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

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

NAME

Format-Volume

SYNOPSIS

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

SYNTAX

Format-Volume [-DriveLetter] <Char[]> [-AllocationUnitSize <UInt32>] [-AsJob] [-CimSession <CimSession[]>] [-Compress] [-Confirm] [-DevDrive] [-DisableHeatGathering]

[-FileSystem {FAT | FAT32 | exFAT | NTFS | ReFS}] [-Force] [-Full] [-IsDAX <Boolean>] [-NewFileSystemLabel <String>] [-SetIntegrityStreams <Boolean>]

[-ShortFileNameSupport <Boolean>] [-ThrottleLimit <Int32>] [-UseLargeFRS] [-WhatIf] [<CommonParameters>]

Format-Volume [-AllocationUnitSize <UInt32>] [-AsJob] [-CimSession <CimSession[]>] [-Compress] [-Confirm] [-DevDrive] [-DisableHeatGathering] [-FileSystem {FAT |

FAT32 | exFAT | NTFS | ReFS}] -FileSystemLabel <String[]> [-Force] [-Full] [-IsDAX <Boolean>] [-NewFileSystemLabel <String>] [-SetIntegrityStreams <Boolean>]

[-ShortFileNameSupport <Boolean>] [-ThrottleLimit <Int32>] [-UseLargeFRS] [-WhatIf] [<CommonParameters>]

Format-Volume [-AllocationUnitSize <UInt32>] [-AsJob] [-CimSession <CimSession[]>] [-Compress] [-Confirm] [-DevDrive] [-DisableHeatGathering] [-FileSystem {FAT |

FAT32 | exFAT | NTFS | ReFS}] [-Force] [-Full] -InputObject <CimInstance[]> [-IsDAX <Boolean>] [-NewFileSystemLabel <String>] [-SetIntegrityStreams <Boolean>]

[-ShortFileNameSupport <Boolean>] [-ThrottleLimit <Int32>] [-UseLargeFRS] [-WhatIf] [<CommonParameters>]

Format-Volume [-AllocationUnitSize <UInt32>] [-AsJob] [-CimSession <CimSession[]>] [-Compress] [-Confirm] [-DevDrive] [-DisableHeatGathering] [-FileSystem {FAT |

FAT32 | exFAT | NTFS | ReFS}] [-Force] [-Full] [-IsDAX <Boolean>] [-NewFileSystemLabel <String>] -ObjectId <String[]> [-SetIntegrityStreams <Boolean>]

[-ShortFileNameSupport <Boolean>] [-ThrottleLimit <Int32>] [-UseLargeFRS] [-WhatIf] [<CommonParameters>]

Format-Volume [-AllocationUnitSize <UInt32>] [-AsJob] [-CimSession <CimSession[]>] [-Compress] [-Confirm] [-DevDrive] [-DisableHeatGathering] [-FileSystem {FAT |

FAT32 | exFAT | NTFS | ReFS}] [-Force] [-Full] [-IsDAX <Boolean>] [-NewFileSystemLabel <String>] [-Partition <CimInstance>] [-SetIntegrityStreams <Boolean>]

[-ShortFileNameSupport <Boolean>] [-ThrottleLimit <Int32>] [-UseLargeFRS] [-WhatIf] [<CommonParameters>]

Format-Volume [-AllocationUnitSize <UInt32>] [-AsJob] [-CimSession <CimSession[]>] [-Compress] [-Confirm] [-DevDrive] [-DisableHeatGathering] [-FileSystem {FAT |

FAT32 | exFAT | NTFS | ReFS}] [-Force] [-Full] [-IsDAX <Boolean>] [-NewFileSystemLabel <String>] -Path <String[]> [-SetIntegrityStreams <Boolean>]

[-ShortFileNameSupport <Boolean>] [-ThrottleLimit <Int32>] [-UseLargeFRS] [-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

-AllocationUnitSize <UInt32>

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

-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 (/powershell/module/cimcmdlets/new-cimsession) 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

-Compress [<SwitchParameter>]

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

Required? false

Position? named

Default value False

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

-DevDrive [<SwitchParameter>]

Formats the volume as a dev drive (/windows/dev-drive/). A dev drive is optimized for performance of developer scenarios and gives administators control over what

minifilters are attached to the volume.

