



# Swordfish Property Guide

**Version: 1.2.8**

**ABSTRACT:**

The Swordfish Property Guide provides a high-level reference of property usage throughout the Swordfish schema and object model.

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**SNIA Approved Publication**

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## Current Revision

SNIA is actively engaged in expanding and refining the Swordfish documentation. The most current revision can be found on the SNIA web site at [https://www.snia.org/tech\\_activities/standards/curr\\_standards/swordfish](https://www.snia.org/tech_activities/standards/curr_standards/swordfish).

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This document is versioned material. Versioned material shall have a three-level revision identifier, comprised of a version number ‘v’, a release number ‘r’ and an errata number ‘e’. Future publications of this document are subject to specific constraints on the scope of change that is permissible from one revision to the next and the degree of interoperability and backward compatibility that should be assumed between products designed to this standard. This versioning policy applies to all SNIA Swordfish versioned materials.

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## Revision History

The evolution of this document is summarized in Table 1.

Table 1: Revision History

Date	Rev	Notes
2 March 2021	Initial Version	Released as v1.2.2 to match bundle version

Date	Rev	Notes
30 August 2021	v1.2.3	Updated with latest property definitions.
5 December 2021	1.2.3	Release as SNIA Approved Publication
12 April 2022	1.2.4	Release as Working Draft
12 July 2022	1.2.4a	Release as SNIA Standard.
22 January 2024	1.2.6	Release as Working Draft
		Copyrights updated to 2024.
9 April 2024	1.2.6	Release as SNIA Standard
21 May 2024	1.2.7	Release as Working Draft
13 August 2024	1.2.7	Release as SNIA Standard
28 January 2025	1.2.8	Release as Working Draft
22 May 2025	1.2.8	Release as SNIA Standard

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## Acknowledgements

The SNIA Scalable Storage Management Technical Work Group, which developed and reviewed this work in progress, would like to recognize the significant contributions made by the following members listed in Table 2.

Table 2: Contributors

Member	Representatives (* – prior employer)
Intel Corporation	Richelle Ahlvers

# 1 Introduction

## 1.1 Overview

The Swordfish Scalable Storage Management API (“Swordfish”) defines a RESTful interface and a standardized data model to provide a scalable, customer-centric interface for managing storage and related data services. It extends the Redfish Scalable Platforms Management API Specification to manage block storage, file systems, object storage, and storage network infrastructure, with a focus on common operational and business concerns of storage management.

The Swordfish API is defined using CSDL, JSON, and/or YAML schema. However, Swordfish is a REST-based API and can be used by clients without requiring an explicit knowledge of the underlying schema.

This document provides a comprehensive reference for the properties defined within the schema that can be provided by the Swordfish API.

## 1.2 Who should read this document?

This document is intended primarily for end users and other consumers of Swordfish data to look up property definitions, without requiring a detailed knowledge of the schema as a whole. Schema authors may also use this document to locate existing property definitions within the Swordfish Schema.

## 1.3 Using this guide

Every Redfish API response consists of a JSON payload containing properties that are strictly defined by a Schema for that Resource. The Schema defining a particular Resource can be determined from the value of the “@odata.type” property returned in every Redfish response. This guide details the definitions for every Redfish standard property defined in the DMTF-published Redfish Schemas.

The property-level details are summarized in Table 3.

Table 3: Property-level details

Column	Purpose
Property Name	The name of the JSON property as it appears, case sensitive, in the JSON payload.

Column	Purpose
Description	The description of the property, as copied directly from the Schema <code>Description</code> definition, or, for properties that appear in multiple Schemas, a general description of its usage in any of the listed Schemas.
Defined in Schemas	The names of the Redfish Schemas where this property is defined, and therefore in which Resources it may appear. For properties that appear within embedded JSON objects, the object name appears in parentheses.
Type	The JSON data types for the property, which can include boolean, number, string, or object. String types that use defined enumerations state <code>(enum)</code> . Number types state units, where used.

## 2 Property Index

Property Name	Defined In Schema(s)	Type	Description
<b>AccessCapabilities</b>	FileSystem	array	An array of supported IO access capabilities.
	DataStorageLineOfService	array	Required access capabilities.
	Volume	array	Supported IO access capabilities.
<b>AccessCapability</b>	StorageGroup (MappedVolumes)	string (enum)	Supported IO access capability.
<b>AccessProtocols</b>	IOConnectivityLineOfService	array	SupportedAccessProtocols.
<b>AccessState</b>	StorageGroup	string (enum)	AccessState for this storage group.
<b>Actions</b>	<i>various</i> (CapacitySource, ClassOfService ...)	object	The available actions for this resource.
<b>AddDrives (Action)</b>	StoragePool (Actions)	object	This action is used to add an additional drive, or set of drives, to a capacity source for the storage pool.
<b>AllocatedBytes</b>	CapacitySource (ProvidedCapacity > Data), CapacitySource (ProvidedCapacity > Metadata), CapacitySource (ProvidedCap	integer (bytes)	The number of bytes currently allocated by the storage system in this data store for this data type.

Property Name	Defined In Schema(s)	Type	Description
	acity > Snapshot)		
<b>AllocatedPools</b>	StoragePool	object	A reference to the collection of storage pools allocated from this storage pool.
	Volume	object	An array of references to StoragePools allocated from this Volume.
<b>AllocatedVolumes</b>	StoragePool	object	A reference to the collection of volumes allocated from this storage pool.
<b>ALUA</b>	Volume	object	ALUA properties for this volume.
<b>ANAGroupId</b>	NVMeDomain	number	The ANA group id for all namespaces within the domain.
	Volume (ALUA)	number	The ANA group id for this volume.
<b>AntivirusEngineProvider</b>	DataSecurityLineOfService	string	AntiVirus provider.
<b>AntivirusScanPolicies</b>	DataSecurityLineOfService	array	Policy for triggering an AntiVirus scan.
<b>AntiVirusScanTrigger</b>	DataSecurityLineOfService (AntivirusScanPolicies), DataSecurityLoSCapabilities (SupportedAntivirusScanPolicies)	string (enum)	Types of antivirus scan triggers.
<b>AssignReplicaTarget (Action)</b>	ConsistencyGroup (Actions)	object	This action is used to establish a replication relationship by assigning an existing consistency group to serve as a target replica for an existing source consistency group.
	Volume (Actions)	object	This action is used to establish a replication relationship by assigning an existing volume to

