



Windows PowerShell Get-Help on Cmdlet 'Optimize-Volume'

PS:\>Get-HELP Optimize-Volume -Full

NAME

Optimize-Volume

SYNOPSIS

Optimizes a volume.

SYNTAX

```
Optimize-Volume [-DriveLetter] <Char[]> [-Analyze] [-AsJob] [-CimSession <CimSession[]>] [-Confirm] [-Defrag]
[-NormalPriority] [-ReTrim] [-SlabConsolidate]
[-ThrottleLimit <Int32>] [-TierOptimize] [-WhatIf] [<CommonParameters>]
```

```
Optimize-Volume [-Analyze] [-AsJob] [-CimSession <CimSession[]>] [-Confirm] [-Defrag] -FileSystemLabel <String[]>
[-NormalPriority] [-ReTrim] [-SlabConsolidate]
[-ThrottleLimit <Int32>] [-TierOptimize] [-WhatIf] [<CommonParameters>]
```

```
Optimize-Volume [-Analyze] [-AsJob] [-CimSession <CimSession[]>] [-Confirm] [-Defrag] -InputObject <CimInstance[]>
[-NormalPriority] [-ReTrim] [-SlabConsolidate]
[-ThrottleLimit <Int32>] [-TierOptimize] [-WhatIf] [<CommonParameters>]
```

Optimize-Volume [-Analyze] [-AsJob] [-CimSession <CimSession[]>] [-Confirm] [-Defrag] [-NormalPriority] -ObjectId
<String[]> [-ReTrim] [-SlabConsolidate]
[-ThrottleLimit <Int32>] [-TierOptimize] [-WhatIf] [<CommonParameters>]

Optimize-Volume [-Analyze] [-AsJob] [-CimSession <CimSession[]>] [-Confirm] [-Defrag] [-NormalPriority] -Path <String[]>
[-ReTrim] [-SlabConsolidate] [-ThrottleLimit
<Int32>] [-TierOptimize] [-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

-Analyze [<SwitchParameter>]

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 False
Accept pipeline input? False
Accept wildcard characters? false

-AsJob [<SwitchParameter>]

Runs the cmdlet as a background job. Use this parameter to run commands that take a long time to complete.

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

-CimSession <CimSession[]>

Runs the cmdlet in a remote session or on a remote computer. Enter a computer name or a session object, such as the output of a New-CimSession

(<https://go.microsoft.com/fwlink/p/?LinkId=227967>) or

[Get-CimSession](<https://go.microsoft.com/fwlink/p/?LinkId=227966>)cmdlet. The default is the current session on the local computer.

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

-Confirm [<SwitchParameter>]

Prompts you for confirmation before running the cmdlet.

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

Accept wildcard characters? false

-Defrag [<SwitchParameter>]

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 False

Accept pipeline input? False

Accept wildcard characters? false

-DriveLetter <Char[]>

Specifies the drive letter of the volume to optimize.

Required? true

Position? 0

Default value None

Accept pipeline input? True (ByPropertyName)

Accept wildcard characters? false

-FileSystemLabel <String[]>

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

-InputObject <CimInstance[]>

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

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

-NormalPriority [<SwitchParameter>]

Indicates that this cmdlet the operation at normal priority. By default, the priority is low.

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

-ObjectId <String[]>

Specifies the ID of the volume to optimize.

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

-Path <String[]>

Specifies the path of the volume to optimize.

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

`-ReTrim [<SwitchParameter>]`

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	False
Accept pipeline input?	False
Accept wildcard characters?	false

`-SlabConsolidate [<SwitchParameter>]`

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	False
Accept pipeline input?	False
Accept wildcard characters?	false

`-ThrottleLimit <Int32>`

Specifies the maximum number of concurrent operations that can be established to run the cmdlet. If this parameter is omitted or a value of `0` is entered, then

Windows 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

-TierOptimize [<SwitchParameter>]

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 False

Accept pipeline input? False

Accept wildcard characters? false

-WhatIf [<SwitchParameter>]

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

Required? false

Position? named

Default value False

Accept pipeline input? False

Accept wildcard characters? false

<CommonParameters>

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

INPUTS

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

You can use the pipeline operator to pass a Volume object to the InputObject parameter.

OUTPUTS

This cmdlet does not generate output.

NOTES

* When used in Failover Cluster, cmdlets from the Storage module operate on cluster level (all servers in the cluster).

----- Example 1: Perform TRIM optimization -----

```
PS C:\>Optimize-Volume -DriveLetter H -ReTrim -Verbose
```

This example optimizes drive H by re-sending Trim requests. This is useful on SSD media, and thinly provisioned storage.

----- Example 2: Analyze a volume -----

```
PS C:\>Optimize-Volume -DriveLetter H -Analyze -Verbose
```

This example reports only the current optimization state of drive H.

----- Example 3: Defragment a volume -----

```
PS C:\>Optimize-Volume -DriveLetter H -Defrag -Verbose
```

This example defragments drive H.

----- Example 4: Perform slab consolidation -----

```
PS C:\>Optimize-Volume -DriveLetter H -SlabConsolidate -Verbose
```

This example performs slab consolidation on the storage space backing volume H.

----- Example 5: Tier optimize a volume -----

PS C:\>Optimize-Volume -DriveLetter H -TierOptimize

This example performs tier optimization on the tiered storage space backing volume H.

RELATED LINKS

Online

Version:

https://learn.microsoft.com/powershell/module/storage/optimize-volume?view=windowsserver2022-ps&wt.mc_id=ps-gethelp

Format-Volume

Get-Volume

Repair-Volume

Set-Volume