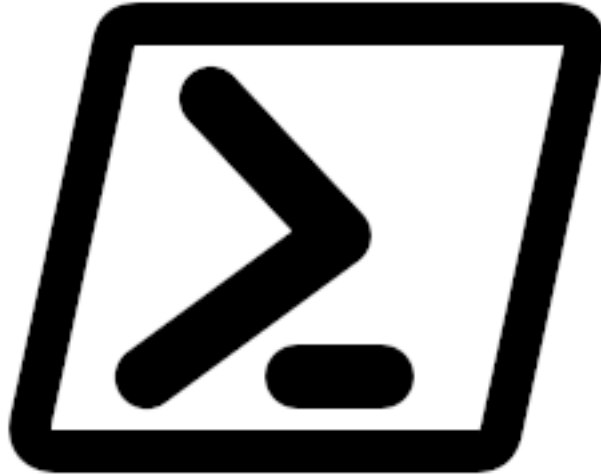


The Powershell Book Generator



PowerShell with Storage

The PowerShell Book Generator - Andreas Nick 2019

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Cmdlet: Add-InitiatorIdToMaskingSet

Synops

Adds an initiator ID to an existing masking set, granting the host associated with the initiator ID access to the virtual disk and target port resources defined in the masking set.

Syntax

```
Add-InitiatorIdToMaskingSet [-MaskingSetFriendlyName] <String[]>  
[-CimSession <CimSession[]>] [-HostType {Unknown | Other |  
Standard | Solaris | HPUNIX | OpenVMS | Tru64 |  
Netware | Sequent | AIX | DGUX | Dynix | Irix |  
CiscoISCSIStorageRouter | Linux | MicrosoftWindows | OS400 |  
TRESPASS | HIUX | VMwareESXi | MicrosoftWindowsServer2008 |  
MicrosoftWindowsServer2003}] [-InitiatorIds <String[]>] [-  
PassThru] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Add-InitiatorIdToMaskingSet [-CimSession <CimSession[]>] [-  
HostType {Unknown | Other | Standard | Solaris | HPUNIX | OpenVMS |  
Tru64 | Netware | Sequent | AIX | DGUX | Dynix  
| Irix | CiscoISCSIStorageRouter | Linux | MicrosoftWindows |  
OS400 | TRESPASS | HIUX | VMwareESXi | MicrosoftWindowsServer2008  
| MicrosoftWindowsServer2003}]  
[-InitiatorIds <String[]>] [-PassThru] [-ThrottleLimit <Int32>]  
[-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Add-InitiatorIdToMaskingSet [-CimSession <CimSession[]>] [-  
HostType {Unknown | Other | Standard | Solaris | HPUNIX | OpenVMS |  
Tru64 | Netware | Sequent | AIX | DGUX | Dynix  
| Irix | CiscoISCSIStorageRouter | Linux | MicrosoftWindows |  
OS400 | TRESPASS | HIUX | VMwareESXi | MicrosoftWindowsServer2008  
| MicrosoftWindowsServer2003}]  
[-InitiatorIds <String[]>] [-PassThru] [-ThrottleLimit <Int32>] -  
MaskingSetUniqueId <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

Description

The Add-InitiatorIdToMaskingSet cmdlet adds an initiator ID to an existing masking set, granting the host associated with the initiator ID access to the virtual disk and target port resources defined in the masking set.

ps_storage_spacesubsystem_not_remark

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**HostType**

Description :Specifies the host operating system or other host environmental factors that may influence the behavior that the storage system should have when showing a virtual disk to an initiator.

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

Parameter :**InitiatorIds**

Description :Specifies one or more initiator IDs on which this cmdlet acts. The initiator IDs will be added to this masking set. Note: The initiator IDs do not need to be displayed in the output of the Get-InitiatorId cmdlet to be added to a masking set.

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

Parameter :**MaskingSetFriendlyName**

Description :Specifies the friendly name of the masking set to which you want to add an initiator ID.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**MaskingSetUniqueld**

Description :Specifies the unique ID of the masking set to which you want to add an initiator ID.

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

Parameter :**PassThru**

Description :Specifies that the cmdlet should output an object representing the masking set to which it added an initiator ID. By default, this cmdlet does not generate any output.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can pipe one or more MSFT_MaskingSet objects to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_MaskingSet

Outputs

If you specify the Passthru parameter, this cmdlet outputs an object that represents the masking set to which you added an initiator ID.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_MaskingSet

Cmdlet: Add-PartitionAccessPath

Synops

Adds an access path such as a drive letter or folder to a partition.

Syntax

```
Add-PartitionAccessPath [-DiskNumber] <UInt32[]> [-PartitionNumber] <UInt32[]> [[-AccessPath] <String>] [-AssignDriveLetter] [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Add-PartitionAccessPath [[-AccessPath] <String>] [-AssignDriveLetter] [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -DiskId <String[]> -Offset <UInt64[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Add-PartitionAccessPath [[-AccessPath] <String>] [-AssignDriveLetter] [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -DriveLetter <Char[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Add-PartitionAccessPath [[-AccessPath] <String>] [-AssignDriveLetter] [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Add-PartitionAccessPath cmdlet adds an access path such as a drive letter or folder to a partition. Access paths can be either a drive letter or a mount point.

Parameters

Parameter :**AccessPath**

Description :Assigns an access path to the partition. An access path can be a drive letter (for example, "C:" or "C:\") or a path to an empty directory on an NTFS volume. The access path string does not require a trailing backslash.

Required	false
Position	3

Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**AssignDriveLetter**

Description :Assigns the next available drive letter to the new partition.

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

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DiskId**

Description :Specifies an ID used to identify a disk in the system.

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

Parameter :**DiskNumber**

Description :Specifies an array of disk numbers.

Required	true
----------	------

Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**DriveLetter**

Description :Specifies a letter used to identify a drive or volume in the system.

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

Parameter :**Offset**

Description :Specifies the starting offset, in bytes.

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

Parameter :**PartitionNumber**

Description :Specifies the number of the partition.

Required	true
Position	2
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**PassThru**

Description :Specifies that the cmdlet should output an object representing the partition to which you added an access path. By default, this cmdlet does not generate any output.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :Confirm

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :WhatIf

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

Inputs

You can pipe a Partition object to the InputObject parameter to specify the partition to which you want to add an access path.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Partition

Outputs

If you specify the Passthru parameter, this cmdlet outputs a Partition object representing the partition on which you added an access path.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Partition

Notes

Cmdlet: Add-PhysicalDisk

Synops

Adds a physical disk to the specified storage pool or manually assigns a physical disk to a specific virtual disk.

Syntax

```
Add-PhysicalDisk [-StoragePool] <CimInstance> [-CimSession  
<CimSession[]>] [-ThrottleLimit <Int32>] [-Usage {AutoSelect |  
ManualSelect | HotSpare | Retired | Journal}]  
-PhysicalDisks <CimInstance[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Add-PhysicalDisk [-VirtualDisk] <CimInstance> [-CimSession  
<CimSession[]>] [-ThrottleLimit <Int32>] -PhysicalDisks  
<CimInstance[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Add-PhysicalDisk -StoragePoolFriendlyName <String> [-Confirm] [-  
WhatIf] [<CommonParameters>]
```

```
Add-PhysicalDisk -StoragePoolName <String> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Add-PhysicalDisk -StoragePoolUniqueId <String> [-Confirm] [-  
WhatIf] [<CommonParameters>]
```

```
Add-PhysicalDisk -VirtualDiskFriendlyName <String> [-Confirm] [-  
WhatIf] [<CommonParameters>]
```

```
Add-PhysicalDisk -VirtualDiskName <String> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Add-PhysicalDisk -VirtualDiskUniqueId <String> [-Confirm] [-  
WhatIf] [<CommonParameters>]
```

Description

The Add-PhysicalDisk cmdlet adds a physical disk to the specified storage pool. The cmdlet can also assign a ManualSelect physical disk already in the storage pool to a specific virtual disk.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**PhysicalDisks**

Description :Specifies the physical disk objects to add to the storage pool. Enter one or more PhysicalDisk CIM objects.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StoragePool**

Description :Specifies the storage pool object to which you want to add the physical disk(s). Enter a StoragePool CIM object.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**StoragePoolFriendlyName**

Description :Specifies the friendly name of the storage pool to which to add the physical disk.

Required	true
----------	------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :StoragePoolName

Description :Specifies the name of the storage pool, provided by the Storage Management Provider, to which to add the physical disk.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :StoragePoolUniqueId

Description :Specifies the ID of the storage pool to which to add the physical disk.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :**Usage**

Description :Specifies the allocation method (usage) for the disk. Valid values are AutoSelect, HotSpare, Journal, ManualSelect, Retired, and Unknown.

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

Parameter :**VirtualDisk**

Description :Specifies the virtual disk object to which to exclusively assign the physical disk(s). Enter one or more VirtualDisk CIM objects.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**VirtualDiskFriendlyName**

Description :Specifies the friendly name of the virtual disk to which to exclusively assign the physical disks.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**VirtualDiskName**

Description :

Required	true
Position	named
Default value	none
Accept pipeline input?	false

Accept wildcard characters?	false
-----------------------------	-------

Parameter :**VirtualDiskUniqueId**

Description :Specifies the ID of the virtual disk to which to exclusively assign the physical disks.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can pipe an MSFT_StoragePool object to the StoragePool parameter.

You can pipe an MSFT_VirtualDisk object to the VirtualDisk parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M

SFT_StoragePool

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M

SFT_VirtualDisk

Examples

Example 1: Adding a physical disk by storage pool friendly name

This example gets the PhysicalDisk object for the physical disk named PhysicalDisk5 and assigns it to the \$PDToAdd variable. It then adds the PhysicalDisk object to the storage pool named CompanyData.

```
PS C:\> $PDToAdd = Get-PhysicalDisk -FriendlyName  
PhysicalDisk5  
PS C:\> Add-PhysicalDisk -PhysicalDisks $PDToAdd -  
StoragePoolFriendlyName CompanyData
```

Example 2: Adding all available physical disks

This example gets all PhysicalDisk objects that can be added to a storage pool and assigns them to the \$PDToAdd variable. It then adds the available physical disks to the storage pool named Demo Pool.

```
PS C:\> $PDToAdd = Get-PhysicalDisk -CanPool $True  
PS C:\> Add-PhysicalDisk -StoragePoolFriendlyName "Demo Pool"  
-PhysicalDisks $PDToAdd
```

Example 3: Piping a storage pool to Add-PhysicalDisk

This example gets all storage pools (except primordial pools) and pipes the output to the Add-PhysicalDisk cmdlet (this will not work if you created more than one storage pool).

This example then uses the Get-Physical Disk cmdlet inside of parentheses to specify all available physical disks without using variables.

```
PS C:\> Get-StoragePool -IsPrimordial $False | Add-  
PhysicalDisk -PhysicalDisks (Get-PhysicalDisk -CanPool $True)
```

Example 4: Manually assigning physical disks to a virtual disk

This example gets two physical disks that have already been added to the storage pool and designated as ManualSelect disks, PhysicalDisk3 and PhysicalDisk4, and assigns them to the virtual disk UserData.

```
PS C:\> Add-PhysicalDisk -VirtualDiskFriendlyName UserData  
-PhysicalDisks (Get-PhysicalDisk -FriendlyName PhysicalDisk3,  
PhysicalDisk4)
```

Cmdlet: Add-StorageFaultDomain

Synops

Add-StorageFaultDomain [-VirtualDisk] <CimInstance#MSFT_VirtualDisk> [-StorageFaultDomains <CimInstance#MSFT_StorageFaultDomain[]>] [-StorageFaultDomainFriendlyNames <string[]>] [-CimSession <CimSession>] [-ThrottleLimit <int>] [-AsJob] [<CommonParameters>]

Add-StorageFaultDomain -VirtualDiskFriendlyName <string> [-StorageFaultDomains <CimInstance#MSFT_StorageFaultDomain[]>] [-StorageFaultDomainFriendlyNames <string[]>] [-CimSession <CimSession>] [-ThrottleLimit <int>] [-AsJob] [<CommonParameters>]

Add-StorageFaultDomain -VirtualDiskName <string> [-StorageFaultDomains <CimInstance#MSFT_StorageFaultDomain[]>] [-StorageFaultDomainFriendlyNames <string[]>] [-CimSession <CimSession>] [-ThrottleLimit <int>] [-AsJob] [<CommonParameters>]

Add-StorageFaultDomain -VirtualDiskUniqueId <string> [-StorageFaultDomains <CimInstance#MSFT_StorageFaultDomain[]>] [-StorageFaultDomainFriendlyNames <string[]>] [-CimSession <CimSession>] [-ThrottleLimit <int>] [-AsJob] [<CommonParameters>]

Add-StorageFaultDomain [-StorageTier] <CimInstance#MSFT_StorageTier> [-StorageFaultDomains <CimInstance#MSFT_StorageFaultDomain[]>] [-StorageFaultDomainFriendlyNames <string[]>] [-CimSession <CimSession>] [-ThrottleLimit <int>] [-AsJob] [<CommonParameters>]

Add-StorageFaultDomain -StorageTierFriendlyName <string> [-StorageFaultDomains <CimInstance#MSFT_StorageFaultDomain[]>] [-StorageFaultDomainFriendlyNames <string[]>] [-CimSession <CimSession>] [-ThrottleLimit <int>] [-AsJob] [<CommonParameters>]

Add-StorageFaultDomain -StorageTierUniqueId <string> [-StorageFaultDomains <CimInstance#MSFT_StorageFaultDomain[]>] [-StorageFaultDomainFriendlyNames <string[]>] [-CimSession <CimSession>] [-ThrottleLimit <int>] [-AsJob] [<CommonParameters>]

Syntax

ntaxItem

{@{name=

```
Add-StorageFaultDomain; CommonParameters=True;  
WorkflowCommonParameters=False; parameter=System.Object[]},  
@{name=
```

```
Add-StorageFaultDomain; CommonParameters=True; ...
```

Description

Parameters

Parameter :**AsJob**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**CimSession**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**StorageFaultDomainFriendlyNames**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**StorageFaultDomains**

Required	false
Position	Named

Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**StorageTier**

Required	true
Position	0
Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	

Parameter :**StorageTierFriendlyName**

Required	true
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**StorageTierUniqueld**

Required	true
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**ThrottleLimit**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**VirtualDisk**

Required	true
Position	0
Default value	
Accept pipeline input?	true (ByValue)

Accept wildcard characters?	
-----------------------------	--

Parameter :**VirtualDiskFriendlyName**

Required	true
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**VirtualDiskName**

Required	true
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**VirtualDiskUniqueld**

Required	true
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Cmdlet: Add-TargetPortToMaskingSet

Synops

Adds one or more target ports to a specified masking set, allowing a connection between the target ports, and any virtual disks and initiator IDs that the masking set contains.

Syntax

```
Add-TargetPortToMaskingSet [-MaskingSetFriendlyName] <String[]>  
[-CimSession <CimSession[]>] [-PassThru] [-TargetPortAddresses  
<String[]>] [-ThrottleLimit <Int32>]  
[-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Add-TargetPortToMaskingSet [-CimSession <CimSession[]>] [-  
PassThru] [-TargetPortAddresses <String[]>] [-ThrottleLimit  
<Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Add-TargetPortToMaskingSet [-CimSession <CimSession[]>] [-  
PassThru] [-TargetPortAddresses <String[]>] [-ThrottleLimit  
<Int32>] -MaskingSetUniqueId <String[]> [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

Description

The Add-TargetPortToMaskingSet cmdlet adds one or more target ports to a specified masking set, allowing a connection between the target ports, and any virtual disks and initiator IDs that the masking set contains. All target ports must use the same connection type (for example iSCSI or Fibre Channel).

Note: This cmdlet works only on storage subsystems that support multi-port per view selection (MaskingPortsPerView = 3). To view the MaskingPortsPerView property, type the following cmdlets: Get-StorageSubSystem | Format-Table -Property FriendlyName, MaskingPortsPerView

ps_storage_spacesubsystem_not_remark

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**MaskingSetFriendlyName**

Description :Specifies the friendly name of the masking set to which you want to assign a target port.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**MaskingSetUniqueid**

Description :Specifies the UniqueID of the masking set to which you want to assign a target port.

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

Parameter :**PassThru**

Description :Specifies that the cmdlet should output an object representing the masking set to which it added target ports. By default, this cmdlet does not generate any output.

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

Parameter :**TargetPortAddresses**

Description :Specifies one or more target port addresses, which you can view by looking at the PortAddress property returned by the Get-TargetPort cmdlet. The target port addresses will be added to the masking set.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can pipe a MaskingSet object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Outputs

If you specify the Passthru parameter, this cmdlet outputs an object that represents the masking set to which you added a target port.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Cmdlet: Add-VirtualDiskToMaskingSet

Synops

Adds a virtual disk to a specified masking set and grants access to the virtual disk to all initiator IDs defined in the masking set.

Syntax

```
Add-VirtualDiskToMaskingSet [-MaskingSetFriendlyName] <String[]>  
[-CimSession <CimSession[]>] [-DeviceAccesses <DeviceAccess[]>  
[-DeviceNumbers <UInt16[]>] [-PassThru]  
[-ThrottleLimit <Int32>] [-VirtualDisknames <String[]>] [-  
Confirm] [-WhatIf] [<CommonParameters>]
```

```
Add-VirtualDiskToMaskingSet [-CimSession <CimSession[]>] [-  
DeviceAccesses <DeviceAccess[]>] [-DeviceNumbers <UInt16[]>] [-  
PassThru] [-ThrottleLimit <Int32>]  
[-VirtualDisknames <String[]>] -MaskingSetUniqueId <String[]> [-  
Confirm] [-WhatIf] [<CommonParameters>]
```

```
Add-VirtualDiskToMaskingSet [-CimSession <CimSession[]>] [-  
DeviceAccesses <DeviceAccess[]>] [-DeviceNumbers <UInt16[]>] [-  
PassThru] [-ThrottleLimit <Int32>]  
[-VirtualDisknames <String[]>] [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

Description

The Add-VirtualDiskToMaskingSet cmdlet adds a virtual disk to a specified masking set and grants access to the virtual disk to all initiator IDs defined in the masking set.

ps_storage_spacesubsystem_not_remark

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DeviceAccesses**

Description :Specifies the way in which initiators can access the virtual disk(s) that are part of this masking set. You must specify a DeviceAccesses value for each virtual disk specified by the VirtualDiskNames parameter. Allowed values are NoAccess, ReadOnly, ReadWrite, and Unknown.

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

Parameter :**DeviceNumbers**

Description :Specifies the device numbers for one or more virtual disks.

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

Parameter :**MaskingSetFriendlyName**

Description :Specifies the friendly name of the masking set to which you want to add a virtual disk.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**MaskingSetUniqueId**

Description :Specifies the UniqueID of the masking set to which you want to add a virtual disk.

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

Parameter :PassThru

Description :Specifies that the cmdlet should output an object representing the masking set to which it added a virtual disk. By default, this cmdlet does not generate any output.

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

Parameter :ThrottleLimit

Description :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

Parameter :VirtualDisknames

Description :Specifies one or more virtual disk names to add to the masking set.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can pipe a MaskingSet object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Outputs

If you specify the Passthru parameter, this cmdlet outputs an object that represents the masking set to which you added a virtual disk.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Cmdlet: Block-FileShareAccess

Synops

Blocks access to a file share.

Syntax

```
Block-FileShareAccess [-CimSession <CimSession[]>] [-FileServer  
<CimInstance>] [-PassThru] [-ThrottleLimit <Int32>] -AccountName  
<String[]> -Name <String[]> [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

```
Block-FileShareAccess [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -AccountName <String[]> -UniqueId  
<String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Block-FileShareAccess [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -AccountName <String[]> [-Confirm] [-  
WhatIf] [<CommonParameters>]
```

Description

The Block-FileShareAccess cmdlet blocks access to the specified file share for the specified accounts by adding an access-denied access control entry (ACE) to the share's security descriptor.

Parameters

Parameter :**AccountName**

Description :Specifies an array of account names to block.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**CimSession**

Description :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 or Get-

CimSession 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

Parameter :**FileServer**

Description :Specifies a file server on which to set permissions.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies the name of the file share for which the user is being granted access. Because the share name is not a worldwide unique name, use a different parameter set to avoid confusion.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies an array of unique IDs.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

Type :

Outputs

Type :

Cmdlet: Clear-Disk

Synops

Cleans a disk by removing all partition information and un-initializing it, erasing all data on the disk.

Syntax

```
Clear-Disk [-Number] <UInt32[]> [-CimSession <CimSession[]>] [-PassThru] [-RemoveData] [-RemoveOEM] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Clear-Disk [-CimSession <CimSession[]>] [-FriendlyName <String[]>] [-PassThru] [-RemoveData] [-RemoveOEM] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Clear-Disk [-CimSession <CimSession[]>] [-PassThru] [-RemoveData] [-RemoveOEM] [-ThrottleLimit <Int32>] -Path <String[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Clear-Disk [-CimSession <CimSession[]>] [-PassThru] [-RemoveData] [-RemoveOEM] [-ThrottleLimit <Int32>] -UniqueId <String[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Clear-Disk [-CimSession <CimSession[]>] [-PassThru] [-RemoveData] [-RemoveOEM] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Clear-Disk cmdlet clears the disk by removing the partition and volume information. If the disk contains active data volumes, then the RemoveData parameter is required as this will delete all data from the specified disk. This cmdlet will not clear OEM recovery partitions unless ForceOEM parameter is also specified.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies a friendly name of the disk to clear.

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

Parameter :**Number**

Description :Specifies the disk number of the disk on which to perform the clear operation. For a list of available disks, see the Get-Disk cmdlet.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**PassThru**

Description :Specifies that the cmdlet should output an object representing a disk. By default, this cmdlet does not generate any output.

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

Parameter :**Path**

Description :Specifies the path of the disk to clear.

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

Parameter :**RemoveData**

Description :Enables the removal of all of the data on the disk.

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

Parameter :**RemoveOEM**

Description :Enables the removal of any OEM recovery partitions from the disk.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies the UniqueID of the disk to clear.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can pipe a Disk object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Disk

Outputs

When you specify the Passthru parameter, this cmdlet outputs an object representing the disk that you cleared.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Disk

Examples

Example 1: Clear a blank disk

This example clears disk number one only if it does not contain both data or OEM partitions.

```
PS C:\> Clear-Disk -Number 1
```

Example 2: Clear a disk with data partitions

This example clears the disk if it has data partitions, but not if it also has OEM partitions.

```
PS C:\> Clear-Disk -Number 1 -RemoveData
```

Example 3: Clear a disk with data and OEM partitions

This example clears the disk regardless of whether it contains data or OEM partitions.

```
PS C:\> Clear-Disk -Number 1 -RemoveData -RemoveOEM
```

Cmdlet: Clear-FileStorageTier

Synops

Unpins a file from the specified storage tier.

Syntax

```
Clear-FileStorageTier [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] -FilePath <String> [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Clear-FileStorageTier cmdlet unpins a file from the specified storage tier. If you unpin a file, it can move between tiers as appropriate for how often the file is accessed. You can pin, or add, a file to a storage tier by using the Set-FileStorageTier cmdlet.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FilePath**

Description :Specifies the full path of a file. The cmdlet unpins the file that you specify.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Cmdlet: Clear-StorageDiagnosticInfo

Synops

Syntax

```
Clear-StorageDiagnosticInfo [-StorageSubSystemFriendlyName]
<String[]> [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>]
[-AsJob] [-PassThru] [<CommonParameters>]
```

```
Clear-StorageDiagnosticInfo -StorageSubSystemUniqueId <String[]>
[-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [-AsJob] [-
PassThru] [<CommonParameters>]
```

```
Clear-StorageDiagnosticInfo -StorageSubSystemName <String[]> [-
CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [-AsJob] [-
PassThru] [<CommonParameters>]
```

```
Clear-StorageDiagnosticInfo -InputObject <CimInstance[]> [-
CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [-AsJob] [-
PassThru] [<CommonParameters>]
```

Description

Parameters

Parameter :**StorageSubSystemUniqueId**

Required	true
Position	named
Default value	
Accept pipeline input?	true (ByPropertyName)
Accept wildcard characters?	false

Parameter :**StorageSubSystemFriendlyName**

Required	true
Position	1
Default value	
Accept pipeline input?	true (ByPropertyName)
Accept wildcard characters?	false

Parameter :**StorageSubSystemName**

Required	true
Position	named
Default value	
Accept pipeline input?	true (ByPropertyName)
Accept wildcard characters?	false

Parameter :**InputObject**

Required	true
Position	named
Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	false

Parameter :**CimSession**

Required	false
Position	named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Required	false
Position	named
Default value	0
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**AsJob**

Required	false
Position	named
Default value	False
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**PassThru**

Required	false
----------	-------

Position	named
Default value	False
Accept pipeline input?	false
Accept wildcard characters?	false

Outputs

Type : Microsoft.Management.Infrastructure.CimInstance

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageSubSystem

Cmdlet: Connect-VirtualDisk

Synops

Connects a disconnected virtual disk to the specified computer when using the Windows Storage subsystem.

Syntax

```
Connect-VirtualDisk [-FriendlyName] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-StorageNodeName <String>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Connect-VirtualDisk [-CimSession <CimSession[]>] [-PassThru] [-  
StorageNodeName <String>] [-ThrottleLimit <Int32>] -UniqueId  
<String[]> [<CommonParameters>]
```

```
Connect-VirtualDisk [-CimSession <CimSession[]>] [-PassThru] [-  
StorageNodeName <String>] [-ThrottleLimit <Int32>] -Name  
<String[]> [<CommonParameters>]
```

```
Connect-VirtualDisk [-CimSession <CimSession[]>] [-PassThru] [-  
StorageNodeName <String>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

Description

The Connect-VirtualDisk cmdlet connects a disconnected virtual disk to the specified computer when using the Windows Storage subsystem.

To connect a virtual disk to a remote computer, from a management node in a subsystem that is registered on the management node, specify the StorageNodeName parameter.

To connect to a virtual disk to a remote computer, use the CimSession parameter, or use the Enter-PSSession or Invoke-Command cmdlets in conjunction with Connect-VirtualDisk.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies the friendly name of the virtual disk that you want to connect.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies the name of the virtual disk that you want to connect.

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

Parameter :**PassThru**

Description :Specifies that the cmdlet should output an object representing a virtual disk.
By default, this cmdlet does not generate any output.

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

Parameter :**StorageNodeName**

Description :Specifies the name of a computer on which to run the cmdlet.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**UniqueId**

Description :Specifies the UniqueID of the virtual disk to connect.

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

Inputs

You can pipe VirtualDisk objects to the InputObject parameter to specify one or more virtual disks to connect to the local computer.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MFT_VirtualDisk

Outputs

The Connect-VirtualDisk cmdlet does not output objects unless you use the Passthru

parameter, in which case it outputs objects that represent the virtual disks that you connected.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Examples

Example 1: Connect a virtual disk to the local computer

This example connects the virtual disk named VirtualDisk1 to the local computer.

```
PS C:\>Connect-VirtualDisk -FriendlyName "VirtualDisk1"
```

Example 2: Connect all disconnected virtual disks on a remote server

This example uses the Get-VirtualDisk cmdlet to get all virtual disk objects on the computer Srv2 (by using the CimSession parameter). It then pipes the objects to the Where-Object cmdlet to filter out all virtual disks except those with the "Detached" operational status. Finally, it pipes these objects to the Connect-VirtualDisk cmdlet.

```
PS C:\>Get-VirtualDisk -CimSession Srv2 | Where-Object -Filter { $_.OperationalStatus -eq "Detached" } | Connect-VirtualDisk
```

Example 3: Connect all disconnected virtual disks on two remote computers by using Invoke-Command

This example uses the Invoke-Command cmdlet to run the cmdlets specified in Example 2 (now specified in the ScriptBlock parameter) on multiple remote computers simultaneously, with all processing done in parallel on each computer and only the results being sent back to the local PowerShell session.

```
PS C:\>Invoke-Command -ComputerName Srv1, Srv2 -ScriptBlock {  
Get-VirtualDisk | Where-Object -Filter { $_.OperationalStatus  
-eq "Detached" } | Connect-VirtualDisk }
```

Example 4: Connect a virtual disk to a remote computer from a management node

This example connects a virtual disk to a remote computer from a management node in a subsystem that is registered on the management node.

```
PS C:\>Get-StorageSubSystem -FriendlyName "Clustered Storage  
Spaces on Cluster01" | Get-VirtualDisk -FriendlyName "VDisk01"  
| Connect-VirtualDisk -StorageNodeName "ClustNode1"
```

Cmdlet: Debug-FileShare

Synops

Finds problems with a file share and recommends solutions.

Syntax

```
Debug-FileShare [-Name] <String[]> [-CimSession <CimSession>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Debug-FileShare [-CimSession <CimSession>] [-ThrottleLimit <Int32>] -UniqueId <String[]> [<CommonParameters>]
```

```
Debug-FileShare [-CimSession <CimSession>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Debug-FileShare cmdlet finds problems with a file share and recommends solutions.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Name**

Description :Specifies the name of the file share about which you want to get information.

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByValue)

Accept wildcard characters?	false
-----------------------------	-------

Parameter :**ThrottleLimit**

Description :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

Parameter :**UniqueId**

Description :Specifies the ID of the file share about which you want to get information.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Inputs

Type : Microsoft.Management.Infrastructure.CimInstance#MSFT_FileShare

Outputs

Type :

Microsoft.Management.Infrastructure.CimInstance#MSFT_StorageDiagnoseResult

Examples

Example 1: Debug a file share by using the pipeline

This command gets any faults and remediation actions associated with all file shares local to the Windows PowerShell session.


```

PS C:\>Get-FileShare | Debug-FileShare
EventTime           :
FaultId             : 0ef62dbe-657a-483e-a248-7c5c1dc82477
FaultingObject      :
FaultingObjectDescription : Storage appliance server
'{'ac906082-8b7e-44fc-b9e5-7bd8aa749958'}:SN:GalenB-VM6'.
FaultingObjectLocation :
FaultType           : ServerDownFault
PerceivedSeverity   : Minor
Reason              : The server cannot be reached.
RecommendedActions   : {Start or replace storage server.}
PSComputerName      :

```

Example 2: Debug a file share by name

This command gets any faults and remediation actions associated the file share named ContosoShare.

```

PS C:\>Debug-FileShare -Name "ContosoShare"
EventTime           :
FaultId             : 0ef62dbe-657a-483e-a248-7c5c1dc82477
FaultingObject      :
FaultingObjectDescription : Storage appliance server
'{'ac906082-8b7e-44fc-b9e5-7bd8aa749958'}:SN:GalenB-VM6'.
FaultingObjectLocation :
FaultType           : ServerDownFault
PerceivedSeverity   : Minor
Reason              : The server cannot be reached.
RecommendedActions   : {Start or replace storage server.}
PSComputerName      :

```

Cmdlet: Debug-StorageSubSystem

Synops

Finds problems with a storage subsystem and recommends solutions.

Syntax

```
Debug-StorageSubSystem [-StorageSubSystemFriendlyName] <String[]>  
[-CimSession <CimSession>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Debug-StorageSubSystem [-CimSession <CimSession>] [-ThrottleLimit  
<Int32>] -StorageSubSystemUniqueId <String[]>  
[<CommonParameters>]
```

```
Debug-StorageSubSystem [-CimSession <CimSession>] [-ThrottleLimit  
<Int32>] -StorageSubSystemName <String[]> [<CommonParameters>]
```

```
Debug-StorageSubSystem [-CimSession <CimSession>] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

Description

The Debug-StorageSubSystem cmdlet finds problems with a storage subsystem and recommends solutions.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**StorageSubSystemFriendlyName**

Description :Specifies the friendly name of the Storage subsystem for which to gather

storage diagnostics. It may denote the Storage subsystem of the local computer (on which the cmdlet is run) or a remote Storage subsystem (standalone or cluster).

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :StorageSubSystemName

Description :Specifies the name of the Storage subsystem for which to gather Storage diagnostics. It may denote the Storage subsystem of the local computer (on which the cmdlet is run) or a remote Storage subsystem (standalone or cluster).

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :StorageSubSystemUniqueId

Description :Specifies the unique ID of the Storage subsystem for which to gather Storage diagnostics. It may denote the Storage subsystem of the local computer (on which the cmdlet is run) or a remote Storage subsystem (standalone or cluster).

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Cmdlet: Debug-Volume

Synops

Finds problems with a volume and recommends solutions.

Syntax

```
Debug-Volume [-DriveLetter] <Char[]> [-CimSession <CimSession>]  
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Debug-Volume [-CimSession <CimSession>] [-ThrottleLimit <Int32>]  
-ObjectId <String[]> [<CommonParameters>]
```

```
Debug-Volume [-CimSession <CimSession>] [-ThrottleLimit <Int32>]  
-Path <String[]> [<CommonParameters>]
```

```
Debug-Volume [-CimSession <CimSession>] [-ThrottleLimit <Int32>]  
-FileSystemLabel <String[]> [<CommonParameters>]
```

```
Debug-Volume [-CimSession <CimSession>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

Description

The Debug-Volume cmdlet finds problems with a volume and recommends solutions.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DriveLetter**

Description :Specifies an array of letters that identify one or more drives or volumes in

the system.

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**FileSystemLabel**

Description :Specifies an array of file system labels.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**ObjectId**

Description :Specifies an array of object IDs, as strings.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**Path**

Description :Specifies an array of valid paths.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Inputs

Type :

Outputs

Type :

Microsoft.Management.Infrastructure.CimInstance#MSFT_StorageDiagnoseResult

Cmdlet: Disable-PhysicalDiskIdentification

Synops

Turns off the identification LED on the specified physical disk.

Syntax

```
Disable-PhysicalDiskIdentification [-FriendlyName] <String> [-  
CimSession <CimSession>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Disable-PhysicalDiskIdentification [-CimSession <CimSession>] [-  
ThrottleLimit <Int32>] -UniqueId <String> [<CommonParameters>]
```

```
Disable-PhysicalDiskIdentification [-CimSession <CimSession>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Disable-PhysicalDiskIndication cmdlet turns off the identification LED on the specified physical disk. The LED is typically used for visual identification of the location of a physical disk in an enclosure for removal and replacement operations. This cmdlet requires a storage enclosure that supports SCSI Enclosure Services (SES).

Parameters

Parameter :**CimSession**

Description :

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

Parameter :**FriendlyName**

Description :Specifies the friendly name of the disk on which to turn off the identification LED.

Required	true
----------	------

Position	1
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :

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

Parameter :**Uniqueld**

Description :Specifies the UniqueID of the disk on which to turn off the identification LED.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Cmdlet: Disable-PhysicalDiskIdentification

Synops

Turns off the identification LED on the specified physical disk.

Syntax

```
sable-PhysicalDiskIdentification [-FriendlyName] <String> [-  
CimSession <CimSession>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]  
Disable-PhysicalDiskIdentification [-CimSession <CimSession>] [-  
ThrottleLimit <Int32>] -UniqueId <String> [<CommonParameters>]  
Disable-PhysicalDiskIdentification [-CimSession <CimSession>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Disable-PhysicalDiskIndication cmdlet turns off the identification LED on the specified physical disk. The LED is typically used for visual identification of the location of a physical disk in an enclosure for removal and replacement operations. This cmdlet requires a storage enclosure that supports SCSI Enclosure Services (SES).

Parameters

Parameter :**CimSession**

Description :

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

Parameter :**FriendlyName**

Description :Specifies the friendly name of the disk on which to turn off the identification LED.

Required	true
Position	1
Default value	none

Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :

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

Parameter :**Uniqueld**

Description :Specifies the UniqueID of the disk on which to turn off the identification LED.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Cmdlet: Stop-StorageDiagnosticLog

Synops

Stops a Storage diagnostic log.

Syntax

```
op-StorageDiagnosticLog [-StorageSubSystemFriendlyName]
<String[]> [-CimSession <CimSession[]>] [-PassThru] [-
ThrottleLimit <Int32>] [<CommonParameters>]
Stop-StorageDiagnosticLog [-CimSession <CimSession[]>] [-
PassThru] [-ThrottleLimit <Int32>] -StorageSubSystemUniqueId
<String[]> [<CommonParameters>]
Stop-StorageDiagnosticLog [-CimSession <CimSession[]>] [-
PassThru] [-ThrottleLimit <Int32>] -StorageSubSystemName
<String[]> [<CommonParameters>]
Stop-StorageDiagnosticLog [-CimSession <CimSession[]>] [-
PassThru] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Stop-StorageDiagnosticLog cmdlet stops the collection of Storage diagnostic logs. You can use the Get-StorageDiagnosticInfo cmdlet to get the logs.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :StorageSubSystemFriendlyName

Description :Specifies the friendly name of the Storage subsystem for which to gather storage diagnostics. It may denote the Storage subsystem of the local computer (on which the cmdlet is run) or a remote Storage subsystem (standalone or cluster).

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByPropertyName)
Accept wildcard characters?	false

Parameter :StorageSubSystemName

Description :Specifies the name of the Storage subsystem for which to gather Storage diagnostics. It may denote the Storage subsystem of the local computer (on which the cmdlet is run) or a remote Storage subsystem (standalone or cluster).

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

Parameter :StorageSubSystemUniqueId

Description :Specifies the unique ID of the Storage subsystem for which to gather Storage diagnostics. It may denote the Storage subsystem of the local computer (on which the cmdlet is run) or a remote Storage subsystem (standalone or cluster).

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

Parameter :ThrottleLimit

Description :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

Inputs

Type :

Outputs

Type :

Cmdlet: Disable-StorageEnclosureIdentification

Synops

Turns off the identification LED on a storage enclosure or the slots for individual disks.

Syntax

```
Disable-StorageEnclosureIdentification [-FriendlyName] <String[]>  
[-CimSession <CimSession[]>] [-PassThru] [-SlotNumbers  
<UInt32[]>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Disable-StorageEnclosureIdentification [-CimSession  
<CimSession[]>] [-PassThru] [-SlotNumbers <UInt32[]>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Disable-StorageEnclosureIdentification [-CimSession  
<CimSession[]>] [-PassThru] [-SlotNumbers <UInt32[]>] [-  
ThrottleLimit <Int32>] -UniqueId <String[]> [<CommonParameters>]
```

Description

The Disable-StorageEnclosureIdentification cmdlet turns off the identification LED on the specified storage enclosure and, optionally, on the slots for individual disks.

Administrators typically use LEDs to locate a physical disk in an enclosure for removal or replacement. This cmdlet requires a storage enclosure that supports SCSI Enclosure Services (SES).

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies an array of friendly names. This cmdlet turns off the identification LEDs for the enclosures that the names specify or for slots that belong to the specified enclosures.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**PassThru**

Description :Returns an array of StorageEnclosure objects. By default, this cmdlet does not generate any output.

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

Parameter :**SlotNumbers**

Description :Specifies an array of slot numbers. This cmdlet turns off the identification LEDs for the slots that the numbers identify.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description : Specifies an array of IDs. This cmdlet turns off the identification LEDs for the enclosures that the IDs specify or for slots that belong to the specified enclosures.

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

Outputs

This cmdlet does not generate any output. If you specify the Passthru parameter, the cmdlet returns an array of MSFT_StorageEnclosure objects.

Type : MSFT_StorageEnclosure[]

Examples

Example 1: Disable identification of an enclosure

This command disables identification for the enclosure named E11.

```
PS C:\>Disable-StorageEnclosureIdentification -FriendlyName "E11"
```

Example 2: Disable identification of specified slot numbers

This command disables identification for the slots numbers 20 and 14 of the enclosure named E11.

```
PS C:\>Disable-StorageEnclosureIdentification -FriendlyName "E11" -SlotNumbers @(20, 14)
```

Cmdlet: Disable-StorageEnclosurePower

Synops

Syntax

```
Disable-StorageEnclosurePower [-FriendlyName] <String[]> [-SlotNumbers <UInt32[]>] [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [-AsJob] [-PassThru] [<CommonParameters>]
```

```
Disable-StorageEnclosurePower -UniqueId <String[]> [-SlotNumbers <UInt32[]>] [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [-AsJob] [-PassThru] [<CommonParameters>]
```

```
Disable-StorageEnclosurePower -InputObject <CimInstance[]> [-SlotNumbers <UInt32[]>] [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [-AsJob] [-PassThru] [<CommonParameters>]
```

Description

Parameters

Parameter :**UniqueId**

Required	true
Position	named
Default value	
Accept pipeline input?	true (ByPropertyName)
Accept wildcard characters?	false

Parameter :**FriendlyName**

Required	true
Position	1
Default value	
Accept pipeline input?	true (ByPropertyName)
Accept wildcard characters?	false

Parameter :**InputObject**

Required	true
Position	named
Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	false

Parameter :**SlotNumbers**

Required	false
Position	named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**CimSession**

Required	false
Position	named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Required	false
Position	named
Default value	0
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**AsJob**

Required	false
Position	named
Default value	False
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**PassThru**

Required	false
Position	named

Default value	False
Accept pipeline input?	false
Accept wildcard characters?	false

Outputs

Type : Microsoft.Management.Infrastructure.CimInstance

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageEnclosure

Cmdlet: Disable-StorageHighAvailability

Synops

Disables a Storage resource.

Syntax

```
Disable-StorageHighAvailability [-DiskNumber] <UInt32[]> [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Disable-StorageHighAvailability [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -DiskUniqueId <String[]> [<CommonParameters>]
```

```
Disable-StorageHighAvailability [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -DiskFriendlyName <String[]> [<CommonParameters>]
```

```
Disable-StorageHighAvailability [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -DiskPath <String[]> [<CommonParameters>]
```

```
Disable-StorageHighAvailability [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Disable-StorageHighAvailability cmdlet configures a Storage resource to be in an unavailable or inactive state.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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
-----------------------------	-------

Parameter :**DiskFriendlyName**

Description :Specifies an array of friendly names of disks.

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

Parameter :**DiskNumber**

Description :Specifies an array of disk numbers.

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByPropertyName)
Accept wildcard characters?	false

Parameter :**DiskPath**

Description :Specifies an array of disk paths.

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

Parameter :**DiskUniqueId**

Description :Specifies an array of unique IDs, as strings, of disks.

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

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Inputs

Type :

Outputs

Type :

Cmdlet: Disable-StorageMaintenanceMode

Synops

Disables storage maintenance mode on a fault domain.

Syntax

```
Disable-StorageMaintenanceMode [-CimSession <CimSession>] [-Manufacturer <String>] [-Model <String>] [<CommonParameters>]
```

Description

The Disable-StorageMaintenanceMode cmdlet disables storage maintenance mode on a fault domain, which includes SSU, StorageEnclosure, and PhysicalDisk.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Manufacturer**

Description :Specifies the manufacturer of a device. This cmdlet matches manufacturer information of physical disk devices, and disables maintenance mode on those devices.

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

Parameter :**Model**

Description :Specifies the model of a physical disk device that this cmdlet removes from

maintenance mode. If multiple devices fit a model string, this cmdlet removes those devices from maintenance mode.

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

Inputs

You can pipe a fault domain object, PhysicalDisk, Enclosure, or SSU to this cmdlet.

Type : MSFT_StorageFaultDomain

Outputs

Type :

Cmdlet: Disconnect-VirtualDisk

Synops

Disconnects a virtual disk from the specified computer, revoking access to the virtual disk.

Syntax

```
Disconnect-VirtualDisk [-FriendlyName] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-StorageNodeName <String>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Disconnect-VirtualDisk [-CimSession <CimSession[]>] [-PassThru]  
[-StorageNodeName <String>] [-ThrottleLimit <Int32>] -UniqueId  
<String[]> [<CommonParameters>]
```

```
Disconnect-VirtualDisk [-CimSession <CimSession[]>] [-PassThru]  
[-StorageNodeName <String>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Disconnect-VirtualDisk [-CimSession <CimSession[]>] [-PassThru]  
[-StorageNodeName <String>] [-ThrottleLimit <Int32>] -Name  
<String[]> [<CommonParameters>]
```

Description

The Disconnect-VirtualDisk cmdlet disconnects a virtual disk from the specified computer, revoking access to the virtual disk.

To disconnect a virtual disk from a remote computer, from a management node in a subsystem that is registered on the management node, specify the StorageNodeName parameter.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies the friendly name of the virtual disk to disconnect.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies the name of the virtual disk to disconnect.

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

Parameter :**PassThru**

Description :Specifies that the cmdlet should output an object representing the disconnected virtual disk. By default, this cmdlet does not generate any output.

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

Parameter :**StorageNodeName**

Description :Specifies the name of a computer. The cmdlet disconnects the virtual disk from the computer that you specify.

Required	false
Position	named

Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**UniqueId**

Description :Specifies the UniqueID of the virtual disk to disconnect.

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

Inputs

You can use the pipeline operator to pass an array of VirtualDisk objects to the InputObject parameter to specify one or more virtual disks to disconnect.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Outputs

The Disconnect-VirtualDisk cmdlet does not output objects unless you use the PassThru parameter, in which case it outputs objects that represent the virtual disks that you disconnected.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Examples

Example 1: Disconnect a virtual disk by friendly name

This example disconnects a virtual disk named VirtualDisk01 from the local machine to prevent further access to the virtual disk.

```
PS C:\>Disconnect-VirtualDisk -FriendlyName VirtualDisk01
```

Example 2: Disconnect a virtual disk from a remote computer from a management node

This command disconnects a virtual disk to from remote computer from a management node in a subsystem that is registered on the management node.

```
PS C:\>Get-StorageSubSystem -FriendlyName "Clustered Storage  
Spaces on Cluster01" | Get-VirtualDisk -FriendlyName "VDisk01"  
| Disconnect-VirtualDisk -StorageNodeName "ClustNode1"
```

Cmdlet: Dismount-DiskImage

Synops

Dismounts a disk image (virtual hard disk or ISO) so that it can no longer be accessed as a disk.

Syntax

```
Dismount-DiskImage [-ImagePath] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-StorageType {Unknown | ISO | VHD |  
VHDX | VHDSets}] [-ThrottleLimit <Int32>]  
[-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Dismount-DiskImage [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Dismount-DiskImage [-CimSession <CimSession[]>] [-PassThru] [-  
StorageType {Unknown | ISO | VHD | VHDX | VHDSets}] [-  
ThrottleLimit <Int32>] -DevicePath <String[]> [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

Description

The Dismount-DiskImage cmdlet dismounts a disk image (virtual hard disk or ISO) so that it can no longer be accessed as a disk. This cmdlet requires either the full image path of the ISO or VHD file, or the device path.

To eject a VHD file, administrator privilege is required. Administrator privilege is not needed to eject an ISO file on Windows® 8. On Windows Server® 2012, only an administrator is allowed to mount or eject ISO file.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DevicePath**

Description :Specifies the device path of the ISO/VHD file. You cannot use this parameter with the ImagePath parameter.

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

Parameter :**ImagePath**

Description :Specifies the path of the ISO or VHD file. You cannot use this parameter with the DevicePath parameter.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByValue, ByPropertyName)
Accept wildcard characters?	false

Parameter :**PassThru**

Description :Specifies that the cmdlet should output an object representing the dismounted disk image. By default, this cmdlet does not generate any output.

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

Parameter :**StorageType**

Description :Specifies the storage type of a file: ISO, VHD, VHDx, or Unknown. If the StorageType parameter is not specified or the Unknown type is provided, the storage type is determined by file extension.

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

Parameter :ThrottleLimit

Description :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

Parameter :Confirm

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :WhatIf

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

Inputs

You can pipe a DiskImage object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_DiskImage

Outputs

If you specify the PassThru parameter, this cmdlet outputs an object that represents the disk image that you dismounted.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_DiskImage

Examples

Example 1: Dismount a disk image by path

This example ejects an ISO named My US Visit Fall 2010 Pictures by specifying the image path at E:\ISO-Files.

```
PS C:\>Dismount-DiskImage -ImagePath "E:\ISO-Files\My US Visit  
Fall 2010 Pictures.iso"
```

Example 2: Dismount a disk image by device path

This example ejects an ISO by specifying device path for cdrom1. Refer to the Get-DiskImage cmdlet to learn how to find the device path of an ISO or VHD file.

```
PS C:\>Dismount-DiskImage -DevicePath \\.\CDROM1
```

Cmdlet: Enable-PhysicalDiskIdentification

Synops

Enables the identification LED on the specified physical disk.

Syntax

```
Enable-PhysicalDiskIdentification [-FriendlyName] <String> [-  
CimSession <CimSession>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Enable-PhysicalDiskIdentification [-CimSession <CimSession>] [-  
ThrottleLimit <Int32>] -UniqueId <String> [<CommonParameters>]
```

```
Enable-PhysicalDiskIdentification [-CimSession <CimSession>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Enable-PhysicalDiskIdentification cmdlet enables the identification LED on the specified physical disk. The LED is typically used for visual identification of the location of a physical disk in an enclosure for removal and replacement operations. This cmdlet requires a storage enclosure that supports SCSI Enclosure Services (SES).

Parameters

Parameter :**CimSession**

Description :

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

Parameter :**FriendlyName**

Description :Specifies the friendly name of the disk on which to enable the identification LED.

Required	true
----------	------

Position	1
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :

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

Parameter :**UniqueId**

Description :Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Inputs

You can pipe a Disk object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_PhysicalDisk

Outputs

This cmdlet outputs an object that represents the physical disk for which you enabled the identification LED.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_PhysicalDisk

Notes

Examples

Example 1: Enable the identification LED on all physical disks in a pool

This example enables the identification LED on all physical disks associated with the storage pool named SpacePool. This is useful for identifying a specific virtual disk, when the LED on the disk in question is not functioning.

```
PS C:\>$stpool = (Get-StoragePool -FriendlyName "SpacePool")
PS C:\> Enable-PhysicalDiskIndication -StoragePool $stpool
```

Example 2: Enable the identification LED on all physical disks used by a virtual disk

This example enables the identification LED on all physical disks associated with the virtual disk named Bruce's Music to visually identify the physical disk associated with the virtual disk.

```
PS C:\>$vdisk = (Get-VirtualDisk -FriendlyName "Bruce's
Music")
PS C:\> Enable-PhysicalDiskIndication -VirtualDisk $vdisk
```

Example 3: Enable the identification LED on all disks that are not healthy

This example gets all physical disks with a health status that is not Healthy, and pipes the disks to the Enable-PhysicalDiskIndication cmdlet, enabling the LEDs on the disks, if supported by the drive enclosure.

```
PS C:\>Get-PhysicalDisk | Where-Object -FilterScript {
$_.HealthStatus -Ne "healthy" } | Enable-
PhysicalDiskIndication
```

Cmdlet: Enable-PhysicalDiskIdentification

Synops

Enables the identification LED on the specified physical disk.

Syntax

```
able-PhysicalDiskIdentification [-FriendlyName] <String> [-  
CimSession <CimSession>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]  
Enable-PhysicalDiskIdentification [-CimSession <CimSession>] [-  
ThrottleLimit <Int32>] -UniqueId <String> [<CommonParameters>]  
Enable-PhysicalDiskIdentification [-CimSession <CimSession>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Enable-PhysicalDiskIdentification cmdlet enables the identification LED on the specified physical disk. The LED is typically used for visual identification of the location of a physical disk in an enclosure for removal and replacement operations. This cmdlet requires a storage enclosure that supports SCSI Enclosure Services (SES).

Parameters

Parameter :**CimSession**

Description :

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

Parameter :**FriendlyName**

Description :Specifies the friendly name of the disk on which to enable the identification LED.

Required	true
Position	1
Default value	none

Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :

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

Parameter :**Uniqueld**

Description :Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Inputs

You can pipe a Disk object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_PhysicalDisk

Outputs

This cmdlet outputs an object that represents the physical disk for which you enabled the identification LED.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_PhysicalDisk

Notes

Examples

Example 1: Enable the identification LED on all physical disks in a pool

This example enables the identification LED on all physical disks associated with the storage pool named SpacePool. This is useful for identifying a specific virtual disk, when the LED on the disk in question is not functioning.

```
PS C:\>$stpool = (Get-StoragePool -FriendlyName "SpacePool")
PS C:\> Enable-PhysicalDiskIndication -StoragePool $stpool
```

Example 2: Enable the identification LED on all physical disks used by a virtual disk

This example enables the identification LED on all physical disks associated with the virtual disk named Bruce's Music to visually identify the physical disk associated with the virtual disk.

```
PS C:\>$vdisk = (Get-VirtualDisk -FriendlyName "Bruce's
Music")
PS C:\> Enable-PhysicalDiskIndication -VirtualDisk $vdisk
```

Example 3: Enable the identification LED on all disks that are not healthy

This example gets all physical disks with a health status that is not Healthy, and pipes the disks to the Enable-PhysicalDiskIndication cmdlet, enabling the LEDs on the disks, if supported by the drive enclosure.

```
PS C:\>Get-PhysicalDisk | Where-Object -FilterScript {
$_.HealthStatus -Ne "healthy" } | Enable-
PhysicalDiskIndication
```

Cmdlet: Start-StorageDiagnosticLog

Synops

Starts Storage diagnostic logging.

Syntax

```
art-StorageDiagnosticLog [-StorageSubSystemFriendlyName]
<String[]> [-CimSession <CimSession[]>] [-Level {Critical | Error
| Warning | Informational | Verbose}]
[-MaxLogSize <UInt64>] [-PassThru] [-ThrottleLimit <Int32>]
[<CommonParameters>]
Start-StorageDiagnosticLog [-CimSession <CimSession[]>] [-Level
{Critical | Error | Warning | Informational | Verbose}] [-
MaxLogSize <UInt64>] [-PassThru] [-ThrottleLimit
<Int32>] -StorageSubSystemUniqueId <String[]>
[<CommonParameters>]
Start-StorageDiagnosticLog [-CimSession <CimSession[]>] [-Level
{Critical | Error | Warning | Informational | Verbose}] [-
MaxLogSize <UInt64>] [-PassThru] [-ThrottleLimit
<Int32>] -StorageSubSystemName <String[]> [<CommonParameters>]
Start-StorageDiagnosticLog [-CimSession <CimSession[]>] [-Level
{Critical | Error | Warning | Informational | Verbose}] [-
MaxLogSize <UInt64>] [-PassThru] [-ThrottleLimit
<Int32>] [<CommonParameters>]
```

Description

The Start-StorageDiagnosticLog cmdlet starts Storage diagnostic logging. After you start logging, you can reproduce the issue that you're troubleshooting or wait for it to reoccur. Use the Stop-StorageDiagnosticLog cmdlet to stop logging. You can use Get-StorageDiagnosticInfo to get the diagnostic logs.