Property Name	Defined In Schema(s)	Type	Description
			serve as a target replica for an existing source volume.
<b>AssociatedDomains</b>	NVMeDomain (Links)	array	An array of links to associated domains.
<b>AssociatedFeaturesRegistry</b>	Volume (Operations)	object	A reference to the task associated with the operation if any.
<b>AuthenticationMethod</b>	StorageGroup	string (enum)	The Authentication method used for the Endpoints involved in this StorageGroup.
<b>AuthenticationType</b>	DataSecurityLoSCapabilities (SupportedHostAuthenticationTypes), DataSecurityLoSCapabilities (SupportedUserAuthenticationTypes)	string (enum)	Enumeration of authentication algorithms.
<b>AvailableFirmwareImages</b>	NVMeDomain	array	A collection of available firmware images.
<b>AverageIOBytes</b>	IOPerformanceLoSCapabilities (SupportedIOWorkloads > Components)	integer (bytes)	Average I/O Size for this component.
<b>AverageIOOperationLatencyMicroseconds</b>	IOPerformanceLineOfService	integer (us)	Expected average IO latency.
<b>BlockSizeBytes</b>	FileSystem	integer (bytes)	Block size of the file system in bytes.
	StoragePool	integer (bytes)	Maximum Block size in bytes.
	Volume	integer (bytes)	The size of the smallest addressable unit (Block) of this volume in bytes.
<b>CacheDataVolumes</b>	Volume (Links)	array	A pointer to the data volumes this volume serves as a cache volume.

Property Name	Defined In Schema(s)	Type	Description
<b>CacheVolumeSource</b>	Volume (Links)	object	A pointer to the cache volume source for this volume.
<b>Capacity</b>	FileSystem	object	Capacity allocated to the file system.
	StoragePool, Volume	object	Capacity utilization.
<b>CapacityBytes</b>	Volume	integer (bytes)	The size in bytes of this Volume.
<b>CapacitySource</b>	StoragePool (Actions > AddDrives (Action))	object	The capacity source to be extended.
<b>CapacitySources</b>	FileSystem	array	An array of capacity sources for the file system.
	StoragePool	array	An array of space allocations to this store.
	Volume	array	An array of space allocations to this volume.
<b>CasePreserved</b>	FileSystem	boolean	The case of file names is preserved by the file system.
<b>CaseSensitive</b>	FileSystem	boolean	Case sensitive file names are supported by the file system.
<b>CASupported</b>	FileShare	boolean	Continuous Availability is supported. Client/Server mediated recovery from network and server failure with application transparency.
<b>ChangeRAIDLayout (Action)</b>	Volume (Actions)	object	Request system change the RAID layout of the volume.
<b>ChannelEncryptionStrength</b>	DataSecurity LineOfService	string (enum)	Key size for transport channel encryption.
<b>ChapInfo</b>	StorageGroup	array	The credential information used to authenticate the endpoints in this StorageGroup.
<b>CHAPPassword</b>	StorageGroup (ChapInfo)	string	The password for CHAP authentication.
<b>CHAPUser</b>	StorageGroup (ChapInfo)	string	The username for CHAP authentication.

Property Name	Defined In Schema(s)	Type	Description
<b>CharacterCodeSet</b>	FileSystem	array	An array of the character sets or encodings supported by the file system.
	FileSystem (CharacterCodeSet)	string (enum)	Supported character code standards for different alphabets and languages.
<b>CheckConsistency (Action)</b>	Volume (Actions)	object	This action is used to force a check of the Volume's parity or redundant data to ensure it matches calculated values.
<b>ChildStorageGroups</b>	StorageGroup (Links)	array	Child StorageGroups.
<b>ClassesOfService</b>	StoragePool	object	The ClassesOfService supported by this storage pool.
	StorageService	object	The ClassesOfService that all storage in this StorageService can support.
<b>ClassOfService</b>	FileShare (Links)	object	A link to the ClassOfService for this file share.
	FileSystem (Links)	object	The ClassOfService of this file system.
	StorageGroup (Links)	object	The ClassOfService that all storage in this StorageGroup conforms to.
	Volume (Links)	object	The ClassOfService that this storage volume conforms to.
<b>ClassOfServiceVersion</b>	ClassOfService	string	The value identifies the current version of this class of service definition.
<b>ClientEndpointGroups</b>	StorageGroup	array	Groups of client endpoints in this storage group.
	StorageService	object	Client endpoint groups.
<b>ClientEndpoints</b>	Volume (Links)	array	An array of references to the client Endpoints associated with this volume.
<b>ClusterSizeBytes</b>	FileSystem	integer (bytes)	A value indicating the minimum file allocation size imposed by the file

Property Name	Defined In Schema(s)	Type	Description
			system.
<b>Components</b>	IOPerformanceLoSCapabilities (SupportedIOWorkloads)	array	An array of IO workload component descriptions.
<b>Compressed</b>	StoragePool	boolean	Indicator of whether or not the StoragePool has compression enabled.
	Volume	boolean	Indicator of whether or not the Volume has compression enabled.
<b>CompressionEnabled</b>	StoragePool	boolean	Indicates whether or not compression is enabled on the storage pool.
<b>CompressionSavings Bytes</b>	FileSystemMetrics	integer (bytes)	Current compression savings in the file system in Bytes.
	StoragePoolMetrics	integer (bytes)	Current compression savings on the storage pool in Bytes.
	StorageServiceMetrics	integer (bytes)	Current compression savings on the storage service in Bytes.
	VolumeMetrics	integer (bytes)	Current compression savings on the volume in Bytes.
<b>Connections</b>	Volume	array	An array of references to Connections that includes this volume.
	StorageService	object	An array of references to Connections that includes this volume.
<b>ConsistencyCheckCount</b>	VolumeMetrics	number	The number of consistency checks completed over the lifetime of the volume.
<b>ConsistencyCheckErrorCount</b>	StoragePoolMetrics, VolumeMetrics	number	The number of consistency check errors of the volume.
<b>ConsistencyGroupName</b>	ConsistencyGroup (Actions > CreateRepli	string	The Name for the new target consistency group.

