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PowerShell

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PowerShell Get-Help on command 'New-PSTransportOption'

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

NAME

New-PSTransportOption

SYNOPSIS

Creates an object that contains advanced options for a session configuration.

SYNTAX

```
New-PSTransportOption [-IdleTimeoutSec <System.Nullable`1[System.Int32]>]
[-MaxConcurrentCommandsPerSession <System.Nullable`1[System.Int32]>]
[-MaxConcurrentUsers <System.Nullable`1[System.Int32]>] [-MaxIdleTimeoutSec
<System.Nullable`1[System.Int32]>] [-MaxMemoryPerSessionMB
<System.Nullable`1[System.Int32]>] [-MaxProcessesPerSession
<System.Nullable`1[System.Int32]>] [-MaxSessions
<System.Nullable`1[System.Int32]>] [-MaxSessionsPerUser
<System.Nullable`1[System.Int32]>] [-OutputBufferingMode {None | Drop |
Block}] [-ProcessIdleTimeoutSec <System.Nullable`1[System.Int32]>]
[<CommonParameters>]
```

DESCRIPTION

The `New-PSTransportOption` cmdlet creates an object that contains transport options for session configurations. You can use the object as the value of the `TransportOption` parameter of cmdlets that create or change a session configuration, such as the `Register-PSSessionConfiguration` and `Set-PSSessionConfiguration` cmdlets.

You can also change the transport option settings by editing the values of the session configuration properties in the `WSMan:` drive. For more information, see `WSMan Provider`.

The session configuration options represent the session values set on the server-side, or receiving end of a remote connection. The client-side, or sending end of the connection, can set session option values when the session is created, or when the client disconnects from or reconnects to the session. Unless stated otherwise, when the setting values conflict, the client-side values take precedence. However, the client-side values cannot violate maximum values and quotas set in the session configuration.

Without parameters, `New-PSTransportOption` generates a transport option object that has null values for all of the options. If you omit a parameter, the object has a null value for the property that the parameter represents. A null value does not affect the session configuration.

For more information about session options, see `New-PSSessionOption`. For more information about session configurations, see `about_Session_Configurations` (`About/about_Session_Configurations.md`).

This cmdlet was introduced in Windows PowerShell 3.0.

PARAMETERS

`-IdleTimeoutSec <System.Nullable`1[System.Int32]>`

Determines how long each session stays open if the remote computer does

not receive any communication from the local computer. This includes the heartbeat signal. When the interval expires, the session closes.

The idle time-out value is of significant importance when the user intends to disconnect and reconnect to a session. The user can reconnect only if the session has not timed out.

The `IdleTimeoutSec` parameter corresponds to the `IdleTimeoutMs` property of a session configuration.

Enter a value in seconds. The default value is 7200 (2 hours). The minimum value is 60 (1 minute). The maximum is the value of the `IdleTimeout` property of Shell objects in the WSMAN configuration (``WSMan:\<ComputerName>\Shell\IdleTimeout``). The default value is 7200000 milliseconds (2 hours).

If an idle time-out value is set in the session options and in the session configuration, value set in the session options takes precedence, but it cannot exceed the value of the `MaxIdleTimeoutMs` property of the session configuration. To set the value of the `MaxIdleTimeoutMs` property, use the `MaxIdleTimeoutSec` parameter.

`-MaxConcurrentCommandsPerSession <System.Nullable`1[System.Int32]>`

Limits the number of commands that can run at the same time in each session to the specified value. The default value is 1000.

The `MaxConcurrentCommandsPerSession` parameter corresponds to the `MaxConcurrentCommandsPerShell` property of a session configuration.

`-MaxConcurrentUsers <System.Nullable`1[System.Int32]>`

Limits the number of users who can run commands at the same time in each session to the specified value. The default value is 5.

-MaxIdleTimeoutSec <System.Nullable`1[System.Int32]>

Limits the idle time-out set for each session to the specified value. The default value is `[Int]::MaxValue` (~25 days).

The idle time-out value is of significant importance when the user intends to disconnect and reconnect to a session. The user can reconnect only if the session has not timed out.

The MaxIdleTimeoutSec parameter corresponds to the MaxIdleTimeoutMs property of a session configuration.

-MaxMemoryPerSessionMB <System.Nullable`1[System.Int32]>

Limits the memory used by each session to the specified value. Enter a value in megabytes. The default value is 1024 megabytes (1 GB).

The MaxMemoryPerSessionMB parameter corresponds to the MaxMemoryPerShellMB property of a session configuration.

-MaxProcessesPerSession <System.Nullable`1[System.Int32]>

Limits the number of processes running in each session to the specified value. The default value is 15.

The MaxProcessesPerSession parameter corresponds to the MaxProcessesPerShell property of a session configuration.

-MaxSessions <System.Nullable`1[System.Int32]>

Limits the number of sessions that use the session configuration. The default value is 25.

The MaxSessions parameter corresponds to the MaxShells property of a session configuration.

-MaxSessionsPerUser <System.Nullable`1[System.Int32]>

Limits the number of sessions that use the session configuration and run with the credentials of a given user to the specified value. The default value is 25.

When you specify this value, consider that many users might be using the credentials of a run as user.