Start-StorageDiagnosticLog creates an Event Tracing for Windows (ETW) session and subscribes to Storage real-time tracing sources. It uses a small circular log file located in C:\Windows\temp\storagelogs to capture the data.

Each trace session creates a unique file named diagnosticlog_<timestamp>.etl. Because the file name incorporates a time stamp, you can create multiple trace sessions without overwriting the previous session.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Level**

Description :Specifies the maximum level of tracing to gather. The acceptable values for this parameter are:

- Critical
- Error
- Warning
- Informational
- Verbose

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

Parameter :**MaxLogSize**

Description :Specifies the log size, in bytes. The default size of 200 MB. The log is circular, so when the log is full, older entries are overwritten. You can use this parameter when you want to record more data or when you want to set a smaller log size to save disk space.

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

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StorageSubSystemFriendlyName**

Description :Specifies the friendly name of the Storage subsystem for which to gather storage diagnostics. It may denote the Storage subsystem of the local computer (on which the cmdlet is run) or a remote Storage subsystem (standalone or cluster).

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByPropertyName)
Accept wildcard characters?	false

Parameter :**StorageSubSystemName**

Description :Specifies the name of the Storage subsystem for which to gather Storage diagnostics. It may denote the Storage subsystem of the local computer (on which the cmdlet is run) or a remote Storage subsystem (standalone or cluster).

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

Parameter :**StorageSubSystemUniqueId**

Description :Specifies the unique ID of the Storage subsystem for which to gather Storage diagnostics. It may denote the Storage subsystem of the local computer (on which the cmdlet is run) or a remote Storage subsystem (standalone or cluster).

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

Parameter :**ThrottleLimit**

Description :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

Inputs

Type :

Outputs

Type :

Cmdlet: Enable-StorageEnclosureIdentification

Synops

Enables the identification LED on a storage enclosure or the slots for individual disks.

Syntax

```
Enable-StorageEnclosureIdentification [-FriendlyName] <String[]>  
[-CimSession <CimSession[]>] [-PassThru] [-SlotNumbers  
<UInt32[]>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Enable-StorageEnclosureIdentification [-CimSession  
<CimSession[]>] [-PassThru] [-SlotNumbers <UInt32[]>] [-  
ThrottleLimit <Int32>] -UniqueId <String[]> [<CommonParameters>]
```

```
Enable-StorageEnclosureIdentification [-CimSession  
<CimSession[]>] [-PassThru] [-SlotNumbers <UInt32[]>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Enable-StorageEnclosureIdentification cmdlet enables the identification LED on the specified storage enclosure and, optionally, on the slots for individual disks. Administrators typically use LEDs to locate a physical disk in an enclosure for removal or replacement. This cmdlet requires a storage enclosure that supports SCSI Enclosure Services (SES).

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies an array of friendly names. This cmdlet turns on the identification LED for the enclosures that the names specify or for slots that belong to the specified enclosures.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**PassThru**

Description :Returns an array of StorageEnclosure objects. By default, this cmdlet does not generate any output.

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

Parameter :**SlotNumbers**

Description :Specifies an array of slot numbers. This cmdlet turns on the identification LEDs for the slots that the numbers identify.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**UniqueId**

Description :Specifies an array of IDs. This cmdlet turns on the identification LED for the enclosures that the IDs specify or for slots that belong to the specified enclosures.

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

Outputs

This cmdlet does not generate any output by default. If you specify the PassThru parameter, the cmdlet returns an array of MSFT_StorageEnclosure objects.

Type : MSFT_StorageEnclosure[]

Examples

Example 1: Enable identification of an enclosure

This command enables identification for the enclosure named E11.

```
PS C:\>Enable-StorageEnclosureIdentification -FriendlyName "E11"
```

Example 2: Enable identification of specified slot numbers

This command enables identification for the slots numbers 20 and 14 of the enclosure named E11.

```
PS C:\>Enable-StorageEnclosureIdentification -FriendlyName "E11" -SlotNumbers @(20, 14)
```

Cmdlet: Enable-StorageEnclosurePower

Synops

Syntax

```
Enable-StorageEnclosurePower [-FriendlyName] <String[]> [-SlotNumbers <UInt32[]>] [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [-AsJob] [-PassThru] [<CommonParameters>]
```

```
Enable-StorageEnclosurePower -UniqueId <String[]> [-SlotNumbers <UInt32[]>] [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [-AsJob] [-PassThru] [<CommonParameters>]
```

```
Enable-StorageEnclosurePower -InputObject <CimInstance[]> [-SlotNumbers <UInt32[]>] [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [-AsJob] [-PassThru] [<CommonParameters>]
```

Description

Parameters

Parameter :**UniqueId**

Required	true
Position	named
Default value	
Accept pipeline input?	true (ByPropertyName)
Accept wildcard characters?	false

Parameter :**FriendlyName**

Required	true
Position	1
Default value	
Accept pipeline input?	true (ByPropertyName)
Accept wildcard characters?	false

Parameter :**InputObject**

Required	true
Position	named
Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	false

Parameter :**SlotNumbers**

Required	false
Position	named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**CimSession**

Required	false
Position	named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Required	false
Position	named
Default value	0
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**AsJob**

Required	false
Position	named
Default value	False
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**PassThru**

Required	false
Position	named

Default value	False
Accept pipeline input?	false
Accept wildcard characters?	false

Outputs

Type : Microsoft.Management.Infrastructure.CimInstance

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageEnclosure

Cmdlet: Enable-StorageHighAvailability

Synops

Enables a disk to be added to the failover cluster.

Syntax

```
Enable-StorageHighAvailability [-DiskNumber] <UInt32[]> [-  
CimSession <CimSession[]>] [-PassThru] [-ScaleOut] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Enable-StorageHighAvailability [-CimSession <CimSession[]>] [-  
PassThru] [-ScaleOut] [-ThrottleLimit <Int32>] -DiskUniqueId  
<String[]> [<CommonParameters>]
```

```
Enable-StorageHighAvailability [-CimSession <CimSession[]>] [-  
PassThru] [-ScaleOut] [-ThrottleLimit <Int32>] -DiskFriendlyName  
<String[]> [<CommonParameters>]
```

```
Enable-StorageHighAvailability [-CimSession <CimSession[]>] [-  
PassThru] [-ScaleOut] [-ThrottleLimit <Int32>] -DiskPath  
<String[]> [<CommonParameters>]
```

```
Enable-StorageHighAvailability [-CimSession <CimSession[]>] [-  
PassThru] [-ScaleOut] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

Description

The Enable-StorageHighAvailability cmdlet enables a clusterable disk that is not yet a cluster resource to be added to the failover cluster.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DiskFriendlyName**

Description :Specifies an array of friendly names for disks.

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

Parameter :**DiskNumber**

Description :Specifies an array of disk numbers.

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByPropertyName)
Accept wildcard characters?	false

Parameter :**DiskPath**

Description :Specifies an array of disk paths.

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

Parameter :**DiskUniqueId**

Description :Specifies an array of disk IDs.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByPropertyName)

Accept wildcard characters?	false
-----------------------------	-------

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ScaleOut**

Description :

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

Parameter :**ThrottleLimit**

Description :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

Inputs

Type :

Outputs

Type :

Examples

Example 1: Enable a disk in a failover cluster by using its ID

This command enables a shared disk to be added to the failover cluster and made a Cluster Shared Volume by using the disk number as the identifier of the disk to enable.

```
This command uses the Get-Disk cmdlet to display the
properties of disk number 9.
PS C:\>Get-Disk -Number 9 | Format-Table -Property
Number,IsHighlyAvailable,IsClustered,IsScaleOut
Number IsHighlyAvailable IsClustered IsScaleOut
-----
          9                False      False      False

The next command enables disk number 9. The final command
repeats the first command to display the new status of the
disk.
PS C:\>Enable-StorageHighAvailability -DiskNumber 9
PS C:\> Get-Disk -Number 9 | Format-Table
Number,IsHighlyAvailable,IsClustered,IsScaleOut
Number IsHighlyAvailable IsClustered IsScaleOut
-----
          9                True       True       True
```

Example 2: Enable a disk for failover cluster without it being enabled for Cluster Shared Volumes

This example enables a shared disk to be added to the failover cluster and made a Cluster Shared Volume by using the disk number. The example makes the disk available but enabled for Cluster Shared Volume.

This command uses Get-Disk to display the properties of disk number 9.

```
PS C:\>Get-Disk -Number 9 | Format-Table -Property  
Number,IsHighlyAvailable,IsClustered,IsScaleOut
```

Number	IsHighlyAvailable	IsClustered	IsScaleOut
9	False	False	False

The next command enables disk number 9. The command specifies a value of 0 for the Scaleout parameter. This command leaves the disk in available storage and not enabled. The final command repeats the first command to display the new status of the disk.

```
PS C:\>Enable-StorageHighAvailability -DiskNumber 9 -ScaleOut  
0
```

```
PS C:\> Get-Disk -Number 9 | Format-Table  
Number,IsHighlyAvailable,IsClustered,IsScaleOut
```

Number	IsHighlyAvailable	IsClustered	IsScaleOut
9	True	True	False

Cmdlet: Enable-StorageMaintenanceMode

Synops

Enables storage maintenance mode on a device.

Syntax

```
Enable-StorageMaintenanceMode [-CimSession <CimSession>] [-IgnoreDetachedVirtualDisks] [-Manufacturer <String>] [-Model <String>] [-ValidateVirtualDisksHealthy <Nullable [System.Boolean]>] [<CommonParameters>]
```

Description

The Enable-StorageMaintenanceMode cmdlet enables storage maintenance mode on a PhysicalDisk device.

You can use this cmdlet on storage fault domains, which include PhysicalDisk, Enclosure, and SSU, that are part of a Storage Spaces pool or virtual disk. While a device is in maintenance mode, no input/output operations flow to that device. Instead, if other fault domains are available and configured, other fault domains serve input/output commands. If enabling storage maintenance mode takes the last copy of data offline for a virtual disk, this cmdlet does not enable maintenance mode.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**IgnoreDetachedVirtualDisks**

Description :Indicates that this cmdlet ignores detached virtual disks when it performs the criticality check for last data-copy and other health metrics.

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

Parameter :**Manufacturer**

Description :Specifies the manufacturer of a device. This cmdlet matches manufacturer information of physical disk devices, and places those devices in maintenance mode.

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

Parameter :**Model**

Description :Specifies the model of a physical disk device that this cmdlet places in maintenance mode. If multiple devices fit a model string, this cmdlet places those devices in maintenance mode.

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

Parameter :**ValidateVirtualDisksHealthy**

Description :Indicates whether this cmdlet validates that all vitural disks in the fault domain to be placed in maintenance mode are healthy before it proceeds.

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

Inputs

You can pipe a fault domain object, PhysicalDisk, Enclosure, or SSU to this cmdlet.

Type : MSFT_StorageFaultDomain

Outputs

Type :

Notes

Examples

Example 1: Enable maintenance mode on a physical disk

This command gets a physical disk by using the Get-PhysicalDisk cmdlet, and then passes that object to the current cmdlet. The command enables storage maintenance mode on the disk named Disk22.

```
PS C:\>Get-PhysicalDisk -FriendlyName "Disk22" | Enable-StorageMaintenanceMode
```

Example 2: Enable maintenance mode on an enclosure

This command gets a storage enclosure disk by using the Get-StorageEnclosure cmdlet, and then passes that object to the current cmdlet. The command enables storage maintenance mode on the enclosure named Enclosure17.

```
PS C:\>Get-StorageEnclosure -FriendlyName "Enclosure17" | Enable-StorageMaintenanceMode
```

Cmdlet: Write-VolumeCache

Synops

Writes the file system cache to disk.

Syntax

```
ite-VolumeCache [-DriveLetter] <Char[]> [-CimSession  
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>]  
[<CommonParameters>]  
Write-VolumeCache [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -FileSystemLabel <String[]>  
[<CommonParameters>]  
Write-VolumeCache [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -Path <String[]> [<CommonParameters>]  
Write-VolumeCache [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -ObjectId <String[]> [<CommonParameters>]  
Write-VolumeCache [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Write-VolumeCache cmdlet writes the file system cache to disk. By default, Windows caches file data to be written to disk in a special memory area before writing the data to disk.

This cmdlet enables you to forcibly empty, or flush, the write cache by writing it to disk.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DriveLetter**

Description :Specifies an array of letters that identify one or more drives or volumes in the system. The cmdlet writes the volume cache for the drives or volumes you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**FileSystemLabel**

Description :Specifies an array of file system labels. The cmdlet writes the volume cache for the file system labels you specify.

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

Parameter :**ObjectId**

Description :Specifies an array of IDs, as strings. The ID is not globally unique.

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

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :Path

Description :Specifies an array of paths. The cmdlet writes the volume cache for the paths you specify.

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

Parameter :ThrottleLimit

Description :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

Inputs

You can use the pipeline operator to pass an array of MSFT_Volume objects to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_Volume

Outputs

If you specify the PassThru parameter, this cmdlet returns an object representing the volumes for which you wrote the file system cache to disk.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_Volume

Cmdlet: Format-Volume

Synops

Formats one or more existing volumes or a new volume on an existing partition.

Syntax

```
Format-Volume [-DriveLetter] <Char[]> [-AllocationUnitSize  
<UInt32>] [-CimSession <CimSession[]>] [-Compress] [-  
DisableHeatGathering] [-FileSystem {FAT | FAT32 | exFAT |  
NTFS | ReFS}] [-Force] [-Full] [-IsDAX] [-NewFileSystemLabel  
<String>] [-SetIntegrityStreams <Boolean>] [-ShortFileNameSupport  
<Boolean>] [-ThrottleLimit <Int32>]  
[-UseLargeFRS] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Format-Volume [-AllocationUnitSize <UInt32>] [-CimSession  
<CimSession[]>] [-Compress] [-DisableHeatGathering] [-FileSystem  
{FAT | FAT32 | exFAT | NTFS | ReFS}] [-Force]  
[-Full] [-IsDAX] [-NewFileSystemLabel <String>] [-Partition  
<CimInstance>] [-SetIntegrityStreams <Boolean>] [-  
ShortFileNameSupport <Boolean>] [-ThrottleLimit <Int32>]  
[-UseLargeFRS] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Format-Volume [-AllocationUnitSize <UInt32>] [-CimSession  
<CimSession[]>] [-Compress] [-DisableHeatGathering] [-FileSystem  
{FAT | FAT32 | exFAT | NTFS | ReFS}] [-Force]  
[-Full] [-IsDAX] [-NewFileSystemLabel <String>] [-  
SetIntegrityStreams <Boolean>] [-ShortFileNameSupport <Boolean>]  
[-ThrottleLimit <Int32>] [-UseLargeFRS] [-FileSystemLabel  
<String[]>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Format-Volume [-AllocationUnitSize <UInt32>] [-CimSession  
<CimSession[]>] [-Compress] [-DisableHeatGathering] [-FileSystem  
{FAT | FAT32 | exFAT | NTFS | ReFS}] [-Force]  
[-Full] [-IsDAX] [-NewFileSystemLabel <String>] [-  
SetIntegrityStreams <Boolean>] [-ShortFileNameSupport <Boolean>]  
[-ThrottleLimit <Int32>] [-UseLargeFRS] [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

```
Format-Volume [-AllocationUnitSize <UInt32>] [-CimSession  
<CimSession[]>] [-Compress] [-DisableHeatGathering] [-FileSystem  
{FAT | FAT32 | exFAT | NTFS | ReFS}] [-Force]
```

```
[-Full] [-IsDAX] [-NewFileSystemLabel <String>] [-SetIntegrityStreams <Boolean>] [-ShortFileNameSupport <Boolean>] [-ThrottleLimit <Int32>] [-UseLargeFRS] -Path <String[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Format-Volume [-AllocationUnitSize <UInt32>] [-CimSession <CimSession[]>] [-Compress] [-DisableHeatGathering] [-FileSystem {FAT | FAT32 | exFAT | NTFS | ReFS}] [-Force] [-Full] [-IsDAX] [-NewFileSystemLabel <String>] [-SetIntegrityStreams <Boolean>] [-ShortFileNameSupport <Boolean>] [-ThrottleLimit <Int32>] [-UseLargeFRS] -ObjectId <String[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Format-Volume cmdlet formats one or more existing volumes, or a new volume on an existing partition. This cmdlet returns the object representing the volume that was just formatted, with all properties updated to reflect the format operation.

To create a new volume, use this cmdlet in conjunction with the Initialize-Disk and New-Partition cmdlets.

Parameters

Parameter :**AllocationUnitSize**

Description :Specifies the allocation unit size to use when formatting the volume.

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

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Compress**

Description :Enables compression on all files and folders created on the specified NTFS volume.

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

Parameter :**DisableHeatGathering**

Description :Indicates that the cmdlet does not gather file activity on the specified tiered volume. You can override file placement based on the desired storage tier. This parameter is only valid for tiered volumes.

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

Parameter :**DriveLetter**

Description :Specifies the drive letter of the volume to format.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**FileSystem**

Description :Specifies the file system with which to format the volume. The acceptable values for this parameter are:NTFS, ReFS, exFAT, FAT32, and FAT.

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

Parameter :**FileSystemLabel**

Description :Specifies the label to use for the volume.

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

Parameter :**Force**

Description :Specifies the override switch.

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

Parameter :**Full**

Description :Performs a full format. A full format writes to every sector of the disk, takes much longer to perform than the default (quick) format, and is not recommended on storage that is thinly provisioned.

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

Parameter :**IsDAX**

Description :Formats a volume as a DirectAccess (DAX) volume.

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

Parameter :**NewFileSystemLabel**

Description :Specifies a new label to use for the volume.

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

Parameter :**ObjectId**

Description :Specifies the ID of the volume to format.

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

Parameter :**Partition**

Description :Specifies the partition object on which to create the new volume. Enter a Partition CIM object, which is exposed by the Get-Partition and New-Partition cmdlets.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**Path**

Description :Specifies the path of the volume to format.

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

Parameter :**SetIntegrityStreams**

Description :Enables integrity streams on the volume to be formatted.

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

Parameter :**ShortFileNameSupport**

Description :Specifies that support for short file names should be enabled on this volume.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**UseLargeFRS**

Description :Specifies that large File Record Segment (FRS) should be used.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can use the pipeline operator to pass an MSFT_Volume object to the InputObject parameter.

You can use the pipeline operator to pass an MSFT_Partition object to the Partition parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M

SFT_Volume

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M

SFT_Partition

Outputs

This cmdlet returns an object that represents the newly formatted volume.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M

SFT_Volume

Examples

Example 1: Quick format

This example performs a format of the D volume.

```
PS C:\>Format-Volume -DriveLetter D
```

Example 2: Full format using FAT32

This example performs a full format of the D volume using the FAT32 file system.

```
PS C:\>Format-Volume -DriveLetter C -FileSystem FAT32 -  
FullFormat -Force
```

Cmdlet: Get-DedupProperties

Synops

Gets Data Deduplication information.

Syntax

```
Get-DedupProperties [-DriveLetter] <Char[]> [-CimSession  
<CimSession[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-DedupProperties [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] -ObjectId <String[]> [<CommonParameters>]
```

```
Get-DedupProperties [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] -Path <String[]> [<CommonParameters>]
```

```
Get-DedupProperties [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] -FileSystemLabel <String[]> [<CommonParameters>]
```

```
Get-DedupProperties [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

Description

The Get-DedupProperties cmdlet gets Data Deduplication information.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DriveLetter**

Description :Specifies the drive letter of the volume for which to get Data Deduplication

information.

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByPropertyName)
Accept wildcard characters?	false

Parameter :FileSystemLabel

Description :Specifies the volume name for which to get Data Deduplication information.

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

Parameter :ObjectId

Description :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(ByPropertyName)
Accept wildcard characters?	false

Parameter :Path

Description :Specifies the volume path for which to get Data Deduplication information.

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

Parameter :ThrottleLimit

Description :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

Cmdlet: Get-Disk

Synops

Gets one or more disks visible to the operating system.

Syntax

```
Get-Disk [[-Number] <UInt32[]>] [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-Disk [-CimSession <CimSession[]>] [-FriendlyName <String[]>] [-SerialNumber <System.String[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-Disk [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [-VirtualDisk <CimInstance>] [<CommonParameters>]
```

```
Get-Disk [-CimSession <CimSession[]>] [-Partition <CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-Disk [-CimSession <CimSession[]>] [-iSCSI Session <CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-Disk [-CimSession <CimSession[]>] [-iSCSI Connection <CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-Disk [-CimSession <CimSession[]>] [-Path <String[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-Disk [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [-UniqueId <String[]>] [<CommonParameters>]
```

```
Get-Disk [-StorageJob <CimInstance>] [<CommonParameters>]
```

```
Get-Disk [-StorageNode <Microsoft.Management.Infrastructure.CimInstance>] [<CommonParameters>]
```

```
Get-Disk [-StorageSubSystem <Microsoft.Management.Infrastructure.CimInstance>] [<CommonParameters>]
```

Description

The Get-Disk cmdlet gets one or more Disk objects visible to the operating system, or optionally a filtered list.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Gets the disk with the specified friendly name. Enter a friendly name, or use wildcard characters to enter a name pattern.

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

Parameter :**Number**

Description :Specifies the disk number for which to get the associated Disk object.

Required	false
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**Partition**

Description :Accepts a Partition object as input. The Partition CIM object is exposed by

the Get-Partition cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**Path**

Description :Contains valid path information.

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

Parameter :**SerialNumber**

Description :Specifies an array of serial numbers associated with disks that this cmdlet gets.

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

Parameter :**StorageJob**

Description :Specifies a storage job object that is associated with disks that this cmdlet gets. To obtain a storage job, use the Get-StorageJob cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**StorageNode**

Description :

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**StorageSubSystem**

Description :Specifies the storage subsystem from which this cmdlet gets disks. To obtain a StorageSubsystem object, use the Get-StorageSubSystem cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**UniqueId**

Description :Gets only the disks with the specified IDs. Type one or more IDs (separated by commas).

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :VirtualDisk

Description :Accepts a VirtualDisk object as input. The Virtual Disk CIM object is exposed by the Get-VirtualDisk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :iSCSIConnection

Description :Accepts an iSCSIConnection object as input. The iSCSI Connection CIM object is exposed by the Get-IscsiConnection cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :iSCSI Session

Description :Accepts an iSCSI Session object as input. The iSCSI Session CIM object is exposed by the Get-IscsiSession cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Inputs

You can pipe an iSCSIConnection object to the iSCSIConnection parameter.

You can pipe an iSCSI Session object to the iSCSI Session parameter.

You can pipe a Partition object to the Partition parameter.

You can pipe a VirtualDisk object to the VirtualDisk parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_IscsiConnection

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_IscsiSession

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Partition

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Outputs

This cmdlet outputs one or more objects representing disks.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Disk

Notes

Examples

Example 1: Get all disks

This example gets all disks visible to the operating system.

```
PS C:\>Get-Disk
```

Example 2: Get a disk by disk number

This example gets disk 6.

```
PS C:\>Get-Disk -Number 6
```

Example 3: Get all USB disks

This example gets all disks attached via the USB bus by piping the output of Get-Disk to the Where-Object cmdlet, and filtering by the USB value of the Bustype property.

```
PS C:\>Get-Disk | Where-Object -FilterScript {$_.BusType -Eq "USB"}
```

Example 4: Get the iSCSI sessions for all iSCSI disks

This example gets all disks attached via the iSCSI bus by piping the output of Get-Disk to the Where-Object cmdlet, and filtering by the iSCSI value of the BusType property. It then passes the Disk objects in the pipeline to the Get-IscsiSession cmdlet, which gets the associated iSCSI sessions, and then pipes the output to the Format-Table cmdlet for simplified display.

```
PS C:\>Get-Disk | Where-Object -FilterScript {$_.BusType -Eq "iSCSI"} |  
Get-IscsiSession | Format-Table
```

Cmdlet: Get-DiskImage

Synops

Gets one or more disk image objects (virtual hard disk or ISO).

Syntax

```
Get-DiskImage [-ImagePath] <String[]> [-CimSession  
<CimSession[]>] [-StorageType {Unknown | ISO | VHD | VHDX |  
VHDSets}] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-DiskImage [-CimSession <CimSession[]>] [-StorageType {Unknown  
| ISO | VHD | VHDX | VHDSets}] [-ThrottleLimit <Int32>] -  
DevicePath <String[]> [<CommonParameters>]
```

```
Get-DiskImage [-CimSession <CimSession[]>] [-StorageType {Unknown  
| ISO | VHD | VHDX | VHDSets}] [-ThrottleLimit <Int32>] [-Volume  
<CimInstance>] [<CommonParameters>]
```

Description

The Get-DiskImage cmdlet gets the objects associated with one or more disk images (virtual hard disk or ISO). This cmdlet requires either the full image path of the ISO or VHD file, or the device path.

This cmdlet reports whether the specified ISO or VHD file is currently attached.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DevicePath**

Description :Specifies the device path of the ISO or VHD file. You cannot use this

parameter with the ImagePath parameter.

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

Parameter :ImagePath

Description :Specifies the path of the ISO or VHD file. You cannot use this parameter with the DevicePath parameter.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByValue, ByPropertyName)
Accept wildcard characters?	false

Parameter :StorageType

Description :Specifies the type of a disk image: ISO, VHD, VHDx, or Unknown. If the StorageType parameter is not specified or the Unknown type is provided, the storage type is determined by file extension.

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

Parameter :ThrottleLimit

Description :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

Parameter :**Volume**

Description :Gets the disk image associated with the specified Volume object. Enter a Volume CIM object, which can be obtained by using the Get-Volume cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Inputs

You can pipe a Volume object to the Volume parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Volume

Outputs

This cmdlet returns an object that represents the specified disk image.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_DiskImage

Examples

Example 1: Get a disk image by path

This example gets an ISO disk image specified by path and displays information about the disk image.

```
PS C:\>Get-DiskImage -ImagePath "E:\ISO-Files\My US Visit Fall  
2010 Pictures.iso"
```

Example 2: Get a disk image by device path

This example gets an ISO disk image specified by device path and displays information about the disk image.

```
PS C:\>Get-DiskImage -DevicePath \\.\CDROM1
```

Example 3: Get the drive letter associated with a mounted ISO

This example displays the drive letter associated with an ISO file.

```
PS C:\>Get-DiskImage -DevicePath \\.\CDROM1 | Get-Volume
```

Example 4: Get the drive letter associated with a mounted VHD

This example displays one or more drive letters associated with volumes in a VHD file.

```
PS C:\>Get-DiskImage -ImagePath E:\vhd1.vhdx | Get-Disk | Get-Partition | Get-Volume
```

DriveLetter	FileSystemLabel	FileSystem	SizeRemaining
DriveType	HealthStatus		
Size			
-----	-----	-----	-----
-	-----	-----	-----
F	New Volume	NTFS	Fixed
Healthy	19.27 GB	19.87 GB	

Cmdlet: Get-DiskStorageNodeView

Synops

Gets the view of a disk from a storage node.

Syntax

```
t-DiskStorageNodeView [[-StorageNode] <CimInstance>] [[-Disk]
<CimInstance>] [[-CimSession] <CimSession>] [<CommonParameters>]
```

Description

The Get-DiskStorageNodeView cmdlet gets the view of a disk from the perspective of the specified storage node.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession cmdlet. The default is the current session on the local computer.

Required	false
Position	3
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**Disk**

Description :Specifies a disk object. To obtain a Disk object, use the Get-Disk cmdlet.

Required	false
Position	2
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**StorageNode**

Description :Specifies a disk object. To obtain a StorageNode object, use the Get-StorageNode cmdlet.

Required	false
Position	1
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Cmdlet: Get-DiskStorageNodeView

Synops

Gets the view of a disk from a storage node.

Syntax

```
Get-DiskStorageNodeView [[-StorageNode] <CimInstance>] [[-Disk] <CimInstance>] [[-CimSession] <CimSession>] [<CommonParameters>]
```

Description

The Get-DiskStorageNodeView cmdlet gets the view of a disk from the perspective of the specified storage node.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession cmdlet. The default is the current session on the local computer.

Required	false
Position	3
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**Disk**

Description :Specifies a disk object. To obtain a Disk object, use the Get-Disk cmdlet.

Required	false
Position	2
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**StorageNode**

Description :Specifies a disk object. To obtain a StorageNode object, use the Get-StorageNode cmdlet.

Required	false
Position	1
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Cmdlet: Get-FileIntegrity

Synops

Gets integrity information for a file on an ReFS volume.

Syntax

```
Get-FileIntegrity [-FileName] <String> [-CimSession  
<CimSession[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-FileIntegrity cmdlet gets integrity information for a file on a Resilient File System (ReFS) volume.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FileName**

Description :Specifies a file name. The cmdlet gets integrity settings for the file that you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Inputs

System.IO.FileInfo. To obtain a FileInfo object, use the Get-Item cmdlet for a specified file name. The cmdlet uses the FullName property as the value of the FileName parameter.

System.IO.DirectoryInfo. To obtain a DirectoryInfo object, use Get-Item for a specified directory name. The cmdlet uses the FullName property as the value of the FileName parameter.

Type :

Outputs

This cmdlet generates an MSFT_FileIntegrity object.

Type : MSFT_FileIntegrity

Examples

Example 1: Get file integrity information

This command gets file integrity information for a file.

```
PS C:\>Get-FileIntegrity -FileName 'H:\Temp\New Text Document.txt'
FileName                               Enabled
Enforced
-----
H:\Temp\New Text Document.txt         False
True
```

Example 2: Get file integrity information for multiple files by using the pipeline

This command uses the Get-Item cmdlet to get all the files in the specified folder, and then passes them to the current cmdlet by using the pipeline operator. For more information, type Get-Help Get-Item. The command gets file integrity information for all the files in the folder.

```
PS C:\>Get-Item -Path 'H:\Temp\*' | Get-FileIntegrity
FileName                                     Enabled
Enforced                                     -----
-----
H:\Temp\New Text Document 07 21             False
True
H:\Temp\New Text Document 08 19             False
True
H:\Temp\New Text Document 08 22             False
True
H:\Temp\New Text Document 09 07             False
True
```

Cmdlet: Get-FileShare

Synops

Retrieves file share objects and their properties.

Syntax

```
Get-FileShare [-CimSession <CimSession[]>] [-FileServer  
<CimInstance>] [-Name <String[]>] [-Protocol  
<FileSharingProtocol[]>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Get-FileShare [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] [-UniqueId <String[]>] [<CommonParameters>]
```

```
Get-FileShare [-CimSession <CimSession[]>] [-Name <String[]>] [-  
Protocol <FileSharingProtocol[]>] [-ThrottleLimit <Int32>] [-  
Volume <CimInstance>] [<CommonParameters>]
```

```
Get-FileShare [-CimSession <CimSession[]>] [-Name <String[]>] [-  
Protocol <FileSharingProtocol[]>] [-Subsystem <CimInstance>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-FileShare cmdlet gets objects that correspond to the file shares on the specified server. You must have local administrator credentials on a server to retrieve the objects.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FileServer**

Description :Specifies the file server on which the file share is hosted. To obtain a FileServer, use the Get-StorageFileServer cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies the name of the file share to get.

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

Parameter :**Protocol**

Description :Specifies the file sharing protocol of the file shares that this cmdlet gets. The acceptable values for this parameter are: SMB and NFS.

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

Parameter :**Subsystem**

Description :Specifies the storage subsystem from which to get file shares. To obtain a StorageSubsystem object, use the Get-StorageSubSystem cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)

Accept wildcard characters?	false
-----------------------------	-------

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueid

Description :Specifies a unique ID.

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

Parameter :Volume

Description :Specified the volume object that contains the file share to get. To obtain a volume, use the Get-Volume cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Inputs

Type :

Outputs

Type :

Examples

Example 1: Get all file shares on the local server

This command lists all the file shares on the local server. You must have local administrator permissions on the server to run this command.

```
PS C:\>Get-FileShare
```

Example 2: Get all NFS file shares on the specified file server

This command lists all NFS file shares on the file server named FileServer01. You must have local administrator credentials on the server to run this command. The command gets the file server by using the Get-StorageFileServer cmdlet.

```
PS C:\>Get-FileShare -Protocol NFS -FileServer (Get-StorageFileServer -FriendlyName "FileServer01")
```

Cmdlet: Get-FileShareAccessControlEntry

Synops

Retrieves an access control entry for the share corresponding to a single account.

Syntax

```
Get-FileShareAccessControlEntry [-CimSession <CimSession[]>] [-FileServer <CimInstance>] [-ThrottleLimit <Int32>] -Name <String[]> [<CommonParameters>]
```

```
Get-FileShareAccessControlEntry [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] -UniqueId <String[]> [<CommonParameters>]
```

```
Get-FileShareAccessControlEntry [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-FileShareAccessControlEntry cmdlet retrieves an access control entry for the share corresponding to a single account. You must have local administrator permissions on the specified server to run this cmdlet.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FileServer**

Description :Specifies the file server which hosts the file share that this cmdlet gets. To obtain a FileServer object, use the Get-StorageFileServer cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**Name**

Description :The name of an object or setting.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies the Uniqueld of the file share.

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

Inputs

Type :

Outputs

Type :

Cmdlet: Get-FileStorageTier

Synops

Gets the files assigned to a Storage tier on a volume, and their status.

Syntax

```
Get-FileStorageTier [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] -VolumeDriveLetter <Char> [<CommonParameters>]
```

```
Get-FileStorageTier [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] -VolumePath <String> [<CommonParameters>]
```

```
Get-FileStorageTier [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] -Volume <CimInstance> [<CommonParameters>]
```

```
Get-FileStorageTier [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] -FilePath <String> [<CommonParameters>]
```

Description

The Get-FileStorageTier cmdlet gets all the files assigned to a Storage tier on a tiered volume stored on a tiered Storage space, and the status of each file. A file that you assign to a Storage tier is called a pinned file. The possible status values are the following:

- Not on tier
- Completely on tier
- Partially on tier

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :FilePath

Description :Specifies the full path of a file. The cmdlet gets the pinned file that you specify and its status.

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

Parameter :ThrottleLimit

Description :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

Parameter :Volume

Description :Specifies a volume as a CimInstance object. The cmdlet gets the pinned files for the volume that you specify, and their status values. To obtain a volume, use the Get-Volume cmdlet.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :VolumeDriveLetter

Description :Specifies the drive letter of a volume. The cmdlet gets the pinned files for the volume that you specify, and their status values.

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

Parameter :**VolumePath**

Description :Specifies the path of a volume. The cmdlet gets the pinned files for the volume that you specify, and their status values.

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

Inputs

Type :

Outputs

This cmdlet generates a file storage tier object that contains the desired storage tier, file path, status, desired storage tier file size, and state. State includes values of Ok, Pending, and Processing.

Type : MSFT_FileStorageTier

Examples

Example 1: Get status for a file

This command gets the pinned file that you specify, and its status.

```
PS C:\>Get-FileStorageTier -FilePath "D:\DataFile06.txt"
```

Example 2: Get pinned files for a volume

This command gets the pinned files for the specified volume, and their status values.

```
PS C:\>Get-FileStorageTier -VolumePath "\\?\Volume{6d6e000d-6038-11e2-be6d-806e6f6e6963}\\"
```

Cmdlet: Get-InitiatorId

Synops

Gets the InitiatorID objects for the specified iSCSI initiators.

Syntax

```
Get-InitiatorId [[-InitiatorAddress] <String[]>] [-CimSession  
<CimSession[]>] [-HostType <HostType[]>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Get-InitiatorId [-CimSession <CimSession[]>] [-StorageSubSystem  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-InitiatorId [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] [-UniqueId <String[]>] [<CommonParameters>]
```

```
Get-InitiatorId [-CimSession <CimSession[]>] [-MaskingSet  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-InitiatorId [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] [-VirtualDisk <CimInstance>] [<CommonParameters>]
```

Description

The Get-InitiatorId cmdlet gets the InitiatorID objects for the specified iSCSI initiators.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**HostType**

Description :Specifies the host operating system or other host environmental factors that may influence the behavior that the storage system should have when showing a virtual disk to an initiator. If the HostType property is blank for the object you want to get, omit this parameter.

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

Parameter :**InitiatorAddress**

Description :Specifies the address of the InitiatorID object you want to get. These are the port addresses of the hosts to which the virtual disks will be made available.

Required	false
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**MaskingSet**

Description :Gets the InitiatorID objects associated with the specified MaskingSet object. Enter a MaskingSet CIM object, which is exposed by the Get-MaskingSet cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**StorageSubSystem**

Description :Gets the InitiatorID objects associated with the specified StorageSubsystem object. Enter a StorageSubsystem CIM object, which is exposed by the Get-StorageSubSystem cmdlet.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueid

Description :Specifies the UniqueID(s) of the InitiatorID(s) you want to get. Separate multiple UniqueIDs with commas, and enclose brackets in quotation marks.

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

Parameter :VirtualDisk

Description :Gets the InitiatorID objects associated with the specified VirtualDisk object. Enter a VirtualDisk CIM object, which is exposed by the Get-VirtualDisk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Inputs

You can pipe a MaskingSet object to the MaskingSet parameter.

You can pipe a StorageSubsystem object to the StorageSubsystem parameter.

You can pipe a VirtualDisk object to the VirtualDisk parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageSubsystem

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Outputs

This cmdlet returns an object that represents an initiator ID.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_InitiatorId

Examples

Example 1: Get all InitiatorIDs

This example gets and displays all iSCSI initiator IDs on the computer.

```
PS C:\>Get-InitiatorID
```

Example 2: Get the storage providers for each InitiatorID

This example gets and displays the storage providers for each InitiatorID by piping the output from the Get-InitiatorId cmdlet to the Get-StorageSubSystem cmdlet, and then piping that cmdlet's output to the Get-StorageProvider cmdlet.

```
PS C:\>Get-InitiatorId | Get-StorageSubSystem | Get-  
StorageProvider
```

Example 3: Get the InitiatorID objects for a masking set

This example uses the Get-MaskingSet cmdlet to get the masking set with a friendly name that ends with EQLV1, and then gets all associated InitiatorID objects.

```
PS C:\>Get-InitiatorId -MaskingSet (Get-MaskingSet -  
FriendlyName *EQLV1)
```

Cmdlet: Get-InitiatorPort

Synops

Gets one or more host bus adapter (HBA) initiator ports.

Syntax

```
Get-InitiatorPort [[-NodeAddress] <String[]>] [-CimSession  
<CimSession[]>] [-ConnectionType <ConnectionType[]>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-InitiatorPort [-CimSession <CimSession[]>] [-iSCSIConnection  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-InitiatorPort [-CimSession <CimSession[]>] [-iSCSITarget  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-InitiatorPort [-CimSession <CimSession[]>] [-iSCSISession  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-InitiatorPort [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] [-VirtualDisk <CimInstance>] [<CommonParameters>]
```

```
Get-InitiatorPort [-CimSession <CimSession[]>] [-ConnectionType  
<ConnectionType[]>] [-InstanceName <String[]>] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

```
Get-InitiatorPort [-CimSession <CimSession[]>] [-ObjectId  
<String[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-InitiatorPort cmdlet gets and displays host bus adapter (HBA) initiator ports, such as SAS, FibreChannel, and iSCSI ports. Typically used either for connection to an iSCSI target in the case of iSCSI, or for in the management of masking sets in the case of FibreChannel.

Parameters

Parameter :**CimSession**

Description :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 or Get-

CimSession 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

Parameter :**ConnectionType**

Description :Specifies the type of the connection. Acceptable values are: Other, FibreChannel, iSCSI, and SAS.

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

Parameter :**InstanceName**

Description :Specifies the instance name of the initiator.

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

Parameter :**NodeAddress**

Description :Specifies the node address for the initiator.

Required	false
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**ObjectId**

Description :Specifies the ObjectID of the initiator.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**VirtualDisk**

Description :Specifies the VirtualDisk object for which you want to get the initiator port. Enter a VirtualDisk CIM object, which is exposed by the Get-VirtualDisk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**iSCSIConnection**

Description :Specifies the iSCSIConnection object for which you want to get the initiator port. Enter an iSCSIConnection CIM object, which is exposed by the Get-IscsiConnection cmdlet.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**iSCSI**Session

Description :Specifies the iSCSI`Session` object for which you want to get the initiator port.
Enter an iSCSI`Session` CIM object, which is exposed by the Get-IscsiSession cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**iSCSI**Target

Description :Specifies the iSCSI`Target` object for which you want to get the initiator port.
Enter an iSCSI`Target` CIM object, which is exposed by the Get-IscsiTarget cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Inputs

You can pipe an iSCSI`Connection` object to the iSCSI`Connection` parameter.

You can pipe an iSCSI`Session` object to the iSCSI`Session` parameter.

You can pipe an Iscsi`Target` object to the Iscsi`Target` parameter.

You can pipe a VirtualDisk object to the VirtualDisk parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_IscsiConnection

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_IscsiSession

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_IscsiTarget

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M

SFT_VirtualDisk

Outputs

This cmdlet returns an object that represents the initiator port you specified.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_InitiatorPort

Examples

Example 1: Get all initiator ports

This example gets all available initiator ports.

```
PS C:\>Get-InitiatorPort
InstanceName      NodeAddress
PortAddress       ConnectionType
-----
ROOT\ISCSIPRT\0000_0  iqn.1991-05.com.contoso:...
ISCSI ANY PORT      iSCSI
```

Example 2: Get all initiator ports, and filter the display

This example gets all available initiator ports. selects only the NodeAddress and ConnectionType properties, and then displays this information.

```
PS C:\>Get-InitiatorPort | Select-Object -Property
NodeAddress,ConnectionType | Format-Table -AutoSize
NodeAddress
ConnectionType
-----
iqn.1991-05.com.microsoft:johnj99-pc2.contoso.com
iSCSI
```

Cmdlet: Get-MaskingSet

Synops

Gets masking sets. Masking sets are used to grant access to a virtual disk or iSCSI VHD for one or more servers.

Syntax

```
Get-MaskingSet [[-FriendlyName] <String[]>] [-CimSession  
<CimSession[]>] [-HostType <HostType[]>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Get-MaskingSet [-CimSession <CimSession[]>] [-InitiatorId  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-MaskingSet [-CimSession <CimSession[]>] [-TargetPort  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-MaskingSet [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] [-VirtualDisk <CimInstance>] [<CommonParameters>]
```

```
Get-MaskingSet [-CimSession <CimSession[]>] [-StorageSubSystem  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-MaskingSet [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] [-UniqueId <String[]>] [<CommonParameters>]
```

Description

The Get-MaskingSet cmdlet returns a list of created masking sets. Masking sets are used to grant access to a virtual disk or iSCSI VHD for one or more servers.

ps_storage_spacesubsystem_not_remark

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Gets the masking set with the specified friendly name or friendly name pattern.

Required	false
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**HostType**

Description :Specifies the host operating system or other host environmental factors that may influence the behavior that the storage system should have when showing a virtual disk to an initiator. If the HostType property is blank for the object you want to get, omit this parameter.

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

Parameter :**InitiatorId**

Description :Gets the masking set associated with the specified InitiatorId object. Enter an InitiatorID CIM object, which is exposed by the Get-InitiatorId cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**StorageSubSystem**

Description :Gets the masking set associated with the specified StorageSubSystem object. Enter a StorageSubSystem CIM object, which is exposed by the Get-StorageSubSystem cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**TargetPort**

Description :Gets the masking set associated with the specified TargetPort object. Enter a TargetPort CIM object, which is exposed by the Get-TargetPort cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**UniqueId**

Description :Specifies the UniqueID of the masking set to get.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**VirtualDisk**

Description :Gets the masking set associated with the specified VirtualDisk object. Enter a VirtualDisk CIM object, which is exposed by the Get-VirtualDisk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Inputs

You can pipe an InitiatorId object to the InitiatorId parameter.

You can pipe a StorageSubsystem object to the StorageSubsystem parameter.

You can pipe a TargetPort object to the TargetPort parameter.

You can pipe a VirtualDisk object to the VirtualDisk parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_InitiatorId

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageSubsystem

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_TargetPort

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Outputs

This cmdlet outputs an object that represents a masking set.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Examples

Example 1: Get all masking sets

This example gets and displays all existing MaskingSet objects which have been created using any available Storage Management Providers across all visible storage subsystems.

```
PS C:\> Get-MaskingSet
```

Example 2: Get all Microsoft Windows masking sets

This example gets and displays all masking sets hosted by a computer running Microsoft Windows.

```
PS C:\> Get-MaskingSet -HostType MicrosoftWindows
```

Example 3: Get the masking set for a specific virtual disk

This example gets the masking set for the CompanyData virtual disk. It does so by using the Get-VirtualDisk cmdlet to get the appropriate VirtualDisk object and provide it to the VirtualDisk parameter of Get-MaskingSet.

```
PS C:\> Get-MaskingSet -VirtualDisk (Get-VirtualDisk -  
FriendlyName CompanyData)
```

Cmdlet: Get-OffloadDataTransferSetting

Synops

Returns offloaded data transfer (ODX) settings for the specified subsystem.

Syntax

```
Get-OffloadDataTransferSetting [-CimSession <CimSession[]>] [-StorageSubSystem <CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-OffloadDataTransferSetting cmdlet returns offloaded data transfer (ODX) settings for the specified storage subsystem.

Note: This cmdlet does not return settings for storage arrays that use the Storage Management Initiative Specification (SMI-S) protocol.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**StorageSubSystem**

Description :Specifies the storage subsystem for which you want to get ODX settings. Enter a StorageSubsystem CIM object, which is exposed by the Get-StorageSubSystem cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)

Accept wildcard characters?	false
-----------------------------	-------

Parameter :**ThrottleLimit**

Description :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

Inputs

You can pipe a StorageSubsystem object to the StorageSubsystem parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageSubsystem

Outputs

This cmdlet outputs one or more objects that represents the ODX settings for one or more storage subsystems.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_OffloadDataTransferSetting

Examples

Example 1: Get all ODX settings

This example gets all ODX settings for connected storage arrays, not including storage arrays that support ODX using the SMI-S protocol.

```
PS C:\>Get -OffloadDataTransferSetting
```

Example 2: Get storage subsystems that have SMPs that support ODX

This example displays all storage subsystems on storage management providers that support ODX, not including storage arrays that support ODX using the SMI-S protocol.

```
PS C:\>Get-OffloadDataTransferSetting | Get-StorageSubSystem
```

Example 3: Get the ODX settings for a particular storage subsystem

This example returns the offload data transfer settings for the StorageSubsystem objects returned by Get-StorageSubSystem cmdlet.

```
PS C:\>$stssubsys = Get-StorageSubsystem -FriendlyName "Big  
Array"
```

```
PS C:\>Get-OffloadDataTransferSetting -StorageSubsystem  
$stssubsys
```

Cmdlet: Get-Partition

Synops

Returns a list of all partition objects visible on all disks, or optionally a filtered list using specified parameters.

Syntax

```
Get-Partition [[-DiskNumber] <UInt32[]>] [[-PartitionNumber]
<UInt32[]>] [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>]
[<CommonParameters>]
```

```
Get-Partition [-CimSession <CimSession[]>] [-ThrottleLimit
<Int32>] [-Volume <CimInstance>] [<CommonParameters>]
```

```
Get-Partition [-CimSession <CimSession[]>] [-Disk <CimInstance>]
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-Partition [-CimSession <CimSession[]>] [-DriveLetter
<Char[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-Partition [-CimSession <CimSession[]>] [-Offset <UInt64[]>]
[-ThrottleLimit <Int32>] -DiskId <String[]> [<CommonParameters>]
```

```
Get-Partition [-StorageSubSystem
<Microsoft.Management.Infrastructure.CimInstance>]
[<CommonParameters>]
```

```
Get-Partition [-UniqueId <String[]>] [<CommonParameters>]
```

Description

The Get-Partition cmdlet returns one or more Partition objects depending on the specified criteria. This cmdlet will return a Volume object or a set of Volume objects given parameters to be used to uniquely identify a volume, or parameters to identify a set of volumes that meet the given set of criteria.

Parameters

Parameter :**CimSession**

Description :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 or Get-

CimSession 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

Parameter :**Disk**

Description :Accepts a Disk object as input. The Disk CIM object is exposed by the Get-Disk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**DiskId**

Description :Specifies an ID used to identify a disk in the system.

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

Parameter :**DiskNumber**

Description :Specifies an array of disk numbers.

Required	false
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**DriveLetter**

Description :Specifies a letter used to identify a drive or volume in the system. Specifically the drive on which the partition resides.

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

Parameter :**Offset**

Description :Specifies the starting offset, in bytes.

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

Parameter :**PartitionNumber**

Description :Specifies the number of the partition.

Required	false
Position	2
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StorageSubSystem**

Description :Specifies the storage subsystem from which to get partitions. To obtain a StorageSubsystem object, use the Get-StorageSubSystem cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**UniqueId**

Description :Specifies the ID of the partition to get.

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

Parameter :**Volume**

Description :Accepts a Volume object as input. The Volume CIM object is exposed by the Get-Volume cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Inputs

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.

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Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Disk

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Volume

Outputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Partitions

Examples

Example 1

This example return all partitions, on all disks.

```
PS C:\>Get-Partition
```

Example 2

This example return all partitions on disk 5.

```
PS C:\>Get-Partition -DiskNumber 5
Disk Number: 5

PartitionNumber  DriveLetter Offset
Size Type
-----
1
298.09 GB IFS H 1048576
```

Example 3

This example partition associated with the volume for drive letter C.

```
PS C:\>Get-Partition -DriveLetter C
Disk Number: 0

PartitionNumber  DriveLetter Offset
Size Type
-----
2               C      368050176
465.42 GB IFS
```

Example 4

This example returns only the basic partitions on all disks.

```
PS C:\>Get-Partition | Where-Object -FilterScript {$_.Type -Eq
"Basic"}
```

Cmdlet: Get-PartitionSupportedSize

Synops

Returns information on supported partition sizes for the specified Disk object.

