PowerShell

FPDF Library
PDF generator

Full credit is given to the above companies including the OS that this PDF file was generated!

PowerShell Get-Help on command 'Set-NetAdapterRss'

PS C:\Users\wahid> Get-Help Set-NetAdapterRss

NAME

Set-NetAdapterRss

SYNOPSIS

Sets the RSS properties on a network adapter.

SYNTAX

Set-NetAdapterRss [-Name] <String[]> [-AsJob] [-BaseProcessorGroup <UInt16>]
[-BaseProcessorNumber <Byte>] [-CimSession <CimSession[]>] [-Confirm]
[-Enabled <Boolean>] [-IncludeHidden] [-MaxProcessorGroup <UInt16>]
[-MaxProcessorNumber <Byte>] [-MaxProcessors <UInt32>] [-NoRestart] [-NumaNode
<UInt16>] [-NumberOfReceiveQueues <UInt32>] [-PassThru] [-Profile {Closest |
ClosestStatic | NUMA | NUMAStatic | Conservative}] [-ThrottleLimit <Int32>]
[-WhatIf] [<CommonParameters>]

Set-NetAdapterRss [-AsJob] [-BaseProcessorGroup <UInt16>]
[-BaseProcessorNumber <Byte>] [-CimSession <CimSession[]>] [-Confirm]
[-Enabled <Boolean>] [-IncludeHidden] -InterfaceDescription <String[]>
[-MaxProcessorGroup <UInt16>] [-MaxProcessorNumber <Byte>] [-MaxProcessors
<UInt32>] [-NoRestart] [-NumaNode <UInt16>] [-NumberOfReceiveQueues <UInt32>]

[-PassThru] [-Profile {Closest | ClosestStatic | NUMA | NUMAStatic |
Conservative}] [-ThrottleLimit <Int32>] [-WhatIf] [<CommonParameters>]

Set-NetAdapterRss [-AsJob] [-BaseProcessorGroup <UInt16>]
[-BaseProcessorNumber <Byte>] [-CimSession <CimSession[]>] [-Confirm]
[-Enabled <Boolean>] -InputObject <CimInstance[]> [-MaxProcessorGroup
<UInt16>] [-MaxProcessorNumber <Byte>] [-MaxProcessors <UInt32>] [-NoRestart]
[-NumaNode <UInt16>] [-NumberOfReceiveQueues <UInt32>] [-PassThru] [-Profile
{Closest | ClosestStatic | NUMA | NUMAStatic | Conservative}] [-ThrottleLimit
<Int32>] [-WhatIf] [<CommonParameters>]

DESCRIPTION

The Set-NetAdapterRss cmdlet sets the receive side scaling (RSS) properties on a network adapter. RSS is a scalability technology that distributes the receive network traffic among multiple processors by hashing the header of the incoming packet. If RSS is disabled, network traffic is processed on a single processor core. This may impact network performance as the processor utilization increases. Many properties can be configured using the parameters to optimize the performance of RSS. The selection of the processors to use for RSS is an important aspect of load balancing. Most of the parameters for this cmdlet help to determine the processors used by RSS. A thorough understanding of RSS is recommended before modifying individual parameters. Selecting the correct profile should be sufficient in most scenarios.

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).

-BaseProcessorGroup <UInt16>

Specifies the base processor group of a non-uniform memory access (NUMA) node. This impacts the processor array used by RSS. This parameter is the lowest group number of any processors that appear in the processor array.

-BaseProcessorNumber <Byte>

Specifies the base processor number of a NUMA node. This parameter is the lowest processor number of any processors from the BaseProcessorGroup parameter that appear in the processor array. This allows for partitioning processors across network adapters.

-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.

-Confirm [<SwitchParameter>]

Prompts you for confirmation before running the cmdlet.

-Enabled <Boolean>

Indicates whether RSS on an interface is enabled.

-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.

-InputObject <CimInstance[]>

Specifies the input to this cmdlet. You can use this parameter, or you can pipe the input to this cmdlet.

-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`.

-MaxProcessorGroup <UInt16>

Specifies the maximum processor group of a NUMA node. This parameter is the highest group number of any processors that appear in the processor array for this network adapter.

-MaxProcessorNumber <Byte>

Specifies the maximum processor number of a NUMA node. This parameter is the highest processor number of any processors from the MaxProcessorGroup parameter that appear in the processor array for this network adapter.

-MaxProcessors <UInt32>

Specifies the maximum number of processors to be used concurrently by RSS from the processor array for load balancing network transmissions from a single network adapter.

-Name <String[]>

Specifies an array of network adapter names.

-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.

-NumaNode <UInt16>

Specifies the NUMA node affinity for a network adapter. This ensures that a given network transmission is load balanced by RSS within the NUMA node. This affects the memory allocation and also impacts the preference and ordering of the processors in the processor array. It does not affect the set of processors contained in the array, but it may impact the subset of the array that RSS actually uses.

-NumberOfReceiveQueues <UInt32>

Specifies the number of receive queues per network adapter that is to be used by the interface

-PassThru [<SwitchParameter>]

Returns an object representing the item with which you are working. By default, this cmdlet does not generate any output.

-Profile <Profile>

Specifies the RSS profile.

The acceptable values for this parameter are:

- Closest: Behavior is consistent with the behavior of Windows Serverr 2008 R2.

- ClosestStatic: No dynamic load balancing, such as distributing but not load balancing at runtime.

- NUMA: Assigns RSS processors in a round robin basis across every NUMA node to enable applications that are running on NUMA servers to scale well.

- NUMAStatic: Default behavior.

RSS processor selection is the same as for NUMA scalability without dynamic load balancing. - Conservative: RSS uses as few processors as possible to sustain the load. This option helps reduce the number of interrupts.

-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.

-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: Set an RSS profile for a NUMA server without dynamic load balancing

PS C:\> Set-NetAdapterRss -Name "Ethernet" -Profile NUMAStatic

This command sets an RSS profile for a NUMA server without dynamic load balancing on the network adapter named Ethernet.

REMARKS

To see the examples, type: "get-help Set-NetAdapterRss -examples".

For more information, type: "get-help Set-NetAdapterRss -detailed".

For technical information, type: "get-help Set-NetAdapterRss -full".

For online help, type: "get-help Set-NetAdapterRss -online"