Property Name	Defined In Schema(s)	Type	Description
	caTarget (Action))		
<b>ConsistencyGroups</b>	Volume (Links)	array	An array of references to the ConsistencyGroups associated with this volume.
	StorageService	object	ConsistencyGroups.
<b>ConsistencyMethod</b>	ConsistencyGroup	string (enum)	The consistency method used by this group.
<b>ConsistencyType</b>	ConsistencyGroup	string (enum)	The consistency type used by this group.
<b>ConsumedBytes</b>	CapacitySource (ProvidedCapacity > Data), CapacitySource (ProvidedCapacity > Metadata), CapacitySource (ProvidedCapacity > Snapshot)	integer (bytes)	The number of bytes consumed in this data store for this data type.
<b>Controllers</b>	Volume (Links)	array	An array of the Controllers associated with this volume.
	NVMeDomain (DomainContents)	array	Contains the current controllers that are part of this domain. These can be IO, Admin, or discovery controllers.
<b>CorrectableIOReadErrorCount</b>	StoragePoolMetrics	integer	The number of the correctable read errors for the lifetime of the storage pool.
	VolumeMetrics	integer	The number of the correctable read errors for the lifetime of the volume.
<b>CorrectableIOWriteErrorCount</b>	StoragePoolMetrics	integer	The number of the correctable write errors for the lifetime of the storage pool.
	VolumeMetrics	integer	The number of the correctable write errors for the lifetime of the volume.

Property Name	Defined In Schema(s)	Type	Description
<b>CorrespondingProfile Definition</b>	FeaturesRegistry (FeatureMappings), FeaturesRegistry (Features)	string	The profile definition that defines the feature.
<b>CreateReplicas (Action)</b>	DataProtectionLineOfService (Actions)	object	This action creates an on-demand replica.
<b>CreateReplicaTarget (Action)</b>	ConsistencyGroup (Actions)	object	This action is used to create a new consistency group resource to provide expanded data protection through a replica relationship with the specified source consistency group.
	Volume (Actions)	object	This action is used to create a new volume resource to provide expanded data protection through a replica relationship with the specified source volume.
<b>Data</b>	CapacitySource (ProvidedCapacity)	object	The capacity information relating to the user data.
<b>DataProtectionLines OfService</b>	ClassOfService	array	A collection of DataProtection line of service elements.
<b>DataProtectionLoSCapabilities</b>	StorageService, StorageService (Links)	object	The data protection capabilities of this service.
<b>DataSanitizationPolicy</b>	DataSecurityLineOfService	string (enum)	Data sanitization policy.
	DataSecurityLoSCapabilities (SupportedDataSanitizationPolicies)	string (enum)	Types of data sanitization policies.
<b>DataSecurityLinesOf Service</b>	ClassOfService	array	A collection of DataSecurity line of service elements.
<b>DataSecurityLoSCapabilities</b>	StorageService, StorageService (Links)	object	The data security capabilities of this service.

Property Name	Defined In Schema(s)	Type	Description
<b>DataStorageLinesOfService</b>	ClassOfService	array	A collection of DataStorage line of service elements.
<b>DataStorageLoSCapabilities</b>	StorageService, StorageService (Links)	object	The data storage capabilities of this service.
<b>DataUnitsRead</b>	StoragePool (NVMeEnduranceGroupProperties > EndGrpLifetime)	integer	The property contains the total number of data units read from this endurance group.
<b>DataUnitsWritten</b>	StoragePool (NVMeEnduranceGroupProperties > EndGrpLifetime)	integer	The property contains the total number of data units written from this endurance group.
<b>DedicatedSpareDrives</b>	StoragePool (Links)	array	An array of references to the drives which are dedicated spares for this StoragePool.
	Volume (Links)	array	An array of references to the drives which are dedicated spares for this volume.
<b>Deduplicated</b>	StoragePool	boolean	Indicator of whether or not the StoragePool has deduplication enabled.
	Volume	boolean	Indicator of whether or not the Volume has deduplication enabled.
<b>DeduplicationEnabled</b>	StoragePool	boolean	Indicates whether or not deduplication is enabled on the storage pool.
<b>DeduplicationSavingsBytes</b>	FileSystemMetrics	integer (bytes)	Current deduplication savings in the file system in Bytes.
	StoragePoolMetrics	integer (bytes)	Current deduplication savings on the storage pool in Bytes.
	StorageServiceMetrics	integer (bytes)	Current deduplication savings on the storage service in Bytes.
	VolumeMetric	integer	Current deduplication savings on

Property Name	Defined In Schema(s)	Type	Description
	cs	(bytes)	the volume in Bytes.
<b>DefaultAccessCapabilities</b>	FileShare	array	An array of default access capabilities for the file share. The types of default access can include Read, Write, and/or Execute.
<b>DefaultClassOfService</b>	StorageService, StorageService (Links)	object	The default class of service for entities allocated by this storage service.
	StoragePool, StoragePool (Links)	object	The default class of service for entities allocated from this storage pool.
<b>DefaultCompressionBehavior</b>	StoragePool	boolean	Indicates the default dedupe behavior applied to the child resource (E.g., volume or storage pool) created out of the storage pool if the 'Compressed' property is not set on the create request.
<b>DefaultDeduplicationBehavior</b>	StoragePool	boolean	Indicates the default deduplication behavior applied to the child resource (E.g., volume or storage pool) created out of the storage pool if the 'Deduplicated' property is not set on the create request.
<b>DefaultEncryptionBehavior</b>	StoragePool	boolean	Indicates the default dedupe behavior applied to the child resource (E.g., volume or storage pool) created out of the storage pool if the 'Encrypted' property is not set on the create request.
<b>DeleteTargetConsistencyGroup</b>	ConsistencyGroup (Actions > RemoveReplicaRelationship (Action))	boolean	Indicate whether or not to delete the target consistency group as part of the operation.
<b>DeleteTargetVolume</b>	Volume (Actions > RemoveReplicaRelationship (Action))	boolean	Indicate whether or not to delete the target volume as part of the operation.

Property Name	Defined In Schema(s)	Type	Description
<b>DHChapInfo</b>	StorageGroup	array	The credential information used to authenticate the endpoints in this StorageGroup for DHCHAP.
<b>DisplayName</b>	Volume	string	A user-configurable string to name the volume.
<b>DomainContents</b>	NVMeDomain	object	Contains the members of the domain.
<b>DomainMembers</b>	NVMeDomain	array	The members of the domain.
<b>Drives</b>	Volume (Links)	array	An array of references to the drives which contain this volume. This will reference Drives that either wholly or only partly contain this volume.
	Volume (Actions > Change RAIDLayout (Action))	array	An array of the drives to be used by the volume.
	StoragePool (Actions > AddDrives (Action))	array	The drive(s) to be added.
	StoragePool (Actions > RemoveDrives (Action))	array	The drive(s) to be removed.
	StorageService	object	The set of drives managed by this storage service.
<b>Duration</b>	IOPerformanceLoSCapabilities (SupportedIOWorkloads > Components)	string (seconds)	Duration that this component is active.
<b>Enable</b>	StoragePool (Actions > Set Compression State (Action))	boolean	This property indicates the desired compression state of the storage pool.