Syntax

```
Get-PartitionSupportedSize [-DiskNumber] <UInt32[]> [[-PartitionNumber] <UInt32[]>] [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-PartitionSupportedSize [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] -DriveLetter <Char[]> [<CommonParameters>]
```

```
Get-PartitionSupportedSize [-CimSession <CimSession[]>] [-Offset <UInt64[]>] [-ThrottleLimit <Int32>] -DiskId <String[]> [<CommonParameters>]
```

```
Get-PartitionSupportedSize [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-PartitionSupportedSizes cmdlet returns information on supported partition sizes for the specified Disk object.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DiskId**

Description :Specifies an ID used to identify a disk in the system.

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

Parameter :**DiskNumber**

Description :Specifies an array of disk numbers. These represent the disks for which to get partitions.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**DriveLetter**

Description :Specifies a letter used to identify a drive or volume in the system.

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

Parameter :**Offset**

Description :Specifies the starting offset, in bytes.

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

Parameter :**PartitionNumber**

Description :Specifies the number of the partition.

Required	false
Position	2
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Inputs

You can pipe a Partition object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Partition

Outputs

Type : System.UInt64

Cmdlet: Get-PhysicalDisk

Synops

Gets a list of all PhysicalDisk objects visible across any available Storage Management Providers, or optionally a filtered list.

Syntax

```
Get-PhysicalDisk [-CanPool] [-CimSession <CimSession>] [-Description <String>] [-HealthStatus <
```

```
Get-PhysicalDisk.PhysicalDiskHealthStatus>] [-Manufacturer <String>] [-Model <String>] [-UniqueId <String>] [-Usage <
```

```
Get-PhysicalDisk.PhysicalDiskUsage>] [<CommonParameters>]
```

```
Get-PhysicalDisk [-CanPool] [-CimSession <CimSession>] [-Description <String>] [-HealthStatus <
```

```
Get-PhysicalDisk.PhysicalDiskHealthStatus>] [-Manufacturer <String>] [-Model <String>] [-ObjectId <String>] [-Usage <
```

```
Get-PhysicalDisk.PhysicalDiskUsage>] [<CommonParameters>]
```

```
Get-PhysicalDisk [[-FriendlyName] <String>] [[-SerialNumber] <String>] [-CanPool] [-CimSession <CimSession>] [-Description <String>] [-HealthStatus <
```

```
Get-PhysicalDisk.PhysicalDiskHealthStatus>] [-Manufacturer <String>] [-Model <String>] [-Usage <
```

```
Get-PhysicalDisk.PhysicalDiskUsage>] [<CommonParameters>]
```

```
Get-PhysicalDisk [-CanPool] [-CimSession <CimSession>] [-Description <String>] [-HealthStatus <
```

```
Get-PhysicalDisk.PhysicalDiskHealthStatus>] [-Manufacturer <String>] [-Model <String>] [-Usage <
```

```
Get-PhysicalDisk.PhysicalDiskUsage>] -StorageSubsystem  
<CimInstance> [<CommonParameters>]
```

```
Get-PhysicalDisk [-CanPool] [-CimSession <CimSession>] [-  
Description <String>] [-HealthStatus <
```

```
Get-PhysicalDisk.PhysicalDiskHealthStatus>] [-Manufacturer  
<String>] [-Model  
<String>] [-Usage <
```

```
Get-PhysicalDisk.PhysicalDiskUsage>] -StorageEnclosure  
<CimInstance> [<CommonParameters>]
```

```
Get-PhysicalDisk [-CanPool] [-CimSession <CimSession>] [-  
Description <String>] [-HealthStatus <
```

```
Get-PhysicalDisk.PhysicalDiskHealthStatus>] [-Manufacturer  
<String>] [-Model  
<String>] [-PhysicallyConnected] [-Usage <
```

```
Get-PhysicalDisk.PhysicalDiskUsage>] -StorageNode <CimInstance>  
[<CommonParameters>]
```

```
Get-PhysicalDisk [-CanPool] [-CimSession <CimSession>] [-  
Description <String>] [-HealthStatus <
```

```
Get-PhysicalDisk.PhysicalDiskHealthStatus>] [-Manufacturer  
<String>] [-Model  
<String>] [-Usage <
```

```
Get-PhysicalDisk.PhysicalDiskUsage>] -StoragePool <CimInstance>  
[<CommonParameters>]
```

```
Get-PhysicalDisk [-CanPool] [-CimSession <CimSession>] [-  
Description <String>] [-HasAllocations <Boolean>] [-HealthStatus  
<
```

```
Get-PhysicalDisk.PhysicalDiskHealthStatus>]  
[-Manufacturer <String>] [-Model <String>] [-NoRedundancy] [-  
SelectedForUse <Boolean>] [-Usage <
```

```
Get-PhysicalDisk.PhysicalDiskUsage>] [-VirtualRangeMax <UInt64>]
[-VirtualRangeMin <UInt64>] -VirtualDisk <CimInstance>
[<CommonParameters>]
```

```
Get-PhysicalDisk [-CimSession <CimSession>] [<CommonParameters>]
```

Description

The Get-PhysicalDisk cmdlet gets a list of all PhysicalDisk objects visible across any available Storage Management Providers, or optionally a filtered list of disks.

Parameters

Parameter :**CanPool**

Description :Indicates that this cmdlet gets physical disks that are available for use in a storage pool.

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

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Description**

Description :Specifies a description. The cmdlet gets the physical disks that contain the description. You can use wildcard characters to enter a description pattern.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :FriendlyName

Description :Gets the physical disk with the specified friendly name. Enter a friendly name, or use wildcard characters to enter a name pattern.

Required	false
Position	1
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :HasAllocations

Description :Indicates whether the cmdlet gets a list of physical disks that host the extents of the virtual disk that you specify by using the VirtualDisk parameter.

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

Parameter :HealthStatus

Description :Specifies the health status of physical disks to get. The acceptable values for this parameter are:

- Healthy
- Unhealthy
- Unknown
- Warning

Required	false
Position	named
Default value	none
Accept pipeline input?	false

Accept wildcard characters?	false
-----------------------------	-------

Parameter :**Manufacturer**

Description :Specifies a manufacturer. The cmdlet gets the physical disks that match the value. You can use wildcard characters to enter a pattern.

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

Parameter :**Model**

Description :Specifies a model. The cmdlet gets the physical disks that match the value. You can use wildcard characters to enter a pattern.

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

Parameter :**NoRedundancy**

Description :Indicates that this cmdlet gets physical disks that contain the last remaining copy of the data of a virtual disk.

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

Parameter :**ObjectId**

Description :Specifies the ID of the physical disk to get.

Required	false
Position	named

Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :PhysicallyConnected

Description :Indicates that this cmdlet gets physical disks that are physically connected to the specified storage node.

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

Parameter :SelectedForUse

Description :Indicates whether the cmdlet gets a list of physical disks to host the extents that belong to the virtual disk specified by the VirtualDisk parameter. Specify the physical disks to host the extents of a virtual disk by using the PhysicalDisksToUse parameter of the New-VirtualDisk cmdlet.

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

Parameter :SerialNumber

Description :Specifies the serial number of the physical disk to get.

Required	false
Position	2
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :StorageEnclosure

Description :Specifies a storage enclosure associated with the physical disk that this

cmdlet gets. To obtain a StorageEnclosure object, use the Get-StorageEnclosure cmdlet.

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

Parameter :**StorageNode**

Description :Specifies a storage node as a CimInstance object. The cmdlet gets the physical disk connected to the node that you specify. To obtain a storage node object, use the Get-StorageNode cmdlet.

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

Parameter :**StoragePool**

Description :Accepts a StoragePool object as input and gets the physical disks that belong to the pool. The Storage Pool CIM object is exposed by the Get-StoragePool cmdlet.

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

Parameter :**StorageSubsystem**

Description :Specifies a storage subsystem. This cmdlet gets physical disks attached to the storage subsystem that you specify. To obtain a StorageSubsystem object, use the Get-StorageSubSystem cmdlet.

Required	true
Position	named

Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :UniqueId

Description :Gets only the physical disks with the specified IDs. Type one or more IDs (separated by commas), or use wildcard characters to enter a pattern.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :Usage

Description :Specifies an allocation method or usage. This cmdlet gets the physical disks that have the specified allocation method. The acceptable values for this parameter are:

-- AutoSelect
 -- HotSpare
 -- Journal
 -- ManualSelect
 -- Retired
 -- Unknown

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

Parameter :VirtualDisk

Description :Accepts a VirtualDisk object as input and gets the physical disks used by the virtual disk. The VirtualDisk object is exposed by the Get-VirtualDisk cmdlet.

Required	true
Position	named
Default value	none

Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**VirtualRangeMax**

Description :This parameter is reserved for future use.

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

Parameter :**VirtualRangeMin**

Description :This parameter is reserved for future use.

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

Inputs

You can use the pipeline operator to pass an MSFT_StoragePool object to the StoragePool parameter.

You can use the pipeline operator to pass an MSFT_StorageSubsystem object to the StorageSubsystem parameter.

You can use the pipeline operator to pass an MSFT_VirtualDisk object to the VirtualDisk parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StoragePool

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageSubsystem

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_VirtualDisk

Outputs

The Get-PhysicalDisk cmdlet returns objects that represent physical disks.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_PhysicalDisk

Examples

Example 1: Getting all physical disks

This example returns an array of all PhysicalDisk objects present in the computer. A storage management provider is required to manage physical disks.

```
PS C:\> Get-PhysicalDisk
FriendlyName      CanPool      OperationalStatus      Size
HealthStatus      Usage
-----
-----
PhysicalDisk4     False       OK                      25 GB
Healthy          Data Store
```

Example 2: Getting all physical disks eligible for adding to a storage pool

This example returns an array of PhysicalDisk objects that are available for adding to a storage pool (they are in a primordial pool).

```
PS C:\>Get-PhysicalDisk -CanPool $True
```

Cmdlet: Get-PhysicalDiskStorageNodeView

Synops

Gets the node view of a physical disk.

Syntax

```
t-PhysicalDiskStorageNodeView [[-StorageNode] <CimInstance>] [[-PhysicalDisk] <CimInstance>] [[-CimSession] <CimSession>] [<CommonParameters>]
```

Description

The Get-PhysicalDiskStorageNodeView cmdlet gets the node view of physical disk. The object that this cmdlet returns includes physical disk properties such as Microsoft Multipath I/O (MPIO) settings, drive health, and so on.

You can use this cmdlet to debug disk issues specific to a node.

Parameters

Parameter :**CimSession**

Description :

Required	false
Position	3
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**PhysicalDisk**

Description :Specifies a physical disk as a CimInstance object.

Required	false
Position	2
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**StorageNode**

Description : Specifies a storage node as a CimInstance object.

Required	false
Position	1
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Outputs

Specifies physical disk properties such as health status, operational status, MPIO status, MPIO load balancing policy, MPIO path IDs, MPIO path state, and IDs of the physical disk object and Storage node object.

Type : MSFT_StorageNodeToPhysicalDisk

Examples

Example 1: Get the node view for a Storage node

The first command gets the Storage node named ClusterNode01, and then stores it in the \$N variable.

The second command gets the node-specific properties of the Storage node in \$N, and then stores them in the \$Output variable.

The third command gets the specified drive object, and then stores it in the \$Pd variable.

```
PS C:\>$N = Get-StorageNode -Name "ClusterNode01"
PS C:\> $Output = Get-PhysicalDiskStorageNodeView -StorageNode $N
PS C:\> $Pd = Get-PhysicalDisk -ObjectId $Output[0].PhysicalDiskObjectId
```

Example 2: Get the node view for a disk

The first command gets the disk object for PhysicalDisk01, and then stores it in the \$Pd variable.

The second command gets the node-specific properties for the disk in \$Pd.

```
PS C:\>$Pd = Get-PhysicalDisk -FriendlyName "PhysicalDisk01"
PS C:\> Get-PhysicalDiskStorageNodeView -PhysicalDisk $Pd
```

Example 3: Get the node view for a specified disk and node

The first command gets the Storage node named ClusterNode01, and then stores it in the \$N variable.

The second command gets the physical disk named PhysicalDisk01, and then stores it in the \$Pd variable.

The third command gets the node view for the specified Storage node and physical disk.

```
PS C:\>$N = Get-StorageNode -Name "ClusterNode01"
PS C:\> $Pd = Get-PhysicalDisk -FriendlyName "PhysicalDisk01"
PS C:\> Get-PhysicalDiskStorageNodeView -StorageNode $N -
PhysicalDisk $Pd
```

Cmdlet: Get-PhysicalDiskStorageNodeView

Synops

Gets the node view of a physical disk.

Syntax

```
Get-PhysicalDiskStorageNodeView [[-StorageNode] <CimInstance>]  
[[[-PhysicalDisk] <CimInstance>] [[-CimSession] <CimSession>]  
[<CommonParameters>]
```

Description

The Get-PhysicalDiskStorageNodeView cmdlet gets the node view of physical disk. The object that this cmdlet returns includes physical disk properties such as Microsoft Multipath I/O (MPIO) settings, drive health, and so on.

You can use this cmdlet to debug disk issues specific to a node.

Parameters

Parameter :**CimSession**

Description :

Required	false
Position	3
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**PhysicalDisk**

Description :Specifies a physical disk as a CimInstance object.

Required	false
Position	2
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**StorageNode**

Description : Specifies a storage node as a CimInstance object.

Required	false
Position	1
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Outputs

Specifies physical disk properties such as health status, operational status, MPIO status, MPIO load balancing policy, MPIO path IDs, MPIO path state, and IDs of the physical disk object and Storage node object.

Type : MSFT_StorageNodeToPhysicalDisk

Examples

Example 1: Get the node view for a Storage node

The first command gets the Storage node named ClusterNode01, and then stores it in the \$N variable.

The second command gets the node-specific properties of the Storage node in \$N, and then stores them in the \$Output variable.

The third command gets the specified drive object, and then stores it in the \$Pd variable.

```
PS C:\>$N = Get-StorageNode -Name "ClusterNode01"
PS C:\> $Output = Get-PhysicalDiskStorageNodeView -StorageNode $N
PS C:\> $Pd = Get-PhysicalDisk -ObjectId $Output[0].PhysicalDiskObjectId
```

Example 2: Get the node view for a disk

The first command gets the disk object for PhysicalDisk01, and then stores it in the \$Pd variable.

The second command gets the node-specific properties for the disk in \$Pd.

```
PS C:\>$Pd = Get-PhysicalDisk -FriendlyName "PhysicalDisk01"
PS C:\> Get-PhysicalDiskStorageNodeView -PhysicalDisk $Pd
```

Example 3: Get the node view for a specified disk and node

The first command gets the Storage node named ClusterNode01, and then stores it in the \$N variable.

The second command gets the physical disk named PhysicalDisk01, and then stores it in the \$Pd variable.

The third command gets the node view for the specified Storage node and physical disk.

```
PS C:\>$N = Get-StorageNode -Name "ClusterNode01"
PS C:\> $Pd = Get-PhysicalDisk -FriendlyName "PhysicalDisk01"
PS C:\> Get-PhysicalDiskStorageNodeView -StorageNode $N -
PhysicalDisk $Pd
```


Cmdlet: Get-PhysicalExtent

Synops

Gets physical allocations for a physical disk, storage tier, or virtual disk.

Syntax

```
Get-PhysicalExtent [-CimSession <CimSession>] -VirtualDisk  
<CimInstance> [<CommonParameters>]
```

```
Get-PhysicalExtent [-CimSession <CimSession>] -StorageTier  
<CimInstance> [<CommonParameters>]
```

```
Get-PhysicalExtent [-CimSession <CimSession>] -PhysicalDisk  
<CimInstance> [<CommonParameters>]
```

Description

The Get-PhysicalExtent cmdlet gets the physical allocations for a physical disk, storage tier, or virtual disk.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**PhysicalDisk**

Description :Specifies physical disk. To obtain a PhysicalDisk obje3t, use the Get-PhysicalDisk cmdlet.

Required	true
Position	named

Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**StorageTier**

Description :Specifies storage tier. To obtain a StorageTier object, use the Get-StorageTier cmdlet.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**VirtualDisk**

Description :Specifies virtual disk. To obtain a VirtualDisk object, use the Get-VirtualDisk cmdlet.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Inputs

You can pass a PhysicalDisk object to this cmdlet.

You can pass a StorageTier object to this cmdlet.

You can pass a VirtualDisk object to this cmdlet.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_PhysicalDisk

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageTier

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Outputs

This cmdlet returns the physical allocation that is associated with the input object.

Type : PhysicalExtent

Cmdlet: Get-PhysicalExtentAssociation

Synops

Gets the physical disk, storage tier, or virtual disk that is associated with a physical extent.

Syntax

```
Get-PhysicalExtentAssociation [-CimSession <CimSession>]  
[<CommonParameters>]
```

Description

The Get-PhysicalExtentAssociation cmdlet gets the physical disk, storage tier, or virtual disk that is associated with a physical extent.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Inputs

You can pass a PhysicalExtent object to this cmdlet.

Type : PhysicalExtent

Outputs

This cmdlet returns a PhysicalDisk object, if the physical extent is associated with a physical disk.

This cmdlet returns a StorageTier object, if the physical extent is associated with a storage tier.

This cmdlet returns a VirtualDisk object, if the physical extent is associated with a virtual disk.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_PhysicalDisk

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageTier

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Cmdlet: Get-ResiliencySetting

Synops

Gets the resiliency settings (also known as storage layouts) available for creating virtual disks on the specified storage subsystem.

Syntax

```
Get-ResiliencySetting [-CimSession <CimSession[]>] [-Name  
<String[]>] [-StoragePool <CimInstance>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Get-ResiliencySetting [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] [-UniqueId <String[]>]  
[<CommonParameters>]
```

Description

The Get-ResiliencySetting cmdlet gets the resiliency settings (storage layouts) available for creating virtual disks on the specified storage subsystem. The resiliency settings vary depending on the storage subsystem; the Windows Storage subsystem supports the Simple, Mirror, and Parity resiliency settings.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Name**

Description :Specifies the name of the resiliency setting or settings to get. The supported resiliency setting names vary by storage subsystem; the Windows Storage subsystem supports the following values: Simple, Mirror, or Parity.

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

Parameter :StoragePool

Description :Specifies the storage pool object for which to get resiliency settings. Enter a StoragePool CIM object. The Storage Pool CIM object is exposed by the Get-StoragePool cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueld

Description :Specifies the UniqueID of the resiliency setting object to get. If the UniqueID includes brackets, enclose the string in quotation marks.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByPropertyName)

Accept wildcard characters?	false
-----------------------------	-------

Inputs

You can pipe an MSFT_StoragePool object to the StoragePool parameter to get the resiliency setting associated with the StoragePool object.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StoragePool

Outputs

The Get-ResiliencySetting cmdlet returns objects representing resiliency settings for a particular storage pool.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_ResiliencySetting

Examples

Example 1: Get all resiliency setting objects

This example gets all resiliency setting objects for each storage pool, showing which resiliency settings are available for use when creating virtual disks. If there are multiple storage pools, the same resiliency setting might appear more than once, with each object representing the resiliency setting support for a particular storage pool.

```
PS C:\> Get-ResiliencySetting
```

Name	NumberOfDataCopies	Interleave
PhysicalDiskRedundancy	NumberOfColumns	
Simple	1	0
8	65536	
Mirror	2	1
4	65536	
Parity	1	1
8	65536	

Example 2: Get only Mirror, Parity, and Simple resiliency setting objects

This example displays only the resiliency settings for the types Mirror, Parity and Simple. Other defined resiliency settings are not displayed.

```
PS C:\> Get-ResiliencySetting -Name Mirror,Parity,Simple
```


Example 3: Get a resiliency setting object by UniqueID

This example displays one particular resiliency setting object by specifying its UniqueID value, enclosed in quotation marks.

```
PS C:\>Get-ResiliencySetting -UniqueId "{5d792e9b-ca00-11e1-9350-00155db7aa01}:1"
```

Cmdlet: Get-StorageAdvancedProperty

Synops

Gets the advanced properties on a storage device.

Syntax

```
Get-StorageAdvancedProperty -PhysicalDisk <CimInstance>  
[<CommonParameters>]
```

Description

The Get-StorageAdvancedProperty cmdlet gets the advanced properties of a storage device. For example, Get-PhysicalDisk gets the most commonly used attributes of a physical disk such as CanPool. To get the cache (IsDeviceCacheEnabled) and power protection (IsPowerProtected) settings for a physical disk, you can pass a PhysicalDisk object to the Get-StorageAdvancedProperty cmdlet.

Parameters

Parameter :**PhysicalDisk**

Description :Specifies an array of physical disk objects.

Required	true
Position	named
Default value	none
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	false

Inputs

Type :

Outputs

The cmdlet gets the advanced properties for PhysicalDisk objects: IsPowerProtected and IsDeviceCacheEnabled.

Type : PhysicalDiskAdvancedProperties

Examples

Example 1: Get advanced storage properties of a physical disk

This command uses the Get-PhysicalDisk cmdlet to get all physical disks, and uses the pipeline operator to pass them to Get-StorageAdvancedProperty to get the advanced storage properties IsPowerProtected and IsDeviceCacheEnabled for the physical disks.

```
PS C:\>Get-PhysicalDisk | Get-StorageAdvancedProperty
FriendlyName      SerialNumber      IsPowerProtected
IsDeviceCacheEnabled
-----
MTFDWSC128MAM-1J1 1247091D111W      True
False
WDC WD10EZWC-60ZF5A0 WD-WCC1S1822719    True
False
WDC WD10EZWC-60ZF5A0 WD-WCC1S1634655    True
False
```

Example 2: Get advanced storage properties for the first physical disk in an array

This command gets the advanced storage properties IsPowerProtected and IsDeviceCacheEnabled for the first PhysicalDisk object in the array of returned physical disks.

```
PS C:\>Get-StorageAdvancedProperty -PhysicalDisk (Get-PhysicalDisk)[0]
FriendlyName      SerialNumber      IsPowerProtected
IsDeviceCacheEnabled
-----
MTFDWSC128MAM-1J1 1247091D111W      True
False
```

Cmdlet: Get-StorageChassis

Synops

Get-StorageChassis [-FriendlyName <string>] [-SerialNumber <string>] [-PhysicalLocation <string>] [-CimSession <CimSession>] [<CommonParameters>]

Get-StorageChassis -StorageSubsystem <CimInstance#MSFT_StorageSubsystem> [-FriendlyName <string>] [-SerialNumber <string>] [-PhysicalLocation <string>] [-CimSession <CimSession>] [<CommonParameters>]

Get-StorageChassis -StorageFaultDomain <CimInstance#MSFT_StorageFaultDomain> [-FriendlyName <string>] [-SerialNumber <string>] [-PhysicalLocation <string>] [-CimSession <CimSession>] [<CommonParameters>]

Syntax

ntaxItem

{@{name=

Get-StorageChassis; CommonParameters=True;
WorkflowCommonParameters=False; parameter=System.Object[]},
@{name=

Get-StorageChassis; CommonParameters=True; Workflow...

Description

Parameters

Parameter :**CimSession**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**FriendlyName**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**PhysicalLocation**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**SerialNumber**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**StorageFaultDomain**

Required	true
Position	Named
Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	

Parameter :**StorageSubsystem**

Required	true
Position	Named
Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	

Cmdlet: Get-StorageDiagnosticInfo

Synops

Gets Storage diagnostic information.

Syntax

```
Get-StorageDiagnosticInfo [-ActivityId <String>] [-CimSession  
<CimSession>] [-ExcludeDiagnosticLog] [-ExcludeOperationalLog] [-  
IncludeLiveDump] [-ThrottleLimit <Int32>]  
[-TimeSpan <UInt32>] -DestinationPath <String>  
[<CommonParameters>]
```

```
Get-StorageDiagnosticInfo [-StorageSubSystemFriendlyName]  
<String> [-ActivityId <String>] [-CimSession <CimSession>] [-  
ExcludeDiagnosticLog] [-ExcludeOperationalLog]  
[-IncludeLiveDump] [-ThrottleLimit <Int32>] [-TimeSpan <UInt32>]  
-DestinationPath <String> [<CommonParameters>]
```

```
Get-StorageDiagnosticInfo [-ActivityId <String>] [-CimSession  
<CimSession>] [-ExcludeDiagnosticLog] [-ExcludeOperationalLog] [-  
IncludeLiveDump] [-ThrottleLimit <Int32>]  
[-TimeSpan <UInt32>] -DestinationPath <String> -  
StorageSubSystemName <String> [<CommonParameters>]
```

```
Get-StorageDiagnosticInfo [-ActivityId <String>] [-CimSession  
<CimSession>] [-ExcludeDiagnosticLog] [-ExcludeOperationalLog] [-  
IncludeLiveDump] [-ThrottleLimit <Int32>]  
[-TimeSpan <UInt32>] -DestinationPath <String> -  
StorageSubSystemUniqueId <String> [<CommonParameters>]
```

Description

The Get-StorageDiagnosticInfo cmdlet gets Storage event logs, trace logs (if present), and live dumps of all nodes in the specified Storage subsystem. Event logs are gathered into one .evtx file per machine, and trace logs are gathered in .etw format. The cmdlet copies this information to path specified by the DestinationPath parameter.

By default, this cmdlet gathers information for the past 24 hours. To specify a different number of hours, use the TimeSpan parameter.

Parameters

Parameter :**ActivityId**

Description :

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

Parameter :**CimSession**

Description :

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

Parameter :**DestinationPath**

Description :

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ExcludeDiagnosticLog**

Description :

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

Parameter :**ExcludeOperationalLog**

Description :

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

Parameter :**IncludeLiveDump**

Description :

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

Parameter :**StorageSubSystemFriendlyName**

Description :

Required	true
Position	1
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StorageSubSystemName**

Description :

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StorageSubSystemUniqueId**

Description :

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :

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

Parameter :**TimeSpan**

Description :

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

Inputs

Type :

Outputs

Type :

Cmdlet: Get-StorageEnclosure

Synops

Gets storage enclosures.

Syntax

```
Get-StorageEnclosure [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]  
[-ThrottleLimit <Int32>] [-UniqueId  
<String[]>] [<CommonParameters>]
```

```
Get-StorageEnclosure [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]  
[-StorageSubSystem <CimInstance>]  
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageEnclosure [[-FriendlyName] <String[]>] [[-  
SerialNumber] <System.String[]>] [-CimSession <CimSession[]>] [-  
HealthStatus <HealthStatus[]>] [-Manufacturer  
<String[]>] [-Model <String[]>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Get-StorageEnclosure [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]  
[-PhysicalDisk <CimInstance>]  
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageEnclosure [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]  
[-PhysicallyConnected] [-StorageNode  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-StorageEnclosure cmdlet gets storage enclosures that are visible to your computer.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies an array of friendly names. The cmdlet gets storage enclosures that the names specify.

Required	false
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**HealthStatus**

Description :Specifies an array of health status values. The acceptable values for this parameter are:

- Healthy
- Warning
- Unhealthy
- Unknown

Health status describes the health of an enclosure. This cmdlet gets the enclosures that have health statuses that this parameter specifies.

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

Parameter :**Manufacturer**

Description :Specifies the name of a manufacturer. This cmdlet gets enclosures for the manufacturers that this parameter identifies.

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

Parameter :**Model**

Description :Specifies an array of model IDs. This cmdlet gets enclosures that the model IDs specify.

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

Parameter :**PhysicalDisk**

Description :Specifies a physical disk as a CimInstance object. The cmdlet gets storage enclosures that contain the disk that the object specifies. To obtain a physical disk object, use the Get-PhysicalDisk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**PhysicallyConnected**

Description :Indicates that this cmdlet gets storage enclosures that are physically connected to a storage node.

Required	false
Position	named
Default value	none

Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**SerialNumber**

Description :Specifies the serial number of the storage enclosure to get.

Required	false
Position	2
Default value	none
Accept pipeline input?	true(ByPropertyName)
Accept wildcard characters?	false

Parameter :**StorageNode**

Description :Specifies a storage node as a CimInstance object. The cmdlet gets storage enclosures connected to the storage node that the object specifies. To obtain a storage node object, use the Get-StorageNode cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**StorageSubSystem**

Description :Specifies a storage subsystem as a CimInstance object. This cmdlet gets storage enclosures that belong to the subsystem that the object specifies. To obtain a storage subsystem object, use the Get-StorageSubSystem cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies an array of IDs. This cmdlet gets the enclosures that the IDs specify.

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

Outputs

This cmdlet returns an array of StorageEnclosure objects.

Type : MSFT_StorageEnclosure[]

Examples

Example 1: Get all enclosures

This command gets all the enclosures visible to your computer.

```
PS C:\>Get-StorageEnclosure
```

Example 2: Get an enclosure by using a friendly name

This command gets the enclosure named E1.

```
PS C:\>Get-StorageEnclosure -FriendlyName "E1"
```

Example 3: Get an enclosure by using an ID

This command gets the enclosure that has the specified UniqueId.

```
PS C:\>Get-StorageEnclosure -UniqueId "{b2c21800-b833-11e2-9981-806e6f6e6963}"
```

Example 4: Get unhealthy enclosures

This command gets enclosures that have the health status of Unhealthy.

```
PS C:\>Get-StorageEnclosure -HealthStatus "Unhealthy"
```

Example 5: Get enclosures from a manufacturer

This command gets enclosures from a specific manufacturer.

```
PS C:\>Get-StorageEnclosure -Manufacturer "Fabrikam"
```

Example 6: Get an enclosure that contains a specified disk

This command uses the Get-PhysicalDisk cmdlet to get the disk named PhysicalDisk35, and then passes that object to the current cmdlet by using the pipeline operator. The current cmdlet gets the enclosure that contains the disk named PhysicalDisk35.

```
PS C:\>Get-PhysicalDisk -FriendlyName "PhysicalDisk35" | Get-StorageEnclosure
```

Example 7: Get enclosures attached to a storage node

This command uses the Get-StorageNode cmdlet to get the storage node named Node14, and then passes that object to the current cmdlet by using the pipeline operator. The current cmdlet gets enclosures attached to the node named Node14.

```
PS C:\>Get-StorageNode -Name "Node14" | Get-StorageEnclosure
```

Example 8: Get enclosures on a subsystem

This command uses the Get-StorageSubSystem cmdlet to get the storage subsystem

that has the specified friendly name, and then passes that object to the current cmdlet by using the pipeline operator. The current cmdlet gets enclosures on the specified subsystem.

```
PS C:\>Get-StorageSubSystem -FriendlyName "Clustered storage  
spaces on main cluster" | Get-StorageEnclosure
```


Cmdlet: Get-StorageEnclosureStorageNodeView

Synops

Gets the node view of a Storage enclosure.

Syntax

```
t-StorageEnclosureStorageNodeView [[-StorageNode] <CimInstance>]
[[-StorageEnclosure] <CimInstance>] [[-CimSession] <CimSession>]
[<CommonParameters>]
```

Description

The Get-StorageEnclosureStorageNodeView cmdlet gets the node view of a Storage enclosure.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession cmdlet. The default is the current session on the local computer.

Required	false
Position	3
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StorageEnclosure**

Description :Specifies the Storage enclosure.

Required	false
Position	2
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**StorageNode**

Description :Specifies the Storage node.

Required	false
Position	1
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Outputs

This cmdlet returns an array of StorageNodeToStorageEnclosure objects.

Type : MSFT_StorageNodeToStorageEnclosure[]

Examples

Example 1: Get enclosure details on a storage node

This command gets all storage enclosure details connected to storage node named StorageNode21.

```
PS C:\>Get-StorageNode -Name "StorageNode21" | Get-StorageEnclosureStorageNodeView
```

Example 2: Get storage enclosure details for all healthy enclosures

This command gets all Healthy storage enclosure details across all nodes in the cluster.

```
PS C:\>Get-StorageEnclosure -HealthStatus Healthy | Get-StorageEnclosureStorageNodeView
```

Example 3: Get storage enclosure details across all nodes

This command gets all storage enclosure details across all nodes in the cluster.

```
PS C:\>Get-StorageEnclosureStorageNodeView
```

Cmdlet: Get-StorageEnclosureStorageNodeView

Synops

Gets the node view of a Storage enclosure.

Syntax

```
Get-StorageEnclosureStorageNodeView [[-StorageNode]
<CimInstance>] [[-StorageEnclosure] <CimInstance>] [[-CimSession]
<CimSession>] [<CommonParameters>]
```

Description

The Get-StorageEnclosureStorageNodeView cmdlet gets the node view of a Storage enclosure.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession cmdlet. The default is the current session on the local computer.

Required	false
Position	3
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StorageEnclosure**

Description :Specifies the Storage enclosure.

Required	false
Position	2
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**StorageNode**

Description :Specifies the Storage node.

Required	false
Position	1
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Outputs

This cmdlet returns an array of StorageNodeToStorageEnclosure objects.

Type : MSFT_StorageNodeToStorageEnclosure[]

Examples

Example 1: Get enclosure details on a storage node

This command gets all storage enclosure details connected to storage node named StorageNode21.

```
PS C:\>Get-StorageNode -Name "StorageNode21" | Get-StorageEnclosureStorageNodeView
```

Example 2: Get storage enclosure details for all healthy enclosures

This command gets all Healthy storage enclosure details across all nodes in the cluster.

```
PS C:\>Get-StorageEnclosure -HealthStatus Healthy | Get-StorageEnclosureStorageNodeView
```

Example 3: Get storage enclosure details across all nodes

This command gets all storage enclosure details across all nodes in the cluster.

```
PS C:\>Get-StorageEnclosureStorageNodeView
```

Cmdlet: Get-StorageEnclosureVendorData

Synops

Gets vendor-specific data for an enclosure.

Syntax

```
Get-StorageEnclosureVendorData [-FriendlyName] <String[]> [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] -PageNumber <UInt16> [<CommonParameters>]
```

```
Get-StorageEnclosureVendorData [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] -PageNumber <UInt16> [<CommonParameters>]
```

```
Get-StorageEnclosureVendorData [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] -PageNumber <UInt16> -UniqueId <String[]> [<CommonParameters>]
```

Description

The Get-StorageEnclosureVendorData cmdlet gets vendor-specific data for a storage enclosure. Specify the enclosure and the SCSI diagnostic page code for the data.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies an array of friendly names. This cmdlet gets vendor data for the enclosures that the names specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :PageNumber

Description :Specifies the SCSI diagnostic page code for which this cmdlet gets vendor-specific information.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueld

Description :Specifies an array of IDs. This cmdlet gets vendor data for the enclosures that the IDs specify.

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

Cmdlet: Get-StorageExtendedStatus

Synops

Get-StorageExtendedStatus -StorageJob <CimInstance#MSFT_StorageJob> [-CimSession <CimSession>] [<CommonParameters>]

Syntax

ntaxItem

{@{name=

Get-StorageExtendedStatus; CommonParameters=True;
WorkflowCommonParameters=False; parameter=System.Object[]}}

Description

Parameters

Parameter :**CimSession**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**StorageJob**

Required	true
Position	Named
Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	

Cmdlet: Get-StorageFaultDomain

Synops

Gets a Storage fault domain object.

Syntax

```
Get-StorageFaultDomain [-CimSession <CimSession>] [-PhysicalLocation <String>] [-Type <StorageFaultDomainType>] [-CommonParameters <CommonParameters>]
```

```
Get-StorageFaultDomain [-CimSession <CimSession>] [-PhysicalLocation <String>] [-Type <StorageFaultDomainType>] -StorageFaultDomain <CimInstance> [-CommonParameters <CommonParameters>]
```

```
Get-StorageFaultDomain [-CimSession <CimSession>] [-PhysicalLocation <String>] [-Type <StorageFaultDomainType>] -StorageSubsystem <CimInstance> [-CommonParameters <CommonParameters>]
```

Description

The Get-StorageFaultDomain cmdlet gets a Storage fault domain object.

Parameters

Parameter :**CimSession**

Description :

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

Parameter :**PhysicalLocation**

Description :Specifies the physical location of the hardware.

Required	false
Position	named
Default value	none

Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StorageFaultDomain**

Description :Specifies the objects in the hierarchy that are above or below the fault domain.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**StorageSubsystem**

Description :Specifies the storage subsystem object in which to retrieve storage jobs.
Enter a StorageSubsystem CIM object. The StorageSubsystem CIM object is exposed by the Get-StorageSubSystem cmdlet.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**Type**

Description :Specifies the Storage fault domain type:

- PhysicalDisk
- Enclosure
- StorageScaleUnit
- Rack
- Chassis

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

Inputs

Type :

Outputs

Type : MSFT_PhysicalDisk, MSFT_StorageEnclosure, MSFT_StorageScaleUnit,
MSFT_StorageRack, MSFT_StorageChassis

Cmdlet: Get-StorageFileServer

Synops

Gets a storage file server.

Syntax

```
Get-StorageFileServer [-CimSession <CimSession[]>] [-FriendlyName  
<String[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageFileServer [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] [-UniqueId <String[]>]  
[<CommonParameters>]
```

```
Get-StorageFileServer [-CimSession <CimSession[]>] [-Subsystem  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-StorageFileServer cmdlet gets the specified storage file server or all discovered storage file servers.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies an array of friendly names of file servers. Some servers may assign a default friendly name that users cannot modify.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**Subsystem**

Description :Specifies the Storage subsystem.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies an array of unique IDs of file servers.

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

Inputs

Type :

Outputs

Type :

Examples

Example 1: Get all file servers

This command gets all file servers known by the current system.

```
PS C:\>Get-StorageFileServer
```

Example 2: Get a file server by name

This command gets the file server named MyFileServer and uses the pipeline to send it to Format-List, which displays its properties.

```
PS C:\>Get-StorageFileServer -StorageFileServerFriendlyName  
"MyFileServer" | Format-List
```

Cmdlet: Get-StorageFirmwareInformation

Synops

Gets information about firmware on a storage object.

Syntax

```
Get-StorageFirmwareInformation [-FriendlyName] <String> [-  
CimSession <CimSession>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Get-StorageFirmwareInformation [-CimSession <CimSession>] [-  
ThrottleLimit <Int32>] -UniqueId <String> [<CommonParameters>]
```

```
Get-StorageFirmwareInformation [-CimSession <CimSession>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-StorageFirmwareInformation cmdlet gets information about firmware on storage objects. On Non-Volatile Memory Express (NVMe) devices, it lists the number of firmware slots, the active firmware image, and slots that are writeable.

Parameters

Parameter :**CimSession**

Description :

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

Parameter :**FriendlyName**

Description :

Required	true
Position	1
Default value	none

Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :

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

Parameter :**Uniqueld**

Description :Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Inputs

Type :

Outputs

This cmdlet returns the following firmware information for a storage object:

- SupportsUpdate. Indicates whether the device is capable of a Windows-compliant firmware update process.
- NumberOfSlots. The number of firmware slots the device has.
- ActiveSlotId. Identifies the slot id that corresponds to the slot containing the currently active firmware image.
- SlotId[] - Array listing all slot IDs.
- IsSlotWritable[]. Indicates if a firmware image can be downloaded to the slot represented by the ID in the SlotId[] array at the corresponding index.
- FirmwareVersionInSlot[]. Array showing the firmware revision in each slot.
- Extended Status. Error information from the storage provider.

Type : Boolean, UInt8, UInt8[], Boolean[], String[], String

Notes

Cmdlet: Get-StorageHealthAction

Synops

Gets health-related system activities.

Syntax

```
Get-StorageHealthAction [-CimSession <CimSession>] [-ThrottleLimit <Int32>] -UniqueId <String[]> [<CommonParameters>]
```

```
Get-StorageHealthAction [-CimSession <CimSession>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-StorageHealthAction cmdlet gets health-related system activities for Storage subsystems, file shares, and volumes.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**ThrottleLimit**

Description :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

Parameter :**UniqueId**

Description :Specifies an ID used to uniquely identify a Health Action object in the system.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Inputs

Type :

Outputs

Type : Microsoft.Management.Infrastructure.CimInstance#MSFT_HealthAction

Examples

Example 1: Use the pipeline to get storage health actions

This command gets the specified Storage subsystems, and uses the pipeline operator to pass them to Get-StorageHealthAction, which gets health-related activities for the subsystems.

```
PS C:\>Get-StorageSubSystem -Model "Clustered Windows Storage"
| Get-StorageHealthAction
```

Example 2: Get the health actions for a volume

This command gets the specified Storage subsystem, and uses the pipeline operator to pass it to Get-Volume, which gets the volume, and then to Get-StorageHealthAction, which gets health-related activities for the volume.

```
PS C:\>Get-StorageSubSystem -Model "Clustered Windows Storage"
| Get-Volume | Get-StorageHealthAction
```

Example 3: Get the health actions for a file share

This command gets the specified Storage subsystem, and uses the pipeline operator to pass it to Get-FileShare, which gets the file share, and then to Get-StorageHealthAction, which gets health-related activities for the file share.

```
PS C:\>Get-StorageSubSystem -Model "Clustered Windows Storage"  
| Get-FileShare | Get-StorageHealthAction
```

Cmdlet: Get-StorageHealthReport

Synops

Gets a storage health report.

Syntax

```
Get-StorageHealthReport [-CimSession <CimSession>] [-Count  
<Int32>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-StorageHealthReport cmdlet gets a storage health report.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Count**

Description :Specifies the number of report objects to be collected when the report runs. The default value is one (1). The maximum value is 300.

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

Parameter :**ThrottleLimit**

Description :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

Inputs

Type :

Outputs

Type : Microsoft.Management.Infrastructure.CimInstance#MSFT_StorageHealthReport

Cmdlet: Get-StorageHealthSetting

Synops

Gets storage health service settings.

Syntax

```
Get-StorageHealthSetting [-CimSession <CimSession>] [-Name  
<String>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-StorageHealthSetting cmdlet gets the storage health service settings for a specified Storage subsystem.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Name**

Description :Specifies the name of an object or setting.

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

Parameter :**ThrottleLimit**

Description :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

Inputs

You can pipe a storage subsystem object for which this cmdlet gets settings.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageSubsystem

Outputs

Type : Microsoft.Management.Infrastructure.CimInstance#MSFT_StorageHealthSetting

Cmdlet: Get-StorageHistory

Synops

Get-StorageHistory -PhysicalDisk <CimInstance#MSFT_PhysicalDisk> [-Credential <pscredential>] [-LogFile <string>] [-NumberOfHours <uint32>] [-Disaggregate] [<CommonParameters>]

Get-StorageHistory -DeviceId <string> [-LogFile <string>] [-NumberOfHours <uint32>] [-Disaggregate] [<CommonParameters>]

Get-StorageHistory -DeviceNumber <string> [-LogFile <string>] [-NumberOfHours <uint32>] [-Disaggregate] [<CommonParameters>]

Syntax

ntaxItem

{@{name=

Get-StorageHistory; CommonParameters=True;
WorkflowCommonParameters=False; parameter=System.Object[]},
@{name=

Get-StorageHistory; CommonParameters=True; Workflow...

Description

Parameters

Parameter :**Credential**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**DeviceId**

Required	true
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**DeviceNumber**

Required	true
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**Disaggregate**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**LogFile**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**NumberOfHours**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**PhysicalDisk**

Required	true
Position	Named

Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	

Cmdlet: Get-StorageJob

Synops

Returns information about long-running Storage module jobs, such as a repair task.

Syntax

```
Get-StorageJob [-CimSession <CimSession[]>] [-JobState  
<JobState[]>] [-ThrottleLimit <Int32>] [-UniqueId <String[]>]  
[<CommonParameters>]
```

```
Get-StorageJob [-CimSession <CimSession[]>] [-JobState  
<JobState[]>] [-Name <String[]>] [-StoragePool <CimInstance>] [-  
ThrottleLimit <Int32>] [-VirtualDisk <CimInstance>]  
[<CommonParameters>]
```

```
Get-StorageJob [-CimSession <CimSession[]>] [-JobState  
<JobState[]>] [-StorageSubsystem <CimInstance>] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

```
Get-StorageJob [-CimSession <CimSession[]>] [-JobState  
<JobState[]>] [-Name <String[]>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Get-StorageJob [-Disk <CimInstance>] [<CommonParameters>]
```

```
Get-StorageJob [-Volume <CimInstance>] [<CommonParameters>]
```

Description

The Get-StorageJob cmdlet returns information about long-running Storage module jobs, such as a repair operation on a storage space.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :Disk

Description :Specifies a disk for which to get storage jobs. To obtain a Disk object, use the Get-Disk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :JobState

Description :Gets storage jobs in the specified state. Acceptable values are Completed, Exception, Killed, New, QueryPending, Running, Service, ShuttingDown, Starting, Suspended, and Terminated.

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

Parameter :Name

Description :Specifies the name the storage job to get.

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

Parameter :StoragePool

Description :Specifies the storage pool object in which to retrieve storage jobs. Enter a StoragePool CIM object. The StoragePool CIM object is exposed by the Get-StoragePool

cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :StorageSubsystem

Description :Specifies the storage subsystem object in which to retrieve storage jobs.

Enter a StorageSubsystem CIM object. The StorageSubsystem CIM object is exposed by the Get-StorageSubSystem cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueld

Description :Specifies the ID of the storage job to retrieve.

Required	false
Position	named

Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :VirtualDisk

Description :Specifies the virtual disk object for which to get storage jobs. Enter a VirtualDisk CIM object. The Virtual Disk CIM object is exposed by the Get-VirtualDisk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :Volume

Description :Specifies the volume object for which to get storage jobs. To obtain a Volume object, use the Get-Volume cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Inputs

You can pipe an MSFT_StoragePool object to the StoragePool parameter to specify the storage pool in which to get storage jobs.

You can pipe an MSFT_StorageSubsystem object to the StorageSubsystem parameter to specify the storage subsystem for which to get storage jobs.

You can pipe an MSFT_VirtualDisk object to the VirtualDisk parameter to specify the virtual disk for which to get storage jobs.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StoragePool

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageSubsystem

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_VirtualDisk

SFT_VirtualDisk

Outputs

The Get-StorageJob cmdlet returns objects that represent storage jobs.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageJob

Examples

Example 1: Get all current storage jobs

This example displays a list of all current storage jobs.

```
PS C:\>Get-StorageJob
```

Name	ElapsedTime	JobState
PercentComplete	IsBackgroundTask	
----	-----	-----
-----	-----	
Regeneration	00:00:00	Running
50	True	

Example 2: Get all storage jobs on the Windows Storage subsystem

This example gets all storage jobs on the Storage Spaces subsystem, using the Get-StorageSubSystem cmdlet to get the StorageSubsystem object.

```
PS C:\>Get-StorageJob -StorageSubsystem (Get-StorageSubSystem  
-FriendlyName "Storage Spaces")
```


Cmdlet: Get-StorageNode

Synops

Gets storage nodes.

Syntax

```
Get-StorageNode [-CimSession <CimSession[]>] [-Name <String[]>]  
[-OperationalStatus <OperationalStatus[]>] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

```
Get-StorageNode [-CimSession <CimSession[]>] [-OperationalStatus  
<OperationalStatus[]>] [-StoragePool <CimInstance>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageNode [-CimSession <CimSession[]>] [-OperationalStatus  
<OperationalStatus[]>] [-ThrottleLimit <Int32>] [-UniqueId  
<String[]>] [<CommonParameters>]
```

```
Get-StorageNode [-CimSession <CimSession[]>] [-OperationalStatus  
<OperationalStatus[]>] [-PhysicallyConnected] [-StorageEnclosure  
<CimInstance>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Get-StorageNode [-CimSession <CimSession[]>] [-OperationalStatus  
<OperationalStatus[]>] [-StorageSubSystem <CimInstance>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageNode [-CimSession <CimSession[]>] [-OperationalStatus  
<OperationalStatus[]>] [-ThrottleLimit <Int32>] [-VirtualDisk  
<CimInstance>] [<CommonParameters>]
```

```
Get-StorageNode [-CimSession <CimSession[]>] [-OperationalStatus  
<OperationalStatus[]>] [-PhysicalDisk <CimInstance>] [-  
PhysicallyConnected] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Get-StorageNode [-Disk  
<Microsoft.Management.Infrastructure.CimInstance>]  
[<CommonParameters>]
```

```
Get-StorageNode [-ObjectId <System.String[]>]
```

[<CommonParameters>]

Get-StorageNode [-Volume
<Microsoft.Management.Infrastructure.CimInstance>]
[<CommonParameters>]

Description

The Get-StorageNode cmdlet gets objects that represent storage nodes and their operational statuses. Use this cmdlet to get storage nodes to pass to the Get-PhysicalDisk cmdlet or the Get-VirtualDisk cmdlet to get the physical or virtual disks connected to storage nodes. Use the current cmdlet with the Get-StoragePool cmdlet to get the storage pools that storage nodes own.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Disk**

Description :Specifies a disk for which this cmdlet gets storage notes. To obtain a Disk object, use the Get-Disk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies an array of names. The cmdlet gets the storage nodes that you specify by name.

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

Parameter :**ObjectId**

Description :Specifies an array of object IDs, as strings.

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

Parameter :**OperationalStatus**

Description :Specifies an array of OperationStatus objects. The cmdlet gets storage nodes that match the operational statuses that you specify. The acceptable values for this parameter are:

- Dormant
- Down
- LowerLayerDown
- NotPresent
- Testing
- Unknown
- Up

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

Parameter :**PhysicalDisk**

Description :Specifies a physical disk as a CimInstance object. The cmdlet gets the storage nodes that correspond to the disk that you specify. To obtain a physical disk

object, use the Get-PhysicalDisk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :PhysicallyConnected

Description :Indicates that this cmdlet gets the storage nodes that are physically connected to a device.

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

Parameter :StorageEnclosure

Description :Specifies a storage enclosure that is associated with the storage nodes to get. To obtain a StorageEnclosure object, use the Get-StorageEnclosure cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :StoragePool

Description :Specifies a storage pool as a CimInstance object. The cmdlet gets storage node associated with storage pool that you specify. To obtain a storage pool object, use the Get-StoragePool cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)

Accept wildcard characters?	false
-----------------------------	-------

Parameter :StorageSubSystem

Description :Specifies a storage subsystem as a CimInstance object. The cmdlet gets the storage nodes that belong to the subsystem that you specify. To obtain a storage subsystem object, use the Get-StorageSubSystem cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :UniqueId

Description :Specifies an array of unique IDs, as strings. The cmdlet gets the storage nodes that have the IDs that you specify.

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

Parameter :VirtualDisk

Description :Specifies a virtual disk as a CimInstance object. The cmdlet gets the storage nodes that correspond to the disk that you specify. To obtain a virtual disk object, use the Get-VirtualDisk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**Volume**

Description :Specifies a volume. The cmdlet gets the storage nodes that correspond to the volume that you specify. To obtain a Volume object, use the Get-Volume cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Outputs

This cmdlet outputs an array of objects that represent storage nodes and their operational statuses.

Type : MSFT_StorageNode[]

Examples

Example 1: Get a storage node

This command gets a storage node named StorageNode21.

```
PS C:\>Get-StorageNode -Name "StorageNode21"
```

Example 2: Get the operational statuses for all physical disks

This command uses the Get-PhysicalDisk cmdlet to obtain all the physical disks, and then passes them to the current cmdlet by using the pipeline operator. The cmdlet gets the storage nodes and operational statuses for the physical disks.

```
PS C:\>Get-PhysicalDisk | Get-StorageNode
```


Cmdlet: Get-StoragePool

Synops

Gets a specific storage pool, or a set of StoragePool objects either from all storage subsystems across all storage providers, or optionally a filtered subset based on specific parameters.

Syntax

```
Get-StoragePool [[-FriendlyName] <String[]>] [-CimSession  
<CimSession[]>] [-HealthStatus <HealthStatus[]>] [-IsPrimordial  
<Boolean[]>] [-ThrottleLimit <Int32>] [-Usage  
<Usage[]>] [<CommonParameters>]
```

```
Get-StoragePool [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsPrimordial <Boolean[]>] [-StorageTier  
<CimInstance>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Get-StoragePool [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsPrimordial <Boolean[]>] [-PhysicalDisk  
<CimInstance>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Get-StoragePool [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsPrimordial <Boolean[]>] [-StorageNode  
<CimInstance>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Get-StoragePool [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsPrimordial <Boolean[]>] [-StorageSubSystem  
<CimInstance>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Get-StoragePool [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsPrimordial <Boolean[]>] [-  
OtherUsageDescription <String[]>] [-ThrottleLimit <Int32>]  
[-Usage <Usage[]>] [<CommonParameters>]
```

```
Get-StoragePool [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsPrimordial <Boolean[]>] [-Name <String[]>]  
[-ThrottleLimit <Int32>] [<CommonParameters>]
```



```
Get-StoragePool [-CimSession <CimSession[]>] [-HealthStatus
<HealthStatus[]>] [-IsPrimordial <Boolean[]>] [-ResiliencySetting
<CimInstance>] [-ThrottleLimit <Int32>]
[<CommonParameters>]
```

```
Get-StoragePool [-CimSession <CimSession[]>] [-HealthStatus
<HealthStatus[]>] [-IsPrimordial <Boolean[]>] [-ThrottleLimit
<Int32>] [-UniqueId <String[]>]
[<CommonParameters>]
```

```
Get-StoragePool [-CimSession <CimSession[]>] [-HealthStatus
<HealthStatus[]>] [-IsPrimordial <Boolean[]>] [-ThrottleLimit
<Int32>] [-VirtualDisk <CimInstance>]
[<CommonParameters>]
```

```
Get-StoragePool [-CimSession <CimSession[]>] [-HealthStatus
<HealthStatus[]>] [-IsPrimordial <Boolean[]>] [-StorageJob
<CimInstance>] [-ThrottleLimit <Int32>]
[<CommonParameters>]
```

```
Get-StoragePool [-Volume
<Microsoft.Management.Infrastructure.CimInstance>]
[<CommonParameters>]
```

Description

The Get-StoragePool cmdlet returns either a specific storage pool, or a set of StoragePool objects either from all storage subsystems across all storage providers, or optionally a filtered subset based on specific parameters.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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
-----------------------------	-------

Parameter :**FriendlyName**

Description :Specifies the friendly name of the storage pool to get.

Required	false
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**HealthStatus**

Description :Specifies the health status(es) of the storage pool to get. Specify one or more of the following values: Healthy, Warning, Unhealthy, or Unknown.

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

Parameter :**IsPrimordial**

Description :Specifies whether to get (concrete) storage pools or primordial storage pools (which store physical disks that have yet to be added to a concrete storage pool). To get (concrete) storage pools, specify the \$False Boolean value. To get primordial pools, specify the \$True Boolean value.

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

Parameter :**Name**

Description :Specifies the name of the storage pool to get.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :OtherUsageDescription

Description :Gets any storage pools that match the specified OtherUsageDescription string.

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

Parameter :PhysicalDisk

Description :Gets the storage pool that contains the specified PhysicalDisk object. Enter a PhysicalDisk CIM object. The Physical Disk CIM object is exposed by the Get-PhysicalDisk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :ResiliencySetting

Description :Gets the storage pool associated with the specified ResiliencySetting object. Enter a single ResiliencySetting CIM object as input, or pipe multiple ResiliencySetting objects to the Get-StoragePool cmdlet to view all pools that support the specified resiliency setting. Resiliency Setting CIM objects are exposed by the Get-ResiliencySetting cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**StorageJob**

Description :Specifies an outstanding storage job as a CimInstance object. The cmdlet gets the storage pools associated with the storage job that you specify. To obtain a storage job, use the Get-StorageJob cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**StorageNode**

Description :Specifies a storage node as a CimInstance object. The cmdlet gets storage pools that have read-write access on the node that you specify. To obtain a storage node object, use the Get-StorageNode cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**StorageSubSystem**

Description :Accepts a StorageSubsystem object as input. The Storage Subsystem CIM object is exposed by the Get-StorageSubsystem cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**StorageTier**

Description :Specifies a storage tier as a CimInstance object. The cmdlet gets storage pools that contain the storage tier that you specify. To obtain a storage tier object, use the Get-StorageTier cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueid

Description :Specifies the UniqueID of the storage pool to get. If the UniqueID includes brackets, enclose the string in quotation marks.

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

Parameter :Usage

Description :Gets any storage pools that match the specified Usage value. Acceptable values: ReservedAsDeltaReplicaContainer, ReservedForComputerSystem, ReservedForLocalReplicationServices, ReservedForMigrationServices, ReservedForRemoteReplicationServices, ReservedForSparing, Unknown, Unrestricted, and Other

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :VirtualDisk

Description :Gets the storage pool associated with the specified virtual disk object. Enter a VirtualDisk CIM object. The Virtual Disk CIM object is exposed by the Get-VirtualDisk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :Volume

Description :Specifies a volume. The cmdlet gets the storage nodes that correspond to the volume that you specify. To obtain a Volume object, use the Get-Volume cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Inputs

You can use the pipeline operator to pass an MSFT_PhysicalDisk object to the PhysicalDisk parameter to get the storage pool associated with the PhysicalDisk object.

You can use the pipeline operator to pass an MSFT_ResiliencySetting object to the ResiliencySetting parameter to get the storage pool associated with the ResiliencySetting object.

You can use the pipeline operator to pass an MSFT_StorageNode object to the StorageNode parameter to get the storage pool associated with the StorageNode object.

You can use the pipeline operator to pass an MSFT_StorageSubsystem object to the StorageSubsystem parameter to get the storage pool associated with the StorageSubsystem object.

You can use the pipeline operator to pass an MSFT_StorageTier object to the

StorageTier parameter to get the storage pool associated with the StorageTier object.

You can use the pipeline operator to pass an MSFT_VirtualDisk object to the VirtualDisk parameter to get the storage pool associated with the VirtualDisk object.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_PhysicalDisk

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_ResiliencySetting

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageNode

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageSubsystem

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageTier

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_VirtualDisk

Outputs

The Get-StoragePool cmdlet returns objects representing storage pools.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StoragePool

Notes

Examples

Example 1: Get all storage pools

This example lists all storage pools, (when run without parameter) from all Storage Management Providers, from all storage subsystems. This list may optionally be filtered using one or more parameters.