Required? false

Position? named

Default value False

Accept pipeline input? False

Accept wildcard characters? false

-DisableHeatGathering [<SwitchParameter>]

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 False

Accept pipeline input? False

Accept wildcard characters? false

-DriveLetter <Char[]>

Specifies the drive letter of the volume to format.

Required? true

Position? 0

Default value None

Accept pipeline input? True (ByPropertyName)

Accept wildcard characters? false

-FileSystem <String>

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

-FileSystemLabel <String[]>

Specifies the label to use for the volume.

Required? true

Position? named

Default value None

Accept pipeline input? True (ByPropertyName)

Accept wildcard characters? false

-Force [<SwitchParameter>]

Specifies the override switch.

Required? false

Position? named

Default value False

Accept pipeline input? False

Accept wildcard characters? false

-Full [<SwitchParameter>]

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 False

Accept pipeline input? False

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

-IsDAX <Boolean>

Formats a volume as a DirectAccess (DAX) volume.

DAX provides applications with direct access and byte-addressability options via memory mapping on storage class memory (SCM) devices, such as NVDIMM-N.

If you do not specify the IsDAX parameter, the cmdlet defaults to a regular, non-DAX volume.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-NewFileSystemLabel <String>

Specifies a new label to use for the volume.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-ObjectId <String[]>

Specifies the ID of the volume to format.

Required? true

Position? named

Default value None

Accept pipeline input? True (ByPropertyName)

Accept wildcard characters? false

-Partition <CimInstance>

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

-Path <String[]>

Specifies the path of the volume to format.

Required? true

Position? named

Default value None

Accept pipeline input? True (ByPropertyName)

Accept wildcard characters? false

-SetIntegrityStreams <Boolean>

Enables integrity streams on the volume to be formatted.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-ShortFileNameSupport <Boolean>

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

-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.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-UseLargeFRS [<SwitchParameter>]

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

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. NOTE : The WhatIf switch does not work with this cmdlet.

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 an MSFT_Volume object to the InputObject parameter.

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

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

OUTPUTS

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

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

NOTES

Be careful, if using this cmdlet on a Windows Cluster, it would format all drives returned by the Get-Volume * cmdlet.

---------- Example 1: Quick format ----------

PS C:\>Format-Volume -DriveLetter D

This example performs a format of the D volume.

---------- Example 2: Full format using FAT32 ----------

PS C:\>Format-Volume -DriveLetter D -FileSystem FAT32 -Full -Force

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

------- Example 3: Format all D drives across a cluster -------

PS C:\> Get-Volume -DriveLetter D

DriveLetter FileSystemLabel FileSystem DriveType HealthStatus OperationalStatus SizeRemaining Size

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D Server1 NTFS Fixed Healthy OK 126.76 GB 126.87 GB

D Server2 NTFS Fixed Healthy OK 126.76 GB 126.87 GB

PS C:\> Format-Volume -DriveLetter D

DriveLetter FileSystemLabel FileSystem DriveType HealthStatus OperationalStatus SizeRemaining Size

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D NTFS Fixed Healthy OK 126.76 GB 126.87 GB

D NTFS Fixed Healthy OK 126.76 GB 126.87 GB

Be careful, if using this cmdlet on a Windows Cluster, it would format all drives returned by the Get-Volume cmdlet.

-- Example 4: Full format using NTFS and allocation size 8192 --

PS C:\> Format-Volume -DriveLetter D -FileSystem NTFS -AllocationUnitSize 8192

This example performs a full format of the D volume using the NTFS file system and allocation size 8192.

RELATED LINKS

Online Version:

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

Get-Disk

Initialize-Disk

New-Partition

Get-Partition

Get-Volume

Optimize-Volume

Repair-Volume

Set-Volume