpMediaSense <DhcpMediaSense>

Specifies a value for Media Sense. The cmdlet modifies the value for this setting.

Media Sense provides a mechanism for the network adapter to notify the protocol stack of media connect and disconnect events. These events trigger the DHCP client

to take an action, such as attempting to renew a DHCP lease or removing routes that are related to a disconnected network. When Media Sense is enabled, the

network parameters on the laptop of a roaming user are automatically and transparently updated without requiring a restart when the user moves from one location

to another. The acceptable values for this parameter are:

- Enabled

- Disabled

The default value is Enabled.

Required? false
Position? named
Default value None
Accept pipeline input? False
Accept wildcard characters? false

-GroupForwardedFragments <GroupForwardedFragments>

Specifies a value for group forwarded fragments. The cmdlet modifies the value for this setting. Group forwarded fragments specifies whether the IP interface

collects fragments into groups before it forwards the fragments. This parameter sets the GroupForwardedFragments property in the IP interface. The acceptable

values for this parameter are:

- Enabled. The IP interface collects IPv6 protocol fragments into groups before it forwards the fragments. - Disabled. The IP interface does not collect IPv6

protocol fragments into groups before it forwards the fragments.

The default value is Disabled.

Required? false
Position? named
Default value None
Accept pipeline input? False
Accept wildcard characters? false

-IcmpRedirects <IcmpRedirects>

Specifies a value for Internet Control Message Protocol (ICMP) redirect. The cmdlet modifies the value for this setting.

ICMP redirect specifies whether to update

the path cache in response to ICMP redirect packets. This parameter sets the IcmpRedirects property in the IP interface. The acceptable values for this parameter

are:

- Enabled. The IP interface updates the path cache in response to ICMP redirect packets. - Disabled. The IP interface does not update the path cache in response

to ICMP redirect packets.

The default value is Enabled.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-InputObject <CimInstance[]>

Specifies the input object that is used in a pipeline command.

Required? false

Position? named

Default value None

Accept pipeline input? True (ByValue)

Accept wildcard characters? false

-MaxTemporaryDadAttempts <UInt32>

Specifies a value for the maximum number of duplicate address detection attempts for temporary addresses. The cmdlet modifies the value for this setting.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-MaxTemporaryDesyncTime <TimeSpan>

Specifies a value for the maximum time to desynchronize temporary address preferred lifetimes. The cmdlet modifies the value for this setting.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-MaxTemporaryPreferredLifetime <TimeSpan>

Specifies an array of values, as TimeSpan objects, for the maximum preferred lifetime over which to prefer a temporary address. The cmdlet gets IPv6 protocol

configurations that have these values.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-MaxTemporaryValidLifetime <TimeSpan>

Specifies a value, as a TimeSpan object, for the maximum lifetime over which a temporary address is valid. The cmdlet modifies the value for this setting.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-MediaSenseEventLog <MediaSenseEventLog>

Specifies a value for Media Sense event log. The cmdlet modifies the value for this setting. The acceptable values for this parameter are:

- Enabled. The IP interface logs DHCP Media Sense events in the event log for troubleshooting purposes. - Disabled. The IP interface does not log DHCP Media Sense events in the event log.

The default value is Disabled.

Required? false
Position? named
Default value None
Accept pipeline input? False
Accept wildcard characters? false

-MldLevel <MldLevel>

Specifies a value for the level of Multicast Listener Discovery (MLD) support. The cmdlet modifies the value for this setting. The acceptable values for this parameter are:

- All. The computer can send and receive multicast packets. - None. The computer cannot send or receive multicast packets. - SendOnly. The computer can send but not receive multicast packets.

Required? false
Position? named
Default value None
Accept pipeline input? False
Accept wildcard characters? false

-MldVersion <MldVersion>

Specifies a value for the maximum version of Multicast Listener Discovery that the host supports. The cmdlet modifies the value for this setting.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-MulticastForwarding <MulticastForwarding>

Specifies a value for multicast forwarding. The cmdlet modifies the value for this setting. The acceptable values for this parameter are:

- Enabled. The computer can forward multicast packets. - Disabled. The computer cannot forward multicast packets.

The default value is Disabled.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-NeighborCacheLimitEntries <UInt32>

Specifies the maximum number of entries in the neighbor cache, which consists of all dynamic neighbors no longer referenced. The cmdlet modifies the value for

this setting.

The default value is 256.

Required? false

Position? named

Default value None

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

-RandomizeIdentifiers <RandomizeIdentifiers>

Specifies a value for the randomization of identifiers. The cmdlet modifies the value for this setting. The acceptable values for this parameter are:

- Enabled. The IP interface randomizes identifiers when it creates an IP address. - Disabled. The IP interface does not randomize identifiers when it creates an

IP address.

The default value is Enabled.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-ReassemblyLimitBytes <UInt32>

Specifies a value for the maximum size of the reassembly buffer. The cmdlet modifies the value for this setting.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-RouteCacheLimitEntries <UInt32>

Specifies a value for the maximum number of route cache entries. The cmdlet modifies the value for this setting.

The default value is 128.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-SourceRoutingBehavior <SourceRoutingBehavior>

Specifies a value for source routing behavior. The cmdlet modifies the value for this setting. The acceptable values for this parameter are:

- DontForward. The computer can receive but not forward source-routed packets. - Drop. The computer drops source-routed packets.

The default value is DontForward.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-TemporaryRegenerateTime <TimeSpan>

Specifies a value, as a TimeSpan object, for the time prior to deprecating a temporary address when a new address is

generated.

The cmdlet modifies the value for this setting.

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 PowerShell® 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

-UseTemporaryAddresses <UseTemporaryAddresses>

Specifies a value for temporary addresses. The cmdlet modifies the value for this setting.

- Always. The computer always generates temporary addresses by using random numbers. - Counter. The computer generates temporary addresses by using the interface

identifier. You typically use this identifier for test purposes. - Disabled. The computer does not use temporary addresses. - Enabled. The computer uses temporary

addresses.

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_NetIPv6Protocol

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

None

NOTES

------- Example 1: Enable the DHCP Media Sense event log -------

PS C:\>Set-NetIPv6Protocol -MediaSenseEventLog Enabled

This command enables the DHCP Media Sense event log.

--------- Example 2: Increase the number of neighbors ---------

PS C:\>Set-NetIPv6Protocol -NeighborCacheLimitEntries 1000

This command increases the size of the cache of on-link neighbors on the subnet that are no longer referenced to 1,000. The default value is 256.

RELATED LINKS

Online Version: https://learn.microsoft.com/powershell/module/nettcpip/set-netipv6protocol?view=windowsserver2022-ps&wt.mc_id=ps-gethelp

Get-NetIPv6Protocol

Set-NetIPv4Protocol