```
PS C:\>Get-StoragePool
FriendlyName      OperationalStatus HealthStatus
IsPrimordial      IsReadOnly
-----
-----
CompanyData       OK              Healthy
False             False
Primordial        OK              Healthy
True              False
```

Example 2: Get all storage pools (not including primordial pools)

This example lists all (concrete) storage pools, excluding primordial pools (which store physical disks that have yet to be added to a concrete storage pool).

```
PS C:\>Get-StoragePool -IsPrimordial $False
FriendlyName      OperationalStatus HealthStatus
IsPrimordial      IsReadOnly
-----
-----
CompanyData      OK
False            False           Healthy
```

Example 3: Get all storage pools that support the Mirror resiliency setting

This example uses the Get-ResiliencySetting cmdlet to retrieve ResiliencySetting objects that represent each storage pool that supports the specified resiliency setting (also known as storage layout), in this case Mirror, and then pipes the array of objects to the Get-StoragePool cmdlet.

```
PS C:\>Get-ResiliencySetting -Name Mirror | Get-StoragePool
FriendlyName      OperationalStatus
HealthStatus      IsPrimordial
IsReadOnly
-----
-----
-----
CompanyData      OK
Healthy          False
False
Primordial       OK
Healthy          True
False
```


Cmdlet: Get-StorageProvider

Synops

Returns a list of the storage providers available on the local computer.

Syntax

```
Get-StorageProvider [[-Name] <String[]>] [-CimSession  
<CimSession[]>] [-Manufacturer <String[]>] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

```
Get-StorageProvider [-CimSession <CimSession[]>] [-Manufacturer  
<String[]>] [-ThrottleLimit <Int32>] [-URI <Uri[]>]  
[<CommonParameters>]
```

```
Get-StorageProvider [-CimSession <CimSession[]>] [-  
StorageSubSystem <CimInstance>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Get-StorageProvider [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] [-UniqueId <String[]>] [<CommonParameters>]
```

Description

The Get-StorageProvider cmdlet returns a list of the storage providers available on the local computer. This cmdlet returns a list of the available storage providers available to the computer, such as a SMP hardware provider, or a SMI-S provider connection.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Manufacturer**

Description :Specifies the name of the manufacturer of this piece of hardware or software.

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

Parameter :**Name**

Description :Specifies the name of an object or setting.

Required	false
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**StorageSubSystem**

Description :Accepts a StorageSubsystem object as input. The Storage Subsystem CIM object is exposed by the Get-StorageSubsystem cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**URI**

Description :Specifies the URI for the object.

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

Parameter :**UniqueId**

Description :Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

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

Inputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageSubsystem

Outputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageProvider

Cmdlet: Get-StorageRack

Synops

Get-StorageRack [-FriendlyName <string>] [-SerialNumber <string>] [-PhysicalLocation <string>] [-CimSession <CimSession>] [<CommonParameters>]

Get-StorageRack -StorageSubsystem <CimInstance#MSFT_StorageSubsystem> [-FriendlyName <string>] [-SerialNumber <string>] [-PhysicalLocation <string>] [-CimSession <CimSession>] [<CommonParameters>]

Get-StorageRack -StorageFaultDomain <CimInstance#MSFT_StorageFaultDomain> [-FriendlyName <string>] [-SerialNumber <string>] [-PhysicalLocation <string>] [-CimSession <CimSession>] [<CommonParameters>]

Syntax

ntaxItem

{@{name=

Get-StorageRack; CommonParameters=True;
WorkflowCommonParameters=False; parameter=System.Object[]},
@{name=

Get-StorageRack; CommonParameters=True; WorkflowCommon...

Description

Parameters

Parameter :**CimSession**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**FriendlyName**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**PhysicalLocation**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**SerialNumber**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**StorageFaultDomain**

Required	true
Position	Named
Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	

Parameter :**StorageSubsystem**

Required	true
Position	Named
Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	

Cmdlet: Get-StorageReliabilityCounter

Synops

Gets storage reliability counters.

Syntax

```
Get-StorageReliabilityCounter [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] -PhysicalDisk <CimInstance> [<CommonParameters>]
```

```
Get-StorageReliabilityCounter [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] -Disk <CimInstance> [<CommonParameters>]
```

Description

The Get-StorageReliabilityCounter cmdlet gets the storage reliability counters for the specified disk or physical disk. These counters include information about such things as the device temperature, errors, wear, and length of time the device has been in use.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Disk**

Description :Specifies a disk for which to get storage reliability counters.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)

Accept wildcard characters?	false
-----------------------------	-------

Parameter :PhysicalDisk

Description :Specifies the physical disk object for which to get storage reliability counters. Enter a PhysicalDisk CIM object.

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

Parameter :ThrottleLimit

Description :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

Inputs

You can pipe an MSFT_PhysicalDisk object to the PhysicalDisk parameter to get the storage reliability counters for the specified physical disk.

You can pipe an MSFT_Disk object to the Disk parameter to get the storage reliability counters for the specified disk.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_PhysicalDisk

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_Disk

Outputs

The Get-StorageReliabilityCounter cmdlet returns a StorageReliabilityCounter object, or an array of StorageReliabilityCounter objects.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageReliabilityCounter

Cmdlet: Get-StorageScaleUnit

Synops

Get-StorageScaleUnit [-FriendlyName <string>] [-SerialNumber <string>] [-PhysicalLocation <string>] [-CimSession <CimSession>] [<CommonParameters>]

Get-StorageScaleUnit -StorageSubsystem <CimInstance#MSFT_StorageSubsystem> [-FriendlyName <string>] [-SerialNumber <string>] [-PhysicalLocation <string>] [-CimSession <CimSession>] [<CommonParameters>]

Get-StorageScaleUnit -StorageFaultDomain <CimInstance#MSFT_StorageFaultDomain> [-FriendlyName <string>] [-SerialNumber <string>] [-PhysicalLocation <string>] [-CimSession <CimSession>] [<CommonParameters>]

Syntax

ntaxItem

{@{name=

Get-StorageScaleUnit; CommonParameters=True;
WorkflowCommonParameters=False; parameter=System.Object[]},
@{name=

Get-StorageScaleUnit; CommonParameters=True; Work...

Description

Parameters

Parameter :**CimSession**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**FriendlyName**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**PhysicalLocation**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**SerialNumber**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**StorageFaultDomain**

Required	true
Position	Named
Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	

Parameter :**StorageSubsystem**

Required	true
Position	Named
Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	

Cmdlet: Get-StorageSetting

Synops

Gets a StorageSettings object.

Syntax

```
Get-StorageSetting [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

Description

The Get-StorageSetting cmdlet returns a StorageSettings object.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**ThrottleLimit**

Description :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

Outputs

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.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageSetting`

Cmdlet: Get-StorageSite

Synops

Get-StorageSite [-FriendlyName <string>] [-SerialNumber <string>] [-PhysicalLocation <string>] [-CimSession <CimSession>] [<CommonParameters>]

Get-StorageSite -StorageSubsystem <CimInstance#MSFT_StorageSubsystem> [-FriendlyName <string>] [-SerialNumber <string>] [-PhysicalLocation <string>] [-CimSession <CimSession>] [<CommonParameters>]

Get-StorageSite -StorageFaultDomain <CimInstance#MSFT_StorageFaultDomain> [-FriendlyName <string>] [-SerialNumber <string>] [-PhysicalLocation <string>] [-CimSession <CimSession>] [<CommonParameters>]

Syntax

ntaxItem

{@{name=

Get-StorageSite; CommonParameters=True;
WorkflowCommonParameters=False; parameter=System.Object[]},
@{name=

Get-StorageSite; CommonParameters=True; WorkflowCommon...

Description

Parameters

Parameter :**CimSession**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**FriendlyName**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**PhysicalLocation**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**SerialNumber**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**StorageFaultDomain**

Required	true
Position	Named
Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	

Parameter :**StorageSubsystem**

Required	true
Position	Named
Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	

Cmdlet: Get-StorageSubsystem

Synops

Gets one or more StorageSubsystem objects.

Syntax

```
Get-StorageSubSystem [[-FriendlyName] <String[]>] [-CimSession  
<CimSession[]>] [-HealthStatus <HealthStatus[]>] [-Manufacturer  
<String[]>] [-Model <String[]>]  
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]  
[-ThrottleLimit <Int32>] [-UniqueId  
<String[]>] [<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]  
[-Name <String[]>] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]  
[-StorageFaultDomain <CimInstance>]  
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-FileServer  
<Microsoft.Management.Infrastructure.CimInstance>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer  
<String[]>] [-Model <String[]>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]  
[-ThrottleLimit <Int32>] [-Volume  
<Microsoft.Management.Infrastructure.CimInstance>]  
[<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]  
[-Partition
```



```
<Microsoft.Management.Infrastructure.CimInstance>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-Disk  
<Microsoft.Management.Infrastructure.CimInstance>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>]  
[-Model <String[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]  
[-OffloadDataTransferSetting  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-InitiatorId <CimInstance>] [-Manufacturer  
<String[]>] [-Model <String[]>]  
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]  
[-TargetPortal <CimInstance>]  
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]  
[-TargetPort <CimInstance>]  
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>] [-MaskingSet  
<CimInstance>] [-Model <String[]>]  
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]  
[-ThrottleLimit <Int32>] [-VirtualDisk  
<CimInstance>] [<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]  
[-StoragePool <CimInstance>]  
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-HealthStatus
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]
[-StorageNode <CimInstance>]
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageSubSystem [-CimSession <CimSession[]>] [-HealthStatus
<HealthStatus[]>] [-Manufacturer <String[]>] [-Model <String[]>]
[-StorageProvider <CimInstance>]
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-StorageSubsystem cmdlet gets one or more StorageSubsystem objects. If no parameters are specified, then all subsystems on the system will be returned. If two parameters are specified that conflict with unique values, then no subsystem will be returned; since none match that criteria.

Parameters

Parameter :CimSession

Description :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 or Get-CimSession 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

Parameter :Disk

Description :Specifies a Disk for which this cmdlet gets storage subsystems. To obtain a Disk object, use the Get-Disk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**FileServer**

Description :Specifies the file server on which to get storage subsystems. To obtain a FileServer object, use the Get-StorageFileServer cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**FriendlyName**

Description :Specifies the friendly name of the storage subsystem to get.

Required	false
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**HealthStatus**

Description :Specifies the health status for which this cmdlet gets storage subsystems. The acceptable values for this parameter are: Healthy, Warning, and Unhealthy.

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

Parameter :**InitiatorId**

Description :Gets the storage subsystem associated with the specified InitiatorId object. Enter an InitiatorID CIM object. The InitiatorID object is exposed by the Get-InitiatorId cmdlet.

Required	false
Position	named

Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**Manufacturer**

Description :Specifies a manufacturer of storage subsystems to get.

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

Parameter :**MaskingSet**

Description :Gets the StorageSubsystem for the specified MaskingSet object. Enter a MaskingSet CIM object. The MaskingSet object is exposed by the Get-MaskingSet cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**Model**

Description :Specifies a model for which to get storage subsystems.

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

Parameter :**Name**

Description :Gets the StorageSubsystem with the specified name.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :OffloadDataTransferSetting

Description :Gets the StorageSubsystem associated with the specified OffloadDataTransferSetting object. The Offload Data Transfer Setting CIM object is exposed by the Get-OffloadDataTransferSetting cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :Partition

Description :Specifies a partition associated with a storage subsystem to get. To obtain a Partition object, use the Get-Partition cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :StorageFaultDomain

Description :Specifies a storage fault domain associated with a storage subsystem to get. To obtain a StorageFaultDomain object, use the Get-StorageFaultDomain cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :StorageNode

Description :Specifies a storage node as a CimInstance object. The cmdlet gets storage subsystems on the node that you specify. To obtain a storage node object, use the Get-StorageNode cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**StoragePool**

Description :Gets the StorageSubsystem associated with the specified StoragePool object. The Storage Pool CIM object is exposed by the Get-StoragePool cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**StorageProvider**

Description :Gets the StorageSubsystem associated with the specified StorageProvider object. The Storage Provider CIM object is exposed by the Get-StorageProvider cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**TargetPort**

Description :Gets the StorageSubsystem associated with the specified TargetPort object. The TargetPort CIM object is exposed by the Get-TargetPort cmdlet.

Required	false
Position	named
Default value	none

Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :TargetPortal

Description :Gets the StorageSubsystem associated with the specified TargetPortal object. The TargetPortal CIM object is exposed by the Get-TargetPortal cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :UniqueId

Description :Gets the StorageSubsystem with the specified UniqueID value.

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

Parameter :VirtualDisk

Description :Gets the StorageSubsystem associated with the specified VirtualDisk object.

The Virtual Disk CIM object is exposed by the Get-VirtualDisk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**Volume**

Description :Specifies a volume that is associated the storage subsystem that this cmdlet gets. To obtain a Volume object, use the Get-Volume cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Inputs

You can use the pipeline operator to pass an InitiatorID object to the InitiatorID parameter to get the storage subsystem associated with the object.

You can use the pipeline operator to pass a MaskingSet object to the MaskingSet parameter to get the storage subsystem associated with the object.

You can use the pipeline operator to pass an OffloadDataTransferSetting object to the OffloadDataTransferSetting parameter to get the storage subsystem associated with the object.

You can use the pipeline operator to pass a PhysicalDisk object to the PhysicalDisk parameter to get the storage subsystem associated with the object.

You can use the pipeline operator to pass a StorageNode object to the StorageNode parameter to get the storage subsystem associated with the object.

You can use the pipeline operator to pass a StoragePool object to the StoragePool parameter to get the storage subsystem associated with the object.

You can use the pipeline operator to pass a StorageProvider object to the StorageProvider parameter to get the storage subsystem associated with the object.

You can use the pipeline operator to pass a TargetPort object to the TargetPort parameter to get the storage subsystem associated with the object.

You can the pipeline operator to pass a TargetPortal object to the TargetPortal parameter

to get the storage subsystem associated with the object.

You can use the pipeline operator to pass a VirtualDisk object to the VirtualDisk parameter to get the storage subsystem associated with the object.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_InitiatorId

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_OffloadDataTransferSetting

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_PhysicalDisk

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageNode

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StoragePool

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageProvider

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_TargetPort

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_TargetPortal

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Outputs

This cmdlet outputs an object representing a storage subsystem.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageSubsystem

Examples

Example 1: Get all storage subsystems

This example returns a list of all visible StorageSubsystem objects across all accessible StorageProvider objects.

```
PS C:\>Get-StorageSubsystem
```

Example 2: Get the Windows Storage subsystem

This example returns only the StorageSubsystem object for the Storage Spaces provider.

```
PS C:\>Get-StorageSubSystem -Model "Storage Spaces"
FriendlyName      HealthStatus
OperationalStatus
-----
Storage Spaces on SRV1    Healthy
OK
```

Example 3: Get all unhealthy storage subsystems

This example gets all storage subsystems in an unhealthy state.

```
PS C:\>Get-StorageSubSystem -HealthStatus Unhealthy
```

Example 4: Get storage subsystems that have SMPs that support ODX

This example displays all storage subsystems on storage management providers that support Windows Offloaded Data Transfers (ODX). Storage arrays that support ODX using the SMI-S protocol are not shown.

```
PS C:\>Get-OffloadDataTransferSetting | Get-StorageSubSystem
```

Cmdlet: Get-StorageTier

Synops

Gets storage tiers on Windows Storage subsystems.

Syntax

```
Get-StorageTier [[-FriendlyName] <String[]>] [-CimSession  
<CimSession[]>] [-MediaType <MediaType[]>] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

```
Get-StorageTier [-CimSession <CimSession[]>] [-MediaType  
<MediaType[]>] [-ThrottleLimit <Int32>] [-VirtualDisk  
<CimInstance>] [<CommonParameters>]
```

```
Get-StorageTier [-CimSession <CimSession[]>] [-MediaType  
<MediaType[]>] [-StoragePool <CimInstance>] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

```
Get-StorageTier [-CimSession <CimSession[]>] [-MediaType  
<MediaType[]>] [-ThrottleLimit <Int32>] [-UniqueId <String[]>]  
[<CommonParameters>]
```

Description

The Get-StorageTier cmdlet gets storage tiers on Windows Storage subsystems. Storage tiers are physical disks that are grouped by characteristics, for example, solid-state drives (SSD) and hybrid hard drives (HHD).

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies an array of friendly names of storage tiers to get.

Required	false
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**MediaType**

Description :Specifies an array of media types. The cmdlet gets the storage tiers for the media type that you specify. The acceptable values for this parameter are:

-- SSD

-- HDD

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

Parameter :**StoragePool**

Description :Specifies a storage pool as a CIMInstance object. The cmdlet gets the storage tiers for the storage pool that you specify. To obtain a storage pool, use the Get-StoragePool cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies an array of IDs of storage tiers to get.

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

Parameter :**VirtualDisk**

Description :Specifies a virtual disk as a CIMInstance object. The cmdlet gets the storage tiers for the virtual disk that you specify. To obtain a virtual disk, use the Get-VirtualDisk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Inputs

You can use the pipeline operator to pass an MSFT_StoragePool object to the StoragePool parameter to get the storage tier associated with the StoragePool object.

You can use the pipeline operator to pass an MSFT_VirtualDisk object to the VirtualDisk parameter to get the storage tier associated with the VirtualDisk object.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StoragePool

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M

SFT_VirtualDisk

Outputs

This cmdlet returns an object that contains details about the storage tier, such as tier friendly name, media type and size.

Type : MSFT_StorageTier

Examples

Example 1: Get a storage tier

This command gets the storage tier named StoreTier01.

```
PS C:\>Get-StorageTier -FriendlyName "StoreTier01"
```

Example 2: Get a storage tier from a storage pool

This command gets the object that contains the storage pool named StorePool01, and then passes the object to the Get-StorageTier cmdlet by using the pipeline operator. The Get-StorageTier cmdlet gets the storage tier from the storage pool object.

```
PS C:\> Get-StoragePool -StoragePoolFriendlyName "StorePool01"  
| Get-StorageTier
```

Example 3: Get a storage tier from a virtual disk

This command uses the Get-VirtualDisk cmdlet to get the tiered virtual disk named VDisk01. The command passes the virtual disk to the Get-StorageTier cmdlet by using the pipeline operator. The Get-StorageTier cmdlet gets the storage tiers that compose the tiered virtual disk.

```
PS C:\>Get-VirtualDisk-FriendlyName "VDisk01" | Get-  
StorageTier
```

Cmdlet: Get-StorageTierSupportedSize

Synops

Gets the minimum and maximum possible sizes of a storage tier.

Syntax

```
Get-StorageTierSupportedSize [-FriendlyName] <String[]> [-CimSession <CimSession[]>] [-ResiliencySettingName <String>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-StorageTierSupportedSize [-CimSession <CimSession[]>] [-ResiliencySettingName <String>] [-ThrottleLimit <Int32>] -UniqueId <String[]> [<CommonParameters>]
```

```
Get-StorageTierSupportedSize [-CimSession <CimSession[]>] [-ResiliencySettingName <String>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-StorageTierSupportSize cmdlet gets the minimum and maximum possible sizes of a storage tier. Use this information to create or extend a virtual disk with the specified resiliency setting on a Windows Storage subsystem.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies an array of friendly names. The cmdlet gets the storage tiers that match the names that you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**ResiliencySettingName**

Description :Specifies the name of the desired resiliency setting, for example, Simple, Mirror, or Parity.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies an array of unique IDs, as strings.

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

Inputs

You can use the pipeline operator to pass an `MSFT_StorageTier` object to the `InputObject` parameter to get the storage tier supported size associated with the `StorageTier` object.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageTier`

Outputs

This cmdlet returns an object that lists the minimum and maximum amounts of space that the specified type of virtual disk could use in the specified storage tier as well as the tier size divisor. These values are `System.UInt64` objects.

Type : `System.Management.Automation.PSCustomObject`

Cmdlet: Get-SupportedClusterSizes

Synops

Gets the supported cluster sizes.

Syntax

```
Get-SupportedClusterSizes [-DriveLetter] <Char[]> [-CimSession  
<CimSession[]>] [-ThrottleLimit <Int32>] -FileSystem <String>  
[<CommonParameters>]
```

```
Get-SupportedClusterSizes [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] -FileSystem <String> -FileSystemLabel  
<String[]> [<CommonParameters>]
```

```
Get-SupportedClusterSizes [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] -FileSystem <String> [<CommonParameters>]
```

```
Get-SupportedClusterSizes [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] -FileSystem <String> -Path <String[]>  
[<CommonParameters>]
```

```
Get-SupportedClusterSizes [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] -FileSystem <String> -ObjectId <String[]>  
[<CommonParameters>]
```

Description

The Get-SupportedClusterSizes cmdlet gets the supported cluster sizes for a specified volume and file system.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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
-----------------------------	-------

Parameter :DriveLetter

Description :Specifies an array of letters that identify one or more drives or volumes in the system. The cmdlet gets the supported cluster sizes for the drives or volumes you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :FileSystem

Description :Specifies the name of the file system. The cmdlet gets the supported cluster sizes for the file system you specify.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :FileSystemLabel

Description :Specifies an array of file system labels. The cmdlet gets the supported cluster sizes for the file system labels you specify.

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

Parameter :ObjectId

Description :Specifies an array of IDs, as strings. The ID is not globally unique.

Required	true
----------	------

Position	named
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**Path**

Description :Specifies an array of valid paths. The cmdlet gets the supported cluster sizes for the paths you specify.

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

Parameter :**ThrottleLimit**

Description :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

Inputs

Type :

Outputs

Type :

Cmdlet: Get-SupportedFileSystems

Synops

Gets the file system choices for a specified volume.

Syntax

```
Get-SupportedFileSystems [-DriveLetter] <Char[]> [-CimSession  
<CimSession[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-SupportedFileSystems [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-SupportedFileSystems [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] -Path <String[]> [<CommonParameters>]
```

```
Get-SupportedFileSystems [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] -FileSystemLabel <String[]>  
[<CommonParameters>]
```

```
Get-SupportedFileSystems [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] -ObjectId <String[]> [<CommonParameters>]
```

Description

The Get-SupportedFileSystems cmdlet gets the file system choices for a specified volume. The file system choices determine your options when you format the volume.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DriveLetter**

Description :Specifies an array of letters that identify one or more drives or volumes in the system. The cmdlet gets the supported file systems for the drives or volumes you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**FileSystemLabel**

Description :Specifies an array of file system labels. The cmdlet gets the supported file systems for the file system labels you specify.

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

Parameter :**ObjectId**

Description :Specifies an array of IDs, as strings. The ID is not globally unique.

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

Parameter :**Path**

Description :Specifies an array of valid paths. The cmdlet gets the supported cluster sizes for the paths you specify.

Required	true
Position	named
Default value	none

Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Inputs

Type :

Outputs

Type :

Cmdlet: Get-TargetPort

Synops

Returns a TargetPort object associated with a specific port address and connection type.

Syntax

```
Get-TargetPort [[-FriendlyName] <String[]>] [-CimSession  
<CimSession[]>] [-ConnectionType <ConnectionType[]>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-TargetPort [-CimSession <CimSession[]>] [-ConnectionType  
<ConnectionType[]>] [-PortAddress <String[]>] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

```
Get-TargetPort [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] [-UniqueId <String[]>] [<CommonParameters>]
```

```
Get-TargetPort [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] [-VirtualDisk <CimInstance>] [<CommonParameters>]
```

```
Get-TargetPort [-CimSession <CimSession[]>] [-TargetPorta l  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-TargetPort [-CimSession <CimSession[]>] [-MaskingSet  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-TargetPort [-CimSession <CimSession[]>] [-StorageSubSystem  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-TargetPort cmdlet returns a TargetPort object associated with a specific port address and connection type.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**ConnectionType**

Description :Specifies the type of the connection. The acceptable values for this parameter are:iSCSI, SAS, Fibre Channel, and so on.

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

Parameter :**FriendlyName**

Description :Specifies a friendly name for a disk. The friendly name may be defined by a user and is not guaranteed to be unique.

Required	false
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**MaskingSet**

Description :Accepts a MaskingSet object as input. The Masking Set CIM object is exposed by the Get-MaskingSet cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**PortAddress**

Description :Specifies a string containing the port address to query.

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

Parameter :**StorageSubSystem**

Description :Accepts a StorageSubsystem object as input. The Storage Subsystem CIM object is exposed by the Get-StorageSubsystem cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**TargetPortal**

Description :Accepts a TargetPortal object as input. The Target Portal CIM object is exposed by the Get-TargetPortal cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueid**

Description :Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

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

Parameter :**VirtualDisk**

Description :Accepts a VirtualDisk object as input. The Virtual Disk CIM object is exposed by the Get-VirtualDisk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Inputs

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.

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Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageSubsystem

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_TargetPortal

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Outputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_TargetPort

Cmdlet: Get-TargetPortal

Synops

Returns a TargetPortal object.

Syntax

```
Get-TargetPortal [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] [-UniqueId <String[]>] [<CommonParameters>]
```

```
Get-TargetPortal [-CimSession <CimSession[]>] [-TargetPort  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-TargetPortal [-CimSession <CimSession[]>] [-IPv6Address  
<String[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-TargetPortal [-CimSession <CimSession[]>] [-StorageSubsystem  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-TargetPortal [-CimSession <CimSession[]>] [-IPv4Address  
<String[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Get-TargetPortal cmdlet returns a TargetPortal object.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**IPv4Address**

Description :Represents a TCP/IP v4 address in xxx.xxx.xxx.xxx format.

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

Parameter :**IPv6Address**

Description :Represents a TCP/IP v6 address.

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

Parameter :**StorageSubsystem**

Description :Specifies a storage subsystem, as a CimInstance object. The cmdlet gets target portals exposed by the storage subsystem that you specify. To obtain a storage subsystem object, use the Get-StorageSubSystem cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**TargetPort**

Description :Accepts a TargetPort object as input. The Target Port CIM object is exposed by the Get-TargetPort cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**UniqueId**

Description :Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

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

Inputs

You can use the pipeline operator to pass a TargetPort object to the TargetPort parameter to get the TargetPortal object associated with the specified target port.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_TargetPort

Outputs

This cmdlet returns an object that represents the target portal.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_TargetPortal

Examples

EXAMPLE 1

This example gets all target portals.

```
PS C:\>Get-TargetPortal
```

EXAMPLE 2

This example gets the target portal with the IPv4 address of 192.168.0.1.

```
PS C:\>Get-TargetPortal -IPv4Address 192.168.0.1
```


Cmdlet: Get-VirtualDisk

Synops

Returns a list of VirtualDisk objects, across all storage pools, across all providers, or optionally a filtered subset based on provided criteria.

Syntax

```
Get-VirtualDisk [[-FriendlyName] <String[]>] [-CimSession  
<CimSession[]>] [-HealthStatus <HealthStatus[]>] [-IsSnapshot  
<Boolean[]>] [-OtherUsageDescription <String[]>]  
[-ThrottleLimit <Int32>] [-Usage <Usage[]>] [<CommonParameters>]
```

```
Get-VirtualDisk [-CimSession <CimSession[]>] [-Disk  
<CimInstance>] [-HealthStatus <HealthStatus[]>] [-IsSnapshot  
<Boolean[]>] [-OtherUsageDescription <String[]>]  
[-ThrottleLimit <Int32>] [-Usage <Usage[]>] [<CommonParameters>]
```

```
Get-VirtualDisk [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsSnapshot <Boolean[]>] [-  
OtherUsageDescription <String[]>] [-ThrottleLimit <Int32>]  
[-UniqueId <String[]>] [-Usage <Usage[]>] [<CommonParameters>]
```

```
Get-VirtualDisk [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsSnapshot <Boolean[]>] [-  
OtherUsageDescription <String[]>] [-TargetVirtualDisk  
<CimInstance>] [-ThrottleLimit <Int32>] [-Usage <Usage[]>]  
[<CommonParameters>]
```

```
Get-VirtualDisk [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsSnapshot <Boolean[]>] [-  
OtherUsageDescription <String[]>] [-SourceVirtualDisk  
<CimInstance>] [-ThrottleLimit <Int32>] [-Usage <Usage[]>]  
[<CommonParameters>]
```

```
Get-VirtualDisk [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsSnapshot <Boolean[]>] [-  
OtherUsageDescription <String[]>] [-TargetPort <CimInstance>]  
[-ThrottleLimit <Int32>] [-Usage <Usage[]>] [<CommonParameters>]
```

```
Get-VirtualDisk [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-InitiatorId <CimInstance>] [-IsSnapshot
```

```
<Boolean[]>] [-OtherUsageDescription <String[]>]  
[-ThrottleLimit <Int32>] [-Usage <Usage[]>] [<CommonParameters>]
```

```
Get-VirtualDisk [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsSnapshot <Boolean[]>] [-MaskingSet  
<CimInstance>] [-OtherUsageDescription <String[]>]  
[-ThrottleLimit <Int32>] [-Usage <Usage[]>] [<CommonParameters>]
```

```
Get-VirtualDisk [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-InitiatorPort <CimInstance>] [-IsSnapshot  
<Boolean[]>] [-OtherUsageDescription <String[]>]  
[-ThrottleLimit <Int32>] [-Usage <Usage[]>] [<CommonParameters>]
```

```
Get-VirtualDisk [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsSnapshot <Boolean[]>] [-  
OtherUsageDescription <String[]>] [-StorageJob <CimInstance>]  
[-ThrottleLimit <Int32>] [-Usage <Usage[]>] [<CommonParameters>]
```

```
Get-VirtualDisk [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsSnapshot <Boolean[]>] [-  
OtherUsageDescription <String[]>] [-StorageTier <CimInstance>]  
[-ThrottleLimit <Int32>] [-Usage <Usage[]>] [<CommonParameters>]
```

```
Get-VirtualDisk [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsSnapshot <Boolean[]>] [-NoRedundancy] [-  
OtherUsageDescription <String[]>] [-PhysicalDisk  
<CimInstance>] [-PhysicalRangeMax <UInt64>] [-PhysicalRangeMin  
<UInt64>] [-ThrottleLimit <Int32>] [-Usage <Usage[]>]  
[<CommonParameters>]
```

```
Get-VirtualDisk [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsSnapshot <Boolean[]>] [-  
OtherUsageDescription <String[]>] [-StoragePool <CimInstance>]  
[-ThrottleLimit <Int32>] [-Usage <Usage[]>] [<CommonParameters>]
```

```
Get-VirtualDisk [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsSnapshot <Boolean[]>] [-  
OtherUsageDescription <String[]>] [-StorageNode <CimInstance>]  
[-ThrottleLimit <Int32>] [-Usage <Usage[]>] [<CommonParameters>]
```

```
Get-VirtualDisk [-CimSession <CimSession[]>] [-HealthStatus  
<HealthStatus[]>] [-IsSnapshot <Boolean[]>] [-
```

```
OtherUsageDescription <String[]>] [-StorageSubSystem
<CimInstance>] [-ThrottleLimit <Int32>] [-Usage <Usage[]>]
[<CommonParameters>]
```

```
Get-VirtualDisk [-CimSession <CimSession[]>] [-HealthStatus
<HealthStatus[]>] [-IsSnapshot <Boolean[]>] [-Name <String[]>] [-
OtherUsageDescription <String[]>]
[-ThrottleLimit <Int32>] [-Usage <Usage[]>] [<CommonParameters>]
```

Description

The Get-VirtualDisk cmdlet returns a list of VirtualDisk objects, across all storage pools, across all providers, or optionally a filtered subset based on provided criteria.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Disk**

Description :Accepts a Disk object as input. The Disk CIM object is exposed by the Get-Disk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**FriendlyName**

Description :Specifies a friendly name for a disk. The friendly name may be defined by a user and is not guaranteed to be unique.

Required	false
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**HealthStatus**

Description :Specifies the status of an object and indicates if the object is Healthy or Warning Unhealthy.

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

Parameter :**InitiatorId**

Description :Accepts an InitiatorId object as input. The Initiator ID CIM object is exposed by the Get-InitiatorId cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**InitiatorPort**

Description :Accepts an InitiatorPort object as input. The Initiator Port CIM object is exposed by the Get-InitiatorPort cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**IsSnapshot**

Description :Specifies that the virtual disk is a snapshot of another virtual disk.

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

Parameter :**MaskingSet**

Description :Accepts a MaskingSet object as input. The Masking Set CIM object is exposed by the Get-MaskingSet cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies the name of an object or setting.

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

Parameter :**NoRedundancy**

Description :Indicates that this cmdlet gets virtual disks that have one remaining copy of data stored on the physical disk.

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

Parameter :**OtherUsageDescription**

Description :Specifies the usage of this object.

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

Parameter :**PhysicalDisk**

Description :Accepts a PhysicalDisk object as input. The Physical Disk CIM object is exposed by the Get-PhysicalDisk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**PhysicalRangeMax**

Description :This parameter is reserved for future use.

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

Parameter :**PhysicalRangeMin**

Description :This parameter is reserved for future use.

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

Parameter :**SourceVirtualDisk**

Description :Specifies a virtual disk as a CIMInstance object. The cmdlet gets the snapshot or clone virtual disks that were created from the virtual disk that you specify. To obtain a virtual disk object, use the Get-VirtualDisk cmdlet.

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

Parameter :**StorageJob**

Description :Specifies an outstanding storage job as a CIMInstance object. The cmdlet gets the virtual disks associated with the storage jobs that you specify. To obtain a virtual disk object, use the Get-StorageJob cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**StorageNode**

Description :Specifies a storage node as a CIMInstance object. The cmdlet gets the virtual disks that belong to the storage node that you specify. The virtual disks that belong to the storage node have read/write permissions on the node. To obtain a virtual disk object, use the Get-StorageNode cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**StoragePool**

Description :Accepts a StoragePool object as input. The Storage Pool CIM object is exposed by the Get-StoragePool cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**StorageSubSystem**

Description :Accepts a StorageSubsystem object as input. The Storage Subsystem CIM object is exposed by the Get-StorageSubsystem cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**StorageTier**

Description :Specifies a storage tier as a CIMInstance object. The cmdlet gets the virtual disks included in the storage tier that you specify. To obtain a virtual disk object, use the Get-StorageTier cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**TargetPort**

Description :Accepts a TargetPort object as input. The Target Port CIM object is exposed by the Get-TargetPort cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**TargetVirtualDisk**

Description :Specifies a virtual disk as a CIMInstance object. The cmdlet gets the virtual disk from which the snapshot or clone virtual disk that you specify were created. To obtain a virtual disk object, use the Get-VirtualDisk cmdlet.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**UniqueId**

Description :Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

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

Parameter :**Usage**

Description :Indicates the intended usage of the virtual disk.

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

Inputs

You can use the pipeline operator to pass an `MSFT_Disk` object to the `Disk` parameter.

You can use the pipeline operator to pass an `MSFT_InitiatorId` object to the `InitiatorId` parameter.

You can use the pipeline operator to pass an `MSFT_InitiatorPort` object to the `InitiatorPort` parameter.

You can use the pipeline operator to pass an `MSFT_MaskingSet` object to the `MaskingSet` parameter.

You can use the pipeline operator to pass an `MSFT_PhysicalDisk` object to the `PhysicalDisk` parameter.

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.

You can use the pipeline operator to pass an `MSFT_StorageSubsystem` object to the `StorageSubsystem` parameter.

You can use the pipeline operator to pass an `MSFT_StorageTier` object to the `StorageTier` parameter.

You can use the pipeline operator to pass an `MSFT_TargetPort` object to the `TargetPort` parameter.

You can use the pipeline operator to pass an `MSFT_TargetVirtualDisk` object to the `TargetVirtualDisk` parameter.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_Disk`

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_InitiatorId`

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_InitiatorPort`

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_MaskingSet`

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_PhysicalDisk`

SFT_PhysicalDisk

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M

SFT_StoragePool

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M

SFT_StorageSubsystem

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M

SFT_StorageTier

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M

SFT_TargetPort

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M

SFT_TargetVirtualDisk

Outputs

This cmdlet outputs an object that represents the specified virtual disk.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M

SFT_VirtualDisk

Examples

EXAMPLE 1

This example returns all VirtualDisk objects across all visible StoragePool objects, across all visible StorageProvider objects.

```
PS C:\> Get-VirtualDisk
```

EXAMPLE 2

This example lists only the virtual disks from the StoragePool object named SpacesPool.

```
PS C:\> $stpool = (Get-StoragePool -FriendlyName "SpacesPool")
PS C:\> Get-VirtualDisk -StoragePool $stpool
```

EXAMPLE 3

This example lists all virtual disks, across all pools, and all providers, which are not currently in a healthy state.

```
PS C:\> Get-VirtualDisk | Where-Object -FilterScript
{$_ .HealthStatus -Ne "Healthy"}
```

EXAMPLE 4

This example gets the partition and volume associated with a virtual disk. The command gets the virtual disk named VDisk01 and passes the virtual disk to the Get-Disk cmdlet by using the pipeline operator. The Get-Disk cmdlet gets the disk associated with the virtual disk and passes the disk to the Get-Partition by using the pipeline operator. The Get-Partition cmdlet gets the partition associated with the disk, and passes the partition to the Get-Volume cmdlet by using the pipeline operator. The Get-Volume cmdlet gets the volume associated with the partition.

```
PS C:\> Get-VirtualDisk -FriendlyName "VDisk01" | Get-Disk |  
Get-Partition | Get-Volume
```

Cmdlet: Get-VirtualDiskSupportedSize

Synops

Returns all sizes supported by a storage pool for virtual disk creation based on the specified resiliency setting name.

Syntax

```
Get-VirtualDiskSupportedSize [-StoragePoolFriendlyName]
<String[]> [-CimSession <CimSession[]>] [-FaultDomainAwareness
{PhysicalDisk | StorageEnclosure | StorageScaleUnit
| StorageChassis | StorageRack}] [-ResiliencySettingName
<String>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-VirtualDiskSupportedSize [-CimSession <CimSession[]>] [-
FaultDomainAwareness {PhysicalDisk | StorageEnclosure |
StorageScaleUnit | StorageChassis | StorageRack}]
[-ResiliencySettingName <String>] [-ThrottleLimit <Int32>]
[<CommonParameters>]
```

```
Get-VirtualDiskSupportedSize [-CimSession <CimSession[]>] [-
FaultDomainAwareness {PhysicalDisk | StorageEnclosure |
StorageScaleUnit | StorageChassis | StorageRack}]
[-ResiliencySettingName <String>] [-ThrottleLimit <Int32>] -
StoragePoolUniqueId <String[]> [<CommonParameters>]
```

```
Get-VirtualDiskSupportedSize [-CimSession <CimSession[]>] [-
FaultDomainAwareness {PhysicalDisk | StorageEnclosure |
StorageScaleUnit | StorageChassis | StorageRack}]
[-ResiliencySettingName <String>] [-ThrottleLimit <Int32>] -
StoragePoolName <String[]> [<CommonParameters>]
```

Description

The Get-VirtualDiskSupportedSize cmdlet returns all sizes supported by a storage pool for virtual disk creation based on the specified resiliency setting name.

Parameters

Parameter :**CimSession**

Description :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 or Get-

CimSession 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

Parameter :**FaultDomainAwareness**

Description :Specifies the desired level of fault tolerance. The acceptable values for this parameter are:

- PhysicalDisk
- StorageScaleUnit
- StorageChassis
- StorageEnclosure
- StorageRack

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

Parameter :**ResiliencySettingName**

Description :Specifies the name of the desired resiliency setting, for example Simple, Mirror, or Parity.

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

Parameter :**StoragePoolFriendlyName**

Description :Specifies an array of friendly names of storage pools. The cmdlet returns all sizes supported by the storage pools that you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :StoragePoolName

Description :Specifies an array of names of storage pools. The cmdlet returns all sizes supported by the storage pools that you specify.

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

Parameter :StoragePoolUniqueId

Description :Specifies an array of unique IDs of storage pools, as strings. The cmdlet returns all sizes supported by the storage pools that you specify.

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

Parameter :ThrottleLimit

Description :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

Inputs

You can use the pipeline operator to pass an MSFT_StoragePool object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StoragePool

Outputs

This cmdlet returns an object that lists the minimum and maximum size for creating a virtual disk in the specified pool with the specified resiliency setting.

Type : System.Management.Automation.PSCustomObject

Cmdlet: Get-Volume

Synops

Gets the specified Volume object, or all Volume objects if no filter is provided.

Syntax

```
Get-Volume [[-DriveLetter] <Char[]>] [-CimSession <CimSession[]>]  
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-Volume [-CimSession <CimSession[]>] [-Partition  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-Volume [-CimSession <CimSession[]>] [-ObjectId <String[]>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-Volume [-CimSession <CimSession[]>] [-FilePath <String>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-Volume [-CimSession <CimSession[]>] [-DiskImage  
<CimInstance>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-Volume [-CimSession <CimSession[]>] [-FileSystemLabel  
<String[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-Volume [-CimSession <CimSession[]>] [-Path <String[]>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-Volume [-FileShare  
<Microsoft.Management.Infrastructure.CimInstance>]  
[<CommonParameters>]
```

```
Get-Volume [-StorageFileServer  
<Microsoft.Management.Infrastructure.CimInstance>]  
[<CommonParameters>]
```

```
Get-Volume [-StorageJob <CimInstance>] [<CommonParameters>]
```

```
Get-Volume [-StorageNode  
<Microsoft.Management.Infrastructure.CimInstance>]  
[<CommonParameters>]
```

```
Get-Volume [-StoragePool  
<Microsoft.Management.Infrastructure.CimInstance>]  
[<CommonParameters>]
```

```
Get-Volume [-StorageSubSystem  
<Microsoft.Management.Infrastructure.CimInstance>]  
[<CommonParameters>]
```

```
Get-Volume [-UniqueId <System.String[]>] [<CommonParameters>]
```

Description

The Get-Volume cmdlet will return a Volume object or a set of Volume objects that match the specified criteria.

Note: Dynamic volumes are supported only by the following cmdlets:

Repair-Volume (chkdsk), Optimize-Volume (defrag), and Format-Volume (format) on basic disks and storage spaces.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DiskImage**

Description :Gets the volume associated with the specified DiskImage object. Enter a DiskImage CIM object, which is returned by the Get-DiskImage cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**DriveLetter**

Description :Gets the volume(s) with the specified drive letter(s). Separate multiple drive letters with commas.x

Required	false
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**FilePath**

Description :Specifies the full path of a file. The cmdlet gets the volume for the file path that you specify.

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

Parameter :**FileShare**

Description :Specifies file shares associated with the volumes to get. To obtain a FileShare object, use the Get-FileShare cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**FileSystemLabel**

Description :Gets the volume with the specified label.

Required	false
Position	named
Default value	none

Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**ObjectId**

Description :Gets the volume with the specified ObjectId.

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

Parameter :**Partition**

Description :Gets the volume associated with the specified Partition object. Enter a Partition CIM object, which is returned by the Get-Partition cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**Path**

Description :Gets the volume with the specified path.

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

Parameter :**StorageFileServer**

Description :Specifies a storage file server which hosts volumes to get. To obtain a StorageFileServer, use the Get-StorageFileServer cmdlet.

Required	false
Position	named

Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**StorageJob**

Description :Specifies a storage job associated with volumes to get. To obtain a StorageJob object, use the Get-StorageJob cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**StorageNode**

Description :Specifies a storage node object that hosts volumes to get. To obtain a StorageNode object, use the Get-StorageNode cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**StoragePool**

Description :Specifies a storage pool that contains volumes to get. To obtain StoragePool objects, use the Get-StoragePool cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**StorageSubSystem**

Description :Specifies the storage subsystem object from which to retrieve volumes. To obtain StorageSubsystem object, the Get-StorageSubSystem cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueld

Description :Specifies the ID of the volume to get.

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

Inputs

You can use the pipeline operator to pass a DiskImage object to the DiskImage parameter.

You can use the pipeline operator to pass a Partition object to the Partition parameter.

You can use the pipeline operator to pass a Volume object to the ObjectId parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MFT_DiskImage

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Partition
Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Volume

Outputs

This cmdlet returns one or more objects that represent the specified volume(s).

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Volume

Examples

Example 1: Get all volumes

This example returns all volumes on all partitions, on all disks.

```
PS C:\>Get-Volume
```

Example 2: Get the volume for a particular drive letter

This example gets the Volume object for drive letter C.

```
PS C:\>Get-Volume -DriveLetter C
```

DriveLetter	HealthStatus	FileSystemLabel	SizeRemaining	FileSystem	Size
C	Healthy		23.61 GB	NTFS	465.42 GB

Cmdlet: Get-VolumeCorruptionCount

Synops

Gets a count of the file system errors on the NTFS volume.

Syntax

```
Get-VolumeCorruptionCount [-DriveLetter] <Char[]> [-CimSession  
<CimSession[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-VolumeCorruptionCount [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] -ObjectId <String[]> [<CommonParameters>]
```

```
Get-VolumeCorruptionCount [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-VolumeCorruptionCount [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] -FileSystemLabel <String[]>  
[<CommonParameters>]
```

```
Get-VolumeCorruptionCount [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] -Path <String[]> [<CommonParameters>]
```

Description

The Get-VolumeCorruptionCount cmdlet gets a count of the file system errors on the NTFS volume. Chkdsk scans a volume for file system errors and stores the result as metadata. This cmdlet enumerates the list of errors on the volume and returns a count of the errors. If you specify the Verbose parameter, the cmdlet also generates a description for each error.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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
-----------------------------	-------

Parameter :DriveLetter

Description :Specifies an array of letters that identify one or more drives or volumes in the system. The cmdlet gets the volume corruption count for the drives or volumes you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :FileSystemLabel

Description :Specifies an array of file system labels. The cmdlet gets the volume corruption count for the file system labels you specify.

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

Parameter :ObjectId

Description :Specifies an array of IDs, as strings. The ID is not globally unique.

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

Parameter :Path

Description :Specifies an array of paths. The cmdlet gets the volume corruption count for the paths you specify.

Required	true
----------	------

Position	named
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Inputs

You can use the pipeline operator to pass a Volume object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Volume

Outputs

This cmdlet returns the number of errors on the volume.

Type : System.UInt32

Cmdlet: Get-VolumeScrubPolicy

Synops

Gets the status of the volume scrub policy.

Syntax

```
Get-VolumeScrubPolicy [-DriveLetter] <Char[]> [-CimSession  
<CimSession[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-VolumeScrubPolicy [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] -ObjectId <String[]> [<CommonParameters>]
```

```
Get-VolumeScrubPolicy [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Get-VolumeScrubPolicy [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] -FileSystemLabel <String[]>  
[<CommonParameters>]
```

```
Get-VolumeScrubPolicy [-CimSession <CimSession[]>] [-  
ThrottleLimit <Int32>] -Path <String[]> [<CommonParameters>]
```

Description

The Get-VolumeScrubPolicy cmdlet gets the status of the volume scrub policy.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DriveLetter**

Description :Specifies an array of letters that identify one or more drives or volumes in the system. The cmdlet gets the volume scrub policy for the drives or volumes you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**FileSystemLabel**

Description :Specifies an array of file system labels. The cmdlet gets the volume scrub policy for the file system labels you specify.

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

Parameter :**ObjectId**

Description :Specifies an array of IDs, as strings. The ID is not globally unique.

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

Parameter :**Path**

Description :Specifies an array of paths. The cmdlet gets the volume scrub policy for the paths you specify.

Required	true
Position	named
Default value	none
Accept pipeline input?	True (ByPropertyName)

Accept wildcard characters?	false
-----------------------------	-------

Parameter :**ThrottleLimit**

Description :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

Inputs

You can use the pipeline operator to pass a Volume object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Volume

Outputs

This cmdlet returns the whether the volume scrub policy is true or false.

Type : System.Boolean

Cmdlet: Grant-FileShareAccess

Synops

Grants access to a file share.

Syntax

```
Grant-FileShareAccess [-CimSession <CimSession[]>] [-FileServer  
<CimInstance>] [-PassThru] [-ThrottleLimit <Int32>] -AccessRight  
{Full | Modify | Read | Custom}  
-AccountName <String[]> -Name <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Grant-FileShareAccess [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -AccessRight {Full | Modify | Read |  
Custom} -AccountName <String[]> -UniqueId  
<String[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Grant-FileShareAccess [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -AccessRight {Full | Modify | Read |  
Custom} -AccountName <String[]> [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

Description

The Grant-FileShareAccess cmdlet grants access to a file share for the specified accounts by adding an Allow access control entry (ACE) to the share's security descriptor.

Parameters

Parameter :**AccessRight**

Description :Specifies the access rights for the accounts. The acceptable values for this parameter are:

- Full
- Modify
- Read
- Custom

Required	true
Position	named

Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**AccountName**

Description :Specifies an array of account names. This cmdlet grants file share access to the account names that you specify.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FileServer**

Description :Specifies a file server.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies an array of file share names. This cmdlet grants access to the file share names you specify. Because the file share name is not a worldwide unique name,

you can use a different parameter set to avoid confusion.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies an array of unique IDs of file shares.

Required	true
Position	named
Default value	none

Accept pipeline input?	true(ByPropertyName)
Accept wildcard characters?	false

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

Type :

Outputs

Type :

Cmdlet: Hide-VirtualDisk

Synops

Hides the virtual disk from the host when the Storage Management Provider in use does not support masking sets.

Syntax

```
Hide-VirtualDisk [-FriendlyName] <String[]> [-CimSession  
<CimSession[]>] [-InitiatorAddress <String>] [-PassThru] [-  
TargetPortAddresses <String[]>] [-ThrottleLimit  
<Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Hide-VirtualDisk [-CimSession <CimSession[]>] [-InitiatorAddress  
<String>] [-PassThru] [-TargetPortAddresses <String[]>] [-  
ThrottleLimit <Int32>] [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Hide-VirtualDisk [-CimSession <CimSession[]>] [-InitiatorAddress  
<String>] [-PassThru] [-TargetPortAddresses <String[]>] [-  
ThrottleLimit <Int32>] -Name <String[]>  
[-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Hide-VirtualDisk [-CimSession <CimSession[]>] [-InitiatorAddress  
<String>] [-PassThru] [-TargetPortAddresses <String[]>] [-  
ThrottleLimit <Int32>] -UniqueId <String[]>  
[-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Hide-VirtualDisk cmdlet hides the virtual disk from the host when the Storage Management Provider in use does not support masking sets. This is equivalent to masking.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies a friendly name for a virtual disk. The friendly name may be defined by a user and is not guaranteed to be unique.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**InitiatorAddress**

Description :Specifies the address for an initiator.

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

Parameter :**Name**

Description :Specifies the name of an object or setting.

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

Parameter :**PassThru**

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :**TargetPortAddresses**

Description :Specifies one or more target port addresses.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

Required	true
----------	------

Position	named
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Outputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Cmdlet: Initialize-Disk

Synops

Initializes a RAW disk for first time use, enabling the disk to be formatted and used to store data.

Syntax

```
Initialize-Disk [-Number] <UInt32[]> [-CimSession <CimSession[]>]  
[-PartitionStyle {Unknown | MBR | GPT}] [-PassThru] [-  
ThrottleLimit <Int32>] [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Initialize-Disk [-CimSession <CimSession[]>] [-FriendlyName  
<String[]>] [-PartitionStyle {Unknown | MBR | GPT}] [-PassThru]  
[-ThrottleLimit <Int32>] [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Initialize-Disk [-CimSession <CimSession[]>] [-PartitionStyle  
{Unknown | MBR | GPT}] [-PassThru] [-ThrottleLimit <Int32>] [-  
VirtualDisk <CimInstance>] [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Initialize-Disk [-CimSession <CimSession[]>] [-PartitionStyle  
{Unknown | MBR | GPT}] [-PassThru] [-ThrottleLimit <Int32>] -  
UniqueId <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Initialize-Disk [-CimSession <CimSession[]>] [-PartitionStyle  
{Unknown | MBR | GPT}] [-PassThru] [-ThrottleLimit <Int32>] [-  
Confirm] [-WhatIf] [<CommonParameters>]
```

```
Initialize-Disk [-CimSession <CimSession[]>] [-PartitionStyle  
{Unknown | MBR | GPT}] [-PassThru] [-ThrottleLimit <Int32>] -Path  
<String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

Description

The Initialize-Disk cmdlet initializes a Disk object with the RAW partition style to either the MBR or GPT partition styles. The default partition style is GPT. Disks must be initialized before they can be formatted and used to store data.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies the friendly name of the disk to initialize.

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

Parameter :**Number**

Description :Specifies the disk number of the disk to initialize.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**PartitionStyle**

Description :Specifies the type of the partition. The acceptable values for this parameter are: MBR or GPT. The disk must be set to read-write (IsReadOnly \$false) before this cmdlet will work.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :PassThru

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :Path

Description :Specifies the path of the disk to initialize.

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

Parameter :ThrottleLimit

Description :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

Parameter :**Uniqueld**

Description :Specifies the UniqueID of the disk to initialize

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

Parameter :**VirtualDisk**

Description :Specifies the VirtualDisk object for which you want to initialize the associated Disk object. The Virtual Disk CIM object is exposed by the Get-VirtualDisk cmdlet.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can pipe an MSFT_VirtualDisk object to the VirtualDisk parameter.

You can pipe an MSFT_Disk object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_VirtualDisk

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_Disk

Outputs

If you specify the Passthru parameter, this cmdlet returns an object representing the newly initialized disk.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_Disk

Examples

Example 1: Initialize a disk using default values

This example initializes the first disk in the computer (disk number 1), using the default values, which initializes the disk using the GPT partition style.

```
PS C:\>Initialize-Disk -Number 1
```

Example 2: Initialize a disk using the MBR partition style

This example initializes a disk using the MBR partition style.

```
PS C:\> Initialize-Disk -Number 1 -PartitionStyle MBR
```

Example 3: Initialize a virtual disk

This example uses the VirtualDisk parameter with the Get-VirtualDisk cmdlet to get a

virtual disk with the friendly name UserData, and initialize the Disk object associated with the virtual disk.

