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PowerShell Get-Help on command 'New-StorageTier'

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

NAME

New-StorageTier

SYNOPSIS

Creates a storage tier.

SYNTAX

New-StorageTier [-AsJob] [-CimSession <CimSession[]>] [-ColumnIsolation {PhysicalDisk | StorageEnclosure | StorageScaleUnit | StorageChassis | StorageRack}] [-Description <String>] [-FaultDomainAwareness {PhysicalDisk | StorageEnclosure | StorageScaleUnit | StorageChassis | StorageRack}] -FriendlyName <String> -InputObject <CimInstance[]> [-Interleave <UInt64>] [-MediaType {HDD | SSD | SCM}] [-NumberOfColumns <UInt16>] [-NumberOfDataCopies <UInt16>] [-NumberOfGroups <UInt16>] [-PhysicalDiskRedundancy <UInt16>] [-ResiliencySettingName <String>] [-ThrottleLimit <Int32>] [<CommonParameters>]

New-StorageTier [-StoragePoolFriendlyName] <String[]> [-AsJob] [-CimSession <CimSession[]>] [-ColumnIsolation {PhysicalDisk | StorageEnclosure | StorageScaleUnit | StorageChassis | StorageRack}] [-Description <String>]

[-FaultDomainAwareness {PhysicalDisk | StorageEnclosure | StorageScaleUnit |
StorageChassis | StorageRack}] -FriendlyName <String> [-Interleave <UInt64>]
[-MediaType {HDD | SSD | SCM}] [-NumberOfColumns <UInt16>]
[-NumberOfDataCopies <UInt16>] [-NumberOfGroups <UInt16>]
[-PhysicalDiskRedundancy <UInt16>] [-ResiliencySettingName <String>]
[-ThrottleLimit <Int32>] [<CommonParameters>]

New-StorageTier [-AsJob] [-CimSession <CimSession[]>] [-ColumnIsolation
{PhysicalDisk | StorageEnclosure | StorageScaleUnit | StorageChassis |
StorageRack}] [-Description <String>] [-FaultDomainAwareness {PhysicalDisk |
StorageEnclosure | StorageScaleUnit | StorageChassis | StorageRack}]
-FriendlyName <String> [-Interleave <UInt64>] [-MediaType {HDD | SSD | SCM}]
[-NumberOfColumns <UInt16>] [-NumberOfDataCopies <UInt16>] [-NumberOfGroups
<UInt16>] [-PhysicalDiskRedundancy <UInt16>] [-ResiliencySettingName <String>]
-StoragePoolName <String[]> [-ThrottleLimit <Int32>] [<CommonParameters>]

New-StorageTier [-AsJob] [-CimSession <CimSession[]>] [-ColumnIsolation
{PhysicalDisk | StorageEnclosure | StorageScaleUnit | StorageChassis |
StorageRack}] [-Description <String>] [-FaultDomainAwareness {PhysicalDisk |
StorageEnclosure | StorageScaleUnit | StorageChassis | StorageRack}]
-FriendlyName <String> [-Interleave <UInt64>] [-MediaType {HDD | SSD | SCM}]
[-NumberOfColumns <UInt16>] [-NumberOfDataCopies <UInt16>] [-NumberOfGroups
<UInt16>] [-PhysicalDiskRedundancy <UInt16>] [-ResiliencySettingName <String>]
-StoragePoolUniqueId <String[]> [-ThrottleLimit <Int32>] [<CommonParameters>]

DESCRIPTION

The New-StorageTier cmdlet creates a storage tier in a storage pool.

PARAMETERS

-AsJob [<SwitchParameter>]

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

that take a long time to complete.

-CimSession <CimSession[]>

Runs the cmdlet in a remote session or on a remote computer. Enter a computer name or a session object, such as the output of a New-CimSession (https://go.microsoft.com/fwlink/p/?LinkId=227967) or [Get-CimSession](https://go.microsoft.com/fwlink/p/?LinkId=227966)cmdlet. The default is the current session on the local computer.

-ColumnIsolation <FaultDomainType>

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

-Description <String>

Specifies a description for the storage tier that you create.

-FaultDomainAwareness <FaultDomainType>

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

For example, specify StorageScaleUnit to store data copies on separate nodes of a Storage Spaces Direct cluster. This cmdlet refers to nodes of a Storage Spaces Direct cluster as storage scale units because you can expand the scale of the cluster by adding more nodes.

-FriendlyName <String>

Specifies a friendly name for the storage tier.

-InputObject <CimInstance[]>

Specifies the input object that is used in a pipeline command.

-Interleave <UInt64>

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.

-MediaType <MediaType>

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.

-NumberOfColumns <UInt16>

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.

-NumberOfDataCopies <UInt16>

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.

-NumberOfGroups <UInt16>

Specifics 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.

-PhysicalDiskRedundancy <UInt16>

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.

-ResiliencySettingName <String>

Specifies the resiliency setting, or storage layout, to use for the virtual disk. The acceptable values for this parameter are: Simple, Mirror, and Parity.

By default, when you specify Mirror, Storage Spaces creates a two-way mirror. When you specify Parity, Storage Spaces creates a single-parity space.

To create a three-way mirror space, specify 3 for the NumberofDataCopies parameter or 2 for the PhysicalDiskRedundancy parameter.

To create a dual-parity space, specify 2 for the PhysicalDiskRedundancy parameter and Fixed provisioning for the ProvisioningType parameter.

-StoragePoolFriendlyName <String[]>

Specifies the friendly name of a storage pool. The cmdlet creates the storage tier in the storage pool that you specify.

-StoragePoolName <String[]>

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.

-StoragePoolUniqueId <String[]>

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.

-ThrottleLimit <Int32>

Specifies the maximum number of concurrent operations that can be established to run the cmdlet. If this parameter is omitted or a value of `0` is entered, then Windows PowerShellr calculates an optimum throttle limit for the cmdlet based on the number of CIM cmdlets that are running on the computer. The throttle limit applies only to the current cmdlet, not to the session or to the computer.

<CommonParameters>

This cmdlet supports the common parameters: Verbose, Debug, ErrorAction, ErrorVariable, WarningAction, WarningVariable, OutBuffer, PipelineVariable, and OutVariable. For more information, see about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).

---------- Example 1: Create a storage tier ----------

PS C:\> New-StorageTier -StoragePoolFriendlyName "TierPool01" -FriendlyName "Tier11" -MediaType HDD

This command creates a storage tier for hard disk drives named Tier11 in the storage pool named TierPool01.

REMARKS

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

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

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

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