Property Name	Defined In Schema(s)	Type	Description
	StoragePool (Actions > Set Deduplication State (Action))	boolean	This property indicates the desired deduplication state of the storage pool.
	StoragePool (Actions > Set Encryption State (Action))	boolean	This property indicates the desired encryption state of the storage pool.
<b>Encrypted</b>	StoragePool	boolean	Indicator of whether or not the StoragePool has encryption enabled.
	Volume	boolean	Is this Volume encrypted.
<b>EncryptionEnabled</b>	StoragePool	boolean	Indicates whether or not encryption is enabled on the storage pool.
<b>EncryptionKey</b>	StorageService (Actions > SetEncryptionKey (Action))	string	The encryption key to set on the storage subsystem.
<b>EncryptionTypes</b>	Volume	array	The types of encryption used by this Volume.
<b>EndGrpLifetime</b>	StoragePool (NVMeEnduranceGroupProperties)	object	This property contains the Endurance Group Lifetime properties.
<b>EndpointGroups</b>	StorageService	object	Client and Server endpoint groups.
<b>Endpoints</b>	StorageService	object	Endpoints.
<b>EnduranceEstimate</b>	StoragePool (NVMeEnduranceGroupProperties > EndGrpLifetime)	integer	This property contains an estimate of the total number of data bytes that may be written to the Endurance Group over the lifetime of the Endurance Group assuming a write amplification of 1.
<b>EnduranceGroupIdentifier</b>	StoragePool (NVMeSetProperties)	string	A 16-bit hex value that contains the endurance group identifier.

Property Name	Defined In Schema(s)	Type	Description
<b>ErrorInformationLog EntryCount</b>	StoragePool (NVMeEnduranceGroupProperties > EndGrpLifetime)	integer	This property contains the number of error information log entries over the life of the controller for the endurance group.
<b>EthernetInterfaces</b>	FileShare	object	A link to the collection of Ethernet interfaces that provide access to this file share.
<b>ExecuteSupport</b>	FileShare	boolean	Execute access is supported by the file share.
<b>ExportedShares</b>	FileSystem	object	An array of exported file shares of this file system.
<b>ExposeVolumes (Action)</b>	StorageGroup (Actions)	object	Expose the storage volumes of this group.
<b>FailureDomainScope</b>	DataProtectionLoSCapabilities (SupportedRecoveryGeographicObjectives)	string (enum)	Values of this enumeration represent a geographic scope of a failure domain.
<b>FeatureMappings</b>	FeaturesRegistry	array	The pattern property indicates that a free-form string is the unique identifier for the feature within the registry.
<b>FeatureName</b>	FeaturesRegistry (FeatureMappings), FeaturesRegistry (Features)	string	The Name of the feature.
<b>Features</b>	FeaturesRegistry	array	The pattern property indicates that a free-form string is the unique identifier for the feature within the registry.
<b>FeaturesUsed</b>	FeaturesRegistry	array	An array containing all the standard feature names defined in the registry.
<b>FileProtocol</b>	FileShare (FileSharingProt)	string (enum)	The file sharing protocols supported by the file system.

Property Name	Defined In Schema(s)	Type	Description
	ocols)		
<b>FileSharePath</b>	FileShare	string	A path to an exported file or directory on the file system where this file share is hosted.
<b>FileShareQuotaType</b>	FileShare	string (enum)	Specifies the type of quota enforcement.
<b>FileShareRemainingQuotaBytes</b>	FileShare	integer (bytes)	The number of remaining bytes that may be used by this file share.
<b>FileShareTotalQuotaBytes</b>	FileShare	integer (bytes)	The maximum number of bytes that may be used by this file share.
<b>FileSharingProtocols</b>	FileShare	array	An array of file sharing protocols supported by this file share.
<b>FileSystem</b>	FileShare (Links)	object	A link to the file system containing the file share.
<b>FileSystems</b>	StorageService	object	FileSystems.
<b>FirmwareImages</b>	NVMeDomain	array	Contains an array of pointers to available firmware images.
<b>FirmwareVersion</b>	NVMeFirmwareImage	string	The firmware version of the available NVMe firmware image.
<b>ForceEnable (Action)</b>	Volume (Actions)	object	Request system force the volume to an enabled state regardless of data loss.
<b>FormattedLBASize</b>	Volume (NVMeNamespaceProperties)	string	The LBA data size and metadata size combination that the namespace has been formatted with.
<b>GuaranteedBytes</b>	CapacitySource (ProvidedCapacity > Data), CapacitySource (ProvidedCapacity > Metadata), CapacitySource (ProvidedCapacity > Snapshot)	integer (bytes)	The number of bytes the storage system guarantees can be allocated in this data store for this data type.

Property Name	Defined In Schema(s)	Type	Description
<b>HideVolumes (Action)</b>	StorageGroup (Actions)	object	Hide the storage volumes of this group.
<b>HostAuthenticationType</b>	DataSecurity LineOfService	string (enum)	Authentication type for hosts (servers) or initiator endpoints.
<b>HostingSystem</b>	StorageService (Links)	object	The hosting system or storage controller hosting this storage service.
<b>HostReadCommandCount</b>	StoragePool (NVMeEnduranceGroupProperties > EndGrpLifetime)	integer	This property contains the number of read commands completed by all controllers in the NVM subsystem for the Endurance Group.
<b>HostWriteCommandCount</b>	StoragePool (NVMeEnduranceGroupProperties > EndGrpLifetime)	integer	This property contains the number of write commands completed by all controllers in the NVM subsystem for the Endurance Group.
<b>Identifier</b>	FileSystem (Identifiers), Volume (Identifiers)	object	Any additional identifiers for a resource.
	ClassOfService, DataProtectionLoSCapabilities, DataSecurityLoSCapabilities, DataStorageLoSCapabilities, IOConnectivityLoSCapabilities, IOPerformanceLoSCapabilities, StorageGroup, StoragePool, StorageService	object	The value identifies this resource.
<b>Identifiers</b>	Volume	array	The Durable names for the volume.

