PowerShell Get-Help on command 'New-NetRoute'

PS C:\Users\wahid> Get-Help New-NetRoute

NAME

New-NetRoute

SYNOPSIS

Creates a route in the IP routing table.

SYNTAX

New-NetRoute [-DestinationPrefix] <String> [-AddressFamily {IPv4 | IPv6}]

[-AsJob] [-CimSession <CimSession[]>] [-Confirm] -InterfaceAlias <String>

[-NextHop <String>] [-PolicyStore <String>] [-PreferredLifetime <TimeSpan>]

[-Protocol {Other | Local | NetMgmt | Icmp | Egp | Ggp | Hello | Rip | IsIs |

EsIs | Igrp | Bbn | Ospf | Bgp | Idpr | Eigrp | Dvmrp | Rpl | Dhcp}] [-Publish

{No | Age | Yes}] [-RouteMetric <UInt16>] [-ThrottleLimit <Int32>]

[-ValidLifetime <TimeSpan>] [-WhatIf] [<CommonParameters>]

New-NetRoute [-DestinationPrefix] <String> [-AddressFamily {IPv4 | IPv6}]

[-AsJob] [-CimSession <CimSession[]>] [-Confirm] -InterfaceIndex <UInt32>

[-NextHop <String>] [-PolicyStore <String>] [-PreferredLifetime <TimeSpan>]

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EsIs | Igrp | Bbn | Ospf | Bgp | Idpr | Eigrp | Dvmrp | Rpl | Dhcp}] [-Publish

{No | Age | Yes}] [-RouteMetric <UInt16>] [-ThrottleLimit <Int32>]

[-ValidLifetime <TimeSpan>] [-WhatIf] [<CommonParameters>]

DESCRIPTION

The New-NetRoute cmdlet creates an IP route in the IP routing table. Specify

the destination prefix, and specify an interface by using the interface alias

or the interface index.

IP routing is the process of forwarding a packet based on the destination IP

address. Routing occurs at TCP/IP hosts and at IP routers. The sending host or

router determines where to forward the packet. To determine where to forward a

packet, the host or router consults a routing table that is stored in memory.

When TCP/IP starts, it creates entries in the routing table. You can add

entries either manually or automatically.

For more information about routing, see Chapter 5 - IP Routing

(https://technet.microsoft.com/library/bb727001.aspx)in the TechNet library.

PARAMETERS

-AddressFamily <AddressFamily>

Specifies the IP address family. The cmdlet uses the family that you

specify for the IP route. The acceptable values for this parameter are:

- IPv4

- IPv6

If you do not specify this parameter, the cmdlet selects a value based on

the other input that you provide.

-AsJob [<SwitchParameter>]

 Runs the cmdlet as a background job. Use this parameter to run commands

 that take a long time to complete.

-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

 (/powershell/module/cimcmdlets/New-CimSession) or

 [Get-CimSession](/powershell/module/cimcmdlets/Get-CimSession)cmdlet. The

 default is the current session on the local computer.

-Confirm [<SwitchParameter>]

 Prompts you for confirmation before running the cmdlet.

-DestinationPrefix <String>

 Specifies a destination prefix of an IP route. A destination prefix

 consists of an IP address prefix and a prefix length, separated by a slash

 (/). A value of 0.0.0.0/0 for IPv4 or ::/0 for IPv6 indicates that the

 value of the NextHop parameter is a default gateway. The prefix length of

 the local host must match the prefix specified in this parameter, with all

 remaining address fields set to zero.

-InterfaceAlias <String>

 Specifies the alias of a network interface. The cmdlet adds a route for

 the interface that has the alias that you specify.

-InterfaceIndex <UInt32>

 Specifies the index of a network interface. The cmdlet adds a route for

 the interface located at the index that you specify.

-NextHop <String>

 Specifies the next hop for the IP route. The cmdlet assigns the next hop

that you specify to the IP route. A value of 0.0.0.0 for IPv4 or :: for

IPv6 indicates that the route is on the local subnet.

-PolicyStore <String>

Specifies the PolicyStore value. The cmdlet assigns the PolicyStore value

that you specify to the IP route. The acceptable values for this parameter

are:

- ActiveStore. Current routing information, used by the OS. When a

computer reboots, information in this store is lost. - PersistentStore.

Cannot be used. Routing information in this store preserved across

reboots. When a computer starts, it copies the saved settings from this

store to the ActiveStore.

By default, a route is saved in both stores. Use this parameter only when

you need to create a route in just the ActiveStore.

-PreferredLifetime <TimeSpan>

Specifies a preferred lifetime, as a TimeSpan object, of an IP route. The

cmdlet assigns the lifetime that you specify to the IP route. To obtain a

TimeSpan object, use the New-TimeSpan cmdlet. For more information, type

`Get-Help New-TimeSpan`. The default value for a lifetime is infinite.

-Protocol <Protocol>

Specifies the type of routing protocol. The cmdlet assigns the protocol

that you specify to the IP route. The acceptable values for this parameter

are:

- Bbn

- Bgp

- Dhcp

- Dvmrp

- Egp

- Eigrp

- EsIs

- Ggp

- Hello

- Icmp

- Idpr

- Igrp

- IsIs

- Local

- NetMgmt

- Ospf

- Rip

- Rpl

- Other

The default value is NetMgmt.

-Publish <Publish>

Specifies the publish setting of an IP route. The cmdlet assigns the

publish setting that you specify to the IP route. The acceptable values

for this parameter are:

- No. Do not publish or advertise IP route information in router

advertisements. - Yes. Publish and advertise IP route information with an

infinite valid lifetime in router advertisements. - Age. Publish and

advertise IP route information with a finite valid lifetime in router

advertisements. Specify a valid lifetime by using the ValidLifetime

parameter.

The default value is No.

-RouteMetric <UInt16>

Specifies an integer route metric for an IP route. The cmdlet assigns the

metric that you specify to the IP route. The default value is 256. To

choose among multiple routes, the computer adds this value. The computer

selects the route with the lowest combined value. To modify the interface

metric, use the Set-NetIPInterface cmdlet.

-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.

-ValidLifetime <TimeSpan>

   Specifies a valid lifetime, as a TimeSpan object, for an IP route. The

   cmdlet assigns the lifetime setting that you specify to the IP route. To

   obtain a TimeSpan object, use the New-TimeSpan cmdlet. The default value

   is infinite.

-WhatIf [<SwitchParameter>]

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

<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).

------- Example 1: Add an IP route to the routing table -------

PS C:\>New-NetRoute -DestinationPrefix "10.0.0.0/24" -InterfaceIndex 12

-NextHop 192.168.0.1

PS C:\>Get-NetRoute | Format-List -Property *

This example adds a routing table entry, and then displays the properties of

all the entries in the routing table.

The first command creates a route for the destination prefix 10.0.0.0/24 for

the interface that has the index of 12. The command specifies 192.168.0.1 as

the next hop.

The second command uses the Get-NetRoute cmdlet to get all the routes for the

computer, and then passes them to the Format-List cmdlet by using the pipeline

operator. The Format-List cmdlet can display all the properties of an object.

For more information, type `Get-Help Format-List`.

REMARKS

To see the examples, type: "get-help New-NetRoute -examples".

For more information, type: "get-help New-NetRoute -detailed".

For technical information, type: "get-help New-NetRoute -full".

For online help, type: "get-help New-NetRoute -online"