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

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

NAME

Enable-NetAdapterPowerManagement

SYNOPSIS

Enables specific power management features on the network adapter.

SYNTAX

Enable-NetAdapterPowerManagement [-Name] <String[]> [-ArpOffload] [-AsJob] [-CimSession <CimSession[]>] [-Confirm] [-D0PacketCoalescing] [-DeviceSleepOnDisconnect]

[-IncludeHidden] [-NSOffload] [-NoRestart] [-PassThru] [-RsnRekeyOffload] [-SelectiveSuspend] [-ThrottleLimit <Int32>] [-WakeOnMagicPacket] [-WakeOnPattern] [-WhatIf]

[<CommonParameters>]

Enable-NetAdapterPowerManagement [-ArpOffload] [-AsJob] [-CimSession <CimSession[]>] [-Confirm] [-D0PacketCoalescing] [-DeviceSleepOnDisconnect] [-IncludeHidden]

-InterfaceDescription <String[]> [-NSOffload] [-NoRestart] [-PassThru] [-RsnRekeyOffload] [-SelectiveSuspend] [-ThrottleLimit <Int32>] [-WakeOnMagicPacket]

[-WakeOnPattern] [-WhatIf] [<CommonParameters>]

Enable-NetAdapterPowerManagement [-ArpOffload] [-AsJob] [-CimSession <CimSession[]>] [-Confirm] [-D0PacketCoalescing] [-DeviceSleepOnDisconnect] -InputObject

<CimInstance[]> [-NSOffload] [-NoRestart] [-PassThru] [-RsnRekeyOffload] [-SelectiveSuspend] [-ThrottleLimit <Int32>] [-WakeOnMagicPacket] [-WakeOnPattern] [-WhatIf]

[<CommonParameters>]

DESCRIPTION

The Enable-NetAdapterPowerManagement cmdlet enables specific power management features on the network adapter. If no power options are specified, then all supported

power management features are enabled.

PARAMETERS

-ArpOffload [<SwitchParameter>]

Indicates that the cmdlet manages the address resolution protocol (ARP) offload capability of the network adapter.

The computer, when in low power mode using the ARP offload technology, is able to offload the responsibility of handling responses for incoming ARP protocol

requests.

Required? false

Position? named

Default value False

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. 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

-D0PacketCoalescing [<SwitchParameter>]

Indicates that the cmdlet manages the D0 packet coalescing capability of the network adapter.

This feature enables power saving on the computer by reducing the number of receive interrupts. This reduces the number of receive interrupts by coalescing random

broadcast or multicast packets. The processing overhead and power consumption is significantly reduced on the computer.

Required? false

Position? named

Default value False

Accept pipeline input? False

Accept wildcard characters? false

-DeviceSleepOnDisconnect [<SwitchParameter>]

Indicates that the cmdlet manages the device sleep on disconnect capability of the network adapter.

This feature allows the device to stand-by in a low power mode when media is disconnected and wake when media is connected again.

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

-NSOffload [<SwitchParameter>]

Indicates that the cmdlet manages the neighbor solicitation (NS) offload capability of the network adapter.

The computer, when in low power mode using the NS offload technology, is able to offload the handling of responses for incoming NS protocol requests.

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

-RsnRekeyOffload [<SwitchParameter>]

Indicates that the cmdlet manages the Wi-Fi robust security network (RSN) rekey offload capability of the network adapter.

The computer, when it goes into sleep state, is able to offload the group temporal key (GTK) rekeying for wake on wireless LAN (WoWLAN).

Required? false

Position? named

Default value False

Accept pipeline input? False

Accept wildcard characters? false

-SelectiveSuspend [<SwitchParameter>]

Indicates that the cmdlet manages the selective suspend capability of the network adapter.

The network drive interface specification (NDIS) selective suspend interface allows NDIS to suspend an idle network adapter by transitioning the adapter to a

low-power state. This enables the computer to reduce the power overhead on the processor and network adapter.

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

-WakeOnMagicPacket [<SwitchParameter>]

Indicates that the cmdlet manages the wake on magic packet capability of the network adapter.

The magic packet is a broadcast frame containing anywhere within its payload 6 bytes of all 255 (FF FF FF FF FF FF in hexadecimal), followed by sixteen

repetitions of the 48-bit MAC address of the target computer, for a total of 102 bytes.

Required? false

Position? named

Default value False

Accept pipeline input? False

Accept wildcard characters? false

-WakeOnPattern [<SwitchParameter>]

Indicates that the cmdlet manages the wake on pattern capability of the network adapter. A wake pattern refers to network packet filters that determine if

incoming network traffic should wake the computer. These patterns can be enabled on the network adapter.

The following wake patterns may be supported by a network adapter:

- Wake Pattern.

- Wake on new incoming TCP connection for IPv4 and IPv6 including TCP SYN IPv4 and TCP SYN IPv6.

- 802.1x re-authentication packets.

- Bitmapped Patterns: Most network adapters can be programmed with bit-mapped pattern filters.

Bitmapped patterns are defined by a bit-map mask and a pattern filter. As a network packet is received, it is masked using the bitmap mask and then compared to

the pattern filter. If there is a match, then the network adapter wakes the computer.

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_NetAdapterPowerManagementSettingData[]

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_NetAdapterPowerManagementSettingDat
a

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 power management on the specified network adapter

PS C:\> Enable-NetAdapterPowerManagement -Name "Ethernet 1"

This command enables power management on the network adapter named Ethernet 1 and restarts the network adapter.

Example 2: Enable power management on the specified network adapter

The first command gets the network adapter named Ethernet 2 and stores the result in the variable named $NetAdapter2. The second command and enables power management

for the network adapter stored in the $NetAdapter variable.

PS C:\> $NetAdapter2 = Get-NetAdapter -Name "Ethernet 2"

PS C:\> Enable-NetAdapterPowerManagement -InputObject $NetAdapter2

This command is a version of the cmdlet that uses the pipeline to select the network adapter named Ethernet 3 and pipes that object into this cmdlet.

PS C:\> Get-NetAdapter -Name "Ethernet 3" | Enable-NetAdapterPowerManagement

RELATED LINKS

Online Version:

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

Disable-NetAdapterPowerManagement

Get-NetAdapter

Get-NetAdapterPowerManagement

Set-NetAdapterPowerManagement