The `MaxSessionsPerUser` parameter corresponds to the `MaxShellsPerUser` property of a session configuration.

`-OutputBufferingMode`

`<System.Nullable`1[System.Management.Automation.Runspace.OutputBufferingMode]>`

Determines how command output is managed in disconnected sessions when the output buffer becomes full. The acceptable values for this parameter are:

- ``Block`` When the output buffer is full, execution is suspended until the buffer is clear.
- ``Drop`` When the output buffer is full, execution continues. As new output is saved, the oldest output is discarded.
- ``None`` No output buffering mode is specified.

The default value of the `OutputBufferingMode` property of sessions is `Block`.

`-ProcessIdleTimeoutSec <System.Nullable`1[System.Int32]>`

Limits the time-out for each host process to the specified value. The default value, 0, means that there is no time-out value for the process.

Other session configurations have per-process time-out values. For example, the `Microsoft.PowerShell.Workflow` session configuration has a per-process time-out value of 28800 seconds (8 hours).

`<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).

----- Example 1: Generate a default transport option -----

```
New-PSTransportOption
```

```
ProcessIdleTimeoutSec      :
MaxIdleTimeoutSec         :
MaxSessions                 :
MaxConcurrentCommandsPerSession :
MaxSessionsPerUser         :
MaxMemoryPerSessionMB     :
MaxProcessesPerSession    :
MaxConcurrentUsers         :
IdleTimeoutSec            :
OutputBufferingMode       :
```

This command runs the `New-PSTransportOption` without parameters. The output shows that the cmdlet generates a transport option object that has null values for all properties.

----- Example 2: Get session configuration options -----

```
$t = New-PSTransportOption -MaxSessions 40
Register-PSSessionConfiguration -Name ITTasks -TransportOption $t
Get-PSSessionConfiguration -Name ITTasks | Format-List -Property *
```

```
Architecture      : 64
Filename           : %windir%\system32\pwrshplugin.dll
ResourceUri       : http://schemas.microsoft.com/powershell/ITTasks
MaxConcurrentCommandsPerShell : 1000
UseSharedProcess   : false
ProcessIdleTimeoutSec : 0
```

```
xmlns          :
http://schemas.microsoft.com/wbem/wsman/1/config/PluginConfiguration
MaxConcurrentUsers    : 5
lang               : en-US
SupportsOptions      : true
ExactMatch          : true
RunAsUser           :
IdleTimeoutms       : 7200000
PSVersion           : 3.0
OutputBufferingMode  : Block
AutoRestart         : false
MaxShells           : 40
MaxMemoryPerShellMB  : 1024
MaxIdleTimeoutms     : 43200000
SDKVersion          : 2
Name                : ITTasks
XmlRenderingType     : text
Capability           : {Shell}
RunAsPassword        :
MaxProcessesPerShell : 15
Enabled              : True
MaxShellsPerUser     : 25
Permission           :
```

The first command uses the `New-PSTransportOption` cmdlet to create a transport options object, which it saves in the `\$t` variable. The command uses the MaxSessions parameter to increase the maximum number of sessions to 40.

The second command uses the `Register-PSSessionConfiguration` cmdlet create the ITTasks session configuration. The command uses the TransportOption parameter to specify the transport options object in the `\$t` variable.

The third command uses the `Get-PSSessionConfiguration` cmdlet to get the ITTasks session configurations and the `Format-List` cmdlet to display all of the properties of the session configuration object in a list. The output shows that the value of the MaxShells property of the session configuration is 40.

----- Example 3: Setting a transport option -----

```
$t = New-PSTransportOption -IdleTimeoutSec 3600
Set-PSSessionConfiguration -Name ITTasks -TransportOption $t
$s = New-PSSession -Name MyITTasks -ConfigurationName ITTasks
$s | Format-List -Property *
```

```
State           : Opened
IdleTimeout     : 3600000
OutputBufferingMode : Block
ComputerName    : localhost
ConfigurationName : ITTasks
InstanceId      : 4110c3f5-68ea-40fa-9bbf-04a433dbb02d
Id              : 1
Name            : MyITTasks
Availability     : Available
ApplicationPrivateData : {PSVersionTable}
Runspace        : System.Management.Automation.RemoteRunspace
```

The first command uses the `New-PSTransportOption` cmdlet to create a transport option object. The command uses the IdleTimeoutSec parameter to set the IdleTimeoutSec property value of the object to one hour (3600 seconds).

The command saves the transport objects object in the `\$t` variable.

The second command uses the `Set-PSSessionConfiguration` cmdlet to change the transport options of the ITTasks session configuration. The command uses the TransportOption parameter to specify the transport options object in the `\$t` variable.

The third command uses the `New-PSSession` cmdlet to create the MyITTasks session on the local computer. The command uses the ConfigurationName property to specify the ITTasks session configuration. The command saves the session in the \$s variable. Notice that the command does not use the SessionOption parameter of `New-PSSession` to set a custom idle time-out for the session. If it did, the idle time-out value set in the session option would take precedence over the idle time-out set in the session configuration.

The fourth command uses the `Format-List` cmdlet to display all properties of the session in the `$s` variable in a list. The output shows that the session has an idle time-out of one hour (360,000 milliseconds).

REMARKS

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

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

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

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