Property Name	Defined In Schema(s)	Type	Description
	FileSystem	array	The durable names for this file system.
<b>ImportedShares</b>	FileSystem	array	An array of imported file shares.
<b>Initialize (Action)</b>	Volume (Actions)	object	This action is used to prepare the contents of the volume for use by the system. If InitializeMethod is not specified in the request body, but the property InitializeMethod is specified, the property InitializeMethod value should be used. If neither is specified, the InitializeMethod should be Foreground.
<b>InitializeMethod</b>	Volume	string (enum)	Indicates the Initialization Method used for this volume. If InitializeMethod is not specified, the InitializeMethod should be Foreground.
	Volume (Actions > Initialize (Action))	string (enum)	The type of initialization to be performed.
<b>InitializeType</b>	Volume (Actions > Initialize (Action))	string (enum)	The type of initialization to be performed.
<b>InitiatorCHAPPassword</b>	StorageGroup (ChapInfo)	string	The shared secret for Mutual (2-way) CHAP authentication by the initiator.
<b>InitiatorCHAPUser</b>	StorageGroup (ChapInfo)	string	The Initiator username for Mutual (2-way) CHAP authentication by the initiator.
<b>IOAccessPattern</b>	IOPerformanceLoSCapabilities (SupportedIOWorkloads > Components)	string (enum)	Expected access pattern for this component.
<b>IOConnectivityLinesOfService</b>	ClassOfService	array	A collection of IOConnectivity line of service elements.
<b>IOConnectivityLoSCa</b>	StorageService	object	The IO connectivity capabilities of

Property Name	Defined In Schema(s)	Type	Description
<b>Capabilities</b>	e, StorageService (Links)		this service.
<b>IOLimitingIsSupported</b>	IOPerformanceLoSCapabilities	boolean	Limiting IOPS is supported.
<b>IOOperationsPerSecondIsLimited</b>	IOPerformanceLineOfService	boolean	Limit the IOPS.
<b>IOPerfModeEnabled</b>	Volume	boolean	Indicates the IO performance mode setting for the volume.
<b>IOPerformanceLinesOfService</b>	ClassOfService	array	A collection of IOPerformance line of service elements.
<b>IOPerformanceLoSCapabilities</b>	StorageService, StorageService (Links)	object	The IO performance capabilities of this service.
<b>IOStatistics</b>	FileSystemMetrics	object	Statistics for this file system.
	FileSystem	object	Statistics for this FileSystem.
	StoragePoolMetrics	object	Statistics for this storage pool.
	StorageServiceMetrics	object	Statistics for this storage service.
	StoragePool	object	Statistics for this StoragePool.
	StorageService	object	Statistics for this StorageService.
	Volume, VolumeMetrics	object	Statistics for this volume.
<b>IOWorkload</b>	IOPerformanceLineOfService	object	A description of the expected workload.
<b>IsBootCapable</b>	Volume	boolean	This property indicates whether or not the Volume contains a boot image and is capable of booting.
<b>IsConsistent</b>	ConsistencyGroup	boolean	This value is true when the consistency group is in a consistent state.

Property Name	Defined In Schema(s)	Type	Description
<b>IsIsolated</b>	DataProtectionLineOfService	boolean	The replica is in a separate fault domain.
<b>IsShareable</b>	Volume (NVMeNamespaceProperties)	boolean	Indicates the namespace is shareable.
<b>IsSpaceEfficient</b>	DataStorageLineOfService	boolean	True implies compression or deduplication of storage.
<b>IsThinProvisioned</b>	CapacitySource (ProvidedCapacity)	boolean	Marks that the capacity is not necessarily fully allocated.
<b>JournalingMedia</b>	Volume (Links)	object	A pointer to the Resource that serves as a journaling media for this volume.
<b>KeySize</b>	DataSecurityLoSCapabilities (SupportedChannelEncryptionStrengths), DataSecurityLoSCapabilities (SupportedMediaEncryptionStrengths)	string (enum)	Enumeration of Key sizes in a symmetric encryption algorithm, (see NIST SP 800-57 part 1 ( <a href="http://csrc.nist.gov/publications/nistpubs/800-57/sp800-57_part1_rev3_general.pdf">http://csrc.nist.gov/publications/nistpubs/800-57/sp800-57_part1_rev3_general.pdf</a> )).
<b>Language</b>	FeaturesRegistry	string	This is the RFC 5646 compliant language code for the registry.
<b>LBADataSizeBytes</b>	Volume (NVMeNamespaceProperties > LBAFormat), Volume (NVMeNamespaceProperties > LBAFormats)	integer	The LBA data size in bytes.
<b>LBAFormat</b>	Volume (NVMeNamespaceProperties)	object	Describes the current LBA format ID and detailed properties.
<b>LBAFormats</b>	Volume (NV	array	Describes the LBA format IDs and

Property Name	Defined In Schema(s)	Type	Description
	MeNamespaceProperties)		detailed properties.
<b>LBAFormatsSupported</b>	Volume (NVMeNamespaceProperties)	array	A list of the LBA format types supported for the namespace, or potential namespaces.
<b>LBAFormatType</b>	Volume (NVMeNamespaceProperties > LBAFormatsSupported)	string (enum)	LBAFormatType is defined in the NVMe specification set. This field indicates the LBA data size supported; implementations may report up to 16 values. For more details refer to the appropriate NVMe specification.
	Volume (NVMeNamespaceProperties > LBAFormat), Volume (NVMeNamespaceProperties > LBAFormats)	string (enum)	The LBA format type.
<b>LBA_METADATA_SIZE_BYTES</b>	Volume (NVMeNamespaceProperties > LBAFormat), Volume (NVMeNamespaceProperties > LBAFormats)	integer	The LBA metadata size in bytes.
<b>LinesOfService</b>	StorageService	array	The LinesOfService defined for this StorageService.
<b>Links</b>	ConsistencyGroup, DataProtectionLoScapabilities, File System, Spare ResourceSet, StorageGroup, StorageService	object	Contains links to other resources that are related to this resource.
	Volume	object	Contains references to other