```
PS C:\>Initialize-Disk -VirtualDisk (Get-VirtualDisk -  
FriendlyName UserData)
```

Cmdlet: Format-Volume

Synops

Formats one or more existing volumes or a new volume on an existing partition.

Syntax

```
rmat-Volume [-DriveLetter] <Char[]> [-AllocationUnitSize
<UInt32>] [-CimSession <CimSession[]>] [-Compress] [-
DisableHeatGathering] [-FileSystem {FAT | FAT32 | exFAT |
NTFS | ReFS}] [-Force] [-Full] [-IsDAX] [-NewFileSystemLabel
<String>] [-SetIntegrityStreams <Boolean>] [-ShortFileNameSupport
<Boolean>] [-ThrottleLimit <Int32>]
[-UseLargeFRS] [-Confirm] [-WhatIf] [<CommonParameters>]
Format-Volume [-AllocationUnitSize <UInt32>] [-CimSession
<CimSession[]>] [-Compress] [-DisableHeatGathering] [-FileSystem
{FAT | FAT32 | exFAT | NTFS | ReFS}] [-Force]
[-Full] [-IsDAX] [-NewFileSystemLabel <String>] [-Partition
<CimInstance>] [-SetIntegrityStreams <Boolean>] [-
ShortFileNameSupport <Boolean>] [-ThrottleLimit <Int32>]
[-UseLargeFRS] [-Confirm] [-WhatIf] [<CommonParameters>]
Format-Volume [-AllocationUnitSize <UInt32>] [-CimSession
<CimSession[]>] [-Compress] [-DisableHeatGathering] [-FileSystem
{FAT | FAT32 | exFAT | NTFS | ReFS}] [-Force]
[-Full] [-IsDAX] [-NewFileSystemLabel <String>] [-
SetIntegrityStreams <Boolean>] [-ShortFileNameSupport <Boolean>]
[-ThrottleLimit <Int32>] [-UseLargeFRS] -FileSystemLabel
<String[]> [-Confirm] [-WhatIf] [<CommonParameters>]
Format-Volume [-AllocationUnitSize <UInt32>] [-CimSession
<CimSession[]>] [-Compress] [-DisableHeatGathering] [-FileSystem
{FAT | FAT32 | exFAT | NTFS | ReFS}] [-Force]
[-Full] [-IsDAX] [-NewFileSystemLabel <String>] [-
SetIntegrityStreams <Boolean>] [-ShortFileNameSupport <Boolean>]
[-ThrottleLimit <Int32>] [-UseLargeFRS] [-Confirm]
[-WhatIf] [<CommonParameters>]
Format-Volume [-AllocationUnitSize <UInt32>] [-CimSession
<CimSession[]>] [-Compress] [-DisableHeatGathering] [-FileSystem
{FAT | FAT32 | exFAT | NTFS | ReFS}] [-Force]
[-Full] [-IsDAX] [-NewFileSystemLabel <String>] [-
SetIntegrityStreams <Boolean>] [-ShortFileNameSupport <Boolean>]
[-ThrottleLimit <Int32>] [-UseLargeFRS] -Path <String[]>
[-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Format-Volume [-AllocationUnitSize <UInt32>] [-CimSession
<CimSession[]>] [-Compress] [-DisableHeatGathering] [-FileSystem
{FAT | FAT32 | exFAT | NTFS | ReFS}] [-Force]
[-Full] [-IsDAX] [-NewFileSystemLabel <String>] [-
SetIntegrityStreams <Boolean>] [-ShortFileNameSupport <Boolean>]
[-ThrottleLimit <Int32>] [-UseLargeFRS] -ObjectId
<String[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Format-Volume cmdlet formats one or more existing volumes, or a new volume on an existing partition. This cmdlet returns the object representing the volume that was just formatted, with all properties updated to reflect the format operation.

To create a new volume, use this cmdlet in conjunction with the Initialize-Disk and New-Partition cmdlets.

Parameters

Parameter :**AllocationUnitSize**

Description :Specifies the allocation unit size to use when formatting the volume.

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

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Compress**

Description :Enables compression on all files and folders created on the specified NTFS

volume.

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

Parameter :**DisableHeatGathering**

Description :Indicates that the cmdlet does not gather file activity on the specified tiered volume. You can override file placement based on the desired storage tier. This parameter is only valid for tiered volumes.

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

Parameter :**DriveLetter**

Description :Specifies the drive letter of the volume to format.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**FileSystem**

Description :Specifies the file system with which to format the volume. The acceptable values for this parameter are:NTFS, ReFS, exFAT, FAT32, and FAT.

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

Parameter :**FileSystemLabel**

Description :Specifies the label to use for the volume.

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

Parameter :**Force**

Description :Specifies the override switch.

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

Parameter :**Full**

Description :Performs a full format. A full format writes to every sector of the disk, takes much longer to perform than the default (quick) format, and is not recommended on storage that is thinly provisioned.

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

Parameter :**IsDAX**

Description :Formats a volume as a DirectAccess (DAX) volume.

Required	false
Position	named
Default value	none
Accept pipeline input?	false

Accept wildcard characters?	false
-----------------------------	-------

Parameter :**NewFileSystemLabel**

Description :Specifies a new label to use for the volume.

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

Parameter :**ObjectId**

Description :Specifies the ID of the volume to format.

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

Parameter :**Partition**

Description :Specifies the partition object on which to create the new volume. Enter a Partition CIM object, which is exposed by the Get-Partition and New-Partition cmdlets.

Required	false
Position	named
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**Path**

Description :Specifies the path of the volume to format.

Required	true
Position	named
Default value	none
Accept pipeline input?	True (ByPropertyName)

Accept wildcard characters?	false
-----------------------------	-------

Parameter :**SetIntegrityStreams**

Description :Enables integrity streams on the volume to be formatted.

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

Parameter :**ShortFileNameSupport**

Description :Specifies that support for short file names should be enabled on this volume.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**UseLargeFRS**

Description :Specifies that large File Record Segment (FRS) should be used.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can use the pipeline operator to pass an MSFT_Volume object to the InputObject parameter.

You can use the pipeline operator to pass an MSFT_Partition object to the Partition parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_Volume

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_Partition

Outputs

This cmdlet returns an object that represents the newly formatted volume.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Volume

Examples

Example 1: Quick format

This example performs a format of the D volume.

```
PS C:\>Format-Volume -DriveLetter D
```

Example 2: Full format using FAT32

This example performs a full format of the D volume using the FAT32 file system.

```
PS C:\>Format-Volume -DriveLetter C -FileSystem FAT32 -  
FullFormat -Force
```

Cmdlet: Mount-DiskImage

Synops

Mounts a previously created disk image (virtual hard disk or ISO), making it appear as a normal disk.

Syntax

```
Mount-DiskImage [-ImagePath] <String[]> [-Access {Unknown |
ReadWrite | ReadOnly}] [-CimSession <CimSession[]>] [-
NoDriveLetter] [-PassThru] [-StorageType {Unknown | ISO |
VHD | VHDX | VHDSet}] [-ThrottleLimit <Int32>] [-Confirm] [-
WhatIf] [<CommonParameters>]
```

```
Mount-DiskImage [-Access {Unknown | ReadWrite | ReadOnly}] [-
CimSession <CimSession[]>] [-NoDriveLetter] [-PassThru] [-
ThrottleLimit <Int32>] [-Confirm] [-WhatIf]
[<CommonParameters>]
```

Description

The Mount-DiskImage cmdlet mounts a previously created disk image (virtual hard disk or ISO), making it appear as a normal disk. This cmdlet requires the full path of the VHD or ISO file. If the file is already mounted, then the cmdlet will display the following error.

-- "The process cannot access the file because it is being used by another process."

To mount a VHD file, administrator privileges is required. Administrator privileges are not needed to mount an ISO file on Windows® 8. On Windows Server® 2012, only an administrator is allowed to mount or eject an ISO file.

To create and mount a VHD on a computer running Hyper-V, use the New-VHD and Mount-VHD cmdlets in the Hyper-V module (which is included in Windows 8 and Windows Server 2012 but not enabled by default). Alternatively, open Disk Management and then choose Create VHD from the Action menu.

Parameters

Parameter :**Access**

Description :Mounts the VHD file in read-only or read-write mode. If this parameter is not used or you specify the Unknown parameter value for the VHD file, the VHD file is mounted in read-write mode.

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

Parameter :CimSession

Description :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 or Get-CimSession 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

Parameter :ImagePath

Description :Specifies the path of the VHD or ISO file.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByValue, ByPropertyName)
Accept wildcard characters?	false

Parameter :NoDriveLetter

Description :Specifies that no drive letter should be assigned to the VHD or ISO file after mounting.

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

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StorageType**

Description :Specifies the storage type of a file: ISO, VHD, VHDx, or Unknown. If the StorageType parameter is not specified or the Unknown type is provided, then the storage type is determined by file extension.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can pipe a DiskImage object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_DiskImage

Outputs

If you specify the Passthru parameter, this cmdlet outputs an object that represents the disk image that you mounted.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_DiskImage

Cmdlet: New-FileShare

Synops

Creates an access point for a remote file share.

Syntax

```
New-FileShare [-CimSession <CimSession[]>] [-ContinuouslyAvailable <Boolean>] [-Description <String>] [-EncryptData <Boolean>] [-Protocol {NFS | SMB}] [-RelativePathName <String>] [-ThrottleLimit <Int32>] -FileServerFriendlyName <String[]> -Name <String> -SourceVolume <CimInstance> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
New-FileShare [-CimSession <CimSession[]>] [-ContinuouslyAvailable <Boolean>] [-Description <String>] [-EncryptData <Boolean>] [-Protocol {NFS | SMB}] [-RelativePathName <String>] [-ThrottleLimit <Int32>] -FileServerUniqueId <String[]> -Name <String> -SourceVolume <CimInstance> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
New-FileShare [-CimSession <CimSession[]>] [-ContinuouslyAvailable <Boolean>] [-Description <String>] [-EncryptData <Boolean>] [-Protocol {NFS | SMB}] [-RelativePathName <String>] [-ThrottleLimit <Int32>] -Name <String> -SourceVolume <CimInstance> [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The New-FileShare cmdlet creates an access point for a remote file share.

The file share that this cmdlet creates represents a Server Message Block (SMB) or Network File System (NFS) share, which is on top of a MSFT_Volume.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**ContinuouslyAvailable**

Description :Indicates whether the file share is continuously available.

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

Parameter :**Description**

Description :Specifies a user-friendly description of the file share.

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

Parameter :**EncryptData**

Description :Indicates whether to encrypt the data on transport.

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

Parameter :**FileServerFriendlyName**

Description :Specifies the name of the file server to host the file share.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**FileServerUniqueld**

Description :Specifies the unique ID of the file server.

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

Parameter :**Name**

Description :Specifies the name of the file share to create.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**Protocol**

Description :Specifies the file sharing protocol. The acceptable values for this parameter are:

-- NFS

-- SMB

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

Parameter :**RelativePathName**

Description :Specifies the relative path. Specify this parameter if the path for the new file share is not the root of the volume.

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

Parameter :**SourceVolume**

Description :Specifies the source volume.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
----------	-------

Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

Type :

Outputs

Type : MSFT_FileShare

Cmdlet: New-MaskingSet

Synops

Creates a new masking set.

Syntax

```
New-MaskingSet [-StorageSubSystemFriendlyName] <String[]> [-CimSession <CimSession[]>] [-DeviceAccesses <DeviceAccess[]>] [-DeviceNumbers <String[]>] [-FriendlyName <String>] [-HostType {Unknown | Other | Standard | Solaris | HPUX | OpenVMS | Tru64 | Netware | Sequent | AIX | DGUX | Dynix | Irix | CiscoISCSISStorageRouter | Linux | MicrosoftWindows | OS400 | TRESPASS | HIUX | VMwareESXi | MicrosoftWindowsServer2008 | MicrosoftWindowsServer2003}] [-InitiatorAddresses <String[]>] [-TargetPortAddresses <String[]>] [-ThrottleLimit <Int32>] [-VirtualDiskNames <String[]>] [<CommonParameters>]
```

```
New-MaskingSet [-CimSession <CimSession[]>] [-DeviceAccesses <DeviceAccess[]>] [-DeviceNumbers <String[]>] [-FriendlyName <String>] [-HostType {Unknown | Other | Standard | Solaris | HPUX | OpenVMS | Tru64 | Netware | Sequent | AIX | DGUX | Dynix | Irix | CiscoISCSISStorageRouter | Linux | MicrosoftWindows | OS400 | TRESPASS | HIUX | VMwareESXi | MicrosoftWindowsServer2008 | MicrosoftWindowsServer2003}] [-InitiatorAddresses <String[]>] [-TargetPortAddresses <String[]>] [-ThrottleLimit <Int32>] [-VirtualDiskNames <String[]>] -StorageSubSystemName <String[]> [<CommonParameters>]
```

```
New-MaskingSet [-CimSession <CimSession[]>] [-DeviceAccesses <DeviceAccess[]>] [-DeviceNumbers <String[]>] [-FriendlyName <String>] [-HostType {Unknown | Other | Standard | Solaris | HPUX | OpenVMS | Tru64 | Netware | Sequent | AIX | DGUX | Dynix | Irix | CiscoISCSISStorageRouter | Linux | MicrosoftWindows | OS400 | TRESPASS | HIUX | VMwareESXi | MicrosoftWindowsServer2008 | MicrosoftWindowsServer2003}] [-InitiatorAddresses <String[]>] [-TargetPortAddresses <String[]>] [-ThrottleLimit <Int32>] [-VirtualDiskNames <String[]>] -StorageSubSystemUniqueId <String[]> [<CommonParameters>]
```

```
New-MaskingSet [-CimSession <CimSession[]>] [-DeviceAccesses
<DeviceAccess[]>] [-DeviceNumbers <String[]>] [-FriendlyName
<String>] [-HostType {Unknown | Other | Standard
| Solaris | HPUNIX | OpenVMS | Tru64 | Netware | Sequent | AIX |
DGUX | Dynix | Irix | CiscoISCSISStorageRouter | Linux |
MicrosoftWindows | OS400 | TRESPASS | HIUX |
VMwareESXi | MicrosoftWindowsServer2008 |
MicrosoftWindowsServer2003}] [-InitiatorAddresses <String[]>] [-
TargetPortAddresses <String[]>] [-ThrottleLimit <Int32>]
[-VirtualDiskNames <String[]>] [<CommonParameters>]
```

Description

The New-MaskingSet cmdlet creates a new masking set. Masking sets allow management of groups of TargetPort, VirtualDisk, and InitiatorID objects to manage access to virtual disks, either for individual computers or multiple computers in the case of a Failover Cluster configuration. Once a masking set is created, adding or removing a virtual disk grants or removes access to all resources in the masking set. Adding or removing initiator addresses can show or hide the virtual disks in this masking set to hosts.

ps_storage_spacesubsystem_not_remark

Parameters

Parameter :CimSession

Description :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 or Get-CimSession 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

Parameter :DeviceAccesses

Description :Specifies the way in which initiators can access the virtual disk(s) that are part of this masking set. You must specify a DeviceAccesses value for each virtual disk specified by the VirtualDiskNames parameter. Allowed values are NoAccess, ReadOnly, ReadWrite, and Unknown.

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

Parameter :**DeviceNumbers**

Description :Specifies the device numbers for one or more virtual disks. Some storage providers do not use device numbers.

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

Parameter :**FriendlyName**

Description :Specifies the friendly name for the new masking set.

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

Parameter :**HostType**

Description :Specifies the host operating system or other host environmental factors that may influence the behavior that the storage system should have when showing a virtual disk to an initiator.

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

Parameter :**InitiatorAddresses**

Description :Specifies the initiator addresses.

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

Parameter :**StorageSubSystemFriendlyName**

Description :Specifies the friendly name of the storage subsystem.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**StorageSubSystemName**

Description :Specifies the name of the storage subsystem provided by the Storage Management.

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

Parameter :**StorageSubSystemUniqueId**

Description :Specifies the UniqueID of the storage subsystem to use.

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

Parameter :**TargetPortAddresses**

Description :Specifies one or more target port addresses.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**VirtualDiskNames**

Description :Specifies one or more virtual disk names to include in the masking set.

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

Inputs

You can pipe a StorageSubsystem object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/Msft_StorageSubsystem

Outputs

This cmdlet outputs an object representing the newly created masking set.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Cmdlet: New-Partition

Synops

Creates a new partition on an existing Disk object.

Syntax

```
New-Partition [-DiskNumber] <UInt32[]> [-Alignment <UInt32>] [-AssignDriveLetter] [-CimSession <CimSession[]>] [-DriveLetter <Char>] [-GptType <String>] [-IsActive] [-IsHidden] [-MbrType {FAT12 | FAT16 | Extended | Huge | IFS | FAT32}] [-Offset <UInt64>] [-Size <UInt64>] [-ThrottleLimit <Int32>] [-UseMaximumSize] [<CommonParameters>]
```

```
New-Partition [-Alignment <UInt32>] [-AssignDriveLetter] [-CimSession <CimSession[]>] [-DriveLetter <Char>] [-GptType <String>] [-IsActive] [-IsHidden] [-MbrType {FAT12 | FAT16 | Extended | Huge | IFS | FAT32}] [-Offset <UInt64>] [-Size <UInt64>] [-ThrottleLimit <Int32>] [-UseMaximumSize] -DiskId <String[]> [<CommonParameters>]
```

```
New-Partition [-Alignment <UInt32>] [-AssignDriveLetter] [-CimSession <CimSession[]>] [-DriveLetter <Char>] [-GptType <String>] [-IsActive] [-IsHidden] [-MbrType {FAT12 | FAT16 | Extended | Huge | IFS | FAT32}] [-Offset <UInt64>] [-Size <UInt64>] [-ThrottleLimit <Int32>] [-UseMaximumSize] [<CommonParameters>]
```

```
New-Partition [-Alignment <UInt32>] [-AssignDriveLetter] [-CimSession <CimSession[]>] [-DriveLetter <Char>] [-GptType <String>] [-IsActive] [-IsHidden] [-MbrType {FAT12 | FAT16 | Extended | Huge | IFS | FAT32}] [-Offset <UInt64>] [-Size <UInt64>] [-ThrottleLimit <Int32>] [-UseMaximumSize] -DiskPath <String[]> [<CommonParameters>]
```

Description

The New-Partition cmdlet creates a partition on a specified Disk object. Note: This cmdlet does not support creating dynamic volumes.

Parameters

Parameter :**Alignment**

Description :Specifies the alignment boundary in bytes.

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

Parameter :**AssignDriveLetter**

Description :Assigns a drive letter to the new partition.

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

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DiskId**

Description :Specifies the ID of the disk on which to create the partition.

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

Parameter :**DiskNumber**

Description :Specifies an array of disk numbers.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**DiskPath**

Description :Specifies the path of the disk on which to create the partition.

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

Parameter :**DriveLetter**

Description :Specifies the specific drive letter to assign to the new partition.

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

Parameter :**GptType**

Description :Specifies the type of GPT partition to create (by GUID). By default, the New-Partition cmdlet creates a basic GPT data partition.

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

Parameter :**IsActive**

Description :Specifies that the object is marked active.

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

Parameter :**IsHidden**

Description :Creates a hidden partition.

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

Parameter :**MbrType**

Description :Specifies the type of MBR partition to create. Valid types are: Extended, FAT12, FAT16, FAT32, Huge, and IFS.

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

Parameter :**Offset**

Description :Specifies the starting offset, in bytes.

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

Parameter :Size

Description :Specifies the size of the partition to create. If not specified, then the units will default to Bytes. The acceptable value for this parameter is a positive number followed by the one of the following unit values: Bytes, KB, MB, GB, or TB.

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

Parameter :ThrottleLimit

Description :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

Parameter :UseMaximumSize

Description :Creates the largest possible partition on the specified disk.

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

Inputs

You can pipe a Disk object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Disk

Outputs

This cmdlet outputs an object that represents the newly created partition.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Partition

Examples

Example 1: Create a new partition on disk 1

This example creates a new partition on disk 1, using the maximum available space, and automatically assigning a drive letter.

```
PS C:\> New-Partition -DiskNumber 1 -UseMaximumSize -  
AssignDriveLetter
```

Example 2: Get all RAW disks, initialize the disks, partition, and format them

This example uses five cmdlets and the pipeline to get all disks, filter them for only RAW, unpartitioned disks, initialize the disks, partition the disks, and then format them.

```
This line gets all disk objects and then pipes the objects to  
the next command.  
PS C:\>Get-Disk |  
  
This line selects only objects where the PartitionStyle  
property value equals "RAW", and then pipes the objects to the  
next command.  
PS C:\>Where-Object PartitionStyle -Eq "RAW" |  
  
This line initializes all Disk objects in the pipeline and  
then pipes the objects to the next cmdlet.  
PS C:\>Initialize-Disk -PassThru |  
  
This line creates a maximum sized partition on each  
initialized Disk object, assigns a drive letter to the  
partitions, and then pipes the objects to the next cmdlet.  
PS C:\>New-Partition -AssignDriveLetter -UseMaximumSize |  
  
This line formats all newly partitioned disks.  
PS C:\>Format-Volume
```

Cmdlet: New-StorageFileServer

Synops

Creates a storage file server.

Syntax

```
New-StorageFileServer [-StorageSubSystemFriendlyName] <String[]>  
[-CimSession <CimSession[]>] [-FriendlyName <String>] [-  
ThrottleLimit <Int32>] -HostNames <String[]>  
-Protocols <FileSharingProtocol[]> [<CommonParameters>]
```

```
New-StorageFileServer [-CimSession <CimSession[]>] [-FriendlyName  
<String>] [-ThrottleLimit <Int32>] -HostNames <String[]> -  
Protocols <FileSharingProtocol[]>  
-StorageSubSystemUniqueId <String[]> [<CommonParameters>]
```

```
New-StorageFileServer [-CimSession <CimSession[]>] [-FriendlyName  
<String>] [-ThrottleLimit <Int32>] -HostNames <String[]> -  
Protocols <FileSharingProtocol[]>  
-StorageSubSystemName <String[]> [<CommonParameters>]
```

```
New-StorageFileServer [-CimSession <CimSession[]>] [-FriendlyName  
<String>] [-ThrottleLimit <Int32>] -HostNames <String[]> -  
Protocols <FileSharingProtocol[]>  
[<CommonParameters>]
```

Description

The New-StorageFileServer cmdlet creates a file server for a specified Storage subsystem exposed by a Storage provider. For Windows network-attached storage (NAS), this cmdlet enables the necessary roles and features to implement a scale-out file server instance on a cluster.

Not all systems support file servers other than the default.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies a friendly name for the file server. A friendly name is not required to be unique.

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

Parameter :**HostNames**

Description :Specifies an array of names of access points for the file server.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**Protocols**

Description :Specifies the file sharing protocol. Valid values are: SMB, NFS, or both.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StorageSubSystemFriendlyName**

Description :Specifies the friendly name of the Storage subsystem to host the file server.

Required	true
Position	1
Default value	none
Accept pipeline input?	true (ByPropertyName)
Accept wildcard characters?	false

Parameter :**StorageSubSystemName**

Description :Specifies the name of the Storage subsystem to host the file server.

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

Parameter :**StorageSubSystemUniqueId**

Description :Specifies the unique ID of the Storage subsystem to host the file server.

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

Parameter :**ThrottleLimit**

Description :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

Inputs

Type :

Outputs

Type : Microsoft.Management.Infrastructure.CimInstance#MSFT_StorageFileServer

Cmdlet: New-StoragePool

Synops

Creates a new storage pool using a group of physical disks.

Syntax

```
New-StoragePool [-StorageSubSystemFriendlyName] <String[]> [-AutoWriteCacheSize <Boolean>] [-CimSession <CimSession[]>] [-EnclosureAwareDefault <Boolean>] [-FaultDomainAwarenessDefault {PhysicalDisk | StorageEnclosure | StorageScaleUnit | StorageChassis | StorageRack}] [-LogicalSectorSizeDefault <UInt64>] [-MediaTypeDefault {HDD | SSD | SCM}] [-OtherUsageDescription <String>] [-ProvisioningTypeDefault {Unknown | Thin | Fixed}] [-ResiliencySettingNameDefault <String>] [-ThrottleLimit <Int32>] [-Usage {Other | Unrestricted | ReservedForComputerSystem | ReservedAsDeltaReplicaContainer | ReservedForMigrationServices | ReservedForLocalReplicationServices | ReservedForRemoteReplicationServices | ReservedForSparing}] [-WriteCacheSizeDefault <UInt64>] -FriendlyName <String> -PhysicalDisks <CimInstance[]> [<CommonParameters>]
```

```
New-StoragePool [-AutoWriteCacheSize <Boolean>] [-CimSession <CimSession[]>] [-EnclosureAwareDefault <Boolean>] [-FaultDomainAwarenessDefault {PhysicalDisk | StorageEnclosure | StorageScaleUnit | StorageChassis | StorageRack}] [-LogicalSectorSizeDefault <UInt64>] [-MediaTypeDefault {HDD | SSD | SCM}] [-OtherUsageDescription <String>] [-ProvisioningTypeDefault {Unknown | Thin | Fixed}] [-ResiliencySettingNameDefault <String>] [-ThrottleLimit <Int32>] [-Usage {Other | Unrestricted | ReservedForComputerSystem | ReservedAsDeltaReplicaContainer | ReservedForMigrationServices | ReservedForLocalReplicationServices | ReservedForRemoteReplicationServices | ReservedForSparing}] [-WriteCacheSizeDefault <UInt64>] -FriendlyName <String> -PhysicalDisks <CimInstance[]> -StorageSubSystemName <String[]> [<CommonParameters>]
```

```
New-StoragePool [-AutoWriteCacheSize <Boolean>] [-CimSession <CimSession[]>] [-EnclosureAwareDefault <Boolean>] [-
```

```
FaultDomainAwarenessDefault {PhysicalDisk |
StorageEnclosure | StorageScaleUnit | StorageChassis |
StorageRack}} [-LogicalSectorSizeDefault <UInt64>] [-
MediaTypeDefault {HDD | SSD | SCM}] [-OtherUsageDescription
<String>] [-ProvisioningTypeDefault {Unknown | Thin | Fixed}] [-
ResiliencySettingNameDefault <String>] [-ThrottleLimit <Int32>]
[-Usage {Other | Unrestricted |
ReservedForComputerSystem | ReservedAsDeltaReplicaContainer |
ReservedForMigrationServices |
ReservedForLocalReplicationServices |
ReservedForRemoteReplicationServices |
ReservedForSparing}] [-WriteCacheSizeDefault <UInt64>] -
FriendlyName <String> -PhysicalDisks <CimInstance[]>
[<CommonParameters>]
```

```
New-StoragePool [-AutoWriteCacheSize <Boolean>] [-CimSession
<CimSession[]>] [-EnclosureAwareDefault <Boolean>] [-
FaultDomainAwarenessDefault {PhysicalDisk |
StorageEnclosure | StorageScaleUnit | StorageChassis |
StorageRack}} [-LogicalSectorSizeDefault <UInt64>] [-
MediaTypeDefault {HDD | SSD | SCM}] [-OtherUsageDescription
<String>] [-ProvisioningTypeDefault {Unknown | Thin | Fixed}] [-
ResiliencySettingNameDefault <String>] [-ThrottleLimit <Int32>]
[-Usage {Other | Unrestricted |
ReservedForComputerSystem | ReservedAsDeltaReplicaContainer |
ReservedForMigrationServices |
ReservedForLocalReplicationServices |
ReservedForRemoteReplicationServices |
ReservedForSparing}] [-WriteCacheSizeDefault <UInt64>] -
FriendlyName <String> -PhysicalDisks <CimInstance[]> -
StorageSubSystemUniqueId<String[]> [<CommonParameters>]
```

Description

The New-StoragePool cmdlet creates a new storage pool using a group of physical disks exposed by a specific storage subsystem.

Parameters

Parameter :**AutoWriteCacheSize**

Description :Indicates whether to set the size of the write-back cache to 1 GB for all types of storage spaces, which include simple, mirror, and parity, to create from the pool. If the number or size of the solid-state drives (SSDs) or journal disks in the storage pool is not

sufficient and you specify a value of \$True for this parameter, the cmdlet sets the write-back cache size to 0 for simple and mirror spaces, and to 32 MB for parity spaces.

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

Parameter :CimSession

Description :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 or Get-CimSession 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

Parameter :EnclosureAwareDefault

Description :Specifies the default allocation policy for virtual disks created in an enclosure-aware storage pool. For example, an enclosure-aware subsystem could balance each data copy of the virtual disk across multiple physical enclosures such that each enclosure contains a full data copy of the virtual disk.

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

Parameter :FaultDomainAwarenessDefault

Description :Specifies the default fault domain for new virtual disks created in this storage pool. The acceptable values for this parameter are:

- PhysicalDisk
- StorageScaleUnit

- StorageChassis
- StorageEnclosure
- StorageRack

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

Parameter :**FriendlyName**

Description :Specifies a friendly name for the storage pool to be created. The friendly name may be defined by a user and is not guaranteed to be unique.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**LogicalSectorSizeDefault**

Description :Specifies the default logical sector size to use for virtual disks created in this pool. Valid logical sector size values (in bytes) for virtual disks created by using the Windows Storage subsystem are 512 and 4096.

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

Parameter :**MediaTypeDefault**

Description :

Required	false
Position	named
Default value	none

Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**OtherUsageDescription**

Description :Specifies the usage description for the storage pool.

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

Parameter :**PhysicalDisks**

Description :Accepts one or more PhysicalDisk objects as input. The Physical Disk CIM objects represent the physical disks to be added to the storage pool.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ProvisioningTypeDefault**

Description :Specifies the default type of provisioning for virtual disks created in this pool. The acceptable values for this parameter are: Unknown, Fixed or Thin.

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

Parameter :**ResiliencySettingNameDefault**

Description :Specifies the default resiliency setting name for virtual disks created in this pool.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StorageSubSystemFriendlyName**

Description :Specifies the friendly name of the storage subsystem on which you want to create the storage pool.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**StorageSubSystemName**

Description :Specifies the name of the storage subsystem (provided by the Storage Management) on which you want to create the storage pool.

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

Parameter :**StorageSubSystemUniqueId**

Description :Specifies the ID of the storage subsystem on which you want to create the storage pool

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Usage**

Description :Specifies the usage setting for the storage pool. The acceptable values for this parameter are:Other, ReservedAsDeltaReplicaContainer, ReservedForComputerSystem, ReservedForLocalReplicationServices, ReservedForMigrationServices, ReservedForRemoteReplicationServices, ReservedForSparing, and Unrestricted.

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

Parameter :**WriteCacheSizeDefault**

Description :Specifies the default write-back cache size for virtual disks in the storage pool.

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

Inputs

You can use the pipeline operator to pass one or more MSFT_PhysicalDisk objects to the PhysicalDisks parameter.

You can use the pipeline operator to pass an MSFT_StorageSubsystem object to the

InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_PhysicalDisk

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageSubsystem

Outputs

This cmdlet returns an object representing the newly created storage pool.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StoragePool

Examples

Example 1: Create a new storage pool using Storage Spaces

This example creates a new storage pool named CompanyData using the Storage Spaces subsystem, using the minimum parameters, and assuming that there are no other storage subsystems attached to the computer that have available disks.

This line uses the Get-PhysicalDisk cmdlet to get all PhysicalDisk objects that are not yet in a (concrete) storage pool, and assigns the array of objects to the \$PhysicalDisks variable.

```
PS C:\> $PhysicalDisks = (Get-PhysicalDisk -CanPool $True)
```

This line creates a new storage pool using the \$PhysicalDisks variable to specify the disks to include from the WindowsStorage subsystem (specified with a wildcard * to remove the need to modify the friendly name for different computers).

```
PS C:\> New-StoragePool -FriendlyName CompanyData -  
StorageSubsystemFriendlyName "Windows Storage*" -PhysicalDisks  
$PhysicalDisks
```

Example 2: Create a new pool and set defaults for virtual disks

This example creates a new storage pool named CompanyData using the Windows Storage subsystem and sets default values for virtual disk creation.

```
PS C:\> $PhysicalDisks = (Get-PhysicalDisk -CanPool $True)  
PS C:\> New-StoragePool -FriendlyName CompanyData -  
StorageSubsystemFriendlyName "Windows Storage*" -PhysicalDisks  
$PhysicalDisks -ResiliencySettingNameDefault Mirror -  
ProvisioningTypeDefault Thin -Verbose
```

Example 3: Create a new storage pool, virtual disk, partition, and volume

This example creates a new storage pool, and then makes use of the pipeline to create a new virtual disk in the pool, initialize the disk, create a new partition on the disk, and then format the new partition (volume). Alternatively you can use the New-Volume cmdlet to achieve a similar result in a single command.

The first line (`$PhysicalDisks = ...`) gets the storage subsystem object for the Windows Storage subsystem, passes it to the `Get-PhysicalDisk` cmdlet, which then gets the physical disks in the specified subsystem that are available to add to a storage pool, and assigns these disks to the `$PhysicalDisks` variable. The second line of the command has five parts, connected by the pipeline (`|`). The first part (`New-StoragePool...`) creates a new storage pool using the physical disks in the `$PhysicalDisks` variable, and then passes the new storage pool down the pipeline. All of the following commands are logically part of one command and should be entered as such. The second part (`New-VirtualDisk...`) creates a new virtual disk on the passed in storage pool and then passes the new virtual disk down the pipeline. The third part (`Initialize-Disk...`) initializes the disk that was passed in, and then passes the disk down the pipeline. The fourth part (`New-Partition...`) creates a new partition on the disk that was passed in, assigns it the next available drive letter, and then passes the partition down the pipeline. The final part of the command (`Format-Volume`) formats the partition that was passed in.

```
PS C:\> $PhysicalDisks = Get-StorageSubSystem -FriendlyName  
"Windows Storage*" | Get-PhysicalDisk -CanPool $True  
PS C:\> New-StoragePool -FriendlyName "CompanyData" -  
StorageSubsystemFriendlyName "Windows Storage*" -PhysicalDisks  
$PhysicalDisks | New-VirtualDisk -FriendlyName "UserData" -Size  
100GB -ProvisioningType Thin | Initialize-Disk -PassThru | New-  
Partition -AssignDriveLetter -UseMaximumSize | Format-Volume
```

Cmdlet: New-StorageSubsystemVirtualDisk

Synops

Allows the creation of a VirtualDisk object on a storage subsystem that does not support creation of storage pools.

Syntax

```
New-StorageSubsystemVirtualDisk [-StorageSubSystemFriendlyName]
<String[]> [-CimSession <CimSession[]>] [-FaultDomainAwareness
{PhysicalDisk | StorageEnclosure |
StorageScaleUnit | StorageChassis | StorageRack}] [-FriendlyName
<String>] [-Interleave <UInt64>] [-IsEnclosureAware] [-
NumberOfColumns <UInt16>] [-NumberOfDataCopies
<UInt16>] [-OtherUsageDescription <String>] [-ParityLayout
{NonRotatedParity | RotatedParity}] [-PhysicalDiskRedundancy
<UInt16>] [-ProvisioningType {Unknown | Thin |
Fixed}] [-RequestNoSinglePointOfFailure <Boolean>] [-Size
<UInt64>] [-ThrottleLimit <Int32>] [-Usage {Other | Unrestricted
| ReservedForComputerSystem |
ReservedForReplicationServices | ReservedForMigrationServices |
LocalReplicaSource | RemoteReplicaSource | LocalReplicaTarget |
RemoteReplicaTarget |
LocalReplicaSourceOrTarget | RemoteReplicaSourceOrTarget |
DeltaReplicaTarget | ElementComponent | ReservedAsPoolContributer
| CompositeVolumeMember |
CompositeVirtualDiskMember | ReservedForSparing}] [-
UseMaximumSize] [<CommonParameters>]
```

```
New-StorageSubsystemVirtualDisk [-CimSession <CimSession[]>] [-
FaultDomainAwareness {PhysicalDisk | StorageEnclosure |
StorageScaleUnit | StorageChassis | StorageRack}]
[-FriendlyName <String>] [-Interleave <UInt64>] [-
IsEnclosureAware] [-NumberOfColumns <UInt16>] [-
NumberOfDataCopies <UInt16>] [-OtherUsageDescription <String>]
[-ParityLayout {NonRotatedParity | RotatedParity}] [-
PhysicalDiskRedundancy <UInt16>] [-ProvisioningType {Unknown |
Thin | Fixed}] [-RequestNoSinglePointOfFailure
<Boolean>] [-Size <UInt64>] [-ThrottleLimit <Int32>] [-Usage
{Other | Unrestricted | ReservedForComputerSystem |
ReservedForReplicationServices |
ReservedForMigrationServices | LocalReplicaSource |
```

```

RemoteReplicaSource | LocalReplicaTarget | RemoteReplicaTarget |
LocalReplicaSourceOrTarget |
RemoteReplicaSourceOrTarget | DeltaReplicaTarget |
ElementComponent | ReservedAsPoolContributer |
CompositeVolumeMember | CompositeVirtualDiskMember |
ReservedForSparing}}
[-UseMaximumSize] [<CommonParameters>]

```

```

New-StorageSubsystemVirtualDisk [-CimSession <CimSession[]>] [-
FaultDomainAwareness {PhysicalDisk | StorageEnclosure |
StorageScaleUnit | StorageChassis | StorageRack}]
[-FriendlyName <String>] [-Interleave <UInt64>] [-
IsEnclosureAware] [-NumberOfColumns <UInt16>] [-
NumberOfDataCopies <UInt16>] [-OtherUsageDescription <String>]
[-ParityLayout {NonRotatedParity | RotatedParity}] [-
PhysicalDiskRedundancy <UInt16>] [-ProvisioningType {Unknown |
Thin | Fixed}] [-RequestNoSinglePointOfFailure
<Boolean>] [-Size <UInt64>] [-ThrottleLimit <Int32>] [-Usage
{Other | Unrestricted | ReservedForComputerSystem |
ReservedForReplicationServices |
ReservedForMigrationServices | LocalReplicaSource |
RemoteReplicaSource | LocalReplicaTarget | RemoteReplicaTarget |
LocalReplicaSourceOrTarget |
RemoteReplicaSourceOrTarget | DeltaReplicaTarget |
ElementComponent | ReservedAsPoolContributer |
CompositeVolumeMember | CompositeVirtualDiskMember |
ReservedForSparing}}]
[-UseMaximumSize] -StorageSubSystemName <String[]>
[<CommonParameters>]

```

```

New-StorageSubsystemVirtualDisk [-CimSession <CimSession[]>] [-
FaultDomainAwareness {PhysicalDisk | StorageEnclosure |
StorageScaleUnit | StorageChassis | StorageRack}]
[-FriendlyName <String>] [-Interleave <UInt64>] [-
IsEnclosureAware] [-NumberOfColumns <UInt16>] [-
NumberOfDataCopies <UInt16>] [-OtherUsageDescription <String>]
[-ParityLayout {NonRotatedParity | RotatedParity}] [-
PhysicalDiskRedundancy <UInt16>] [-ProvisioningType {Unknown |
Thin | Fixed}] [-RequestNoSinglePointOfFailure
<Boolean>] [-Size <UInt64>] [-ThrottleLimit <Int32>] [-Usage
{Other | Unrestricted | ReservedForComputerSystem |
ReservedForReplicationServices |

```



```

ReservedForMigrationServices | LocalReplicaSource |
RemoteReplicaSource | LocalReplicaTarget | RemoteReplicaTarget |
LocalReplicaSourceOrTarget |
RemoteReplicaSourceOrTarget | DeltaReplicaTarget |
ElementComponent | ReservedAsPoolContributer |
CompositeVolumeMember | CompositeVirtualDiskMember |
ReservedForSparing}}
[-UseMaximumSize] -StorageSubSystemUniqueId <String[]>
[<CommonParameters>]

```

Description

The New-StorageSubsystemVirtualDisk cmdlet allows the creation of a VirtualDisk object on a storage subsystem that does not support creation of storage pools, or if its storage pool does not support virtual disk creation.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FaultDomainAwareness**

Description :Specifies the default fault domain for new virtual disks created in this storage pool. The fault domain specifies at what level you want to be fault tolerant. The acceptable values for this parameter are:

```

-- PhysicalDisk
-- StorageScaleUnit
-- StorageChassis
-- StorageEnclosure
-- StorageRack

```

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :FriendlyName

Description :Specifies a friendly name for a virtual disk. The friendly name may be defined by a user and is not guaranteed to be unique.

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

Parameter :Interleave

Description :Specifies the interleave value to use during the creation of a storage tier. The interleave value represents the number of bytes that is written to a single physical disk. Therefore, Interleave * NumberOfColumns yields the size of one stripe of user data.

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

Parameter :IsEnclosureAware

Description :Specifies that the enclosure supports SCSI Enclosure Services (SES), which is utilized for providing things like Slot location for a physical disk, as well as to manage LEDs on the disks for visual identification.

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

Parameter :**NumberOfColumns**

Description :Specifies the number of columns to create.

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

Parameter :**NumberOfDataCopies**

Description :Specifies the number of data copies to create.

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

Parameter :**OtherUsageDescription**

Description :Specifies the usage of this object.

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

Parameter :**ParityLayout**

Description :Specifies the parity layout to be used with the virtual disk to be created.

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

Parameter :**PhysicalDiskRedundancy**

Description :Specifies the physical disk redundancy value to use during the creation of a virtual disk.

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

Parameter :**ProvisioningType**

Description :Specifies the type of provisioning. The acceptable values for this parameter are: Unknown, Fixed, or Thin.

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

Parameter :**RequestNoSinglePointOfFailure**

Description :Requests that the virtual disk is created on hardware that has path redundancy to provide resilience to storage path faults. This cannot be guaranteed.

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

Parameter :**Size**

Description :Specifies the size of the partition to create. If not specified, then the number will default to Bytes. The acceptable values for this parameter are: Bytes, KB, MB, GB, or TB. The size may be defined by a user.

Required	false
Position	named
Default value	none

Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StorageSubSystemFriendlyName**

Description :Specifies the friendly name of the storage subsystem. The friendly name may be defined by the user.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**StorageSubSystemName**

Description :Specifies the name of the storage subsystem provided by the Storage Management.

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

Parameter :**StorageSubSystemUniqueId**

Description :Specifies an ID used to uniquely identify the storage subsystem in the system. The ID persists through reboots.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :Usage

Description :Specifies the intended usage.

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

Parameter :UseMaximumSize

Description :Uses the maximum allowable size for this virtual disk.

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

Inputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageSubsystem

Outputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Cmdlet: New-StorageTier

Synops

Creates a storage tier.

Syntax

```
New-StorageTier [-StoragePoolFriendlyName] <String[]> [-CimSession <CimSession[]>] [-ColumnIsolation {PhysicalDisk | StorageEnclosure | StorageScaleUnit | StorageChassis | StorageRack}] [-Description <String>] [-FaultDomainAwareness {PhysicalDisk | StorageEnclosure | StorageScaleUnit | StorageChassis | StorageRack}] [-Interleave <UInt64>] [-MediaType {HDD | SSD | SCM}] [-NumberOfColumns <UInt16>] [-NumberOfDataCopies <UInt16>] [-NumberOfGroups <UInt16>] [-PhysicalDiskRedundancy <UInt16>] [-ProvisioningType {Unknown | Thin | Fixed}] [-ResiliencySettingName <String>] [-ThrottleLimit <Int32>] -FriendlyName <String> [<CommonParameters>]
```

```
New-StorageTier [-CimSession <CimSession[]>] [-ColumnIsolation {PhysicalDisk | StorageEnclosure | StorageScaleUnit | StorageChassis | StorageRack}] [-Description <String>] [-FaultDomainAwareness {PhysicalDisk | StorageEnclosure | StorageScaleUnit | StorageChassis | StorageRack}] [-Interleave <UInt64>] [-MediaType {HDD | SSD | SCM}] [-NumberOfColumns <UInt16>] [-NumberOfDataCopies <UInt16>] [-NumberOfGroups <UInt16>] [-PhysicalDiskRedundancy <UInt16>] [-ProvisioningType {Unknown | Thin | Fixed}] [-ResiliencySettingName <String>] [-ThrottleLimit <Int32>] -FriendlyName <String> [<CommonParameters>]
```

```
New-StorageTier [-CimSession <CimSession[]>] [-ColumnIsolation {PhysicalDisk | StorageEnclosure | StorageScaleUnit | StorageChassis | StorageRack}] [-Description <String>] [-FaultDomainAwareness {PhysicalDisk | StorageEnclosure | StorageScaleUnit | StorageChassis | StorageRack}] [-Interleave <UInt64>] [-MediaType {HDD | SSD | SCM}] [-NumberOfColumns <UInt16>] [-NumberOfDataCopies <UInt16>] [-NumberOfGroups <UInt16>] [-PhysicalDiskRedundancy <UInt16>] [-ProvisioningType {Unknown | Thin | Fixed}] [-ResiliencySettingName <String>] [-ThrottleLimit <Int32>] -
```



```
FriendlyName <String> -StoragePoolUniqueId <String[]>
[<CommonParameters>]
```

```
New-StorageTier [-CimSession <CimSession[]>] [-ColumnIsolation
{PhysicalDisk | StorageEnclosure | StorageScaleUnit |
StorageChassis | StorageRack}] [-Description <String>]
[-FaultDomainAwareness {PhysicalDisk | StorageEnclosure |
StorageScaleUnit | StorageChassis | StorageRack}] [-Interleave
<UInt64>] [-MediaType {HDD | SSD | SCM}]
[-NumberOfColumns <UInt16>] [-NumberOfDataCopies <UInt16>] [-
NumberOfGroups <UInt16>] [-PhysicalDiskRedundancy <UInt16>] [-
ProvisioningType {Unknown | Thin | Fixed}]
[-ResiliencySettingName <String>] [-ThrottleLimit <Int32>] -
FriendlyName <String> -StoragePoolName <String[]>
[<CommonParameters>]
```

Description

The New-StorageTier cmdlet creates a storage tier in a storage pool.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**ColumnIsolation**

Description :Specifies at which level columns within a virtual disk should be isolated from each other. We recommend omitting this parameter and using the defaults. The acceptable values for this parameter are:

```
-- PhysicalDisk
-- StorageScaleUnit
-- StorageChassis
```

- StorageEnclosure
- StorageRack

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

Parameter :**Description**

Description :Specifies a description for the storage tier that you create.

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

Parameter :**FaultDomainAwareness**

Description :Specifies at what level you want the virtual disk to be fault tolerant. The acceptable values for this parameter are:

- PhysicalDisk
- StorageScaleUnit
- StorageChassis
- StorageEnclosure
- StorageRack

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

Parameter :**FriendlyName**

Description :Specifies a friendly name for the storage tier.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :Interleave

Description :Specifies the interleave value to use during the creation of a storage tier. The interleave value represents the number of bytes that is written to a single physical disk. Thus Interleave * NumberOfColumns yields the size of one stripe of user data.

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

Parameter :MediaType

Description :Specifies the media type of the storage tier. The cmdlet creates the storage tier for the media type that you specify. The acceptable values for this parameter are:

-- SSD
 -- SCM
 -- HDD

Use SCM for storage-class memory such as NVDIMMs.

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

Parameter :NumberOfColumns

Description :Specifies the number of columns to use for the storage tier. Columns represent the number of underlying physical disks in a tier across which one stripe of data for a virtual disk is written.

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

Parameter :**NumberOfDataCopies**

Description :Specifies the number of data copies to create. Specify 2 to create a two-way mirror, or 3 to specify a three-way mirror or for dual-parity.

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

Parameter :**NumberOfGroups**

Description :Specifies the number of groups used by Local Reconstruction Coding (LRC) with a dual parity virtual disk. We recommend omitting this parameter and using the defaults.

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

Parameter :**PhysicalDiskRedundancy**

Description :Specifies the physical disk redundancy value to use during the creation of a virtual disk. This value represents how many failed physical disks the virtual disk can tolerate without data loss. The redundancy values are as follows:

- For two-way mirror spaces, the virtual disk can tolerate 1 failed physical disk without data loss.
- For three-way mirror spaces, the virtual disk can tolerate 2 failed physical disks without data loss.
- For single-parity spaces, the virtual disk can tolerate 1 failed physical disk without data loss.

-- For dual-parity spaces the virtual disk can tolerate 2 failed physical disks without data loss.

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

Parameter :**ProvisioningType**

Description :Specifies the type of provisioning. The acceptable values for this parameter are: Fixed and Thin. You must specify Fixed for storage spaces that use storage tiers or a clustered storage pool.

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

Parameter :**ResiliencySettingName**

Description :Specifies the resiliency setting, or storage layout, to use for the virtual disk. The acceptable values for this parameter are: Simple, Mirror, and Parity.

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

Parameter :**StoragePoolFriendlyName**

Description :Specifies the friendly name of a storage pool. The cmdlet creates the storage tier in the storage pool that you specify.

Required	true
Position	1
Default value	none

Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :StoragePoolName

Description :Specifies the name of a storage pool. The cmdlet creates the storage tier in the storage pool that you specify. This human-readable name is not necessarily unique.

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

Parameter :StoragePoolUniqueId

Description :Specifies the unique ID, as a string, of a storage pool. The cmdlet creates the storage tiers in the storage pool that has the ID that you specify.

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

Parameter :ThrottleLimit

Description :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

Inputs

You can use the pipeline operator to pass a `MSFT_StoragePool` object to the `InputObject` parameter.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StoragePool`

Outputs

This cmdlet outputs an object that represents the storage tier

Type :

`Microsoft.Management.Infrastructure.CimInstance#root/microsoft/windows/storage/MSFT_StorageTier`

Cmdlet: New-VirtualDisk

Synops

Creates a new virtual disk in the specified storage pool.

Syntax

```
New-VirtualDisk [-StoragePoolFriendlyName] <String[]> [-
AllocationUnitSize <UInt64>] [-AutoNumberOfColumns] [-
AutoWriteCacheSize] [-CimSession <CimSession[]>]
[-ColumnIsolation {PhysicalDisk | StorageEnclosure |
StorageScaleUnit | StorageChassis | StorageRack}] [-
FaultDomainAwareness {PhysicalDisk | StorageEnclosure |
StorageScaleUnit | StorageChassis | StorageRack}] [-Interleave
<UInt64>] [-IsEnclosureAware <Boolean>] [-MediaType {HDD | SSD |
SCM}] [-NumberOfColumns <UInt16>]
[-NumberOfDataCopies <UInt16>] [-NumberOfGroups <UInt16>] [-
OtherUsageDescription <String>] [-PhysicalDiskRedundancy
<UInt16>] [-PhysicalDisksToUse <CimInstance[]>]
[-ProvisioningType {Unknown | Thin | Fixed}] [-ReadCacheSize
<UInt64>] [-ResiliencySettingName <String>] [-Size <UInt64>] [-
StorageTiers <CimInstance[]>]
[-StorageTierSizes <UInt64[]>] [-ThrottleLimit <Int32>] [-Usage
{Other | Unrestricted | ReservedForComputerSystem |
ReservedForReplicationServices |
ReservedForMigrationServices | LocalReplicaSource |
RemoteReplicaSource | LocalReplicaTarget | RemoteReplicaTarget |
LocalReplicaSourceOrTarget |
RemoteReplicaSourceOrTarget | DeltaReplicaTarget |
ElementComponent | ReservedAsPoolContributer |
CompositeVolumeMember | CompositeVirtualDiskMember |
ReservedForSparing}]
[-UseMaximumSize] [-WriteCacheSize <UInt64>] -FriendlyName
<String> [<CommonParameters>]
```

```
New-VirtualDisk [-AllocationUnitSize <UInt64>] [-
AutoNumberOfColumns] [-AutoWriteCacheSize] [-CimSession
<CimSession[]>] [-ColumnIsolation {PhysicalDisk |
StorageEnclosure
| StorageScaleUnit | StorageChassis | StorageRack}] [-
FaultDomainAwareness {PhysicalDisk | StorageEnclosure |
StorageScaleUnit | StorageChassis | StorageRack}]
```



```

[-Interleave <UInt64>] [-IsEnclosureAware <Boolean>] [-MediaType
{HDD | SSD | SCM}] [-NumberOfColumns <UInt16>] [-
NumberOfDataCopies <UInt16>] [-NumberOfGroups <UInt16>]
[-OtherUsageDescription <String>] [-PhysicalDiskRedundancy
<UInt16>] [-PhysicalDisksToUse <CimInstance[]>] [-
ProvisioningType {Unknown | Thin | Fixed}] [-ReadCacheSize
<UInt64>] [-ResiliencySettingName <String>] [-Size <UInt64>] [-
StorageTiers <CimInstance[]>] [-StorageTierSizes <UInt64[]>] [-
ThrottleLimit <Int32>] [-Usage {Other |
Unrestricted | ReservedForComputerSystem |
ReservedForReplicationServices | ReservedForMigrationServices |
LocalReplicaSource | RemoteReplicaSource | LocalReplicaTarget |
RemoteReplicaTarget | LocalReplicaSourceOrTarget |
RemoteReplicaSourceOrTarget | DeltaReplicaTarget |
ElementComponent | ReservedAsPoolContributer |
CompositeVolumeMember
| CompositeVirtualDiskMember | ReservedForSparing}] [-
UseMaximumSize] [-WriteCacheSize <UInt64>] [-FriendlyName <String>]
[-StoragePoolUniqueId <String[]>] [<CommonParameters>]

```

```

New-VirtualDisk [-AllocationUnitSize <UInt64>] [-
AutoNumberOfColumns] [-AutoWriteCacheSize] [-CimSession
<CimSession[]>] [-ColumnIsolation {PhysicalDisk |
StorageEnclosure
| StorageScaleUnit | StorageChassis | StorageRack}] [-
FaultDomainAwareness {PhysicalDisk | StorageEnclosure |
StorageScaleUnit | StorageChassis | StorageRack}]
[-Interleave <UInt64>] [-IsEnclosureAware <Boolean>] [-MediaType
{HDD | SSD | SCM}] [-NumberOfColumns <UInt16>] [-
NumberOfDataCopies <UInt16>] [-NumberOfGroups <UInt16>]
[-OtherUsageDescription <String>] [-PhysicalDiskRedundancy
<UInt16>] [-PhysicalDisksToUse <CimInstance[]>] [-
ProvisioningType {Unknown | Thin | Fixed}] [-ReadCacheSize
<UInt64>] [-ResiliencySettingName <String>] [-Size <UInt64>] [-
StorageTiers <CimInstance[]>] [-StorageTierSizes <UInt64[]>] [-
ThrottleLimit <Int32>] [-Usage {Other |
Unrestricted | ReservedForComputerSystem |
ReservedForReplicationServices | ReservedForMigrationServices |
LocalReplicaSource | RemoteReplicaSource | LocalReplicaTarget |
RemoteReplicaTarget | LocalReplicaSourceOrTarget |
RemoteReplicaSourceOrTarget | DeltaReplicaTarget |
ElementComponent | ReservedAsPoolContributer |

```

