



## ***Windows PowerShell Get-Help on Cmdlet 'New-NetNeighbor'***

***PS:\>Get-HELP New-NetNeighbor -Full***

### NAME

New-NetNeighbor

### SYNOPSIS

Creates a neighbor cache entry.

### SYNTAX

```
New-NetNeighbor [-IPAddress] <String> [-AddressFamily {IPv4 | IPv6}] [-AsJob] [-CimSession <CimSession[]>] [-Confirm]
-InterfaceAlias <String> [-LinkLayerAddress
    <String>] [-PolicyStore <String>] [-State {Unreachable | Incomplete | Probe | Delay | Stale | Reachable | Permanent}]
[-ThrottleLimit <Int32>] [-WhatIf]
[<CommonParameters>]
```

```
New-NetNeighbor [-IPAddress] <String> [-AddressFamily {IPv4 | IPv6}] [-AsJob] [-CimSession <CimSession[]>] [-Confirm]
-InterfaceIndex <UInt32> [-LinkLayerAddress
    <String>] [-PolicyStore <String>] [-State {Unreachable | Incomplete | Probe | Delay | Stale | Reachable | Permanent}]
[-ThrottleLimit <Int32>] [-WhatIf]
[<CommonParameters>]
```

## DESCRIPTION

The New-NetNeighbor cmdlet creates a neighbor cache entry. The neighbor cache maintains information for each on-link neighbor, including the IP address and the

associated link-layer address. The address family that you specify for the neighbor cache entry must match the address family of the IP interface.

## PARAMETERS

**-AddressFamily <AddressFamily>**

Specifies the IP address family. The cmdlet adds a neighbor cache entry that belongs to the IP address family you specify. If you do not specify this parameter,

the cmdlet automatically generates the address families of the neighbor cache entries. The acceptable values for this parameter are:

- IPv4

- IPv6

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

-IPAddress <String>

Specifies an IP address. The cmdlet adds a neighbor cache entry that has the IP address you specify.

Required?	true
Position?	0
Default value	None
Accept pipeline input?	False
Accept wildcard characters?	false

-InterfaceAlias <String>

Specifies the alias of a network interface. The cmdlet adds a neighbor cache entry for the network interface that has the alias you specify.

Required?	true
Position?	named
Default value	None
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

#### **-InterfaceIndex <UInt32>**

Specifies the alias of a network interface. The cmdlet adds a neighbor cache entry for the network interface located at the index you specify.

Required?	true
Position?	named
Default value	None
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

#### **-LinkLayerAddress <String>**

Specifies the link-layer address of the neighbor cache entry. The cmdlet adds a neighbor cache entry that has the link-layer address you specify.

The link-layer address is also called the media access control (MAC) address. A link-layer address that uses IPv4 address syntax is a tunnel technology that

encapsulates packets over an IPv4 tunnel, such as Intra-Site Automatic Tunnel Addressing Protocol (ISATAP) or Teredo. A link-layer address of all zeroes indicates

that the neighbor is unreachable and the neighbor cache entry does not have a link-layer address entry. An empty link-layer address indicates that the link layer

does not use link-layer addresses, such as on a loopback interface.

Required?	false
Position?	named

Default value            None  
Accept pipeline input?    False  
Accept wildcard characters? false

**-PolicyStore <String>**

Specifies a PolicyStore value. The cmdlet adds a neighbor cache entry that has the PolicyStore value you specify. The acceptable values for this parameter are:

- ActiveStore: The IP address information is valid.
- PersistentStore: The computer saves IP address information across restarts.

When the computer restarts, it copies the saved settings to the ActiveStore.

Specify ActiveStore only.

If you do not specify this parameter, the default entries are created in both the ActiveStore and the PersistentStore.

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

**-State <State>**

Specifies the state of the neighbor cache entry. The cmdlet adds a neighbor cache entry that has the state you specify. You can create only neighbor cache entries that are in a permanent state. The acceptable values for this parameter are:

- Permanent. The neighbor is statically provisioned and will not expire unless you remove it.

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

#### **-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 \(https://go.microsoft.com/fwlink/?LinkID=113216\)](https://go.microsoft.com/fwlink/?LinkID=113216).

None

## OUTPUTS

```
Microsoft.Management.Infrastructure.CimInstance#root\StandardCimv2\MSFT_NetNeighbor
```

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: Create an IPv4 neighbor cache entry -----

```
PS C:\>New-NetNeighbor -InterfaceIndex 12 -IPAddress "192.168.0.5" -LinkLayerAddress "00-00-12-00-00-ff"
```

This command creates a neighbor cache entry that has the IP address 192.168.0.5. The command specifies that the neighbor is connected to the interface that has the

index 12. The command specifies that the link-layer address of the neighbor cache entry is 00-00-12-00-00-ff.

----- Example 2: Create an IPv6 neighbor cache entry -----

```
PS C:\>New-NetNeighbor -InterfaceIndex 13 -IPAddress "fe80::5efe:192.168.0.5"
```

This command creates a neighbor cache entry on a virtual ISATAP interface that has the IP address fe80::5efe:192.168.0.5. The command specifies that the neighbor is

connected to the interface that has the index 13.

## RELATED LINKS

[https://learn.microsoft.com/powershell/module/nettcpip/new-netneighbor?view=windowsserver2022-ps&wt.mc\\_id=ps-gethel](https://learn.microsoft.com/powershell/module/nettcpip/new-netneighbor?view=windowsserver2022-ps&wt.mc_id=ps-gethel)

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Get-NetAdapter

Get-NetNeighbor

Remove-NetNeighbor

Set-NetNeighbor