Property Name	Defined In Schema(s)	Type	Description
			resources that are related to this resource.
	FileShare, StoragePool	object	The links object contains the links to other resources that are related to this resource.
	NVMeDomain	object	The links to other resources that are related to this resource.
<b>LocalDHCHAPAuthSecret</b>	StorageGroup (DHChapInfo)	string	The local DHCHAP auth secret for DHCHAP authentication.
<b>LogicalUnitNumber</b>	Volume	integer	Indicates the host-visible LogicalUnitNumber assigned to this Volume.
	StorageGroup (MappedVolumes)	string	A SCSI Logical Unit Number for a Volume.
<b>LowSpaceWarningThresholdPercents</b>	FileShare	array (%)	An array of low space warning threshold percentages for the file share.
	FileSystem	array (%)	An array of low space warning threshold percentages for the file system.
	StoragePool	array (%)	Low space warning threshold specified in percents.
	Volume	array (%)	Low space warning.
<b>Manufacturer</b>	Volume	string	The manufacturer or OEM of this storage volume.
<b>MappedVolumes</b>	StorageGroup	array	Mapped Volumes in this storage group.
<b>MaxBlockSizeBytes</b>	Volume	integer (bytes)	Max Block size in bytes.
	StoragePool	integer (bytes)	Maximum Block size in bytes.
<b>MaxBytesPerSecond</b>	IOConnectivityLineOfService	integer (By/s)	The maximum Bandwidth in bytes per second that a connection can support.
<b>MaxFileNameLength</b>	FileSystem	integer	A value indicating the maximum

Property Name	Defined In Schema(s)	Type	Description
<b>Bytes</b>		(bytes)	length of a file name within the file system.
<b>MaximumCapacityPerEnduranceGroupBytes</b>	NVMeDomain	integer (bytes)	The maximum capacity per endurance group in bytes of this NVMe Domain.
<b>MaximumRecoverableCapacitySourceCount</b>	DataStorageLoSCapabilities	integer	Maximum number of capacity source resources for the purpose of recovery from a failure.
<b>MaxIOOperationsPerSecondPerTerabyte</b>	IOPerformanceLineOfService	integer (1/s/TBy)	The amount of IOPS a volume of a given committed size can support.
<b>MaxIOPS</b>	IOConnectivityLineOfService	integer ([IO]/s)	The maximum supported IOs per second that the connection will support for the selected access protocol.
<b>MaxNamespacesSupportedPerController</b>	NVMeDomain	number	The maximum number of namespace attachments of this NVMe Domain.
<b>MaxSamplePeriod</b>	IOPerformanceLoSCapabilities	string (seconds)	Maximum sampling period over which average values are calculated.
<b>MaxSupportedBytesPerSecond</b>	IOConnectivityLoSCapabilities	integer (By/s)	The maximum Bandwidth in bytes per second that a connection can support.
<b>MaxSupportedIOPS</b>	IOConnectivityLoSCapabilities	integer ([IO]/s)	The maximum IOPS that a connection can support.
<b>MediaAndDataIntegrityErrorCount</b>	StoragePool (NVMeEnduranceGroupProperties > EndGrpLifetime)	integer	This property contains the number of occurrences where the controller detected an unrecovered data integrity error for the Endurance Group.
<b>MediaEncryptionStrength</b>	DataSecurityLineOfService	string (enum)	Key size for media encryption.
<b>MediaSpanCount</b>	Volume	integer	Indicates the number of media elements used per span in the secondary RAID for a hierarchical

Property Name	Defined In Schema(s)	Type	Description
			RAID type.
	Volume (Actions > Change RAIDLayout (Action))	integer	The requested number of media elements used per span in the secondary RAID for a hierarchical RAID type.
<b>MediaUnitsWritten</b>	StoragePool (NVMeEnduranceGroupProperties > EndGrpLifetime)	integer	The property contains the total number of data units written from this endurance group.
<b>Members</b>	HostedStorageServices	array	The value of each member references a StorageService resource.
<b>Members@odata.nextLink</b>	HostedStorageServices	string	The URI to the resource containing the next set of partial members.
<b>MembersAreConsistent</b>	StorageGroup	boolean	Members are kept in a consistent state.
<b>Metadata</b>	CapacitySource (ProvidedCapacity)	object	The capacity information relating to metadata.
<b>MetadataTransferredAtEndOfDataLBA</b>	Volume (NVMeNamespaceProperties)	boolean	This property indicates whether or not the metadata is transferred at the end of the LBA creating an extended data LBA.
<b>Metrics</b>	FileSystem	object	The link to the metrics for this file system.
	StoragePool	object	The link to the metrics for this storage pool.
	StorageService	object	The link to the metrics for this storage service.
	Volume	object	The link to the metrics for this volume.
<b>MinLifetime</b>	DataProtectionLineOfService	string	Minimum lifetime (seconds) that replica must be maintained.
<b>MinSamplePeriod</b>	IOPerforman	string	Minimum sampling period over

Property Name	Defined In Schema(s)	Type	Description
	ceLoSCapabilities	(seconds)	which average values are calculated.
<b>MinSupportedIoOperationLatencyMicroseconds</b>	IOPerformanceLoSCapabilities	integer (us)	Minimum supported average IO latency.
<b>Model</b>	Volume	string	The model number for this storage volume.
<b>NamespaceFeatures</b>	Volume (NVMeNamespaceProperties)	object	This property contains a set of Namespace Features.
<b>NamespaceId</b>	Volume (NVMeNamespaceProperties)	string	The NVMe Namespace Identifier for this namespace.
<b>Namespaces</b>	NVMeDomain (DomainContents)	array	Contains the current namespaces that are part of this domain. These can be IO, Admin, or discovery controllers.
<b>NamespaceType</b>	Volume (NVMeNamespaceProperties)	string (enum)	Identifies the type of namespace.
<b>NumberLBAFormats</b>	Volume (NVMeNamespaceProperties)	integer (bytes)	The number of LBA data size and metadata size combinations supported by this namespace. The value of this property is between 0 and 16.
<b>NVMeDeviceType</b>	NVMeFirmwareImage	string (enum)	The type of NVMe Device this image is associated with.
<b>NVMeEnduranceGroupProperties</b>	StoragePool	object	This property contains properties to use when StoragePool is used to describe an NVMe Endurance Group.
<b>NVMeNamespaceProperties</b>	Volume	object	This property contains properties to use when Volume is used to describe an NVMe Namespace.
<b>NVMePoolType</b>	StoragePool (NVMeProperties)	string (enum)	Indicates whether the StoragePool is used as an EnduranceGroup or an NVMeSet.
<b>NVMeProperties</b>	StoragePool	object	NVMe properties for this storage