```
CompositeVolumeMember
| CompositeVirtualDiskMember | ReservedForSparing}} [-
UseMaximumSize] [-WriteCacheSize <UInt64>] -FriendlyName <String>
-StoragePoolName <String[]> [<CommonParameters>]
```

```
New-VirtualDisk [-AllocationUnitSize <UInt64>] [-
AutoNumberOfColumns] [-AutoWriteCacheSize] [-CimSession
<CimSession[]>] [-ColumnIsolation {PhysicalDisk |
StorageEnclosure
| StorageScaleUnit | StorageChassis | StorageRack}} [-
FaultDomainAwareness {PhysicalDisk | StorageEnclosure |
StorageScaleUnit | StorageChassis | StorageRack}}
[-Interleave <UInt64>] [-IsEnclosureAware <Boolean>] [-MediaType
{HDD | SSD | SCM}] [-NumberOfColumns <UInt16>] [-
NumberOfDataCopies <UInt16>] [-NumberOfGroups <UInt16>]
[-OtherUsageDescription <String>] [-PhysicalDiskRedundancy
<UInt16>] [-PhysicalDisksToUse <CimInstance[]>] [-
ProvisioningType {Unknown | Thin | Fixed}} [-ReadCacheSize
<UInt64>] [-ResiliencySettingName <String>] [-Size <UInt64>] [-
StorageTiers <CimInstance[]>] [-StorageTierSizes <UInt64[]>] [-
ThrottleLimit <Int32>] [-Usage {Other |
Unrestricted | ReservedForComputerSystem |
ReservedForReplicationServices | ReservedForMigrationServices |
LocalReplicaSource | RemoteReplicaSource | LocalReplicaTarget |
RemoteReplicaTarget | LocalReplicaSourceOrTarget |
RemoteReplicaSourceOrTarget | DeltaReplicaTarget |
ElementComponent | ReservedAsPoolContributer |
CompositeVolumeMember
| CompositeVirtualDiskMember | ReservedForSparing}} [-
UseMaximumSize] [-WriteCacheSize <UInt64>] -FriendlyName <String>
[<CommonParameters>]
```

Description

The New-VirtualDisk cmdlet creates a new virtual disk in the specified storage pool.

Parameters

Parameter :**AllocationUnitSize**

Description :Specifies the allocation unit size to use when create the virtual disk.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :AutoNumberOfColumns

Description :Specifies that the number of columns used by the virtual disk should be automatically determined. Columns represent the number of underlying physical disks across which one stripe of data for a virtual disk is written.

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

Parameter :AutoWriteCacheSize

Description :Indicates that the cmdlet sets the size of the write-back cache to 1 GB for all types of storage spaces, which include simple, mirror, and parity, to create from the pool. If the number or size of the solid-state drives (SSDs) or journal disks in the storage pool is not sufficient and you specify a value of \$True for this parameter, the cmdlet sets the write-back cache size to 0 for simple and mirror spaces, and to 32 MB for parity spaces.

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

Parameter :CimSession

Description :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 or Get-CimSession 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
-----------------------------	-------

Parameter :ColumnIsolation

Description :Specifies at which level columns within a virtual disk should be isolated from each other. We recommend omitting this parameter and using the defaults. The acceptable values for this parameter are:

- PhysicalDisk
- StorageScaleUnit
- StorageChassis
- StorageEnclosure
- StorageRack

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

Parameter :FaultDomainAwareness

Description :Specifies at what level you want the virtual disk to be fault tolerant. The acceptable values for this parameter are:

- PhysicalDisk
- StorageScaleUnit
- StorageChassis
- StorageEnclosure
- StorageRack

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

Parameter :FriendlyName

Description :Specifies the friendly name for the virtual disk. The friendly name is not required to be unique.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :Interleave

Description :Specifies the interleave value to use during the creation of a virtual disk. The interleave value represents the number of bytes that is written to a single physical disk. Therefore, Interleave * NumberOfColumns yields the size of one stripe of user data.

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

Parameter :IsEnclosureAware

Description :Specifies that the virtual disk should use enclosure awareness.

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

Parameter :MediaType

Description :Specifies the media type of the storage tier. The cmdlet creates the storage tier for the media type that you specify. The acceptable values for this parameter are:

-- SSD
 -- SCM
 -- HDD

Use SCM for storage-class memory such as NVDIMMs.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**NumberOfColumns**

Description :Specifies the number of columns to use when allocating the virtual disk.

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

Parameter :**NumberOfDataCopies**

Description :Specifies the number of data copies to create. Specify 2 to create a two-way mirror, or 3 to specify a three-way mirror or for dual parity.

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

Parameter :**NumberOfGroups**

Description :specifies the number of groups used by Local Reconstruction Coding (LRC) with a dual parity virtual disk. We recommend omitting this parameter and using the defaults.

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

Parameter :**OtherUsageDescription**

Description :Specifies an OtherUsageDescription string for the virtual disk. You can use

the OtherUsageDescription parameter only if you set the Usage parameter to Other or do not include the Usage parameter.

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

Parameter :PhysicalDiskRedundancy

Description :Specifies the physical disk redundancy value to use during the creation of a virtual disk. This value represents how many failed physical disks the virtual disk can tolerate without data loss.

- For two-way mirror spaces, the virtual disk can tolerate 1 failed physical disk without data loss.
- For three-way mirror spaces, the virtual disk can tolerate 2 failed physical disks without data loss.
- For single-parity spaces, the virtual disk can tolerate 1 failed physical disk without data loss.
- For dual-parity spaces the virtual disk can tolerate 2 failed physical disks without data loss.

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

Parameter :PhysicalDisksToUse

Description :Specifies an array of one or more PhysicalDisk objects. The PhysicalDisk objects represent the specific physical disks on which to create this virtual disk.

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

Parameter :**ProvisioningType**

Description :Specifies the type of provisioning. The acceptable values for this parameter are:Fixed, or Thin. You must specify Fixed for storage spaces that use storage tiers or a clustered storage pool.

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

Parameter :**ReadCacheSize**

Description :This parameter is no longer supported.

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

Parameter :**ResiliencySettingName**

Description :Specifies the resiliency setting, or storage layout, to use for the virtual disk. Acceptable values vary by storage subsystem.

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

Parameter :**Size**

Description :Specifies the size of the virtual disk to create. The default unit is Bytes; to specify a different unit, enter the size followed by one of the following unit values, with no spaces: Bytes, KB, MB, GB, or TB.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :StoragePoolFriendlyName

Description :Specifies the friendly name of the storage pool in which to create the virtual disk. Enter a friendly name, or use wildcard characters to enter a name pattern.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :StoragePoolName

Description :Specifies the name of the storage pool in which to create the virtual disk. Enter the name of the storage pool provided by the Storage Management Provider, or use wildcard characters to enter a name pattern.

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

Parameter :StoragePoolUniqueId

Description :Specifies the ID of the storage pool in which to create the virtual disk Enter an ID or use wildcard characters to enter a pattern.

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

Parameter :StorageTiers

Description :Specifies an array of storage tiers as a CIMInstance object. The cmdlet adds the storage tiers that you specify to the virtual disk. To obtain a virtual disk object, use the Get-StorageTier cmdlet.

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

Parameter :**StorageTierSizes**

Description :Specifies an array of sizes of the storage tiers that you specify for the StorageTiers parameter.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Usage**

Description :Specifies the intended usage of the virtual disk. You can specify one of the predefined descriptions, or use the default value (Other) and instead use the OtherUsageDescription parameter to specify a custom value.

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

Parameter :**UseMaximumSize**

Description :Creates a virtual disk with the maximum size possible given the available storage pool space and specified parameters.

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

Parameter :**WriteCacheSize**

Description :Specifies the size of the write-back cache. The cmdlet creates the write-back cache of the size that you specify when the cmdlet creates the virtual disk space.

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

Inputs

You can use the pipeline operator to pass an MSFT_StoragePool object to the InputObject parameter.

You can use the pipeline operator to pass an array of MSFT_StorageTier objects to the StorageTiers parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StoragePool

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageTier

Outputs

The New-VirtualDisk cmdlet returns an object that represents the newly created virtual disk.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Examples

Example 1: Creating a 100 GB virtual disk using default settings

This example creates a virtual disk named UserData from the storage pool named CompanyData that is 100GB in size, using the storage pool default settings for unspecified parameters.

```
PS C:\> New-VirtualDisk -StoragePoolFriendlyName CompanyData -  
FriendlyName UserData -Size 100GB
```

Example 2: Creating a thinly-provisioned mirror

This example creates a virtual disk named DataWarehouse, which is 42TB in size, uses the Mirror resiliency setting, and is thinly provisioned.

```
PS C:\> New-VirtualDisk -StoragePoolFriendlyName CompanyData -  
FriendlyName DataWarehouse -ResiliencySettingName Mirror -Size  
42TB -ProvisioningType Thin
```

Example 3: Creating a three-way mirror

This example creates a 42 TB thinly-provisioned virtual disk on the Windows Storage subsystem, using the Mirror resiliency setting with three data copies. This creates a three-way mirror that is capable of tolerating two disk failures).

```
PS C:\> New-VirtualDisk -StoragePoolFriendlyName CompanyData -  
FriendlyName BusinessCritical -ResiliencySettingName Mirror -  
NumberOfDataCopies 3 -Size 42TB -ProvisioningType Thin
```

Example 4: Creating a two-column mirror

This example creates a thinly-provisioned virtual disk on the Windows Storage subsystem that uses two columns, regardless of how many physical disks are in the storage pool above the two-disk minimum for a two-way mirror.

```
PS C:\> New-VirtualDisk -StoragePoolFriendlyName CompanyData -  
FriendlyName BusinessCritical -ResiliencySettingName Mirror -  
-Size 42TB -ProvisioningType Thin -NumberOfColumns 2
```

Example 5: Create a mirror space with storage tiers

This example creates a 40 GB fixed provisioning virtual disk on the Windows Storage subsystem. The virtual disk uses the Mirror resiliency setting and storage tiers to store 8 GB of data on the SSD tier and 32 GB of data on the HDD tier.

```
PS C:\> $SSD = Get-StorageTier -FriendlyName *SSD*  
PS C:\> $HDD = Get-StorageTier -FriendlyName *HDD*  
PS C:\> Get-StoragePool CompanyData | New-VirtualDisk -  
FriendlyName "UserData01" -ResiliencySettingName "Mirror"  
-StorageTiers $SSD, $HDD -StorageTierSizes 8GB, 32GB
```

Example 6: Create a dual-parity space

This example creates a virtual disk on the Windows Storage subsystem that uses the dual-parity resiliency type to help protect against two simultaneous disk failures and maximize capacity efficiency.

```
PS C:\> New-VirtualDisk -StoragePoolFriendlyName "CompanyData"  
-FriendlyName "ArchivalData" -Size 50GB -ProvisioningType  
Fixed -ResiliencySettingName "Parity" -PhysicalDiskRedundancy  
2
```

Cmdlet: New-VirtualDiskClone

Synops

Creates a new clone of a specified virtual disk.

Syntax

```
New-VirtualDiskClone [-CimSession <CimSession[]>] [-  
TargetStoragePoolName <String>] [-ThrottleLimit <Int32>] -  
FriendlyName <String> [<CommonParameters>]
```

```
New-VirtualDiskClone [-CimSession <CimSession[]>] [-  
TargetStoragePoolName <String>] [-ThrottleLimit <Int32>] -  
FriendlyName <String> -VirtualDiskName <String[]>  
[<CommonParameters>]
```

```
New-VirtualDiskClone [-VirtualDiskFriendlyName] <String[]> [-  
CimSession <CimSession[]>] [-TargetStoragePoolName <String>] [-  
ThrottleLimit <Int32>] -FriendlyName <String>  
[<CommonParameters>]
```

```
New-VirtualDiskClone [-CimSession <CimSession[]>] [-  
TargetStoragePoolName <String>] [-ThrottleLimit <Int32>] -  
FriendlyName <String> -VirtualDiskUniqueId <String[]>  
[<CommonParameters>]
```

Description

The New-VirtualDiskClone cmdlet creates a new clone of a specified virtual disk.

ps_storage_spacesubsystem_not_remark

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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
-----------------------------	-------

Parameter :FriendlyName

Description :Specifies a friendly name for a virtual disk. The friendly name may be defined by a user and is not guaranteed to be unique.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :TargetStoragePoolName

Description :Specifies the name of the target storage pool. The name of the target storage pool that contains the virtual disk to be snapshot.

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

Parameter :ThrottleLimit

Description :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

Parameter :VirtualDiskFriendlyName

Description :Specifies the friendly name of the virtual disk to be snapshot. The friendly

name may be defined by a user.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**VirtualDiskName**

Description :Specifies the name of the virtual disk. This parameter is typically read-only. This parameter is not equivalent to the VirtualDiskFriendlyName parameter that can be set by a user.

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

Parameter :**VirtualDiskUniqueId**

Description :Specifies the unique ID of the virtual disk to be snapshot.

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

Inputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Outputs

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.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_VirtualDisk`

Cmdlet: New-VirtualDiskSnapshot

Synops

Creates a new snapshot of the specified virtual disk.

Syntax

```
New-VirtualDiskSnapshot [-CimSession <CimSession[]>] [-  
TargetStoragePoolName <String>] [-ThrottleLimit <Int32>] -  
FriendlyName <String> [<CommonParameters>]
```

```
New-VirtualDiskSnapshot [-CimSession <CimSession[]>] [-  
TargetStoragePoolName <String>] [-ThrottleLimit <Int32>] -  
FriendlyName <String> -VirtualDiskName <String[]>  
[<CommonParameters>]
```

```
New-VirtualDiskSnapshot [-VirtualDiskFriendlyName <String[]> [-  
CimSession <CimSession[]>] [-TargetStoragePoolName <String>] [-  
ThrottleLimit <Int32>] -FriendlyName  
<String> [<CommonParameters>]
```

```
New-VirtualDiskSnapshot [-CimSession <CimSession[]>] [-  
TargetStoragePoolName <String>] [-ThrottleLimit <Int32>] -  
FriendlyName <String> -VirtualDiskUniqueId <String[]>  
[<CommonParameters>]
```

Description

The New-VirtualDiskSnapshot cmdlet creates a new snapshot of the specified virtual disk.

ps_storage_spacesubsystem_not_remark

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :FriendlyName

Description :Specifies a friendly name for a disk. The friendly name may be defined by a user and is not guaranteed to be unique.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :TargetStoragePoolName

Description :Specifiess the name of the target storage pool.

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

Parameter :ThrottleLimit

Description :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

Parameter :VirtualDiskFriendlyName

Description :Specifies the friendly name of the virtual disk to be snapshot. The friendly

name may be defined by a user.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**VirtualDiskName**

Description :Specifies the name of the virtual disk. This parameter is typically read-only. This parameter is not equivalent to the VirtualDiskFriendlyName parameter that can be set by a user.

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

Parameter :**VirtualDiskUniqueId**

Description :Specifies the unique ID of the virtual disk to be snapshot.

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

Inputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Outputs

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.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk`

Cmdlet: New-Volume

Synops

Creates a volume with the specified file system.

Syntax

```
New-Volume [-StoragePool] <CimInstance> [-AccessPath <String>] [-AllocationUnitSize <UInt32>] [-CimSession <CimSession>] [-DriveLetter <Char>] [-FileSystem <FileSystemType>] [-MediaType <
```

```
New-Volume.MediaType>] [-NumberOfColumns <UInt16>] [-NumberOfGroups <UInt16>] [-PhysicalDiskRedundancy <UInt16>] [-ProvisioningType <Microsoft.PowerShell.Cmdletization.GeneratedTypes.SetStoragePool.ProvisioningType>] [-ReadCacheSize <UInt64>] [-ResiliencySettingName <String>] [-Size <UInt64>] [-StorageTierFriendlyNames <String[]>] [-StorageTiers <CimInstance[]>] [-StorageTierSizes <UInt64[]>] [-ThrottleLimit <Int32>] [-UseMaximumSize] [-WriteCacheSize <UInt64>] [-FriendlyName <String> [<CommonParameters>]
```

```
New-Volume [-AccessPath <String>] [-AllocationUnitSize <UInt32>] [-CimSession <CimSession>] [-DriveLetter <Char>] [-FileSystem <FileSystemType>] [-ThrottleLimit <Int32>] [-DiskUniqueId <String>] [-FriendlyName <String> [<CommonParameters>]
```

```
New-Volume [-AccessPath <String>] [-AllocationUnitSize <UInt32>] [-CimSession <CimSession>] [-DriveLetter <Char>] [-FileSystem <FileSystemType>] [-ThrottleLimit <Int32>] [-DiskPath <String>] [-FriendlyName <String> [<CommonParameters>]
```

```
New-Volume [-DiskNumber] <UInt32> [-AccessPath <String>] [-AllocationUnitSize <UInt32>] [-CimSession <CimSession>] [-DriveLetter <Char>] [-FileSystem <FileSystemType>] [-ThrottleLimit <Int32>] [-FriendlyName <String> [<CommonParameters>]
```

```
New-Volume [-Disk] <CimInstance> [-AccessPath <String>] [-AllocationUnitSize <UInt32>] [-CimSession <CimSession>] [-
```

```
DriveLetter <Char>] [-FileSystem <FileSystemType>]
[-ThrottleLimit <Int32>] -FriendlyName <String>
[<CommonParameters>]
```

```
New-Volume [-AccessPath <String>] [-AllocationUnitSize <UInt32>]
[-CimSession <CimSession>] [-DriveLetter <Char>] [-FileSystem
<FileSystemType>] [-MediaType
<
```

```
New-Volume.MediaType>] [-NumberOfColumns <UInt16>] [-
NumberOfGroups <UInt16>] [-PhysicalDiskRedundancy <UInt16>] [-
ProvisioningType
<Microsoft.PowerShell.Cmdletization.GeneratedTypes.SetStoragePool
.ProvisioningType>] [-ReadCacheSize <UInt64>] [-
ResiliencySettingName <String>] [-Size <UInt64>]
[-StorageTierFriendlyNames <String[]>] [-StorageTiers
<CimInstance[]>] [-StorageTierSizes <UInt64[]>] [-ThrottleLimit
<Int32>] [-UseMaximumSize] [-WriteCacheSize <UInt64>]
-FriendlyName <String> -StoragePoolUniqueId <String>
[<CommonParameters>]
```

```
New-Volume [-AccessPath <String>] [-AllocationUnitSize <UInt32>]
[-CimSession <CimSession>] [-DriveLetter <Char>] [-FileSystem
<FileSystemType>] [-MediaType
<
```

```
New-Volume.MediaType>] [-NumberOfColumns <UInt16>] [-
NumberOfGroups <UInt16>] [-PhysicalDiskRedundancy <UInt16>] [-
ProvisioningType
<Microsoft.PowerShell.Cmdletization.GeneratedTypes.SetStoragePool
.ProvisioningType>] [-ReadCacheSize <UInt64>] [-
ResiliencySettingName <String>] [-Size <UInt64>]
[-StorageTierFriendlyNames <String[]>] [-StorageTiers
<CimInstance[]>] [-StorageTierSizes <UInt64[]>] [-ThrottleLimit
<Int32>] [-UseMaximumSize] [-WriteCacheSize <UInt64>]
-FriendlyName <String> -StoragePoolName <String>
[<CommonParameters>]
```

```
New-Volume [-AccessPath <String>] [-AllocationUnitSize <UInt32>]
[-CimSession <CimSession>] [-DriveLetter <Char>] [-FileSystem
<FileSystemType>] [-MediaType
<
```

```
New-Volume.MediaType>] [-NumberOfColumns <UInt16>] [-
NumberOfGroups <UInt16>] [-PhysicalDiskRedundancy <UInt16>] [-
ProvisioningType
<Microsoft.PowerShell.Cmdletization.GeneratedTypes.SetStoragePool
.ProvisioningType>] [-ReadCacheSize <UInt64>] [-
ResiliencySettingName <String>] [-Size <UInt64>]
[-StorageTierFriendlyNames <String[]>] [-StorageTiers
<CimInstance[]>] [-StorageTierSizes <UInt64[]>] [-ThrottleLimit
<Int32>] [-UseMaximumSize] [-WriteCacheSize <UInt64>]
-FriendlyName <String> -StoragePoolFriendlyName <String>
[<CommonParameters>]
```

Description

The New-Volume cmdlet creates a volume with the specified file system. The cmdlet manages the creation of the virtual disk with the specified size and resiliency setting, initializes the disk, creates a partition on it and formats the volume with the specified file system, including Cluster Shared Volumes (CSVs).

Parameters

Parameter :**AccessPath**

Description :Specifies a drive letter, or a mount point.

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

Parameter :**AllocationUnitSize**

Description :Specifies the allocation unit size to use when creating the volume.

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

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Disk**

Description :Specifies a Disk object. To obtain a Disk object, use the Get-Disk cmdlet.

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**DiskNumber**

Description :Specifies the disk number of the disk on which to create a volume.

Required	true
Position	1
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**DiskPath**

Description :Specifies the path of the disk on which to create a volume.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**DiskUniqueId**

Description :Specifies the ID of the disk on which to create a volume.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**DriveLetter**

Description :Specifies the drive letter of the disk on which to create a volume.

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

Parameter :**FileSystem**

Description :Specified the file system to use on the volume. The acceptable values for this parameter are: NTFS, and ReFS, as well as the cluster shared volume versions of these file systems for use on a scale-out file server: CSVFS_NTFS, and CSVFS_ReFS,

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

Parameter :**FriendlyName**

Description :Specifies the friendly name to use for the volume.

Required	true
Position	named
Default value	none
Accept pipeline input?	false

Accept wildcard characters?	false
-----------------------------	-------

Parameter :MediaType

Description :Specifies the media type of the storage tier. The cmdlet creates the storage tier for the media type that you specify. The acceptable values for this parameter are:

-- SSD
-- SCM
-- HDD

Use SCM for storage-class memory such as NVDIMMs.

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

Parameter :NumberOfColumns

Description :Specifies the number of columns to use when creating the volume on a Windows Storage subsystem. Columns represent the number of underlying physical disks across which one stripe of data for a volume is written.

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

Parameter :NumberOfGroups

Description :Specifies the number of groups used by Local Reconstruction Coding (LRC) with a dual parity virtual disk. We recommend omitting this parameter and using the defaults.

Required	false
Position	named
Default value	none
Accept pipeline input?	false

Accept wildcard characters?	false
-----------------------------	-------

Parameter :PhysicalDiskRedundancy

Description :Specifies the physical disk redundancy value to use during the creation of a volume on a Windows Storage subsystem. This value represents how many failed physical disks the volume can tolerate without data loss. Redundancy values are as follows:

- For two-way mirror spaces, the virtual disk can tolerate 1 failed physical disk without data loss.
- For three-way mirror spaces, the virtual disk can tolerate 2 failed physical disks without data loss.
- For single-parity spaces, the virtual disk can tolerate 1 failed physical disk without data loss.
- For dual-parity spaces the virtual disk can tolerate 2 failed physical disks without data loss.

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

Parameter :ProvisioningType

Description :Specifies the type of provisioning. The acceptable values for this parameter are: Fixed and Thin. Specify Fixed for storage spaces that use storage tiers or a clustered storage pool

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

Parameter :ReadCacheSize

Description :This parameter is no longer supported.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ResiliencySettingName**

Description :Specifies the resiliency setting (storage layout) to use for the volume.
Acceptable values vary by storage subsystem.

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

Parameter :**Size**

Description :Specifies the size of the volume to create. The default unit is bytes. To specify a different unit, enter the size followed by one of the following unit values, with no spaces: Bytes, KB, MB, GB, or TB.

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

Parameter :**StoragePool**

Description :Specifies the storage pool object in which you want to create a volume. To obtain a storage pool object, use the Get-StoragePool cmdlet.

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**StoragePoolFriendlyName**

Description :Specifies the friendly name of the storage pool in which to create a volume.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StoragePoolName**

Description :Specifies the name of the storage pool in which to create a volume.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StoragePoolUniqueId**

Description :Specifies the unique ID of the storage pool in which to create a volume.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StorageTierFriendlyNames**

Description :Specifies the names of storage tiers to use when creating the volume.

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

Parameter :**StorageTiers**

Description :Specifies the storage tier objects to use when creating the volume.

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

Parameter :**StorageTierSizes**

Description :Specifies how big to make each storage tier on this volume.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**UseMaximumSize**

Description :Indicates that this cmdlet creates the largest volumn possible.

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

Parameter :**WriteCacheSize**

Description :Specifies the size of the write-back cache. The cmdlet creates the write-back cache of the size that you specify when the cmdlet creates the virtual disk space.

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

Inputs

You can use the pipeline operator to pass an MSFT_StoragePool object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StoragePool

Outputs

This cmdlet outputs an object that represents the newly created volume.

Type :

Microsoft.Management.Infrastructure.CimInstance#root/Microsoft/Windows/Storage/MSFT_Volume

Notes

Examples

Example 1: Create a volume on a mirror space

This command creates a new storage space in the CompanyData pool using the Mirror resiliency setting and fixed provisioning, and then formats the volume with the NTFS file system and assigns drive letter M.

```
PS C:\> New-Volume -StoragePoolName "CompanyData" -
FriendlyName "TestVolume" -Size 10GB -ResiliencySettingName
"Mirror" -FileSystem NTFS -AccessPath "M: " -ProvisioningType
Fixed
```

Example 2: Create a volume on a new tiered storage space

This command creates new storage space in the CompanyData pool using the Mirror resiliency setting, fixed provisioning, a 20 GB SSD storage tier, and an 80 GB HDD storage tier, and then formats the volume with the NTFS file system and assigns drive letter M.

```
PS C:\>New-Volume -StoragePoolFriendlyName "CompanyData" -  
FriendlyName "UserData" -AccessPath "M:" -  
ResiliencySettingName "Mirror" -ProvisioningType "Fixed" -  
StorageTiers (Get-StorageTier -FriendlyName "*SSD*"), (Get-  
StorageTier -FriendlyName "*HDD*") -StorageTierSizes 20GB,  
80GB -FileSystem NTFS
```

Cmdlet: Optimize-StoragePool

Synops

Optimizes a Storage pool.

Syntax

```
Optimize-StoragePool [-FriendlyName] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

```
Optimize-StoragePool [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -UniqueId <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Optimize-StoragePool [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -Name <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Optimize-StoragePool [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Optimize-StoragePool cmdlet rebalances the Spaces allocations in a pool to disks with available capacity.

If you are adding new disks or fault domains, this operation helps move existing Spaces allocations to them, and optimization improves their performance. However, rebalancing is an I/O intensive operation.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies the friendly name of the Storage pool to optimize.

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByPropertyName)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies the name of the Storage pool to optimize.

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

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies the unique ID of the storage pool to optimize.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

Type :

Outputs

Type :

Cmdlet: Optimize-Volume

Synops

Optimizes a volume.

Syntax

```
Optimize-Volume [-DriveLetter] <Char[]> [-Analyze] [-CimSession  
<CimSession[]>] [-Defrag] [-NormalPriority] [-ReTrim] [-  
SlabConsolidate] [-ThrottleLimit <Int32>]  
[-TierOptimize] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Optimize-Volume [-Analyze] [-CimSession <CimSession[]>] [-Defrag]  
[-NormalPriority] [-ReTrim] [-SlabConsolidate] [-ThrottleLimit  
<Int32>] [-TierOptimize] -Path <String[]>  
[-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Optimize-Volume [-Analyze] [-CimSession <CimSession[]>] [-Defrag]  
[-NormalPriority] [-ReTrim] [-SlabConsolidate] [-ThrottleLimit  
<Int32>] [-TierOptimize] -ObjectId  
<String[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Optimize-Volume [-Analyze] [-CimSession <CimSession[]>] [-Defrag]  
[-NormalPriority] [-ReTrim] [-SlabConsolidate] [-ThrottleLimit  
<Int32>] [-TierOptimize] [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

```
Optimize-Volume [-Analyze] [-CimSession <CimSession[]>] [-Defrag]  
[-NormalPriority] [-ReTrim] [-SlabConsolidate] [-ThrottleLimit  
<Int32>] [-TierOptimize] -FileSystemLabel  
<String[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Optimize-Volume cmdlet optimizes a volume, performing defragmentation, trim, slab consolidation, and storage tier processing. If no parameter is specified, then the default operation will be performed per the drive type as follows.

- HDD, Fixed VHD, Storage Space. -Analyze -Defrag.
- Tiered Storage Space. -TierOptimize.
- SSD with TRIM support. -Retrim.
- Storage Space (Thinly provisioned), SAN Virtual Disk (Thinly provisioned), Dynamic VHD, Differencing VHD. -Analyze -SlabConsolidate -Retrim.

-- SSD without TRIM support, Removable FAT, Unknown. No operation.

Parameters

Parameter :**Analyze**

Description :Analyzes the volume specified for fragmentation statistics. Performs analysis only and reports the current optimization state of the volume.

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

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Defrag**

Description :Indicates that the cmdlet initiates defragmentation on the specified volume. Defragmentation consolidates fragmented regions of files to improve performance of sequential reads or writes.

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

Parameter :**DriveLetter**

Description :Specifies the drive letter of the volume to optimize.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**FileSystemLabel**

Description :Specifies the file system label of the volume to optimize.

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

Parameter :**NormalPriority**

Description :Indicates that this cmdlet the operation at normal priority. By default, the priority is low.

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

Parameter :**ObjectId**

Description :Specifies the ID of the volume to optimize.

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

Parameter :**Path**

Description :Specifies the path of the volume to optimize.

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

Parameter :**ReTrim**

Description :Generates TRIM and Unmap hints for all currently unused sectors of the volume, notifying the underlying storage that the sectors are no longer needed and can be purged. This can recover unused capacity on thinly provisioned drives.

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

Parameter :**SlabConsolidate**

Description :Indicates that the cmdlet performs slab consolidation on the storage to optimize slab allocations and to reduce the number of used slabs.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**TierOptimize**

Description :Indicates that the cmdlet performs tier optimization of the volume, which places file data on the optimal storage tier according to heat or desired placement. This parameter only applies to tiered spaces volumes with more than one storage tier.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can use the pipeline operator to pass a Volume object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Volume

Outputs

This cmdlet does not generate output.

Type :

Examples

Example 1: Perform TRIM optimization

This example optimizes drive H by re-sending Trim requests. This is useful on SSD media, and thinly provisioned storage.

```
PS C:\>Optimize-Volume -DriveLetter H -ReTrim -Verbose
```

Example 2: Analyze a volume

This example reports only the current optimization state of drive H.

```
PS C:\>Optimize-Volume -DriveLetter H -Analyze -Verbose
```

Example 3: Defragment a volume

This example defragments drive H.

```
PS C:\>Optimize-Volume -DriveLetter H -Defrag -Verbose
```

Example 4: Perform slab consolidation

This example performs slab consolidation on the storage space backing volume H.

```
PS C:\>Optimize-Volume -DriveLetter H -SlabConsolidate  
-Verbose
```

Example 5: Tier optimize a volume

This example performs tier optimization on the tiered storage space backing volume H.

```
PS C:\>Optimize-Volume -DriveLetter H -TierOptimize
```


Cmdlet: Register-StorageSubsystem

Synops

Connects to storage subsystems on a remote computer.

Syntax

```
Register-StorageSubsystem [-ProviderName] <String[]> [-CimSession  
<CimSession[]>] [-Credential <PSCredential>] [-ThrottleLimit  
<Int32>] -ComputerName <String>  
[<CommonParameters>]
```

```
Register-StorageSubsystem [-CimSession <CimSession[]>] [-  
Credential <PSCredential>] [-ThrottleLimit <Int32>] -ComputerName  
<String> [<CommonParameters>]
```

```
Register-StorageSubsystem [-CimSession <CimSession[]>] [-  
Credential <PSCredential>] [-ThrottleLimit <Int32>] -ComputerName  
<String> -ProviderUniqueId <String[]>  
[<CommonParameters>]
```

Description

The Register-StorageSubsystem cmdlet connects to storage subsystems on a remote computer or cluster. In data centers and clustered environments, a management node manages storage on the remote computers. From the management node, you must connect to the storage subsystems on the remote computer or cluster before you can manage storage on the remote computer.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**ComputerName**

Description :Specifies the name of a remote computer. Specify the IP address or any value that resolves to an IP address, such as a fully qualified domain name (FQDN), host name, or NetBIOS name.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**Credential**

Description :Specifies a PSCredential object that contains the user credentials for the remote computer. To obtain a PSCredential object, use the Get-Credential cmdlet. For more information, type Get-Help Get-Credential.

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

Parameter :**ProviderName**

Description :Specifies an array of names of providers. The cmdlet connects to the storage subsystems that are managed by the storage providers that you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**ProviderUniqueId**

Description :Specifies an array of unique IDs of providers. The cmdlet connects to the storage subsystems that are managed by the storage providers that you specify.

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

Parameter :**ThrottleLimit**

Description :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

Inputs

You can use the pipeline operator to pass an MSFT_StorageProvider object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageProvider

Outputs

This cmdlet returns an MSFT_StorageSubsystem object. You can use this object to perform storage management operations on the remote computer.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageSubsystem

Cmdlet: Remove-FileShare

Synops

Removes a file share.

Syntax

```
Remove-FileShare [-CimSession <CimSession[]>] [-FileServer  
<CimInstance>] [-PassThru] [-ThrottleLimit <Int32>] -Name  
<String[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Remove-FileShare [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -UniqueId <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Remove-FileShare [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Remove-FileShare cmdlet removes the specified file sharing access point. This operation does not delete data.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FileServer**

Description :Specifies a file server.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies the name of the file share to remove.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies the unique ID of the file share to remove.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

Type :

Outputs

Type :

Cmdlet: Remove-InitiatorId

Synops

Removes an initiator identifier (ID).

Syntax

```
Remove-InitiatorId [-InitiatorAddress] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

```
Remove-InitiatorId [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -UniqueId <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Remove-InitiatorId [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Remove-InitiatorId cmdlet removes an initiator identifier (ID).

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**InitiatorAddress**

Description :Specifies the address of the InitiatorID object you want to remove.

Required	true
Position	1

Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :PassThru

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueld

Description :Specifies the UniqueID(s) of the InitiatorID(s) you want to remove. Separate multiple UniqueIDs with commas, and enclose brackets in quotation marks.

Required	true
Position	named
Default value	none

Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can pipe an InitiatorID object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_InitiatorId

Outputs

This cmdlet returns an object that represents an initiator ID.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_InitiatorId

Cmdlet: Remove-InitiatorIdFromMaskingSet

Synops

Removes an initiator identifier (ID) from a masking set.

Syntax

```
Remove-InitiatorIdFromMaskingSet [-MaskingSetFriendlyName]
<String[]> [-CimSession <CimSession[]>] [-InitiatorIds
<String[]>] [-PassThru] [-ThrottleLimit <Int32>]
[-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Remove-InitiatorIdFromMaskingSet [-CimSession <CimSession[]>] [-
InitiatorIds <String[]>] [-PassThru] [-ThrottleLimit <Int32>] [-
Confirm] [-WhatIf] [<CommonParameters>]
```

```
Remove-InitiatorIdFromMaskingSet [-CimSession <CimSession[]>] [-
InitiatorIds <String[]>] [-PassThru] [-ThrottleLimit <Int32>] -
MaskingSetUniqueId <String[]> [-Confirm]
[-WhatIf] [<CommonParameters>]
```

Description

The Remove-InitiatorIdFromMaskingSet removes an initiator identifier (ID) from a masking set.

ps_storage_spacesubsystem_not_remark

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**InitiatorIds**

Description :Specifies one or more initiator IDs on which this cmdlet acts.

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

Parameter :**MaskingSetFriendlyName**

Description :Specifies the friendly name of the masking set from which to remove the InitiatorID.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**MaskingSetUniqueid**

Description :Specifies the UniqueID of the masking set from which to remove the InitiatorID.

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

Parameter :**PassThru**

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :Confirm

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :WhatIf

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

Inputs

You can pipe a MaskingSet object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Outputs

If you specify the PassThru parameter, this cmdlet outputs an object that represents the masking set from which you removed an InitiatorID.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Cmdlet: Remove-MaskingSet

Synops

Removes a masking set.

Syntax

```
Remove-MaskingSet [-FriendlyName] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

```
Remove-MaskingSet [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -UniqueId <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Remove-MaskingSet [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Remove-MaskingSet cmdlet removes a masking set.

Note: Removal of a masking set, will remove access to all virtual disks defined in the masking set for all initiator IDs, and target ports defined in the masking set.

ps_storage_spacesubsystem_not_remark

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies the friendly name for the masking set to be removed.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :PassThru

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueld

Description :Specifies the UniqueID of the masking set to remove.

Required	true
----------	------

Position	named
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can pipe a MaskingSet object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Outputs

If you use the PassThru parameter, this cmdlet returns an object representing the masking set that you removed.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Cmdlet: Remove-Partition

Synops

Deletes the specified Partition object on an existing disk and any underlying Volume objects.

Syntax

```
Remove-Partition [-DiskNumber] <UInt32[]> [-PartitionNumber]
<UInt32[]> [-CimSession <CimSession[]>] [-PassThru] [-
ThrottleLimit <Int32>] [-Confirm] [-WhatIf]
[<CommonParameters>]
```

```
Remove-Partition [-CimSession <CimSession[]>] [-PassThru] [-
ThrottleLimit <Int32>] -DiskId <String[]> -Offset <UInt64[]> [-
Confirm] [-WhatIf] [<CommonParameters>]
```

```
Remove-Partition [-CimSession <CimSession[]>] [-PassThru] [-
ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Remove-Partition [-CimSession <CimSession[]>] [-PassThru] [-
ThrottleLimit <Int32>] -DriveLetter <Char[]> [-Confirm] [-WhatIf]
[<CommonParameters>]
```

Description

The Remove-Partition cmdlet deletes the specified Partition object on an existing disk and any underlying Volume objects.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DiskId**

Description :Specifies an ID used to identify a disk in the system.

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

Parameter :**DiskNumber**

Description :Specifies an array of disk numbers.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**DriveLetter**

Description :Specifies a letter used to identify a drive or volume in the system.

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

Parameter :**Offset**

Description :Specifies the starting offset, in bytes.

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

Parameter :**PartitionNumber**

Description :Specifies the number of the partition.

Required	true
Position	2
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**PassThru**

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for

confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Partition

Outputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Partition

Examples

EXAMPLE 1

This example removes the partition associated with drive letter Y.

```
PS C:\>Remove-Partition -DriveLetter Y
```

EXAMPLE 2

This example removes partition number 2 from disk number 5.

```
PS C:\>Remove-Partition -DiskNumber 5 -PartitionNumber 2
```

Cmdlet: Remove-PartitionAccessPath

Synops

Removes an access path such as a drive letter or folder from a partition.

Syntax

```
Remove-PartitionAccessPath [-DiskNumber] <UInt32[]> [-PartitionNumber] <UInt32[]> [[-AccessPath] <String>] [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Remove-PartitionAccessPath [[-AccessPath] <String>] [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -DiskId <String[]> -Offset <UInt64[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Remove-PartitionAccessPath [[-AccessPath] <String>] [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Remove-PartitionAccessPath [[-AccessPath] <String>] [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -DriveLetter <Char[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Remove-PartitionAccessPath cmdlet removes an access path such as a drive letter or mount point from a partition.

Parameters

Parameter :**AccessPath**

Description :Specifies a drive letter, or a mount point.

Required	false
Position	3
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DiskId**

Description :Specifies an ID used to identify a disk in the system.

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

Parameter :**DiskNumber**

Description :Specifies an array of disk numbers.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**DriveLetter**

Description :Specifies a letter used to identify a drive or volume in the system.

Required	true
Position	named
Default value	none
Accept pipeline input?	True (ByPropertyName)

Accept wildcard characters?	false
-----------------------------	-------

Parameter :**Offset**

Description :Specifies the starting offset, in bytes.

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

Parameter :**PartitionNumber**

Description :Specifies the number of the partition.

Required	true
Position	2
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**PassThru**

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MFT_Partition

Outputs

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.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Partition`

Cmdlet: Remove-PhysicalDisk

Synops

Removes a physical disk from a specified storage pool.

Syntax

```
Remove-PhysicalDisk [-VirtualDisk] <CimInstance> [-CimSession  
<CimSession[]>] [-ThrottleLimit <Int32>] -PhysicalDisks  
<CimInstance[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Remove-PhysicalDisk [-StoragePool] <CimInstance> [-CimSession  
<CimSession[]>] [-ThrottleLimit <Int32>] -PhysicalDisks  
<CimInstance[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Remove-PhysicalDisk -StoragePoolFriendlyName <String> [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

```
Remove-PhysicalDisk -StoragePoolName <String> [-Confirm] [-  
WhatIf] [<CommonParameters>]
```

```
Remove-PhysicalDisk -StoragePoolUniqueId <String> [-Confirm] [-  
WhatIf] [<CommonParameters>]
```

```
Remove-PhysicalDisk -VirtualDiskFriendlyName <String> [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

```
Remove-PhysicalDisk -VirtualDiskName <String> [-Confirm] [-  
WhatIf] [<CommonParameters>]
```

```
Remove-PhysicalDisk -VirtualDiskUniqueId <String> [-Confirm] [-  
WhatIf] [<CommonParameters>]
```

Description

The Remove-PhysicalDisk cmdlet removes a physical disk from a specified storage pool.

If sufficient space does not exist in the storage pool to tolerate this removal, then data loss can result (the user is warned about this). If the user configuration allows, then the

user should add a replacement physical disk to the pool prior to removal of the old one.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**PhysicalDisks**

Description :Accepts one or more PhysicalDisk objects as input. The Physical Disk CIM objects represent the physical disks to be removed from the storage pool.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StoragePool**

Description :Specifies a storage pool as a CimInstance object. The cmdlet removes the physical disk associated with storage pool that you specify. To obtain a storage pool object, use the Get-StoragePool cmdlet.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**StoragePoolFriendlyName**

Description :Specifies the friendly name of the storage pool from which to remove the

physical disk.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StoragePoolName**

Description :Specifies the name of the storage pool from which to remove the physical disk.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StoragePoolUniqueId**

Description :Specifies the ID of the storage pool from which to remove the physical disk.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**VirtualDisk**

Description :Specifies a virtual disk as a CimInstance object. The cmdlet removes the physical disk associated with virtual disk that you specify. To obtain a virtual disk object, use the Get-VirtualDisk cmdlet.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :**VirtualDiskFriendlyName**

Description :Specifies the friendly name of the virtual disk from which to remove the physical disk.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**VirtualDiskName**

Description :Specifies the name of the virtual disk from which to remove the physical disk.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**VirtualDiskUniqueId**

Description :Specifies the ID of the virtual disk from which to remove the physical disk.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can use the pipeline operator to pass an array of MSFT_PhysicalDisk objects to the PhysicalDisks parameter

You can use the pipeline operator to pass an MSFT_StoragePool object to the StoragePool parameter.

You can use the pipeline operator to pass an MSFT_VirtualDisk object to the VirtualDisk parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_PhysicalDisks

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StoragePool

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Outputs

This cmdlet does not generate output.

Type :

Cmdlet: Remove-StorageFaultDomain

Synops

Remove-StorageFaultDomain [-VirtualDisk] <CimInstance#MSFT_VirtualDisk> [-StorageFaultDomains <CimInstance#MSFT_StorageFaultDomain[]>] [-StorageFaultDomainFriendlyNames <string[]>] [-CimSession <CimSession>] [-ThrottleLimit <int>] [-AsJob] [<CommonParameters>]

Remove-StorageFaultDomain -VirtualDiskFriendlyName <string> [-StorageFaultDomains <CimInstance#MSFT_StorageFaultDomain[]>] [-StorageFaultDomainFriendlyNames <string[]>] [-CimSession <CimSession>] [-ThrottleLimit <int>] [-AsJob] [<CommonParameters>]

Remove-StorageFaultDomain -VirtualDiskName <string> [-StorageFaultDomains <CimInstance#MSFT_StorageFaultDomain[]>] [-StorageFaultDomainFriendlyNames <string[]>] [-CimSession <CimSession>] [-ThrottleLimit <int>] [-AsJob] [<CommonParameters>]

Remove-StorageFaultDomain -VirtualDiskUniqueId <string> [-StorageFaultDomains <CimInstance#MSFT_StorageFaultDomain[]>] [-StorageFaultDomainFriendlyNames <string[]>] [-CimSession <CimSession>] [-ThrottleLimit <int>] [-AsJob] [<CommonParameters>]

Remove-StorageFaultDomain [-StorageTier] <CimInstance#MSFT_StorageTier> [-StorageFaultDomains <CimInstance#MSFT_StorageFaultDomain[]>] [-StorageFaultDomainFriendlyNames <string[]>] [-CimSession <CimSession>] [-ThrottleLimit <int>] [-AsJob] [<CommonParameters>]

Remove-StorageFaultDomain -StorageTierFriendlyName <string> [-StorageFaultDomains <CimInstance#MSFT_StorageFaultDomain[]>] [-StorageFaultDomainFriendlyNames <string[]>] [-CimSession <CimSession>] [-ThrottleLimit <int>] [-AsJob] [<CommonParameters>]

Remove-StorageFaultDomain -StorageTierUniqueId <string> [-StorageFaultDomains <CimInstance#MSFT_StorageFaultDomain[]>] [-StorageFaultDomainFriendlyNames <string[]>] [-CimSession <CimSession>] [-ThrottleLimit <int>] [-AsJob] [<CommonParameters>]

Syntax

ntaxItem

{@{name=

```
Remove-StorageFaultDomain; CommonParameters=True;  
WorkflowCommonParameters=False; parameter=System.Object[]},  
@{name=
```

```
Remove-StorageFaultDomain; CommonParameters=...
```

Description

Parameters

Parameter :**AsJob**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**CimSession**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**StorageFaultDomainFriendlyNames**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**StorageFaultDomains**

Required	false
Position	Named

Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**StorageTier**

Required	true
Position	0
Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	

Parameter :**StorageTierFriendlyName**

Required	true
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**StorageTierUniqueld**

Required	true
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**ThrottleLimit**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**VirtualDisk**

Required	true
Position	0
Default value	
Accept pipeline input?	true (ByValue)

Accept wildcard characters?	
-----------------------------	--

Parameter :**VirtualDiskFriendlyName**

Required	true
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**VirtualDiskName**

Required	true
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**VirtualDiskUniqueld**

Required	true
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Cmdlet: Remove-StorageFileServer

Synops

Removes a file server.

Syntax

```
Remove-StorageFileServer [-CimSession <CimSession[]>] [-  
FriendlyName <String[]>] [-PassThru] [-ThrottleLimit <Int32>] [-  
Confirm] [-WhatIf] [<CommonParameters>]
```

```
Remove-StorageFileServer [-CimSession <CimSession[]>] [-PassThru]  
[-ThrottleLimit <Int32>] -UniqueId <String[]> [-Confirm] [-  
WhatIf] [<CommonParameters>]
```

```
Remove-StorageFileServer [-CimSession <CimSession[]>] [-PassThru]  
[-ThrottleLimit <Int32>] [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

Description

The Remove-StorageFileServer cmdlet removes a storage file server. This cmdlet operates on scale-out file server implementations only.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies the friendly name of the file server to remove.

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

Parameter :PassThru

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueld

Description :Specifies the unique ID of the file server to remove.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

Type :

Outputs

Type :

Cmdlet: Remove-StorageHealthIntent

Synops

Remove-StorageHealthIntent -InputObject <CimInstance#MSFT_StorageObject> [-CimSession <CimSession>] [-AsJob] [-WhatIf] [-Confirm] [<CommonParameters>]

Syntax

ntaxItem

{@{name=

Remove-StorageHealthIntent; CommonParameters=True;
WorkflowCommonParameters=False; parameter=System.Object[]}}

Description

Parameters

Parameter :**AsJob**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**CimSession**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**Confirm**

Required	false
Position	Named

Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**InputObject**

Required	true
Position	Named
Default value	
Accept pipeline input?	true (ByValue)
Accept wildcard characters?	

Parameter :**WhatIf**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Cmdlet: Remove-StorageHealthSetting

Synops

Removes a storage health service setting.

Syntax

```
Remove-StorageHealthSetting [-CimSession <CimSession>] [-ThrottleLimit <Int32>] -Name <String> [<CommonParameters>]
```

Description

The Remove-StorageHealthSetting cmdlet removes a storage health service setting for a specified Storage subsystem.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Name**

Description :Specifies the name of the storage health service setting to remove.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Inputs

Type :

Outputs

Type :

Cmdlet: Remove-StoragePool

Synops

Deletes a storage pool and associated VirtualDisk objects.

Syntax

```
Remove-StoragePool [-FriendlyName] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

```
Remove-StoragePool [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -Name <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Remove-StoragePool [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -UniqueId <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Remove-StoragePool [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Remove-StoragePool cmdlet deletes a storage pool. If the storage pool contains virtual disks, you must delete the virtual disks prior to removing the storage pool.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies a friendly name for the storage pool to be removed. The friendly name may be defined by a user and is not guaranteed to be unique.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies the name of an object or setting.

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

Parameter :**PassThru**

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

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.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StoragePool`

Outputs

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.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StoragePool`

Cmdlet: Remove-StorageTier

Synops

Removes storage tiers from a storage pool.

Syntax

```
Remove-StorageTier [-FriendlyName] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

```
Remove-StorageTier [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -UniqueId <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Remove-StorageTier [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Remove-StorageTier cmdlet removes one or more storage tiers from a storage pool. You cannot remove storage tiers that are used by virtual disks.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies an array of friendly names of storage tiers to remove.

Required	true
----------	------

Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :PassThru

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueld

Description :Specifies an array of IDs of storage tiers to remove.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can use the pipeline operator to pass an array of MSFT_StorageTier objects to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageTier

Outputs

If you specify the PassThru parameter, this cmdlet returns an object that represents the storage tiers that you removed.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageTier

Cmdlet: Remove-TargetPortFromMaskingSet

Synops

Removes a specified target port from a masking set.

Syntax

```
Remove-TargetPortFromMaskingSet [-MaskingSetFriendlyName]
<String[]> [-CimSession <CimSession[]>] [-PassThru] [-
TargetPortAddresses <String[]>] [-ThrottleLimit <Int32>]
[-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Remove-TargetPortFromMaskingSet [-CimSession <CimSession[]>] [-
PassThru] [-TargetPortAddresses <String[]>] [-ThrottleLimit
<Int32>] -MaskingSetUniqueId <String[]>
[-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Remove-TargetPortFromMaskingSet [-CimSession <CimSession[]>] [-
PassThru] [-TargetPortAddresses <String[]>] [-ThrottleLimit
<Int32>] [-Confirm] [-WhatIf]
[<CommonParameters>]
```

Description

The Remove-TargetPortFromMaskingSet cmdlet removes a specified target port from a masking set.

ps_storage_spacesubsystem_not_remark

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**MaskingSetFriendlyName**

Description :Specifies the friendly name of a masking set. The friendly name may be defined by a user.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**MaskingSetUniqueld**

Description :Specifies an ID used to uniquely identify a masking set in the system. The ID persists through reboots.

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

Parameter :**PassThru**

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :**TargetPortAddresses**

Description :Specifies one or more target port addresses. The target port addresses to be removed from the masking set.

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

Parameter :ThrottleLimit

Description :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

Parameter :Confirm

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :WhatIf

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

Inputs

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.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet`

Outputs

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.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet`

Cmdlet: Remove-VirtualDisk

Synops

Deletes an existing virtual disk and reclaims the used space for use by other virtual disks in the same storage pool.

Syntax

```
Remove-VirtualDisk [-FriendlyName] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

```
Remove-VirtualDisk [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -UniqueId <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Remove-VirtualDisk [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -Name <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Remove-VirtualDisk [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Remove-VirtualDisk cmdlet deletes an existing virtual disk and reclaims the used space for use by other virtual disks in the same StoragePool object. This action also deletes any associated file system located on the virtual disk.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies a friendly name for a virtual disk. The friendly name may be defined by a user and is not guaranteed to be unique.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies the name of an object or setting.

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

Parameter :**PassThru**

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :Uniqueld

Description :Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

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

Parameter :Confirm

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :WhatIf

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

Inputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Outputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Cmdlet: Remove-VirtualDiskFromMaskingSet

Synops

Removes a virtual disk from a specified masking set to block access to the virtual disk by an InitiatorIds object defined in the masking set.

Syntax

```
Remove-VirtualDiskFromMaskingSet [-MaskingSetFriendlyName]
<String[]> [-CimSession <CimSession[]>] [-PassThru] [-
ThrottleLimit <Int32>] [-VirtualDiskNames <String[]>]
[-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Remove-VirtualDiskFromMaskingSet [-CimSession <CimSession[]>] [-
PassThru] [-ThrottleLimit <Int32>] [-VirtualDiskNames <String[]>]
-MaskingSetUniqueId <String[]> [-Confirm]
[-WhatIf] [<CommonParameters>]
```

```
Remove-VirtualDiskFromMaskingSet [-CimSession <CimSession[]>] [-
PassThru] [-ThrottleLimit <Int32>] [-VirtualDiskNames <String[]>]
[-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Remove-VirtualDiskFromMaskingSet cmdlet removes a virtual disk from a specified masking set to block access to the virtual disk by an InitiatorIds object defined in the masking set.

ps_storage_spacesubsystem_not_remark

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**MaskingSetFriendlyName**

Description :Specifies the friendly name of a masking set. The friendly name may be defined by a user.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**MaskingSetUniqueld**

Description :Specifies an ID used to uniquely identify a masking set in the system. The ID persists through reboots.

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

Parameter :**PassThru**

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**VirtualDiskNames**

Description :Specifies one or more virtual disk names that are to be removed from the masking set.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Outputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Cmdlet: Rename-MaskingSet

Synops

Renames an existing masking set.

Syntax

```
Rename-MaskingSet [-FriendlyName] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -  
NewFriendlyName <String> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Rename-MaskingSet [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -NewFriendlyName <String> -UniqueId  
<String[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Rename-MaskingSet [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -NewFriendlyName <String> [-Confirm] [-  
WhatIf] [<CommonParameters>]
```

Description

The Rename-MaskingSet cmdlet renames an existing masking set.

ps_storage_spacesubsystem_not_remark

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies the friendly name for the masking set to rename.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :NewFriendlyName

Description :Specifies the new name of the masking set

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :PassThru

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :ThrottleLimit

Description :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

Parameter :**Uniqueld**

Description :Specifies the UniqueID of the masking set to rename

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can pipe a MaskingSet object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M

SFT_MaskingSet

Outputs

If you use the PassThru parameter, this cmdlet returns an object representing the masking set that you removed.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_MaskingSet

Cmdlet: Repair-FileIntegrity

Synops

Repairs a corrupted file on an NTFS or ReFS volume.

Syntax

```
Repair-FileIntegrity [-FileName] <String> [-CimSession  
<CimSession[]>] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

Description

The Repair-FileIntegrity cmdlet repairs a corrupted file on an NTFS file system volume or a Resilient File System (ReFS) volume. For the cmdlet to repair a file, the file must be on a storage volume that provides redundancy, and the file must have integrity turned on. This cmdlet does not repair corrupted file metadata.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FileName**

Description :Specifies a file name. The cmdlet attempts to repair the file that you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

To obtain a FileInfo object, use the Get-Item cmdlet for a specified file name. The cmdlet uses the FullName property as the value of the FileName parameter.