Property Name	Defined In Schema(s)	Type	Description
			pool.
<b>NVMeSetProperties</b>	StoragePool	object	This property contains properties to use when StoragePool is used to describe an NVMe Set.
<b>NVMeVersion</b>	Volume (NVMeNamespaceProperties)	string	The version of the NVMe Base Specification supported.
<b>OEMFeaturesUsed</b>	FeaturesRegistry	array	An array containing all the OEM feature names defined in the registry.
<b>OnHandLocation</b>	SpareResourceSet	object	Location where this set of spares is kept.
<b>OnHandSpares</b>	SpareResourceSet (Links)	array	The type of resources in the set.
<b>OnLine</b>	SpareResourceSet	boolean	This set is available online.
<b>Operation</b>	Volume (Operations)	string (enum)	The type of the operation.
<b>OperationName</b>	Volume (Operations)	string	The name of the operation.
<b>Operations</b>	Volume	array	The operations currently running on the Volume.
<b>OptimalWriteSizes</b>	StoragePool (NVMeSetProperties)	integer (bytes)	This property contains the Optimal Write Size in Bytes for this NVMe Set.
<b>OptimumIOSizeBytes</b>	Volume	integer (bytes)	The size in bytes of this Volume's optimum IO size.
<b>OwningEntity</b>	FeaturesRegistry	string	This is the organization or company that publishes this registry.
<b>OwningStorageResource</b>	StoragePool (Links)	object	A pointer to the Storage resource that owns or contains this StoragePool.
	Volume (Links)	object	A pointer to the Storage resource that owns or contains this volume.
<b>OwningStorageService</b>	Volume (Links)	object	A pointer to the StorageService that owns or contains this volume.

Property Name	Defined In Schema(s)	Type	Description
<b>ParentStorageGroups</b>	StorageGroup (Links)	array	Parent StorageGroups.
<b>PeerDHCHAPAuthSecret</b>	StorageGroup (DHChapInfo)	string	The peer DHCHAP auth secret for DHCHAP authentication.
<b>PercentageComplete</b>	Volume (Operations)	integer	The percentage of the operation that has been completed.
<b>PercentOfData</b>	IOPerformanceLoSCapabilities (SupportedIOWorkloads > Components)	integer (%)	Percent of data for this workload component.
<b>PercentOfIOPS</b>	IOPerformanceLoSCapabilities (SupportedIOWorkloads > Components)	integer (%)	Percent of total IOPS for this workload component.
<b>PercentUsed</b>	StoragePool (NVMeEnduranceGroupProperties > EndGrpLifetime)	integer	A vendor-specific estimate of the percent life used for the endurance group based on the actual usage and the manufacturer prediction of NVM life.
<b>PoolType</b>	StoragePool	array	Pool usage type for this storage pool.
<b>PredictedMediaLifeLeftPercent</b>	StoragePool (NVMeEnduranceGroupProperties)	number (%)	The percentage of reads and writes that are predicted to be available for the media.
<b>ProvidedCapacity</b>	CapacitySource	object	The amount of space that has been provided from the ProvidingDrives, ProvidingVolumes, ProvidingMemory or ProvidingPools.
<b>ProvidedClassOfService</b>	CapacitySource	object	The ClassOfService provided from the ProvidingDrives, ProvidingVolumes,

Property Name	Defined In Schema(s)	Type	Description
			ProvidingMemoryChunks, ProvidingMemory or ProvidingPools.
<b>ProvidingDrives</b>	CapacitySource	object	The drive or drives that provide this space.
<b>ProvidingMemory</b>	CapacitySource	object	The memory that provides this space.
<b>ProvidingMemoryChunks</b>	CapacitySource	object	The memory chunks that provide this space.
<b>ProvidingPools</b>	CapacitySource	object	The pool or pools that provide this space.
<b>ProvidingStoragePool</b>	Volume (Links)	object	The StoragePool resource that provides this volume resource.
<b>ProvidingVolumes</b>	CapacitySource	object	The volume or volumes that provide this space.
<b>ProvisionedBytes</b>	CapacitySource (ProvidedCapacity > Data), CapacitySource (ProvidedCapacity > Metadata), CapacitySource (ProvidedCapacity > Snapshot)	integer (bytes)	The maximum number of bytes that can be allocated in this data store for this data type.
<b>ProvisioningPolicy</b>	DataStorageLineOfService	string (enum)	Provisioning policy for storage.
	DataStorageLoSCapabilities (SupportedProvisioningPolicies), StoragePool (SupportedProvisioningPolicies)	string (enum)	Space provisioning policy.
	Volume	string (enum)	This property specifies the volume's storage allocation, or provisioning policy.

Property Name	Defined In Schema(s)	Type	Description
<b>RAIDType</b>	Volume	string (enum)	The RAID type of this volume.
	Volume (Actions > Change RAIDLayout (Action))	string (enum)	The requested RAID type for the volume.
<b>Random4kReadTypicalNanoSeconds</b>	StoragePool (NVMeSetProperties)	integer	Indicates the typical time to complete a 4k read in 100 nano-second units when the NVM Set is in a Predictable Latency Mode Deterministic Window and there is 1 outstanding command per NVM Set.
<b>ReadCachePolicy</b>	Volume	string (enum)	Indicates the read cache policy setting for the Volume.
<b>RebuildErrorCount</b>	StoragePoolMetrics	number	The number of rebuild errors over the lifetime of the storage pool.
	VolumeMetrics	number	The number of rebuild errors over the lifetime of the volume.
<b>RecoverableCapacitySourceCount</b>	FileSystem, StoragePool, Volume	integer	Current number of capacity source resources that are available as replacements.
	DataStorageLineOfService	integer	Required minimum number of available capacity source resources.
<b>RecoveryAccessScope</b>	DataProtectionLoSCapabilities (SupportedRecoveryTimeObjectives), DataStorageLoSCapabilities (SupportedRecoveryTimeObjectives)	string (enum)	An enumeration that represents the relative time required to make a replica available as a source.
<b>RecoveryGeographicObjective</b>	DataProtectionLineOfService	string (enum)	Geographic distribution scopes.
<b>RecoveryPointObjecti</b>	DataProtectio	string	Time interval defining how much