To obtain a DirectoryInfo object, use Get-Item for a specified directory name. The cmdlet uses the FullName property as the value of the FileName parameter.

Type : System.IO.FileInfo System.IO.DirectoryInfo

Outputs

This cmdlet generates no output.

Type :

Examples

Example 1: Repair a file

This command repairs a file. Because the repair proceeds without error, the cmdlet does not display any message.

```
PS C:\>Repair-FileIntegrity -FileName 'H:\Temp\Text  
Document.txt'
```

Example 2: Attempt to repair a file that cannot be repaired

This command attempts to repair a file. In this example, the cmdlet cannot repair the file and therefore displays an explanation.

```
PS C:\>Repair-FileIntegrity -FileName 'J:\Temp\Text  
Document.txt'  
Repair-FileIntegrity : The storage device does not provide  
redundancy.
```

Cmdlet: Repair-VirtualDisk

Synops

Performs repairs on a virtual disk that is unhealthy.

Syntax

```
Repair-VirtualDisk [-FriendlyName] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

```
Repair-VirtualDisk [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Repair-VirtualDisk [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -Name <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Repair-VirtualDisk [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -UniqueId <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

Description

The Repair-VirtualDisk cmdlet performs repairs on a virtual disk that is unhealthy. The actual tasks performed are vendor-specific based on implementation in a Storage Management provider.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies a friendly name for a disk. The friendly name may be defined by a user and is not guaranteed to be unique.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies the name of an object or setting.

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

Parameter :**PassThru**

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

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.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MFT_VirtualDisk`

Outputs

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.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MFT_VirtualDisk`

Examples

EXAMPLE 1

This example repairs the virtual disk named `Space05` which is currently unhealthy.

```
PS C:\>Repair-VirtualDisk -FriendlyName Space05
```

EXAMPLE 2

This example gets all of the unhealthy `VirtualDisk` objects, and runs repairs on all of them serially.

```
PS C:\>Get-VirtualDisk | Where-Object -FilterScript  
{$_ .HealthStatus -Eq "Unhealthy"} | Repair-VirtualDisk
```

Cmdlet: Repair-Volume

Synops

Performs repairs on a volume.

Syntax

```
Repair-Volume [-DriveLetter] <Char[]> [-CimSession  
<CimSession[]>] [-OfflineScanAndFix] [-Scan] [-SpotFix] [-  
ThrottleLimit <Int32>] [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Repair-Volume [-CimSession <CimSession[]>] [-OfflineScanAndFix]  
[-Scan] [-SpotFix] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Repair-Volume [-CimSession <CimSession[]>] [-OfflineScanAndFix]  
[-Scan] [-SpotFix] [-ThrottleLimit <Int32>] -Path <String[]> [-  
Confirm] [-WhatIf] [<CommonParameters>]
```

```
Repair-Volume [-CimSession <CimSession[]>] [-OfflineScanAndFix]  
[-Scan] [-SpotFix] [-ThrottleLimit <Int32>] -FileSystemLabel  
<String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Repair-Volume [-CimSession <CimSession[]>] [-OfflineScanAndFix]  
[-Scan] [-SpotFix] [-ThrottleLimit <Int32>] -ObjectId <String[]>  
[-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Repair-Volume cmdlet performs repairs on a volume. The following repair actions are available:

OfflineScanAndFix: Takes the volume offline to scan the volume and fix any errors found (equivalent to `chkdsk /f`).

Scan: Scans the volume without attempting to repair it; all detected corruptions are added to the \$corrupt system file (equivalent to `chkdsk /scan`).

SpotFix: Takes the volume briefly offline and then fixes only issues that are logged in the \$corrupt file (equivalent to `chkdsk /spotfix`).

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DriveLetter**

Description :Specifies a letter used to identify a drive or volume in the system.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**FileSystemLabel**

Description :Specifies the volume to scan based on the file system label (the volume name).

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

Parameter :**ObjectId**

Description :Specifies an ID representing the object. The ID is not globally unique.

Required	true
Position	named
Default value	none
Accept pipeline input?	True (ByPropertyName)

Accept wildcard characters?	false
-----------------------------	-------

Parameter :**OfflineScanAndFix**

Description :Performs and offline scan and fix of any errors found in the file system.

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

Parameter :**Path**

Description :Contains valid path information.

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

Parameter :**Scan**

Description :Scans the volume.

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

Parameter :**SpotFix**

Description :Takes the volume offline and fixes any issues that are logged in the \$corrupt file.

Required	false
Position	named
Default value	none
Accept pipeline input?	false

Accept wildcard characters?	false
-----------------------------	-------

Parameter :ThrottleLimit

Description :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

Parameter :Confirm

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :WhatIf

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

Inputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MFT_Volume

Examples

EXAMPLE 1

This example scans drive H and reports errors only.

```
PS C:\>Repair-Volume -DriveLetter H -Scan
```

EXAMPLE 2

This example takes drive H offline, and fixes all issues.

```
PS C:\>Repair-Volume -DriveLetter H -OfflineScanAndFix
```

EXAMPLE 3

This example uses the spot verifier functionality to quickly fix drive H.

```
PS C:\>Repair-Volume -DriveLetter H -SpotFix
```

Cmdlet: Reset-PhysicalDisk

Synops

Resets the status of a physical disk.

Syntax

```
Reset-PhysicalDisk [-FriendlyName] <String> [-CimSession  
<CimSession>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Reset-PhysicalDisk [-CimSession <CimSession>] [-ThrottleLimit  
<Int32>] -UniqueId <String> [<CommonParameters>]
```

```
Reset-PhysicalDisk [-CimSession <CimSession>] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

Description

The Reset-PhysicalDisk cmdlet resets the status of a physical disk. For Storage spaces, this is a destructive operation that removes the Storage pool configuration and pool data from the specified physical disk.

If you run Reset-PhysicalDisk on a physical disk that appears as lost communication or split, this cmdlet attempts to re-integrate the disk into the Storage pool if the disk is discoverable. After you reset a physical disk, use Repair-VirtualDisk to restore its resiliency.

If you run Reset-PhysicalDisk on a disk that is not a part of a Storage pool, the operation clears any lingering Storage spaces data and metadata.

Parameters

Parameter :**CimSession**

Description :

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

Parameter :**FriendlyName**

Description :Specifies a friendly name for a disk. The friendly name may be defined by a

user and is not guaranteed to be unique.

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :

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

Parameter :**Uniqueld**

Description :Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Inputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_PhysicalDisk

Outputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_PhysicalDisk

Examples

EXAMPLE 1

This example resets the state of a specific physical disk.

```
PS C:\> Reset-PhysicalDisk -FriendlyName "PhysicalDisk5"
```

EXAMPLE 2

This example resets all of the unhealthy physical disks.

```
PS C:\> $phydisk = (Get-Physicaldisk | Where-Object  
-FilterScript {$_.HealthStatus -Eq "Unhealthy"})  
PS C:\> Reset-PhysicalDisk -FriendlyName $phydisk.FriendlyName
```

Cmdlet: Reset-StorageReliabilityCounter

Synops

Resets storage reliability counters for a disk.

Syntax

```
Reset-StorageReliabilityCounter [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Reset-StorageReliabilityCounter -Disk <CimInstance> [<CommonParameters>]
```

```
Reset-StorageReliabilityCounter -PhysicalDisk <CimInstance> [<CommonParameters>]
```

Description

The Reset-StorageReliabilityCounter cmdlet resets the storage reliability counters to zero for a virtual disk or physical disk. The cmdlet resets the following storage reliability counters for I/O operations: read latency, write latency, and flush latency. If an unexpected issue with a disk or driver causes high latency, use this cmdlet to discount the sharp rise in latencies when you monitor I/O performance.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Disk**

Description :Specifies the Disk for which to reset reliability counters. To obtain a Disk object, use the Get-Disk cmdlet.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**PhysicalDisk**

Description :Specifies the physical disk for which to reset reliability counters. To obtain a PhysicalDisk object, use the Get-PhysicalDisk cmdlet

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Inputs

You can use the pipeline operator to pass an array of `MSFT_StorageReliabilityCounter` objects to the `InputObject` parameter.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageReliabilityCounter`

Outputs

This cmdlet outputs an array of objects that represent storage reliability counter data.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageReliabilityCounter`

Cmdlet: Resize-Partition

Synops

Resizes a partition and the underlying file system.

Syntax

```
Resize-Partition [-Size] <UInt64> [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -DriveLetter <Char[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Resize-Partition [-DiskNumber] <UInt32[]> [-PartitionNumber] <UInt32[]> [-Size] <UInt64> [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Resize-Partition [-Size] <UInt64> [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -DiskId <String[]> -Offset <UInt64[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Resize-Partition [-Size] <UInt64> [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Resize-Partition cmdlet resizes a partition and the underlying file system.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DiskId**

Description :Specifies an ID used to identify a disk in the system.

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

Parameter :**DiskNumber**

Description :Specifies an array of disk numbers.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**DriveLetter**

Description :Specifies a letter used to identify a drive or volume in the system.

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

Parameter :**Offset**

Description :Specifies the starting offset, in bytes.

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

Parameter :**PartitionNumber**

Description :Specifies the number of the partition. The number of the partition to be resized.

Required	true
Position	2
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**PassThru**

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :**Size**

Description :Specifies the size of the partition to create. If not specified, then the number will default to Bytes. The acceptable values for this parameter are: Bytes, KB, MB, GB, or TB. The size may be defined by a user.

Required	true
Position	3
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MFT_Partition

Outputs

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.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MFT_Partition`

Cmdlet: Resize-StorageTier

Synops

Increases the size of storage tiers.

Syntax

```
Resize-StorageTier [-FriendlyName] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-Size <UInt64>] [-ThrottleLimit  
<Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Resize-StorageTier [-CimSession <CimSession[]>] [-PassThru] [-  
Size <UInt64>] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Resize-StorageTier [-CimSession <CimSession[]>] [-PassThru] [-  
Size <UInt64>] [-ThrottleLimit <Int32>] -UniqueId <String[]> [-  
Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Resize-StorageTier increases the size of one or more storage tiers that are associated with a virtual disk. You cannot use the cmdlet to decrease the size of a storage tier.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies an array of friendly names of storage tiers to resize.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :PassThru

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :Size

Description :Specifies the size of the storage tiers. The cmdlet increases the size of the storage tiers that are associated with a virtual disk to the size that you specify.

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

Parameter :ThrottleLimit

Description :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

Parameter :**Uniqueld**

Description :Specifies an array of IDs of storage tiers to resize.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can use the pipeline operator to pass an array of MSFT_StorageTier objects to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageTier

Outputs

If you specify the `Passthru` parameter, this cmdlet returns an array of objects that contains details about the tiers, such as tier friendly name, media type and size.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageTier`

Cmdlet: Resize-VirtualDisk

Synops

Resizes an existing virtual disk to be larger or smaller.

Syntax

```
Resize-VirtualDisk [-FriendlyName] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-Size <UInt64>] [-ThrottleLimit  
<Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Resize-VirtualDisk [-CimSession <CimSession[]>] [-PassThru] [-  
Size <UInt64>] [-ThrottleLimit <Int32>] -UniqueId <String[]> [-  
Confirm] [-WhatIf] [<CommonParameters>]
```

```
Resize-VirtualDisk [-CimSession <CimSession[]>] [-PassThru] [-  
Size <UInt64>] [-ThrottleLimit <Int32>] -Name <String[]> [-  
Confirm] [-WhatIf] [<CommonParameters>]
```

```
Resize-VirtualDisk [-CimSession <CimSession[]>] [-PassThru] [-  
Size <UInt64>] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

Description

The Resize-VirtualDisk cmdlet resizes an existing virtual disk to be larger or smaller.

Note: The ability to expand or shrink is vendor specific.

Note: If there is a partition on the virtual disk, then the partition must also be resized in order for the client to have additional space on the disk surfaced to Windows.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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
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Parameter :**FriendlyName**

Description :Specifies a friendly name for a disk. The friendly name may be defined by a user and is not guaranteed to be unique.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies the name of an object or setting.

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

Parameter :**PassThru**

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :**Size**

Description :Specifies the size of the partition to create. If not specified, then the number

will default to Bytes. The acceptable values for this parameter are: Bytes, KB, MB, GB, or TB. The size may be defined by a user.

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

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueid

Description :Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

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

Parameter :Confirm

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
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Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Outputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_VirtualDisk

Cmdlet: Revoke-FileShareAccess

Synops

Revokes access to a file share.

Syntax

```
Revoke-FileShareAccess [-CimSession <CimSession[]>] [-FileServer  
<CimInstance>] [-PassThru] [-ThrottleLimit <Int32>] -AccountName  
<String[]> -Name <String[]> [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

```
Revoke-FileShareAccess [-CimSession <CimSession[]>] [-PassThru]  
[-ThrottleLimit <Int32>] -AccountName <String[]> -UniqueId  
<String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Revoke-FileShareAccess [-CimSession <CimSession[]>] [-PassThru]  
[-ThrottleLimit <Int32>] -AccountName <String[]> [-Confirm] [-  
WhatIf] [<CommonParameters>]
```

Description

The Revoke-FileShareAccess cmdlet removes the Allow access control entries (ACE) for a trustee from the security descriptor of a specified file share.

Parameters

Parameter :**AccountName**

Description :Specifies an array of account names for which to revoke access.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FileServer**

Description :Specifies a file server.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies an array of file share names for which to revoke access.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :Uniqueld

Description :Specifies an array of unique IDs of file shares for which to revoke access.

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

Parameter :Confirm

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :WhatIf

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

Inputs

Type :

Outputs

Type :

Cmdlet: Set-Disk

Synops

Takes a Disk object or unique disk identifiers and a set of attributes, and updates the physical disk on the system.

Syntax

```
Set-Disk [-Number] <UInt32> [-CimSession <CimSession[]>] [-Guid  
<String>] [-IsReadOnly <Boolean>] [-Signature <UInt32>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Set-Disk [-Number] <UInt32> [-CimSession <CimSession[]>] [-  
IsOffline <Boolean>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Set-Disk [-CimSession <CimSession[]>] [-IsOffline <Boolean>] [-  
ThrottleLimit <Int32>] -Path <String> [<CommonParameters>]
```

```
Set-Disk [-CimSession <CimSession[]>] [-PartitionStyle {Unknown |  
MBR | GPT}] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Set-Disk [-CimSession <CimSession[]>] [-Guid <String>] [-  
IsReadOnly <Boolean>] [-Signature <UInt32>] [-ThrottleLimit  
<Int32>] -Path <String> [<CommonParameters>]
```

```
Set-Disk [-CimSession <CimSession[]>] [-Guid <String>] [-  
IsReadOnly <Boolean>] [-Signature <UInt32>] [-ThrottleLimit  
<Int32>] -UniqueId <String> [<CommonParameters>]
```

```
Set-Disk [-CimSession <CimSession[]>] [-Guid <String>] [-  
IsReadOnly <Boolean>] [-Signature <UInt32>] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

```
Set-Disk [-CimSession <CimSession[]>] [-IsOffline <Boolean>] [-  
ThrottleLimit <Int32>] -UniqueId <String> [<CommonParameters>]
```

```
Set-Disk [-CimSession <CimSession[]>] [-IsOffline <Boolean>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Set-Disk [-Number] <UInt32> [-CimSession <CimSession[]>] [-  
PartitionStyle {Unknown | MBR | GPT}] [-ThrottleLimit <Int32>]
```

[<CommonParameters>]

```
Set-Disk [-CimSession <CimSession[]>] [-PartitionStyle {Unknown |  
MBR | GPT}] [-ThrottleLimit <Int32>] -Path <String>  
[<CommonParameters>]
```

```
Set-Disk [-CimSession <CimSession[]>] [-PartitionStyle {Unknown |  
MBR | GPT}] [-ThrottleLimit <Int32>] -UniqueId <String>  
[<CommonParameters>]
```

Description

The Set-Disk cmdlet takes a Disk object or unique disk identifiers and a set of attributes, and updates the physical disk on the system.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Guid**

Description :Contains a globally unique ID (GUID).

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

Parameter :**IsOffline**

Description :Specifies that the disk is offline.

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

Parameter :IsReadOnly

Description :Sets the disk to be read-only, or read-write (read-only = false). Note: If the disk is set to read-only, then the disk must be set to read-only = false before using this cmdlet to set the PartitionStyle parameter.

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

Parameter :Number

Description :Specifies a disk number on which the cmdlet acts.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :PartitionStyle

Description :Specifies the type of the partition. The acceptable values for this parameter are: MBR or GPT. The disk must be initialized (such as using theInitialize-Disk cmdlet) and set to read-write (IsReadOnly \$false) before this cmdlet will work. The disk must be set to read-only = false before this cmdlet will work.

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

Parameter :**Path**

Description :Contains the device instance path.

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

Parameter :**Signature**

Description :Contains the signature of the disk.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**UniqueId**

Description :Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

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

Inputs

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.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MFT_Disk`

Examples

EXAMPLE 1

This example takes a disk that is offline and makes it online.

```
PS C:\>Set-Disk -Number 5 -IsOffline $False
```

EXAMPLE 2

This example takes a disk that is read-only and makes it writeable.

```
PS C:\>Set-Disk -Number 5 -IsReadOnly $False
```

Cmdlet: Set-FileIntegrity

Synops

Sets integrity for a file on an ReFS volume.

Syntax

```
Set-FileIntegrity [-FileName] <String> [[-Enable] <Boolean>] [-CimSession <CimSession[]>] [-Enforce <Boolean>] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Set-FileIntegrity cmdlet sets integrity for a file on a Resilient File System (ReFS) volume. You can enable or disable integrity.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Enable**

Description :Indicates whether to enable integrity for the file.

Required	false
Position	2
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**Enforce**

Description :Indicates whether to enable blocking access to a file if integrity streams indicate data corruption.

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

Parameter :**FileName**

Description :Specifies a file name. The cmdlet modifies integrity for the file that you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
----------	-------

Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

To obtain a FileInfo object, use the Get-Item cmdlet for a specified file name. The cmdlet uses the FullName property as the value of the FileName parameter.

To obtain a DirectoryInfo object, use Get-Item for a specified directory name. The cmdlet uses the FullName property as the value of the FileName parameter.

Type : System.IO.FileInfo System.IO.DirectoryInfo

Outputs

This cmdlet generates no output.

Type :

Examples

Example 1: Enable integrity

The first command enables integrity for a file by specifying the Enable parameter.

The second command uses the Get-FileIntegrity cmdlet to display the file integrity settings for the specified file.

```

PS C:\>Set-FileIntegrity -FileName 'H:\Temp\New Text
Document.txt' -Enable $True
PS C:\> Get-FileIntegrity 'H:\Temp\New Text Document.txt'
FileName                               Enabled
Enforced
-----
H:\Temp\New Text Document.txt         True
True

```

Example 2: Enable integrity for multiple files by using the pipeline

The first command uses the Get-Item cmdlet to get all the files in the specified folder, and then passes them to the current cmdlet by using the pipeline operator. For more information, type Get-Help Get-Item. The command enables integrity for each file in the directory.

The second command uses Get-Item to get all the files in the specified folder, and then passes them to the Get-FileIntegrity by using the pipeline operator. The command displays the file integrity setting for all the files in the folder.

```

PS C:\>Get-Item -Path 'H:\Temp\*' | Set-FileIntegrity -Enable
$True
PS C:\> Get-Item -Path 'H:\Temp\*' | Get-FileIntegrity
FileName                               Enabled
Enforced
-----
H:\Temp\New Text Document 07 21         True
True
H:\Temp\New Text Document 08 19         True
True
H:\Temp\New Text Document 08 22         True
True
H:\Temp\New Text Document 09 07         True
True

```

Cmdlet: Set-FileShare

Synops

Modifies a file share.

Syntax

```
Set-FileShare [-CimSession <CimSession[]>] [-Description  
<String>] [-EncryptData <Boolean>] [-ThrottleLimit <Int32>] -  
UniqueId <String> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Set-FileShare [-CimSession <CimSession[]>] [-Description  
<String>] [-EncryptData <Boolean>] [-ThrottleLimit <Int32>] [-  
Confirm] [-WhatIf] [<CommonParameters>]
```

```
Set-FileShare [-CimSession <CimSession[]>] [-Description  
<String>] [-EncryptData <Boolean>] [-ThrottleLimit <Int32>] -Name  
<String> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

Description

The Set-FileShare cmdlet modifies a file share.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Description**

Description :Specifies a description for the file share. You can use this parameter to store extra information such as notes or details about the file share.

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

Parameter :**EncryptData**

Description :Indicates whether to enable encryption for data transmission.

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

Parameter :**Name**

Description :Specifies the name of the file share.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies the unique ID of the file share.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

Type :

Outputs

Type :

Examples

Example 1: Set a description

This command sets the description for a file share.

```
PS C:\>Set-FileShare -Description "This share is for use by  
the accounting department."
```

Example 2: Enable encryption

This command enables data-in-flight encryption for the file share.

```
PS C:\>Set-FileShare -EnableEncryption
```

Cmdlet: Set-FileStorageTier

Synops

Assigns a file to a storage tier.

Syntax

```
Set-FileStorageTier [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] -DesiredStorageTierFriendlyName <String> -FilePath  
<String> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Set-FileStorageTier [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] -DesiredStorageTierUniqueId <String> -FilePath <String>  
[-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Set-FileStorageTier [-CimSession <CimSession[]>] [-ThrottleLimit  
<Int32>] -DesiredStorageTier <CimInstance> -FilePath <String> [-  
Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Set-FileStorageTier cmdlet assigns a file to a specified storage tier. Assigning a file to a tier is also called pinning the file to a tier. To pin a file to a storage tier, the file must be on a volume that is hosted by the same tiered storage space. If you pin a file that is already assigned to a different tier, the file changes assignment the next time tier optimization takes place.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DesiredStorageTier**

Description :Specifies the storage tier, as a CimInstance object, to pin a file to. To obtain a storage tier object, use the Get-StorageTier cmdlet.

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

Parameter :**DesiredStorageTierFriendlyName**

Description :Specifies the friendly name of a storage tier to pin a file to.

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

Parameter :**DesiredStorageTierUniqueId**

Description :Specifies the unique ID, as a string, of a storage tier to pin a file to.

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

Parameter :**FilePath**

Description :Specifies the full path of a file. The cmdlet pins the file that you specify to a storage tier.

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

Parameter :ThrottleLimit

Description :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

Parameter :Confirm

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :WhatIf

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

Inputs

You can use the pipeline operator to pass an MSFT_StorageTier object to the DesiredStorageTier parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageTier

Outputs

This cmdlet does not generate any output.

Type :

Examples

Example 1: Pin a file to a storage tier

The first command uses the Get-StorageTier cmdlet to get a storage tier named Tier07, and then stores the tier in the \$StorageTier variable.

The second command pins the specified file to a storage tier. The command specifies the storage tier by using the object stored in the \$StorageTier variable.

```
PS C:\> $StorageTier = Get-StorageTier -FriendlyName "Tier07"  
PS C:\> Set-FileStorageTier -DesiredStorageTier $StorageTier -  
FilePath "D:\DataFile06.txt"
```

Example 2: Pin a file to a storage tier by using an ID

The first command uses the Get-StorageTier cmdlet to get a storage tier named Tier07, and then stores the tier in the \$StorageTier variable.

The second command pins the specified file to a storage tier. The command specifies the ID of the storage tier by using the UniqueID property of the storage tier object stored in the \$StorageTier variable.

```
PS C:\> $StorageTier = Get-StorageTier -FriendlyName "Tier07"  
PS C:\> Set-FileStorageTier -DesiredStorageTierUniqueId  
$StorageTier.UniqueId -FilePath "D:\DataFile06.txt"
```

Cmdlet: Set-InitiatorPort

Synops

Sets properties on the InitiatorPort object.

Syntax

```
Set-InitiatorPort [-NodeAddress] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -  
NewNodeAddress <String> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Set-InitiatorPort [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -NewNodeAddress <String> -ObjectId  
<String[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Set-InitiatorPort [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -NewNodeAddress <String> [-Confirm] [-  
WhatIf] [<CommonParameters>]
```

Description

The Set-InitiatorPort cmdlet sets properties on the InitiatorPort object.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**NewNodeAddress**

Description :Specifies the new node address for the initiator port.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**NodeAddress**

Description :Specifies the node address for the initiator.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**ObjectId**

Description :Specifies the ObjectID of the initiator.

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

Parameter :**PassThru**

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can pipe an InitiatorPort object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_InitiatorPort

Outputs

This cmdlet returns an object that represents the initiator port you specified.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_InitiatorPort

Cmdlet: Set-Partition

Synops

Sets attributes of a partition, such as active, read-only, and offline states.

Syntax

```
Set-Partition [-DiskNumber] <UInt32> [-PartitionNumber] <UInt32>
[-CimSession <CimSession[]>] [-GptType <System.String>] [-
IsActive <Boolean>] [-IsDAX] [-IsHidden
<Boolean>] [-IsReadOnly <Boolean>] [-IsShadowCopy] [-MbrType
<System.UInt16>] [-NoDefaultDriveLetter <Boolean>] [-
ThrottleLimit <Int32>] [-Confirm] [-WhatIf]
[<CommonParameters>]
```

```
Set-Partition [-DiskNumber] <UInt32> [-PartitionNumber] <UInt32>
[-CimSession <CimSession[]>] [-IsOffline <Boolean>] [-
ThrottleLimit <Int32>] [-Confirm] [-WhatIf]
[<CommonParameters>]
```

```
Set-Partition [-CimSession <CimSession[]>] [-IsOffline <Boolean>]
[-ThrottleLimit <Int32>] -DriveLetter <Char> [-Confirm] [-WhatIf]
[<CommonParameters>]
```

```
Set-Partition [-CimSession <CimSession[]>] [-GptType
<System.String>] [-IsActive <Boolean>] [-IsDAX] [-IsHidden
<Boolean>] [-IsReadOnly <Boolean>] [-IsShadowCopy]
[-MbrType <System.UInt16>] [-NoDefaultDriveLetter <Boolean>] [-
ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Set-Partition [-CimSession <CimSession[]>] [-NewDriveLetter
<Char>] [-ThrottleLimit <Int32>] -DriveLetter <Char> [-Confirm]
[-WhatIf] [<CommonParameters>]
```

```
Set-Partition [-CimSession <CimSession[]>] [-NewDriveLetter
<Char>] [-ThrottleLimit <Int32>] -DiskId <String> -Offset
<UInt64> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Set-Partition [-CimSession <CimSession[]>] [-NewDriveLetter
<Char>] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf]
[<CommonParameters>]
```



```
Set-Partition [-DiskNumber] <UInt32> [-PartitionNumber] <UInt32>
[-CimSession <CimSession[]>] [-NewDriveLetter <Char>] [-
ThrottleLimit <Int32>] [-Confirm] [-WhatIf]
[<CommonParameters>]
```

```
Set-Partition [-CimSession <CimSession[]>] [-IsOffline <Boolean>]
[-ThrottleLimit <Int32>] -DiskId <String> -Offset <UInt64> [-
Confirm] [-WhatIf] [<CommonParameters>]
```

```
Set-Partition [-CimSession <CimSession[]>] [-IsOffline <Boolean>]
[-ThrottleLimit <Int32>] [-Confirm] [-WhatIf]
[<CommonParameters>]
```

```
Set-Partition [-CimSession <CimSession[]>] [-GptType
<System.String>] [-IsActive <Boolean>] [-IsDAX] [-IsHidden
<Boolean>] [-IsReadOnly <Boolean>] [-IsShadowCopy]
[-MbrType <System.UInt16>] [-NoDefaultDriveLetter <Boolean>] [-
ThrottleLimit <Int32>] -DriveLetter <Char> [-Confirm] [-WhatIf]
[<CommonParameters>]
```

```
Set-Partition [-CimSession <CimSession[]>] [-GptType
<System.String>] [-IsActive <Boolean>] [-IsDAX] [-IsHidden
<Boolean>] [-IsReadOnly <Boolean>] [-IsShadowCopy]
[-MbrType <System.UInt16>] [-NoDefaultDriveLetter <Boolean>] [-
ThrottleLimit <Int32>] -DiskId <String> -Offset <UInt64> [-
Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Set-Partition cmdlet sets the attributes of a partition, including active, read-only, hidden, offline, and the drive letter.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DiskId**

Description :Specifies the disk ID of the partition to modify.

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

Parameter :**DiskNumber**

Description :Specifies an array of disk numbers. These represent the disks on which the partitions reside to modify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**DriveLetter**

Description :Specifies the drive letter of the partition to modify.

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

Parameter :**GptType**

Description :Sets the type of a GPT partition to a specific GUID.

Required	false
Position	named
Default value	none

Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :IsActive

Description :Specifies that the partition is marked as active and can be used to start the system. This parameter is only relevant for MBR disks.

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

Parameter :IsDAX

Description :Formats a volume as a DirectAccess (DAX) volume.

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

Parameter :IsHidden

Description :Specifies that the partition is hidden. As a result, the partition does not receive a drive letter, does not receive a volume GUID path, and does not host volume mount points. This ensures that applications such as disk defragmenter do not access the partition.

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

Parameter :IsOffline

Description :Takes the partition offline until explicitly brought back online, or until an access path is added to the partition.

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

Parameter :**IsReadOnly**

Description :Sets the partition to be read-only (IsReadOnly \$true) or read-write (IsReadOnly \$false).

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

Parameter :**IsShadowCopy**

Description :

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

Parameter :**MbrType**

Description :Sets the type of an MBR partition to a specific numeric ID.

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

Parameter :**NewDriveLetter**

Description :Specifies the new drive letter for the partition.

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

Parameter :**NoDefaultDriveLetter**

Description :Specifies that the automatic assignment of a drive letter is disabled. This is only honored for GPT disks. This attribute is useful in storage area network (SAN) environments.

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

Parameter :**Offset**

Description :Specifies the partition's offset from the beginning of the disk, measured in bytes.

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

Parameter :**PartitionNumber**

Description :Specifies the number of the partition.

Required	true
Position	2
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can pipe a Partition object to the InputObject parameter to specify the partition you want to modify by Partition object.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M

SFT_Partition

Examples

Example 1: Set the partition to read-only

This example makes partition Y read-only.

```
PS C:\> Set-Partition -DriveLetter Y -IsReadOnly $True
```

Example 2: Set an MBR partition to active

This example makes the MBR partition Y active.

```
PS C:\> Set-Partition -DriveLetter Y -IsActive $True
```

Example 3: Hide the partition

This example hides partition Y.

```
PS C:\> Set-Partition -DriveLetter Y -IsHidden $True
```

Example 4: Take the partition offline

This example takes the partition and volume offline.

```
PS C:\> Set-Partition -DriveLetter Y -IsOffline $True
```

Example 5: Change the drive letter

This example changes the drive letter from Y to Z.

```
PS C:\> Set-Partition -DriveLetter Y -NewDriveLetter Z
```

Cmdlet: Set-PhysicalDisk

Synops

Sets attributes on a specific physical disk.

Syntax

```
Set-PhysicalDisk [-CimSession <CimSession[]>] [-Description  
<String>] [-MediaType {HDD | SSD | SCM}] [-NewFriendlyName  
<String>] [-ThrottleLimit <Int32>] [-Usage  
{AutoSelect | ManualSelect | HotSpare | Retired | Journal}] -  
UniqueId <String> [<CommonParameters>]
```

```
Set-PhysicalDisk [-FriendlyName] <String> [-CimSession  
<CimSession[]>] [-Description <String>] [-MediaType {HDD | SSD |  
SCM}] [-NewFriendlyName <String>] [-ThrottleLimit  
<Int32>] [-Usage {AutoSelect | ManualSelect | HotSpare | Retired  
| Journal}] [<CommonParameters>]
```

```
Set-PhysicalDisk [-CimSession <CimSession[]>] [-Description  
<String>] [-MediaType {HDD | SSD | SCM}] [-NewFriendlyName  
<String>] [-ThrottleLimit <Int32>] [-Usage  
{AutoSelect | ManualSelect | HotSpare | Retired | Journal}]  
[<CommonParameters>]
```

Description

The Set-PhysicalDisk cmdlet sets attributes on a specific physical disk in a storage pool, other than the primordial pool when using Storage Spaces.

When using the Windows Storage subsystem, this cmdlet only works on physical disks that have been added to a storage pool.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Description**

Description :Sets the description of the specified physical disk.

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

Parameter :**FriendlyName**

Description :Specifies the friendly name of the physical disk on which to set attributes.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**MediaType**

Description :Specifies a media type. The cmdlet changes the media type that is associated with physical disk to the media type that you specify. The acceptable values for this parameter are:

-- SSD
-- HDD

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

Parameter :**NewFriendlyName**

Description :Specifies the new friendly name of the physical disk.

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

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueid

Description :Specifies the UniqueID of the physical disk on which to set attributes.

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

Parameter :Usage

Description :Specifies the allocation method (usage) for the disk. Valid values are AutoSelect, HotSpare, Journal, ManualSelect, Retired, and Unknown.

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

Inputs

You can use the pipeline operator to pass an MSFT_PhysicalDisk object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_PhysicalDisk

Notes

Examples

Example 1: Change the friendly name of a physical disk

This example changes the friendly name of PhysicalDisk4 to PhysicalDiskInSlot5.

```
PS C:\>Set-PhysicalDisk -FriendlyName "PhysicalDisk4" -  
NewFriendlyName "PhysicalDiskInSlot5"
```

Example 2: Change the Usage of a physical disk

This example changes the Usage property of PhysicalDisk2 to AutoSelect.

```
PS C:\>Set-PhysicalDisk -FriendlyName PhysicalDisk2 -Usage  
AutoSelect
```

Cmdlet: Set-ResiliencySetting

Synops

Modifies the properties of the specified resiliency setting name.

Syntax

```
Set-ResiliencySetting [-AutoNumberOfColumns] [-CimSession  
<CimSession[]>] [-InterleaveDefault <UInt64>] [-  
NumberOfColumnsDefault <UInt16>] [-NumberOfDataCopiesDefault  
<UInt16>] [-NumberOfGroupsDefault <UInt16>] [-PassThru] [-  
PhysicalDiskRedundancyDefault <UInt16>] [-ThrottleLimit <Int32>]  
-Name <String[]> -StoragePool <CimInstance>  
[<CommonParameters>]
```

```
Set-ResiliencySetting [-AutoNumberOfColumns] [-CimSession  
<CimSession[]>] [-InterleaveDefault <UInt64>] [-  
NumberOfColumnsDefault <UInt16>] [-NumberOfDataCopiesDefault  
<UInt16>] [-NumberOfGroupsDefault <UInt16>] [-PassThru] [-  
PhysicalDiskRedundancyDefault <UInt16>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Set-ResiliencySetting [-AutoNumberOfColumns] [-CimSession  
<CimSession[]>] [-InterleaveDefault <UInt64>] [-  
NumberOfColumnsDefault <UInt16>] [-NumberOfDataCopiesDefault  
<UInt16>] [-NumberOfGroupsDefault <UInt16>] [-PassThru] [-  
PhysicalDiskRedundancyDefault <UInt16>] [-ThrottleLimit <Int32>]  
-UniqueId <String[]> [<CommonParameters>]
```

Description

The Set-ResiliencySetting cmdlet modifies the properties of the specified resiliency setting name. For example, the user can specify that when creating any new virtual disk using the resiliency setting named Mirror, that the default interleave value would be 128K, or to define the default number of columns to use when creating a Simple (stripe without parity) virtual disk.

Parameters

Parameter :**AutoNumberOfColumns**

Description :Indicates whether the provider automatically determines the best possible column count for a resiliency setting on a storage pool. The value ranges are:

- Mirror. The minimum is two for two-way mirror or three for three-way mirror. The maximum is eight times the number of data copies.
- Parity. The minimum is three for single parity and seven for dual parity. The maximum is eight for single parity and 17 for dual parity.
- Simple. The minimum is one. The maximum is eight.

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

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**InterleaveDefault**

Description :Specifies the default interleave value to use. The interleave value represents the number of bytes that is written to a single physical disk. Therefore, Interleave * NumberOfColumns yields the size of one stripe of user data.

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

Parameter :**Name**

Description :Specifies the name of an object or setting. The acceptable values for this parameter are:simple, mirror, or parity.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**NumberOfColumnsDefault**

Description :Specifies the default number of columns to create.

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

Parameter :**NumberOfDataCopiesDefault**

Description :Specifies the default number of data copies to create.

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

Parameter :**NumberOfGroupsDefault**

Description :Specifies the default number of groups used by Local Reconstruction Coding (LRC) with a dual parity virtual disk. We recommend omitting this parameter and using the defaults.

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

Parameter :**PassThru**

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :**PhysicalDiskRedundancyDefault**

Description :Specifies the default number to use for the physical disk redundancy value.

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

Parameter :**StoragePool**

Description :Accepts a StoragePool object as input. The Storage Pool CIM object is exposed by the Get-StoragePool cmdlet.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**UniqueId**

Description : Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

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

Inputs

You can use the pipeline operator to pass an MSFT_ResiliencySetting object to the InputObject parameter.

You can use the pipeline operator to pass an MSFT_StoragePool object to the StoragePool parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_ResiliencySetting

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StoragePool

Outputs

This cmdlet generates an object that represents resiliency settings if you specify the PassThru parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_ResiliencySetting

Cmdlet: Set-StorageFileServer

Synops

Modifies a storage file server.

Syntax

```
Set-StorageFileServer [-CimSession <CimSession[]>] [-FriendlyName  
<String[]>] [-PassThru] [-ThrottleLimit <Int32>] -NewFriendlyName  
<String> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Set-StorageFileServer [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -NewFriendlyName <String> -UniqueId  
<String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Set-StorageFileServer [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -NewFriendlyName <String> [-Confirm] [-  
WhatIf] [<CommonParameters>]
```

Description

The Set-StorageFileServer cmdlet modifies a storage file server.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies the friendly name for a file server. The FriendlyName can be used in place of HostName. Not all implementations support FriendlyName.

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

Parameter :NewFriendlyName

Description :Specifies the new friendly name for the file server.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :PassThru

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :**Uniqueld**

Description :Specifies the unique ID of the file server.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

Type :

Outputs

Type :

Cmdlet: Set-StorageHealthSetting

Synops

Modifies a storage health service setting.

Syntax

```
Set-StorageHealthSetting [-CimSession <CimSession>] [-ThrottleLimit <Int32>] -Name <String> -Value <String> [<CommonParameters>]
```

Description

The Set-StorageHealthSetting cmdlet modifies a setting to the current storage health service for the specified storage subsystem. If the setting doesn't exist, it creates it.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Name**

Description :Specifies the name of the Storage health setting to set.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Value**

Description :Specifies the value for a storage health setting.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Inputs

Type :

Outputs

Type :

Cmdlet: Set-StoragePool

Synops

Modifies the properties of the specified storage pool.

Syntax

```
Set-StoragePool [-CimSession <CimSession[]>] [-ClearOnDeallocate  
<Boolean>] [-IsPowerProtected <Boolean>] [-NewFriendlyName  
<String>] [-OtherUsageDescription <String>]  
[-RepairPolicy {Sequential | Parallel}] [-  
RetireMissingPhysicalDisks {Auto | Always | Never}] [-  
ThinProvisioningAlertThresholds <UInt16[]>] [-ThrottleLimit  
<Int32>]  
[-Usage {Other | Unrestricted | ReservedForComputerSystem |  
ReservedAsDeltaReplicaContainer | ReservedForMigrationServices |  
ReservedForLocalReplicationServices |  
ReservedForRemoteReplicationServices | ReservedForSparing}] -  
UniqueId <String> [<CommonParameters>]
```

```
Set-StoragePool [-FriendlyName] <String> [-AutoWriteCacheSize  
<Boolean>] [-CimSession <CimSession[]>] [-EnclosureAwareDefault  
<Boolean>] [-FaultDomainAwarenessDefault  
{PhysicalDisk | StorageEnclosure | StorageScaleUnit |  
StorageChassis | StorageRack}] [-MediaTypeDefault {Unspecified |  
HDD | SSD | SCM}] [-ProvisioningTypeDefault {Unknown  
| Thin | Fixed}] [-ResiliencySettingNameDefault <String>] [-  
ThrottleLimit <Int32>] [-WriteCacheSizeDefault <UInt64>]  
[<CommonParameters>]
```

```
Set-StoragePool [-AutoWriteCacheSize <Boolean>] [-CimSession  
<CimSession[]>] [-EnclosureAwareDefault <Boolean>] [-  
FaultDomainAwarenessDefault {PhysicalDisk |  
StorageEnclosure | StorageScaleUnit | StorageChassis |  
StorageRack}] [-MediaTypeDefault {Unspecified | HDD | SSD | SCM}]  
[-ProvisioningTypeDefault {Unknown | Thin |  
Fixed}] [-ResiliencySettingNameDefault <String>] [-ThrottleLimit  
<Int32>] [-WriteCacheSizeDefault <UInt64>] -UniqueId <String>  
[<CommonParameters>]
```

```
Set-StoragePool [-AutoWriteCacheSize <Boolean>] [-CimSession  
<CimSession[]>] [-EnclosureAwareDefault <Boolean>] [-
```

```
FaultDomainAwarenessDefault {PhysicalDisk |
StorageEnclosure | StorageScaleUnit | StorageChassis |
StorageRack}} [-MediaTypeDefault {Unspecified | HDD | SSD | SCM}]
[-ProvisioningTypeDefault {Unknown | Thin |
Fixed}} [-ResiliencySettingNameDefault <String>] [-ThrottleLimit
<Int32>] [-WriteCacheSizeDefault <UInt64>] [<CommonParameters>]
```

```
Set-StoragePool [-AutoWriteCacheSize <Boolean>] [-CimSession
<CimSession[]>] [-EnclosureAwareDefault <Boolean>] [-
FaultDomainAwarenessDefault {PhysicalDisk |
StorageEnclosure | StorageScaleUnit | StorageChassis |
StorageRack}} [-MediaTypeDefault {Unspecified | HDD | SSD | SCM}]
[-ProvisioningTypeDefault {Unknown | Thin |
Fixed}} [-ResiliencySettingNameDefault <String>] [-ThrottleLimit
<Int32>] [-WriteCacheSizeDefault <UInt64>] -Name <String>
[<CommonParameters>]
```

```
Set-StoragePool [-CimSession <CimSession[]>] [-IsReadOnly
<Boolean>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Set-StoragePool [-CimSession <CimSession[]>] [-ClearOnDeallocate
<Boolean>] [-IsPowerProtected <Boolean>] [-NewFriendlyName
<String>] [-OtherUsageDescription <String>]
[-RepairPolicy {Sequential | Parallel}] [-
RetireMissingPhysicalDisks {Auto | Always | Never}] [-
ThinProvisioningAlertThresholds <UInt16[]>] [-ThrottleLimit
<Int32>]
[-Usage {Other | Unrestricted | ReservedForComputerSystem |
ReservedAsDeltaReplicaContainer | ReservedForMigrationServices |
ReservedForLocalReplicationServices |
ReservedForRemoteReplicationServices | ReservedForSparing}} -Name
<String> [<CommonParameters>]
```

```
Set-StoragePool [-FriendlyName] <String> [-CimSession
<CimSession[]>] [-IsReadOnly <Boolean>] [-ThrottleLimit <Int32>]
[<CommonParameters>]
```

```
Set-StoragePool [-CimSession <CimSession[]>] [-IsReadOnly
<Boolean>] [-ThrottleLimit <Int32>] -Name <String>
[<CommonParameters>]
```

```
Set-StoragePool [-CimSession <CimSession[]>] [-IsReadOnly
```



```
<Boolean>] [-ThrottleLimit <Int32>] -UniqueId <String>
[<CommonParameters>]
```

```
Set-StoragePool [-FriendlyName] <String> [-CimSession
<CimSession[]>] [-ClearOnDeallocate <Boolean>] [-IsPowerProtected
<Boolean>] [-NewFriendlyName <String>]
[-OtherUsageDescription <String>] [-RepairPolicy {Sequential |
Parallel}] [-RetireMissingPhysicalDisks {Auto | Always | Never}]
[-ThinProvisioningAlertThresholds
<UInt16[]>] [-ThrottleLimit <Int32>] [-Usage {Other |
Unrestricted | ReservedForComputerSystem |
ReservedAsDeltaReplicaContainer | ReservedForMigrationServices |
ReservedForLocalReplicationServices |
ReservedForRemoteReplicationServices | ReservedForSparing}]
[<CommonParameters>]
```

```
Set-StoragePool [-CimSession <CimSession[]>] [-ClearOnDeallocate
<Boolean>] [-IsPowerProtected <Boolean>] [-NewFriendlyName
<String>] [-OtherUsageDescription <String>]
[-RepairPolicy {Sequential | Parallel}] [-
RetireMissingPhysicalDisks {Auto | Always | Never}] [-
ThinProvisioningAlertThresholds <UInt16[]>] [-ThrottleLimit
<Int32>]
[-Usage {Other | Unrestricted | ReservedForComputerSystem |
ReservedAsDeltaReplicaContainer | ReservedForMigrationServices |
ReservedForLocalReplicationServices |
ReservedForRemoteReplicationServices | ReservedForSparing}]
[<CommonParameters>]
```

Description

The Set-StoragePool cmdlet modifies the properties of the specified storage pool.

Parameters

Parameter :**AutoWriteCacheSize**

Description :Indicates whether to set the size of the write-back cache to 1 GB for all types of storage spaces, which include simple, mirror, and parity, to create from the pool. If the number or size of the solid-state drives (SSDs) or journal disks in the storage pool is not sufficient and you specify a value of \$True for this parameter, the cmdlet sets the write-back cache size to 0 for simple and mirror spaces, and to 32 MB for parity spaces.

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

Parameter :CimSession

Description :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 or Get-CimSession 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

Parameter :ClearOnDeallocate

Description :Clears all blocks on the physical disks in the storage pool upon deallocation. Clearing all blocks is more secure, but is much slower to deallocate.

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

Parameter :EnclosureAwareDefault

Description :Specifies that the storage pool should use enclosure awareness by default when creating storage spaces.

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

Parameter :**FaultDomainAwarenessDefault**

Description :Specifies the default fault domain for new virtual disks created in this storage pool. The acceptable values for this parameter are:

- PhysicalDisk
- StorageScaleUnit
- StorageChassis
- StorageEnclosure
- StorageRack

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

Parameter :**FriendlyName**

Description :Specifies the friendly name of the storage pool on which you want to set attributes.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**IsPowerProtected**

Description :Indicates whether the physical disks that belong to the storage pool have backup power systems, such as battery backup. If you specify a value of \$True for this parameter, the storage pool does not perform flush operations, and the pool removes write-through attributes from commands.

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

Parameter :**IsReadOnly**

Description :Sets the object to be read-only (IsReadOnly \$true\$true) or read-write (IsReadOnly \$false\$false). Note: If the object is set to read-only (IsReadOnly \$true\$true), the object must be set to read-write (IsReadOnly \$false\$false) before using this cmdlet to set the PartitionStyle parameter.

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

Parameter :**MediaTypeDefault**

Description :Specifies the default media type to use during virtual disk creation. The acceptable values for this parameter are: HDD, SSD, and Unspecified.

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

Parameter :**Name**

Description :Specifies the name of the storage pool on which you want to set attributes.

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

Parameter :**NewFriendlyName**

Description :Specifies the new friendly name for the storage pool.

Required	false
Position	named
Default value	none

Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**OtherUsageDescription**

Description :Specifies the OtherUsageDescription for the storage pool.

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

Parameter :**ProvisioningTypeDefault**

Description :Specifies the default type of provisioning to use for virtual disks created in the specified storage pool. The acceptable values for this parameter are: Fixed or Thin.

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

Parameter :**RepairPolicy**

Description :Specifies how the operating system proceeds with repairing virtual disks in the specified storage pool. The acceptable values for this parameter are:

--Sequential Repair processes one allocation slab at a time. Specifying this value results in longer repair times, but smaller impact on I/O load.

--Parallel Repair processes as many allocation slabs as it can in parallel. Specifying this value results in the shortest repair time, but significantly impacts I/O load.

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

Parameter :**ResiliencySettingNameDefault**

Description :Specifies the default resiliency setting (also known as storage layout) to use for virtual disks the created in the specified storage pool. The supported resiliency settings vary by storage subsystem. Acceptable values for the Windows Storage subsystem are Mirror, Parity, and Simple.

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

Parameter :RetireMissingPhysicalDisks

Description :Specifies when Windows should set the Usage property of physical disks missing from a storage pool to Retired. The acceptable values for this parameter are:

—Auto This is the default setting for storage pools. When set to Auto, Windows retires missing disks, but doesn't automatically rebuild affected virtual disks unless there are physical disks whose Usage value is set to HotSpare, in which case Windows rebuilds the virtual disks five minutes after the failed write operation.

—Always This is the recommended setting when using free pool space to rebuild storage spaces instead of using hot-spare disks. When set to Always, Windows retires missing physical disks and automatically rebuilds affected virtual disks five minutes after the failed write operation.

—Never When set to Never, Windows never retires missing physical disks.

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

Parameter :ThinProvisioningAlertThresholds

Description :Specifies how full a storage pool must get (in percent) before an alert is generated to add physical disks to the storage pool to support thinly provisioned virtual disks.

Required	false
Position	named
Default value	none
Accept pipeline input?	false

Accept wildcard characters?	false
-----------------------------	-------

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueid

Description :Specifies the UniqueID of the storage pool for which you want to set attributes.

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

Parameter :Usage

Description :Specifies the usage setting for the storage pool. The acceptable values for this parameter are:Other, ReservedAsDeltaReplicaContainer, ReservedForComputerSystem, ReservedForLocalReplicationServices, ReservedForMigrationServices, ReservedForRemoteReplicationServices, ReservedForSparing, and Unrestricted.

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

Parameter :**WriteCacheSizeDefault**

Description :Specifies the default write-back cache size for virtual disks in the storage pool.

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

Inputs

You can use the pipeline operator to pass one or more MSFT_StoragePool objects to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StoragePool

Examples

Example 1: Change the friendly name

This example changes the friendly name of StoragePool to StoragePool2.

```
PS C:\>Set-StoragePool -FriendlyName StoragePool -  
NewFriendlyName StoragePool2
```

Example 2: Make a read-only storage pool writeable

This example makes the storage pool named Storage Pool 1 writable when it is in a read-only state.

```
PS C:\>Set-StoragePool -FriendlyName "Storage Pool 1" -  
IsReadOnly $False
```

Example 3: Set the default resiliency and provisioning settings

This example makes any new virtual disks by default use the Mirror resiliency setting and thin provisioning.


```
PS C:\>Set-StoragePool -FriendlyName "Storage Pool 1" -  
ResiliencySettingsNameDefault Mirror -ProvisioningTypeDefault  
Thin
```

Cmdlet: Set-StorageProvider

Synops

Modifies whether to enable the SMP provider cache.

Syntax

```
Set-StorageProvider [-ProviderName] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-RemoteSubsystemCacheMode {Disabled  
| ManualDiscovery}] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Set-StorageProvider [-CimSession <CimSession[]>] [-PassThru] [-  
RemoteSubsystemCacheMode {Disabled | ManualDiscovery}] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Set-StorageProvider [-CimSession <CimSession[]>] [-PassThru] [-  
RemoteSubsystemCacheMode {Disabled | ManualDiscovery}] [-  
ThrottleLimit <Int32>] -ProviderUniqueId <String[]>  
[<CommonParameters>]
```

Description

The Set-StorageProvider cmdlet modifies whether to enable the symmetric multiprocessing (SMP) provider cache. Specify a value of Manual for the RemoteSubsystemCacheMode parameter to enable caching. If you enable the cache on the management node that manages storage on remote computers or clusters, the management node caches remote objects. This caching can improve enumeration operations, such as the Get-StoragePool cmdlet or the New-VirtualDisk cmdlet.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ProviderName**

Description :Specifies an array of names of providers. The cmdlet modifies the providers that you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**ProviderUniqueld**

Description :Specifies an array of unique IDs of providers. The cmdlet modifies the providers that you specify.

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

Parameter :**RemoteSubsystemCacheMode**

Description :Specifies the cache mode for a remote subsystem. The acceptable values for this parameter are:

- Disable
- Manual

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

Parameter :**ThrottleLimit**

Description :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

Inputs

You can use the pipeline operator to pass one or more MSFT_StorageProvider objects to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageProvider

Outputs

If you use the PassThru parameter, this cmdlet outputs an object that represents the storage provider for which you changed settings

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageProvider

Cmdlet: Set-StorageSetting

Synops

Adjusts or configures current storage settings of the StorageSetting object.

Syntax

```
Set-StorageSetting [-CimSession <CimSession[]>] [-NewDiskPolicy {Unknown | OnlineAll | OfflineShared | OfflineAll | OfflineInternal}] [-ScrubPolicy {Off | IntegrityStreams | All}] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Set-StorageSettings cmdlet adjusts or configures current storage settings of the StorageSetting object.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**NewDiskPolicy**

Description :Manages the policy that will be applied to newly attached disks. New disk policy accepts the following settings; (only applies to disks that were not previously seen), The acceptable values for this parameter are:

- OnlineAll: (Same as current diskpartsanpolicy definition) All disks are automatically onlined regardless of bus-type or configuration. Can cause data loss if used on shared bus disks improperly.
- OfflineAll: (Same as current diskpartsanpolicy definition) All disks are automatically left offline, regardless of the bus-type. (not recommended for Windows Client as this would result in attached USB disk not being available by default).

- OfflineInternal: Leaves all newly attached disks, which are non-shared storage busses (such as ATA, SATA, USB) offline by default. (new for Windows Server® 2012).
- OfflineShared: Leaves all newly attached disks which are on a sharable bus (iSCSI, FC, SAS) offline by default.

In Windows Server 2016, including Nano Server, the default policy is OfflineShared.

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

Parameter :**ScrubPolicy**

Description :Specifies the policy for the files that the automatic data integrity scanner scrubs. The acceptable values for this parameter are:

- 0. Off: No files are scrubbed.
- 1. Integrity Streams: Only files with integrity streams are scrubbed.
- 2. All: All files are scrubbed.

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

Parameter :**ThrottleLimit**

Description :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

Examples

EXAMPLE 1

This example changes the new disk policy so that all newly attached disks remain offline.

```
PS C:\> Set-StorageSettings -NewDiskPolicy OfflineAll
```

EXAMPLE 2

This example changes the new disk policy so that all newly attached disks on a local bus remain offline.

```
PS C:\> Set-StorageSettings -NewDiskPolicy OfflineInternal
```

EXAMPLE 3

This example changes the new disk policy so that all new shared bus disks remain offline and all new local bus disks remain online.

```
PS C:\> Set-StorageSettings -NewDiskPolicy OfflineShared
```

EXAMPLE 4

This example changes the new disk policy so that all new disks are brought online, regardless of whether the disk are on a local or shared bus.

```
PS C:\> Set-StorageSettings -NewDiskPolicy OnlineAll
```

Cmdlet: Set-StorageSubsystem

Synops

Modifies the properties of a StorageSubsystem object.

Syntax

```
Set-StorageSubSystem [-CimSession <CimSession[]>] [-Description  
<String>] [-ThrottleLimit <Int32>] -UniqueId <String>  
[<CommonParameters>]
```

```
Set-StorageSubSystem [-AutomaticClusteringEnabled] [-CimSession  
<CimSession[]>] [-FaultDomainAwarenessDefault {PhysicalDisk |  
StorageEnclosure | StorageScaleUnit |  
StorageChassis | StorageRack}] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Set-StorageSubSystem [-AutomaticClusteringEnabled] [-CimSession  
<CimSession[]>] [-FaultDomainAwarenessDefault {PhysicalDisk |  
StorageEnclosure | StorageScaleUnit |  
StorageChassis | StorageRack}] [-ThrottleLimit <Int32>] -UniqueId  
<String> [<CommonParameters>]
```

```
Set-StorageSubSystem [-FriendlyName] <String> [-  
AutomaticClusteringEnabled] [-CimSession <CimSession[]>] [-  
FaultDomainAwarenessDefault {PhysicalDisk | StorageEnclosure |  
StorageScaleUnit | StorageChassis | StorageRack}] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

```
Set-StorageSubSystem [-AutomaticClusteringEnabled] [-CimSession  
<CimSession[]>] [-FaultDomainAwarenessDefault {PhysicalDisk |  
StorageEnclosure | StorageScaleUnit |  
StorageChassis | StorageRack}] [-ThrottleLimit <Int32>] -Name  
<String> [<CommonParameters>]
```

```
Set-StorageSubSystem [-CimSession <CimSession[]>] [-Description  
<String>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Set-StorageSubSystem [-CimSession <CimSession[]>] [-Description  
<String>] [-ThrottleLimit <Int32>] -Name <String>  
[<CommonParameters>]
```



```
Set-StorageSubSystem [-FriendlyName] <String> [-CimSession
<CimSession[]>] [-Description <String>] [-ThrottleLimit <Int32>]
[<CommonParameters>]
```

Description

The Set-StorageSubsystem cmdlet modifies the properties of the specified StorageSubsystem object.

Parameters

Parameter :**AutomaticClusteringEnabled**

Description :Indicates that storage pools and virtual disks are automatically added to the cluster. By default, storage pools and virtual disks in a cluster are automatically added to the cluster. If you want to disable this, set the value of this parameter to \$False.

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

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Description**

Description :Specifies a description of the object. The description may be defined by a user.

Required	false
Position	named

Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**FaultDomainAwarenessDefault**

Description :Specifies the default fault domain for new virtual disks created with this storage subsystem. The acceptable values for this parameter are:

- PhysicalDisk
- StorageScaleUnit
- StorageChassis
- StorageEnclosure
- StorageRack

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

Parameter :**FriendlyName**

Description :Specifies the friendly name of the storage subsystem to modify.

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByPropertyName)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies the name of the storage subsystem to modify.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**UniqueId**

Description :Specifies the ID of the storage subsystem to modify.

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

Inputs

You can use the pipeline operator to pass an array of MSFT_StorageSubsystem objects to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageSubsystem

Outputs

Type : None

Cmdlet: Set-StorageTier

Synops

Modifies a storage tier.

Syntax

```
Set-StorageTier [-CimSession <CimSession[]>] [-NewFriendlyName  
<String>] [-ThrottleLimit <Int32>] -UniqueId <String>  
[<CommonParameters>]
```

```
Set-StorageTier [-CimSession <CimSession[]>] [-Description  
<String>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Set-StorageTier [-CimSession <CimSession[]>] [-ColumnIsolation  
{PhysicalDisk | StorageEnclosure | StorageScaleUnit |  
StorageChassis | StorageRack}] [-FaultDomainAwareness  
{PhysicalDisk | StorageEnclosure | StorageScaleUnit |  
StorageChassis | StorageRack}] [-Interleave <UInt64>] [-MediaType  
{HDD | SSD | SCM}] [-NumberOfColumns <UInt16>]  
[-NumberOfDataCopies <UInt16>] [-NumberOfGroups <UInt16>] [-  
PhysicalDiskRedundancy <UInt16>] [-ProvisioningType {Thin |  
Fixed}] [-ResiliencySettingName <String>]  
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Set-StorageTier [-CimSession <CimSession[]>] [-NewFriendlyName  
<String>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Set-StorageTier [-FriendlyName] <String> [-CimSession  
<CimSession[]>] [-NewFriendlyName <String>] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

```
Set-StorageTier [-FriendlyName] <String> [-CimSession  
<CimSession[]>] [-ColumnIsolation {PhysicalDisk |  
StorageEnclosure | StorageScaleUnit | StorageChassis |  
StorageRack}] [-FaultDomainAwareness {PhysicalDisk |  
StorageEnclosure | StorageScaleUnit | StorageChassis |  
StorageRack}] [-Interleave <UInt64>] [-MediaType {HDD | SSD |  
SCM}] [-NumberOfColumns <UInt16>] [-NumberOfDataCopies <UInt16>]  
[-NumberOfGroups <UInt16>] [-PhysicalDiskRedundancy <UInt16>] [-  
ProvisioningType {Thin | Fixed}]  
[-ResiliencySettingName <String>] [-ThrottleLimit <Int32>]
```

[<CommonParameters>]

```
Set-StorageTier [-CimSession <CimSession[]>] [-ColumnIsolation
{PhysicalDisk | StorageEnclosure | StorageScaleUnit |
StorageChassis | StorageRack}] [-FaultDomainAwareness
{PhysicalDisk | StorageEnclosure | StorageScaleUnit |
StorageChassis | StorageRack}] [-Interleave <UInt64>] [-MediaType
{HDD | SSD | SCM}] [-NumberOfColumns <UInt16>]
[-NumberOfDataCopies <UInt16>] [-NumberOfGroups <UInt16>] [-
PhysicalDiskRedundancy <UInt16>] [-ProvisioningType {Thin |
Fixed}] [-ResiliencySettingName <String>]
[-ThrottleLimit <Int32>] -UniqueId <String> [<CommonParameters>]
```

```
Set-StorageTier [-FriendlyName] <String> [-CimSession
<CimSession[]>] [-Description <String>] [-ThrottleLimit <Int32>]
[<CommonParameters>]
```

```
Set-StorageTier [-CimSession <CimSession[]>] [-Description
<String>] [-ThrottleLimit <Int32>] -UniqueId <String>
[<CommonParameters>]
```

Description

The Set-StorageTier cmdlet modifies a storage tier. Use this cmdlet to change the name and description of a storage tier, and to change the media type that is associated with storage tier.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**ColumnIsolation**

Description :Specifies at which level columns within a virtual disk should be isolated from each other. We recommend omitting this parameter and using the defaults. The acceptable values for this parameter are:

- PhysicalDisk
- StorageScaleUnit
- StorageChassis
- StorageEnclosure
- StorageRack

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

Parameter :**Description**

Description :Specifies a description for the storage tier.

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

Parameter :**FaultDomainAwareness**

Description :Specifies at what level you want the storage tier to be fault tolerant. The acceptable values for this parameter are:

- PhysicalDisk
- StorageScaleUnit
- StorageChassis
- StorageEnclosure
- StorageRack

Required	false
Position	named
Default value	none
Accept pipeline input?	false

Accept wildcard characters?	false
-----------------------------	-------

Parameter :**FriendlyName**

Description :Specifies the friendly name of the storage tier to modify.

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByPropertyName)
Accept wildcard characters?	false

Parameter :**Interleave**

Description :Specifies the interleave value to use during the creation of a virtual disk. The interleave value represents the number of bytes that is written to a single physical disk. Therefore, Interleave * NumberOfColumns yields the size of one stripe of user data.

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

Parameter :**MediaType**

Description :Specifies the media type of the storage tier. The acceptable values for this parameter are:

- SSD
- SCM
- HDD

Use SCM for storage-class memory such as NVDIMMs.

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

Parameter :**NewFriendlyName**

Description :Specifies a new friendly name for the storage tier.

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

Parameter :**NumberOfColumns**

Description :Specifies the number of columns to use when allocating the storage tier.

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

Parameter :**NumberOfDataCopies**

Description :Specifies the number of data copies to create. Specify 2 to create a two-way mirror, or 3 to specify a three-way mirror or for dual-parity.

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

Parameter :**NumberOfGroups**

Description :Specifies the number of groups used by Local Reconstruction Coding (LRC) with a dual parity virtual disk. We recommend omitting this parameter and using the defaults.

Required	false
Position	named
Default value	none
Accept pipeline input?	false

Accept wildcard characters?	false
-----------------------------	-------

Parameter :PhysicalDiskRedundancy

Description :Specifies the physical disk redundancy value to use during the creation of a virtual disk. This value represents how many failed physical disks the virtual disk can tolerate without data loss. The redundancy values are as follows:

- For two-way mirror spaces, the virtual disk can tolerate 1 failed physical disk without data loss.
- For three-way mirror spaces, the virtual disk can tolerate 2 failed physical disks without data loss.
- For single-parity spaces, the virtual disk can tolerate 1 failed physical disk without data loss.
- For dual-parity spaces the virtual disk can tolerate 2 failed physical disks without data loss.

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

Parameter :ProvisioningType

Description :Specifies the type of provisioning. The acceptable values for this parameter are: Fixed and Thin. Specify Fixed for storage spaces that use storage tiers or a clustered storage pool.

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

Parameter :ResiliencySettingName

Description :Specifies the resiliency setting, or storage layout, to use for the virtual disk. Acceptable values vary by storage subsystem.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueid

Description :Specifies the unique ID of the storage tier to modify.

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

Inputs

You can use the pipeline operator to pass an array of MSFT_StorageTier objects to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageSubsystem

Outputs

This cmdlet returns an MSFT_StorageTier object that contains details about the tier such as tier friendly name, media type and size.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_StorageTier

Notes

Examples

Example 1: Change the name of a storage tier

This command changes the friendly name of the storage tier that has the specified ID.

```
PS C:\> Set-StorageTier -UniqueId '{49dde1c4-5c34-11e2-8441-00155de88701}' -NewFriendlyName "FastTier"
```

Example 2: Change the description of a storage tier

This command uses the Get-StorageTier cmdlet to get the storage tier named FastTier, and then passes the storage tier to the Set-StorageTier cmdlet by using the pipeline operator. The Set-StorageTier cmdlet changes the description of the storage tier to the specified string.

```
PS C:\> Get-StorageTier -FriendlyName "FastTier" | Set-StorageTier -Description "This tier denotes fast media in the system"
```

Cmdlet: Set-VirtualDisk

Synops

Modifies the attributes of an existing virtual disk.

Syntax

```
Set-VirtualDisk [-CimSession <CimSession[]>] [-NewFriendlyName  
<String>] [-OtherUsageDescription <String>] [-ThrottleLimit  
<Int32>] [-Usage {Other | Unrestricted |  
ReservedForComputerSystem | ReservedForReplicationServices |  
ReservedForMigrationServices | LocalReplicaSource |  
RemoteReplicaSource | LocalReplicaTarget |  
RemoteReplicaTarget | LocalReplicaSourceOrTarget |  
RemoteReplicaSourceOrTarget | DeltaReplicaTarget |  
ElementComponent | ReservedAsPoolContributer |  
CompositeVolumeMember  
| CompositeVirtualDiskMember | ReservedForSparing}] -UniqueId  
<String> [<CommonParameters>]
```

```
Set-VirtualDisk [-Access {Unknown | Readable | Writeable |  
ReadWrite | WriteOnce}] [-CimSession <CimSession[]>] [-  
IsManualAttach <Boolean>] [-StorageNodeName <String>]  
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Set-VirtualDisk [-FriendlyName] <String> [-Access {Unknown |  
Readable | Writeable | ReadWrite | WriteOnce}] [-CimSession  
<CimSession[]>] [-IsManualAttach <Boolean>]  
[-StorageNodeName <String>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Set-VirtualDisk [-Access {Unknown | Readable | Writeable |  
ReadWrite | WriteOnce}] [-CimSession <CimSession[]>] [-  
IsManualAttach <Boolean>] [-StorageNodeName <String>]  
[-ThrottleLimit <Int32>] -UniqueId <String> [<CommonParameters>]
```

```
Set-VirtualDisk [-Access {Unknown | Readable | Writeable |  
ReadWrite | WriteOnce}] [-CimSession <CimSession[]>] [-  
IsManualAttach <Boolean>] [-StorageNodeName <String>]  
[-ThrottleLimit <Int32>] -Name <String> [<CommonParameters>]
```

```
Set-VirtualDisk [-FriendlyName] <String> [-CimSession
```

```
<CimSession[]>] [-NewFriendlyName <String>] [-
OtherUsageDescription <String>] [-ThrottleLimit <Int32>] [-Usage
{Other
| Unrestricted | ReservedForComputerSystem |
ReservedForReplicationServices | ReservedForMigrationServices |
LocalReplicaSource | RemoteReplicaSource | LocalReplicaTarget
| RemoteReplicaTarget | LocalReplicaSourceOrTarget |
RemoteReplicaSourceOrTarget | DeltaReplicaTarget |
ElementComponent | ReservedAsPoolContributer |
CompositeVolumeMember | CompositeVirtualDiskMember |
ReservedForSparing}} [<CommonParameters>]
```

```
Set-VirtualDisk [-CimSession <CimSession[]>] [-NewFriendlyName
<String>] [-OtherUsageDescription <String>] [-ThrottleLimit
<Int32>] [-Usage {Other | Unrestricted |
ReservedForComputerSystem | ReservedForReplicationServices |
ReservedForMigrationServices | LocalReplicaSource |
RemoteReplicaSource | LocalReplicaTarget |
RemoteReplicaTarget | LocalReplicaSourceOrTarget |
RemoteReplicaSourceOrTarget | DeltaReplicaTarget |
ElementComponent | ReservedAsPoolContributer |
CompositeVolumeMember
| CompositeVirtualDiskMember | ReservedForSparing}} -Name
<String> [<CommonParameters>]
```

```
Set-VirtualDisk [-CimSession <CimSession[]>] [-NewFriendlyName
<String>] [-OtherUsageDescription <String>] [-ThrottleLimit
<Int32>] [-Usage {Other | Unrestricted |
ReservedForComputerSystem | ReservedForReplicationServices |
ReservedForMigrationServices | LocalReplicaSource |
RemoteReplicaSource | LocalReplicaTarget |
RemoteReplicaTarget | LocalReplicaSourceOrTarget |
RemoteReplicaSourceOrTarget | DeltaReplicaTarget |
ElementComponent | ReservedAsPoolContributer |
CompositeVolumeMember
| CompositeVirtualDiskMember | ReservedForSparing}}
[<CommonParameters>]
```

```
Set-VirtualDisk [-NumberOfDataCopies <UInt16>] [-
PhysicalDiskRedundancy <UInt16>] [-ProvisioningType {Thin |
Fixed}} [<CommonParameters>]
```

```
Set-VirtualDisk [-NumberOfDataCopies <UInt16>] [-PhysicalDiskRedundancy <UInt16>] [-ProvisioningType {Thin | Fixed}] [<CommonParameters>]
```

```
Set-VirtualDisk [-NumberOfDataCopies <UInt16>] [-PhysicalDiskRedundancy <UInt16>] [-ProvisioningType {Thin | Fixed}] [<CommonParameters>]
```

```
Set-VirtualDisk [-NumberOfDataCopies <UInt16>] [-PhysicalDiskRedundancy <UInt16>] [-ProvisioningType {Thin | Fixed}] [<CommonParameters>]
```

Description

The Set-VirtualDisk cmdlet modifies the attributes of an existing virtual disk.

Parameters

Parameter :**Access**

Description :Manages access permissions to the VirtualDisk object.

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

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies a friendly name for a disk. The friendly name may be defined by a

user and is not guaranteed to be unique.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**IsManualAttach**

Description :Specifies that the object is set as manual-attach.

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

Parameter :**Name**

Description :Specifies the name of the virtual disk to modify.

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

Parameter :**NewFriendlyName**

Description :Specifies the new name of the virtual disk.

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

Parameter :**NumberOfDataCopies**

Description :Specifies the number of data copies to create. Specify 2 to create a two-way

mirror, or 3 to specify a three-way mirror or for dual-parity.

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

Parameter :**OtherUsageDescription**

Description :Specifies the usage of this object.

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

Parameter :**PhysicalDiskRedundancy**

Description :Specifies the physical disk redundancy value to use during the creation of a virtual disk. This value represents how many failed physical disks the virtual disk can tolerate without data loss. The redundancy values are as follows:

- For two-way mirror spaces, the virtual disk can tolerate 1 failed physical disk without data loss.
- For three-way mirror spaces, the virtual disk can tolerate 2 failed physical disks without data loss.
- For single-parity spaces, the virtual disk can tolerate 1 failed physical disk without data loss.
- For dual-parity spaces the virtual disk can tolerate 2 failed physical disks without data loss.

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

Parameter :**ProvisioningType**

Description :Specifies the type of provisioning. The acceptable values for this parameter are: Fixed and Thin. Specify Fixed for storage spaces that use storage tiers or a clustered storage pool.

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

Parameter :**StorageNodeName**

Description :Specifies the name of the computer on which to run the cmdlet.

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

Parameter :**ThrottleLimit**

Description :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

Parameter :**UniqueId**

Description :Specifies the unique ID of the virtual disk to modify.

Required	true
Position	named

Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**Usage**

Description :Specifies the intended usage.

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

Inputs

You can use the pipeline operator to pass an MSFT_VirtualDisk object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_VirtualDisk

Examples

EXAMPLE 1

This example changes the friendly name of a virtual disk.

```
PS C:\>Set-VirtualDisk -FriendlyName VirtualDisk1 -
NewFriendlyName "Storage For Contoso"
```

EXAMPLE 2

This example attaches a virtual disk that is currently set to manual-attach.

```
PS C:\>Set-VirtualDisk -FriendlyName "Storage For Contoso" -
IsManualAttach $False
```

Cmdlet: Set-Volume

Synops

Sets or changes the file system label of an existing volume.

Syntax

```
Set-Volume [-CimSession  
<Microsoft.Management.Infrastructure.CimSession[]>] [-  
NewFileSystemLabel <System.String>] [-ThrottleLimit  
<System.Int32>] -DriveLetter  
<System.Char> [<CommonParameters>]
```

```
Set-Volume [-CimSession  
<Microsoft.Management.Infrastructure.CimSession[]>] [-DedupMode  
{Disabled | GeneralPurpose | HyperV | Backup | NotAvailable}] [-  
ThrottleLimit  
<System.Int32>] [<CommonParameters>]
```

```
Set-Volume [-CimSession  
<Microsoft.Management.Infrastructure.CimSession[]>] [-  
NewFileSystemLabel <System.String>] [-ThrottleLimit  
<System.Int32>] [<CommonParameters>]
```

```
Set-Volume [-CimSession  
<Microsoft.Management.Infrastructure.CimSession[]>] [-  
NewFileSystemLabel <System.String>] [-ThrottleLimit  
<System.Int32>] -FileSystemLabel  
<System.String> [<CommonParameters>]
```

```
Set-Volume [-CimSession  
<Microsoft.Management.Infrastructure.CimSession[]>] [-  
NewFileSystemLabel <System.String>] [-ThrottleLimit  
<System.Int32>] -Path <System.String>  
[<CommonParameters>]
```

```
Set-Volume [-CimSession  
<Microsoft.Management.Infrastructure.CimSession[]>] [-  
NewFileSystemLabel <System.String>] [-ThrottleLimit  
<System.Int32>] -UniqueId <System.String>  
[<CommonParameters>]
```

```
Set-Volume [-CimSession
<Microsoft.Management.Infrastructure.CimSession[]>] [-DedupMode
{Disabled | GeneralPurpose | HyperV | Backup | NotAvailable}] [-
ThrottleLimit
<System.Int32>] -UniqueId <System.String> [<CommonParameters>]
```

```
Set-Volume [-CimSession
<Microsoft.Management.Infrastructure.CimSession[]>] [-DedupMode
{Disabled | GeneralPurpose | HyperV | Backup | NotAvailable}] [-
ThrottleLimit
<System.Int32>] -Path <System.String> [<CommonParameters>]
```

```
Set-Volume [-CimSession
<Microsoft.Management.Infrastructure.CimSession[]>] [-DedupMode
{Disabled | GeneralPurpose | HyperV | Backup | NotAvailable}] [-
ThrottleLimit
<System.Int32>] -FileSystemLabel <System.String>
[<CommonParameters>]
```

```
Set-Volume [-CimSession
<Microsoft.Management.Infrastructure.CimSession[]>] [-DedupMode
{Disabled | GeneralPurpose | HyperV | Backup | NotAvailable}] [-
ThrottleLimit
<System.Int32>] -DriveLetter <System.Char> [<CommonParameters>]
```

Description

The Set-Volume cmdlet sets or changes the file system label of an existing volume.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DedupMode**

Description :Specifies the Data Deduplication mode to use for the volume, if Data Deduplication is enabled on this volume. The acceptable values for this parameter are:

- Backup
- Disabled
- GeneralPurpose
- Hyper-V
- NotAvailable

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

Parameter :**DriveLetter**

Description :Specifies a letter used to identify a drive or volume in the system.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**FileSystemLabel**

Description :Specifies the file system label of the object. The acceptable values for this parameter include: NTFS and ReFS.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**NewFileSystemLabel**

Description :Specifies a new file system label to use.

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

Parameter :Path

Description :Contains valid path information.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueid

Description :Specifies a unique ID.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Inputs

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.

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.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MFT_Partition`

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MFT_Volume`

Outputs

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.

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.

Type :

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MFT_Partition`

`Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MFT_Volume`

Examples

Example 1: Set the file system label

This example changes the file system label from test to TestData.

```
PS C:\>Set-Volume -FileSystemLabel "Test" -NewFileSystemLabel "TestData"
```

Example 2: Format the volume

This example uses the specified Partition object as an input to format the volume on this partition with the NTFS file system, using the file system label testdata with a cluster size of 8K, and with short filename support disabled.

```
PS C:\>Format-Volume -InputObject $PartitionObject -FileSystem  
NTFS -NewFileSystemLabel "TestData" -ClusterSize (8K) -  
ShortFileNameSupport $False
```


Cmdlet: Set-VolumeScrubPolicy

Synops

Sets the status of the volume scrub policy.

Syntax

```
Set-VolumeScrubPolicy [-DriveLetter] <Char[]> [[-Enable]
<Boolean>] [-CimSession <CimSession[]>] [-PassThru] [-
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Set-VolumeScrubPolicy [[-Enable] <Boolean>] [-CimSession
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -
FileSystemLabel <String[]> [<CommonParameters>]
```

```
Set-VolumeScrubPolicy [[-Enable] <Boolean>] [-CimSession
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -Path
<String[]> [<CommonParameters>]
```

```
Set-VolumeScrubPolicy [[-Enable] <Boolean>] [-CimSession
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>]
[<CommonParameters>]
```

```
Set-VolumeScrubPolicy [[-Enable] <Boolean>] [-CimSession
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -ObjectId
<String[]> [<CommonParameters>]
```

Description

The Set-VolumeScrubPolicy cmdlet sets the status of the volume scrub policy. Use this cmdlet to enable or disable the policy.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DriveLetter**

Description :Specifies an array of letters that identify one or more drives or volumes in the system. The cmdlet sets the volume scrub policy for the drives or volumes you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**Enable**

Description :Indicates whether to enable or disable the volume scrub policy.

Required	false
Position	2
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**FileSystemLabel**

Description :Specifies an array of file system labels. The cmdlet sets the volume scrub policy for the file system labels you specify.

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

Parameter :**ObjectId**

Description :Specifies an array of IDs, as strings. The ID is not globally unique.

Required	true
----------	------

Position	named
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :PassThru

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :Path

Description :Specifies an array of paths. The cmdlet sets the volume scrub policy for the paths you specify.

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

Parameter :ThrottleLimit

Description :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

Inputs

You can use the pipeline operator to pass an array of MSFT_Volume objects to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_Volume

Outputs

If you specify the PassThru parameter, this cmdlet returns an object representing the volumes that you were configuring.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_Volume

Cmdlet: Show-StorageHistory

Synops

Show-StorageHistory [-Objects] <ArrayList> [-Title <string>] [-DisplayAvgLatency] [-DisplayMaxLatency] [<CommonParameters>]

Syntax

ntaxItem

{@{name=

```
Show-StorageHistory; CommonParameters=True;
WorkflowCommonParameters=False; parameter=System.Object[]}}
```

Description

Parameters

Parameter :**DisplayAvgLatency**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**DisplayMaxLatency**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**Objects**

Required	true
Position	0

Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Parameter :**Title**

Required	false
Position	Named
Default value	
Accept pipeline input?	false
Accept wildcard characters?	

Cmdlet: Show-VirtualDisk

Synops

Makes a virtual disk available to a host.

Syntax

```
Show-VirtualDisk [-FriendlyName] <String[]> [-CimSession  
<CimSession[]>] [-HostType {Unknown | Other | Standard | Solaris  
| HPUNIX | OpenVMS | Tru64 | Netware | Sequent |  
AIX | DGUX | Dynix | Irix | CiscoISCSIStorageRouter | Linux |  
MicrosoftWindows | OS400 | TRESPASS | HIUX | VMwareESXi |  
MicrosoftWindowsServer2008 |  
MicrosoftWindowsServer2003}] [-InitiatorAddress <String>] [-  
PassThru] [-TargetPortAddresses <String[]>] [-ThrottleLimit  
<Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Show-VirtualDisk [-CimSession <CimSession[]>] [-HostType {Unknown  
| Other | Standard | Solaris | HPUNIX | OpenVMS | Tru64 | Netware |  
Sequent | AIX | DGUX | Dynix | Irix |  
CiscoISCSIStorageRouter | Linux | MicrosoftWindows | OS400 |  
TRESPASS | HIUX | VMwareESXi | MicrosoftWindowsServer2008 |  
MicrosoftWindowsServer2003}] [-InitiatorAddress  
<String>] [-PassThru] [-TargetPortAddresses <String[]>] [-  
ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Show-VirtualDisk [-CimSession <CimSession[]>] [-HostType {Unknown  
| Other | Standard | Solaris | HPUNIX | OpenVMS | Tru64 | Netware |  
Sequent | AIX | DGUX | Dynix | Irix |  
CiscoISCSIStorageRouter | Linux | MicrosoftWindows | OS400 |  
TRESPASS | HIUX | VMwareESXi | MicrosoftWindowsServer2008 |  
MicrosoftWindowsServer2003}] [-InitiatorAddress  
<String>] [-PassThru] [-TargetPortAddresses <String[]>] [-  
ThrottleLimit <Int32>] -Name <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Show-VirtualDisk [-CimSession <CimSession[]>] [-HostType {Unknown  
| Other | Standard | Solaris | HPUNIX | OpenVMS | Tru64 | Netware |  
Sequent | AIX | DGUX | Dynix | Irix |  
CiscoISCSIStorageRouter | Linux | MicrosoftWindows | OS400 |  
TRESPASS | HIUX | VMwareESXi | MicrosoftWindowsServer2008 |  
MicrosoftWindowsServer2003}] [-InitiatorAddress
```

```
<String>] [-PassThru] [-TargetPortAddresses <String[]>] [-ThrottleLimit <Int32>] -UniqueId <String[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Show-VirtualDisk cmdlet makes a virtual disk available to a host (by initiator and target ports). This cmdlet is equivalent to a VDS unmask operation.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies the friendly name of the virtual disk to make available to the specified hosts.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**HostType**

Description :Specifies the operating system of the host computer.

Required	false
Position	named
Default value	none
Accept pipeline input?	false

Accept wildcard characters?	false
-----------------------------	-------

Parameter :**InitiatorAddress**

Description :Specifies the address for an initiator to which the virtual disk should be unmasked.

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

Parameter :**Name**

Description :Specifies the name of the virtual disk to make available to the specified hosts.

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

Parameter :**PassThru**

Description :Specifies that the cmdlet should output an object representing the virtual disk it unmasked. By default, this cmdlet does not generate any output.

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

Parameter :**TargetPortAddresses**

Description :Specifies one or more target port addresses to which the virtual disk should be unmasked.

Required	false
----------	-------

Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :Uniqueid

Description :Specifies the UniqueID of the virtual disk to make available to the specified host.

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

Parameter :Confirm

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can pipe an MSFT_VirtualDisk object to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_VirtualDisk

Outputs

If you specify the PassThru parameter, this cmdlet outputs an object representing the virtual disk you made available to a host computer.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_VirtualDisk

Cmdlet: Start-StorageDiagnosticLog

Synops

Starts Storage diagnostic logging.

Syntax

```
Start-StorageDiagnosticLog [-StorageSubSystemFriendlyName]
<String[]> [-CimSession <CimSession[]>] [-Level {Critical | Error
| Warning | Informational | Verbose}]
[-MaxLogSize <UInt64>] [-PassThru] [-ThrottleLimit <Int32>]
[<CommonParameters>]
```

```
Start-StorageDiagnosticLog [-CimSession <CimSession[]>] [-Level
{Critical | Error | Warning | Informational | Verbose}] [-
MaxLogSize <UInt64>] [-PassThru] [-ThrottleLimit
<Int32>] -StorageSubSystemUniqueId <String[]>
[<CommonParameters>]
```

```
Start-StorageDiagnosticLog [-CimSession <CimSession[]>] [-Level
{Critical | Error | Warning | Informational | Verbose}] [-
MaxLogSize <UInt64>] [-PassThru] [-ThrottleLimit
<Int32>] -StorageSubSystemName <String[]> [<CommonParameters>]
```

```
Start-StorageDiagnosticLog [-CimSession <CimSession[]>] [-Level
{Critical | Error | Warning | Informational | Verbose}] [-
MaxLogSize <UInt64>] [-PassThru] [-ThrottleLimit
<Int32>] [<CommonParameters>]
```

Description

The Start-StorageDiagnosticLog cmdlet starts Storage diagnostic logging. After you start logging, you can reproduce the issue that you're troubleshooting or wait for it to reoccur. Use the Stop-StorageDiagnosticLog cmdlet to stop logging. You can use Get-StorageDiagnosticInfo to get the diagnostic logs.

Start-StorageDiagnosticLog creates an Event Tracing for Windows (ETW) session and subscribes to Storage real-time tracing sources. It uses a small circular log file located in C:\Windows\temp\storagelogs to capture the data.

Each trace session creates a unique file named diagnosticlog_<timestamp>.etl. Because the file name incorporates a time stamp, you can create multiple trace sessions without overwriting the previous session.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Level**

Description :Specifies the maximum level of tracing to gather. The acceptable values for this parameter are:

- Critical
- Error
- Warning
- Informational
- Verbose

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

Parameter :**MaxLogSize**

Description :Specifies the log size, in bytes. The default size of 200 MB. The log is circular, so when the log is full, older entries are overwritten. You can use this parameter when you want to record more data or when you want to set a smaller log size to save disk space.

Required	false
Position	named
Default value	none
Accept pipeline input?	false

Accept wildcard characters?	false
-----------------------------	-------

Parameter :PassThru

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :StorageSubSystemFriendlyName

Description :Specifies the friendly name of the Storage subsystem for which to gather storage diagnostics. It may denote the Storage subsystem of the local computer (on which the cmdlet is run) or a remote Storage subsystem (standalone or cluster).

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByPropertyName)
Accept wildcard characters?	false

Parameter :StorageSubSystemName

Description :Specifies the name of the Storage subsystem for which to gather Storage diagnostics. It may denote the Storage subsystem of the local computer (on which the cmdlet is run) or a remote Storage subsystem (standalone or cluster).

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

Parameter :StorageSubSystemUniqueId

Description :Specifies the unique ID of the Storage subsystem for which to gather Storage diagnostics. It may denote the Storage subsystem of the local computer (on

which the cmdlet is run) or a remote Storage subsystem (standalone or cluster).

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

Parameter :**ThrottleLimit**

Description :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

Inputs

Type :

Outputs

Type :

Cmdlet: Stop-StorageDiagnosticLog

Synops

Stops a Storage diagnostic log.

Syntax

```
Stop-StorageDiagnosticLog [-StorageSubSystemFriendlyName]
<String[]> [-CimSession <CimSession[]>] [-PassThru] [-
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Stop-StorageDiagnosticLog [-CimSession <CimSession[]>] [-
PassThru] [-ThrottleLimit <Int32>] -StorageSubSystemUniqueId
<String[]> [<CommonParameters>]
```

```
Stop-StorageDiagnosticLog [-CimSession <CimSession[]>] [-
PassThru] [-ThrottleLimit <Int32>] -StorageSubSystemName
<String[]> [<CommonParameters>]
```

```
Stop-StorageDiagnosticLog [-CimSession <CimSession[]>] [-
PassThru] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Stop-StorageDiagnosticLog cmdlet stops the collection of Storage diagnostic logs. You can use the Get-StorageDiagnosticInfo cmdlet to get the logs.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**StorageSubSystemFriendlyName**

Description :Specifies the friendly name of the Storage subsystem for which to gather storage diagnostics. It may denote the Storage subsystem of the local computer (on which the cmdlet is run) or a remote Storage subsystem (standalone or cluster).

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByPropertyName)
Accept wildcard characters?	false

Parameter :**StorageSubSystemName**

Description :Specifies the name of the Storage subsystem for which to gather Storage diagnostics. It may denote the Storage subsystem of the local computer (on which the cmdlet is run) or a remote Storage subsystem (standalone or cluster).

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

Parameter :**StorageSubSystemUniqueId**

Description :Specifies the unique ID of the Storage subsystem for which to gather Storage diagnostics. It may denote the Storage subsystem of the local computer (on which the cmdlet is run) or a remote Storage subsystem (standalone or cluster).

Required	true
----------	------

Position	named
Default value	none
Accept pipeline input?	true(ByPropertyName)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Inputs

Type :

Outputs

Type :

Cmdlet: Stop-StorageJob

Synops

Stops storage job.

Syntax

```
Stop-StorageJob [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -UniqueId <String[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Stop-StorageJob [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -Name <String[]> [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Stop-StorageJob [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

Description

The Stop-StorageJob cmdlet stops the specified storage job.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Name**

Description :Specifies the name of the storage job to stop.

Required	true
Position	named

Default value	none
Accept pipeline input?	true(ByPropertyName)
Accept wildcard characters?	false

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies the ID of the storage job to stop.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Cmdlet: Unblock-FileShareAccess

Synops

Unblocks access to a file share.

Syntax

```
Unblock-FileShareAccess [-CimSession <CimSession[]>] [-FileServer  
<CimInstance>] [-PassThru] [-ThrottleLimit <Int32>] -AccountName  
<String[]> -Name <String[]> [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

```
Unblock-FileShareAccess [-CimSession <CimSession[]>] [-PassThru]  
[-ThrottleLimit <Int32>] -AccountName <String[]> -UniqueId  
<String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Unblock-FileShareAccess [-CimSession <CimSession[]>] [-PassThru]  
[-ThrottleLimit <Int32>] -AccountName <String[]> [-Confirm] [-  
WhatIf] [<CommonParameters>]
```

Description

The Unblock-FileShareAccess cmdlet removes all of the Deny access control entries (ACE) for the specified trustee from the share's security descriptor.

Parameters

Parameter :**AccountName**

Description :Specifies the names of accounts to unblock.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FileServer**

Description :Specifies a file server.

Required	false
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies the name of the file share for which the user is being granted access. Because the share name is not a worldwide unique name, use a different parameter set to avoid confusion.

Required	true
Position	named
Default value	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueid**

Description :Specifies the unique ID of the file share for which the user is being granted access.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

Type :

Outputs

Type :

Cmdlet: Unregister-StorageSubsystem

Synops

Disconnects from storage subsystems on a remote computer.

Syntax

```
Unregister-StorageSubsystem [-ProviderName] <String[]> [-  
CimSession <CimSession[]>] [-Force] [-PassThru] [-  
StorageSubSystemUniqueId <String>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Unregister-StorageSubsystem [-CimSession <CimSession[]>] [-Force]  
[-PassThru] [-StorageSubSystemUniqueId <String>] [-ThrottleLimit  
<Int32>] [<CommonParameters>]
```

```
Unregister-StorageSubsystem [-CimSession <CimSession[]>] [-Force]  
[-PassThru] [-StorageSubSystemUniqueId <String>] [-ThrottleLimit  
<Int32>] -ProviderUniqueId <String[]>  
[<CommonParameters>]
```

Description

The Unregister-StorageSubsystem cmdlet disconnects storage management in Windows Server® 2012 R2 from storage subsystems on a remote computer or remote cluster.

When you disconnect from a storage subsystem, you cannot use the management node to remotely manage the storage subsystem.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**Force**

Description :Forces the command to run without asking for user confirmation.

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

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ProviderName**

Description :Specifies an array of names of providers. The cmdlet disconnects from the storage subsystems that are managed by the storage provider that you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**ProviderUniqueId**

Description :Specifies an array of unique IDs of providers. The cmdlet disconnects from the storage subsystems that are managed by the storage provider that you specify.

Windows Server® 2012 retains the provider ID through computer restarts.

Required	true
Position	named
Default value	none

Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :StorageSubSystemUniqueId

Description :Specifies the unique ID of the storage subsystem in the system. The cmdlet disconnects from the storage subsystem that you specify. Windows Server® 2012 retains the storage subsystem ID through computer restarts.

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

Parameter :ThrottleLimit

Description :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

Inputs

You can use the pipeline operator to pass an array of MSFT_StorageProvider objects to the InputObject parameter.

You can use the pipeline operator to pass an MSFT_StorageSubsystem object to this cmdlet, which maps the UniqueID property by name to the StorageSubsystemUniqueId parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageProvider

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageSubsystem

Outputs

If you specify the PassThru parameter, this cmdlet returns an object that represents the storage providers that you disconnected.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Volume

Cmdlet: Update-Disk

Synops

Updates cached information about the specified Disk object only

Syntax

```
Update-Disk [-Number] <UInt32[]> [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Update-Disk [-CimSession <CimSession[]>] [-FriendlyName <String[]>] [-PassThru] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Update-Disk [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Update-Disk [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -Path <String[]> [<CommonParameters>]
```

```
Update-Disk [-CimSession <CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] -UniqueId <String[]> [<CommonParameters>]
```

Description

The Update-Disk cmdlet updates cached information about the specified Disk object only.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**FriendlyName**

Description :Specifies a friendly name for a disk. The friendly name may be defined by a user and is not guaranteed to be unique.

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

Parameter :**Number**

Description :Specifies a disk number on which the cmdlet acts.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**PassThru**

Description :Sends items from the interactive window down the pipeline as input to other cmdlets. By default, this cmdlet does not generate any output.

To send items from the interactive window down the pipeline, click to select the items and then click OK. Shift-click and Ctrl-click are supported.

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

Parameter :**Path**

Description :Contains valid path information.

Required	true
Position	named

Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**UniqueId**

Description :Specifies an ID used to uniquely identify a Disk object in the system. The ID persists through restarts.

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

Inputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MFT_Disk

Outputs

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.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Disk

Cmdlet: Update-HostStorageCache

Synops

Initiates an update on the host storage cache to reflect the current status of storage.

Syntax

```
Update-HostStorageCache [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Update-HostStorageCache cmdlet initiates an update on the host storage cache to reflect the current status of storage. This is equivalent to a VDS Rescan, in that it will re-enumerate Disk, Partition, and Volume objects.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**ThrottleLimit**

Description :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
-----------------------------	-------

Cmdlet: Update-StorageFirmware

Synops

Updates the firmware on a storage device.

Syntax

```
Update-StorageFirmware [-FriendlyName] <String> [-CimSession  
<CimSession>] [-ImagePath <String>] [-SlotNumber <UInt16>] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Update-StorageFirmware [-CimSession <CimSession>] [-ImagePath  
<String>] [-SlotNumber <UInt16>] [-ThrottleLimit <Int32>] -  
UniqueId <String> [<CommonParameters>]
```

```
Update-StorageFirmware [-CimSession <CimSession>] [-ImagePath  
<String>] [-SlotNumber <UInt16>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

Description

The Update-StorageFirmware cmdlet updates the firmware on a storage device with the specified firmware image.

You can also use Update-StorageFirmware to load firmware that is already on the device but in a non-active slot. The update operation consists of a download step and an activation step that are both performed by this cmdlet.

Parameters

Parameter :**CimSession**

Description :

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

Parameter :**FriendlyName**

Description :

Required	true
Position	1
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Parameter :**ImagePath**

Description :

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

Parameter :**SlotNumber**

Description :

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

Parameter :**ThrottleLimit**

Description :

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

Parameter :**Uniqueld**

Description :Specifies an array of IDs, as strings.

Required	true
Position	named
Default value	none
Accept pipeline input?	true(ByValue)
Accept wildcard characters?	false

Inputs

Type :

Outputs

This cmdlet returns extended status error information as a String from the storage provider.

Type : String

Notes

Examples

Example 1: Update a physical disk

This command uses the Get-PhysicalDisk cmdlet to get a physical disk, and then uses the pipeline operator to pass the disk to Update-StorageFirmware, which updates the physical disk with the firmware in Image.bin.

```
PS C:\>Get-PhysicalDisk -FriendlyName "PhysicalDisk0" |
Update-StorageFirmware -ImagePath
"C:\Users\Contoso\Desktop\Image.bin" -SlotNumber 0
```

Example 2: Activate a firmware image in a different slot

This command uses the Get-PhysicalDisk cmdlet to get a physical disk, and then uses the pipeline operator to pass the disk to Update-StorageFirmware, which activates the firmware in slot 2.

```
PS C:\>Get-PhysicalDisk -FriendlyName "PhysicalDisk1" |
Update-StorageFirmware -SlotNumber 2
```

Cmdlet: Update-StoragePool

Synops

Updates the metadata of a Windows Server 2012 R2 storage pool.

Syntax

```
Update-StoragePool [-FriendlyName] <String[]> [-CimSession  
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>] [-Confirm]  
[-WhatIf] [<CommonParameters>]
```

```
Update-StoragePool [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]
```

```
Update-StoragePool [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -Name <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

```
Update-StoragePool [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -UniqueId <String[]> [-Confirm] [-WhatIf]  
[<CommonParameters>]
```

Description

The Update-StoragePool cmdlet updates the metadata of a Windows Server® 2012 storage pool to a Windows Server® 2012 R2 storage pool. If you upgrade Windows Server 2012 to Windows Server 2012 R2, storage pools hosted on that server continue to work, but new Storage Spaces functionality, such as storage tiers, is not available. This cmdlet enables new Storage Spaces functionality for a storage pool on a server that runs Windows Server 2012 R2.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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
-----------------------------	-------

Parameter :**FriendlyName**

Description :Specifies an array of storage pool friendly names. The cmdlet upgrades the storage pools that you specify by friendly name.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**Name**

Description :Specifies an array of names. The cmdlet upgrades the storage pools that you specify by name. This human-readable name is not necessarily unique.

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

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**ThrottleLimit**

Description :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

Parameter :**Uniqueld**

Description :Specifies an array of unique IDs, as strings. The cmdlet upgrades the storage pools that have the IDs that you specify.

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

Parameter :**Confirm**

Description :Prompts you for confirmation before running the cmdlet.Prompts you for confirmation before running the cmdlet.

Required	false
Position	named
Default value	false
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**WhatIf**

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

Inputs

You can use the pipeline operator to pass an array of MSFT_StoragePool objects to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StoragePool

Outputs

This cmdlet generates an object that represents the storage pools that you updated, if you specify the PassThru parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StoragePool

Cmdlet: Update-StorageProviderCache

Synops

Updates the cache of the service for a particular provider and associated child objects.

Syntax

```
Update-StorageProviderCache [[-Name] <String[]>] [-CimSession  
<CimSession[]>] [-DiscoveryLevel {Level0 | Level1 | Level2 |  
Level3 | Full}] [-Manufacturer <String[]>]  
[-PassThru] [-RootObject <PSReference>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Update-StorageProviderCache [-CimSession <CimSession[]>] [-  
DiscoveryLevel {Level0 | Level1 | Level2 | Level3 | Full}] [-  
PassThru] [-RootObject <PSReference>]  
[-StorageSubSystem <CimInstance>] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Update-StorageProviderCache [-CimSession <CimSession[]>] [-  
DiscoveryLevel {Level0 | Level1 | Level2 | Level3 | Full}] [-  
PassThru] [-RootObject <PSReference>]  
[-ThrottleLimit <Int32>] [<CommonParameters>]
```

```
Update-StorageProviderCache [-CimSession <CimSession[]>] [-  
DiscoveryLevel {Level0 | Level1 | Level2 | Level3 | Full}] [-  
PassThru] [-RootObject <PSReference>]  
[-ThrottleLimit <Int32>] [-UniqueId <String[]>]  
[<CommonParameters>]
```

```
Update-StorageProviderCache [-CimSession <CimSession[]>] [-  
DiscoveryLevel {Level0 | Level1 | Level2 | Level3 | Full}] [-  
Manufacturer <String[]>] [-PassThru] [-RootObject  
<PSReference>] [-ThrottleLimit <Int32>] [-URI <Uri[]>]  
[<CommonParameters>]
```

Description

The Update-StorageProviderCache cmdlet updates the cache of the service for a particular provider and associated child objects.

Note: Using the Full value for the DiscoveryLevel parameter without using additional parameters to limit the scope to particular storage providers or storage subsystems

causes all accessible storage providers to enumerate and report all state information, which can be extremely time intensive in large environments.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DiscoveryLevel**

Description :Defines the level (or depth) of discovery that should be performed. Increasing levels are cumulative; the storage providers will discover objects starting from Level0 and continuing to the highest level specified. Acceptable values are:

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

Parameter :**Manufacturer**

Description :Specifies the storage provider cache to update by manufacturer name. Enter a manufacturer string, or use wildcard characters to enter a pattern.

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

Parameter :**Name**

Description :Specifies the name of the storage provider cache to update.

Required	false
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**PassThru**

Description :Specifies that the cmdlet should output an object representing the storage provider it updated. By default, this cmdlet does not generate any output.

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

Parameter :**RootObject**

Description :Specifies a reference to the object from which you want to begin discovering associated objects. When the DiscoveryLevel parameter is not specified, well-defined actions will be taken depending on the type of object reference specified:

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

Parameter :**StorageSubSystem**

Description :Updates all storage subsystems managed by the storage provider associated with the StorageSubsystem object you specify. Enter a StorageSubsystem CIM object, which is exposed by the Get-StorageSubSystem cmdlet.

Required	false
Position	named
Default value	none

Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

Parameter :ThrottleLimit

Description :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

Parameter :URI

Description :Specifies the URI of the storage provider whose cache should be updated.

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

Parameter :Uniqueld

Description :Specifies the ID of the storage provider cache to update. Type one or more IDs, with each ID enclosed in quotes, and multiple IDs separated by commas. The ID persists through restarts.

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

Inputs

You can pipe an MSFT_StorageSubsystem object to the StorageSubsystem parameter to perform the update on the storage provider for the specified subsystem.

You can pipe an MSFT_StorageProvider object to the InputObject parameter to perform the update on the specified storage provider.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageSubsystem

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageProvider

Outputs

By default the Update-StorageProviderCache cmdlet does not return any objects. If you specify the PassThru parameter, this cmdlet returns an object representing the storage provider it updated.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_StorageProvider

Examples

Example 1: Perform a Full update of all objects

This example performs a Full update of the storage provider cache on all accessible storage providers, rescanning all associated physical disks and reporting the state. This operation can be extremely time intensive in large or enterprise environments; instead use parameters to scope the update.

```
PS C:\>Update-StorageProviderCache -DiscoveryLevel Full
```

Example 2: Update PhysicalDisk objects for a particular storage provider

This example uses the StorageSubsystem parameter in association with the Get-StorageSubSystem cmdlet to get a particular storage subsystem and then perform a Level3 update on its associated storage provider, discovering all associated PhysicalDisk objects.

```
PS C:\>Update-StorageProviderCache -StorageSubSystem (Get-StorageSubSystem -FriendlyName "StorageArray*") -DiscoveryLevel Level3
```

Example 3: Update all objects for a specific storage pool

This example uses the Name parameter to specify the storage provider to update, and uses the RootObject parameter to specify the specific storage pool for which to update objects. Because RootObject takes PSReference objects as input, you need to prepend the object call with [ref] to get a reference to the object instead of the object itself.

```
PS C:\>Update-StorageProviderCache -Name "StorageArray" -  
RootObject ([ref](Get-StoragePool "Storage pool"))
```


Cmdlet: Write-VolumeCache

Synops

Writes the file system cache to disk.

Syntax

```
ite-VolumeCache [-DriveLetter] <Char[]> [-CimSession  
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>]  
[<CommonParameters>]  
Write-VolumeCache [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -FileSystemLabel <String[]>  
[<CommonParameters>]  
Write-VolumeCache [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -Path <String[]> [<CommonParameters>]  
Write-VolumeCache [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -ObjectId <String[]> [<CommonParameters>]  
Write-VolumeCache [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Write-VolumeCache cmdlet writes the file system cache to disk. By default, Windows caches file data to be written to disk in a special memory area before writing the data to disk.

This cmdlet enables you to forcibly empty, or flush, the write cache by writing it to disk.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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

Parameter :**DriveLetter**

Description :Specifies an array of letters that identify one or more drives or volumes in the system. The cmdlet writes the volume cache for the drives or volumes you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :**FileSystemLabel**

Description :Specifies an array of file system labels. The cmdlet writes the volume cache for the file system labels you specify.

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

Parameter :**ObjectId**

Description :Specifies an array of IDs, as strings. The ID is not globally unique.

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

Parameter :**PassThru**

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :Path

Description :Specifies an array of paths. The cmdlet writes the volume cache for the paths you specify.

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

Parameter :ThrottleLimit

Description :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

Inputs

You can use the pipeline operator to pass an array of MSFT_Volume objects to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_Volume

Outputs

If you specify the PassThru parameter, this cmdlet returns an object representing the volumes for which you wrote the file system cache to disk.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_Volume

Cmdlet: Write-VolumeCache

Synops

Writes the file system cache to disk.

Syntax

```
Write-VolumeCache [-DriveLetter] <Char[]> [-CimSession  
<CimSession[]>] [-PassThru] [-ThrottleLimit <Int32>]  
[<CommonParameters>]
```

```
Write-VolumeCache [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -FileSystemLabel <String[]>  
[<CommonParameters>]
```

```
Write-VolumeCache [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -Path <String[]> [<CommonParameters>]
```

```
Write-VolumeCache [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] -ObjectId <String[]> [<CommonParameters>]
```

```
Write-VolumeCache [-CimSession <CimSession[]>] [-PassThru] [-  
ThrottleLimit <Int32>] [<CommonParameters>]
```

Description

The Write-VolumeCache cmdlet writes the file system cache to disk. By default, Windows caches file data to be written to disk in a special memory area before writing the data to disk.

This cmdlet enables you to forcibly empty, or flush, the write cache by writing it to disk.

Parameters

Parameter :**CimSession**

Description :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 or Get-CimSession 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
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Parameter :DriveLetter

Description :Specifies an array of letters that identify one or more drives or volumes in the system. The cmdlet writes the volume cache for the drives or volumes you specify.

Required	true
Position	1
Default value	none
Accept pipeline input?	True (ByPropertyName)
Accept wildcard characters?	false

Parameter :FileSystemLabel

Description :Specifies an array of file system labels. The cmdlet writes the volume cache for the file system labels you specify.

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

Parameter :ObjectId

Description :Specifies an array of IDs, as strings. The ID is not globally unique.

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

Parameter :PassThru

Description :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	none
Accept pipeline input?	false
Accept wildcard characters?	false

Parameter :**Path**

Description :Specifies an array of paths. The cmdlet writes the volume cache for the paths you specify.

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

Parameter :**ThrottleLimit**

Description :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

Inputs

You can use the pipeline operator to pass an array of MSFT_Volume objects to the InputObject parameter.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/MSFT_Volume

Outputs

If you specify the PassThru parameter, this cmdlet returns an object representing the volumes for which you wrote the file system cache to disk.

Type :

Microsoft.Management.Infrastructure.CimInstance#ROOT/Microsoft/Windows/Storage/M
SFT_Volume