Property Name	Defined In Schema(s)	Type	Description
<b>RecoveryTimeObjective</b>	nLineOfService		source data that can be lost on failure.
<b>RecoveryTimeObjective</b>	DataProtectionLineOfService	string (enum)	An enumeration value that indicates the expected time to access an alternate replica.
<b>RecoveryTimeObjectives</b>	DataStorageLineOfService	string (enum)	Expectations for time to access the primary store after disaster recover.
<b>Redundancy</b>	StorageService	array	Redundancy information for the storage subsystem.
<b>RegistryPrefix</b>	FeaturesRegistry	string	This is the single word prefix used to form a Feature ID structure.
<b>RegistryVersion</b>	FeaturesRegistry	string	This is the feature registry version which is used in the middle portion of a Feature ID.
<b>RelativePerformance</b>	Volume (NVMeNamespaceProperties > LBAFormat), Volume (NVMeNamespaceProperties > LBAFormats)	string (enum)	The LBA Relative Performance type.
<b>RemainingCapacity</b>	FileSystem	object	Remaining capacity allocated to the file system.
<b>RemainingCapacityPercent</b>	FileShare	integer	The percentage of the capacity remaining in the FileShare.
	FileSystem	integer	The percentage of the capacity remaining in the FileSystem.
	StoragePool	integer	The percentage of the capacity remaining in the StoragePool.
	Volume	integer	The percentage of the capacity remaining in the Volume.
<b>RemoteReplicaTargets</b>	ConsistencyGroup, Volume	array	URIs to the resources that are remote target replicas of this source.
<b>RemoveDrives (Action)</b>	StoragePool (Actions)	object	This action is used to remove drive(s) from the capacity source for

Property Name	Defined In Schema(s)	Type	Description
			the StoragePool.
<b>RemoveReplicaRelationship (Action)</b>	ConsistencyGroup (Actions)	object	This action is used to disable data synchronization between a source and target consistency group, remove the replication relationship, and optionally delete the target consistency group.
	Volume (Actions)	object	This action is used to disable data synchronization between a source and target volume, remove the replication relationship, and optionally delete the target volume.
<b>ReplacementSpareSets</b>	SpareResourceSet (Links)	array	Other spare sets that can be utilized to replenish this spare set.
<b>ReplicaAccessLocation</b>	DataProtectionLineOfService	object	Location that supplies data access to the replica.
<b>ReplicaClassOfService</b>	DataProtectionLineOfService	object	The replica's class of service.
<b>ReplicaCollection</b>	FileSystem (Links)	array	An array of links to replicas for this file system.
<b>ReplicaInfo</b>	ConsistencyGroup, StorageGroup	object	Describes this storage group in its role as a target for replication.
	Volume	object	Describes this storage volume in its role as a target replica.
	FileSystem	object	This value describes the replica attributes if this file system is a replica.
<b>ReplicaLineOfService</b>	DataProtectionLineOfService (Actions > CreateReplicas (Action))	object	The data protection line of service this action is bound to.
<b>ReplicaName</b>	DataProtectionLineOfService (Actions >	string	The name of the new replica.

Property Name	Defined In Schema(s)	Type	Description
	CreateReplicas (Action) > ReplicaRequests		
<b>ReplicaRequests</b>	DataProtectionLineOfService (Actions > CreateReplicas (Action))	array	Specifies the resources to replicate and a name for the replica.
<b>ReplicaSource</b>	DataProtectionLineOfService (Actions > CreateReplicas (Action) > ReplicaRequests)	object	A resource to be replicated.
<b>ReplicaTargets</b>	ConsistencyGroup, FileSystem, StorageGroup, Volume	array	The resources that are target replicas of this source.
<b>ReplicationEnabled</b>	FileShare	boolean	Indicates whether or not replication is enabled on the file share.
	FileSystem	boolean	Indicates whether or not replication is enabled on the file system.
	StoragePool	boolean	Indicates whether or not replication is enabled on the storage pool.
	Volume	boolean	Indicates whether or not replication is enabled on the volume.
<b>ReplicaType</b>	ConsistencyGroup (Actions > AssignReplicaTarget (Action)), ConsistencyGroup (Actions > CreateReplicaTarget (Action))	string (enum)	The type of replica relationship to be created (e.g., Clone, Mirror, Snap).
	Volume (Actions > Assign	string (enum)	The type of replica relationship to be created.

Property Name	Defined In Schema(s)	Type	Description
	ReplicaTarget (Action)), Volume (Actions > CreateReplicaTarget (Action))		
	DataProtectionLineOfService	string (enum)	Type of replica.
	DataProtectionLoSCapabilities (SupportedReplicaTypes)	string (enum)	Values of ReplicaType describe the intended outcome of the replication.
<b>ReplicaUpdateMode</b>	ConsistencyGroup (Actions > AssignReplicaTarget (Action)), ConsistencyGroup (Actions > CreateReplicaTarget (Action)), Volume (Actions > AssignReplicaTarget (Action)), Volume (Actions > CreateReplicaTarget (Action))	string (enum)	The replica update mode (synchronous vs asynchronous).
<b>Resources</b>	FeaturesRegistry (FeatureMappings)	array	An array of resources in the service containing the set that are related to support for the specified feature.
<b>ResourceType</b>	SpareResourceSet	string	The type of resources in the set.
<b>ResumeReplication (Action)</b>	ConsistencyGroup (Actions)	object	This action is used to resume the active data synchronization between a source and target consistency group, without otherwise altering the replication relationship.

Property Name	Defined In Schema(s)	Type	Description
	Volume (Actions)	object	This action is used to resume the active data synchronization between a source and target volume, without otherwise altering the replication relationship.
<b>ReverseReplicationRelationship (Action)</b>	ConsistencyGroup (Actions)	object	This action is used to reverse the replication relationship between a source and target consistency group.
	Volume (Actions)	object	This action is used to reverse the replication relationship between a source and target volume.
<b>RootAccess</b>	FileShare	boolean	Root access is allowed by the file share.
<b>SamplePeriod</b>	IOPerformanceLineOfService	string	Sampling period over which average values are calculated.
<b>Schedule</b>	DataProtectionLineOfService	object	A schedule for making periodic point in time replicas.
	IOPerformanceLoSCapabilities (SupportedIOWorkloads > Components)	object	Specifies when to apply this workload component.
<b>SecureChannelProtocol</b>	DataSecurityLineOfService	string (enum)	Protocol that provide encrypted communication.
	DataSecurityLoSCapabilities (SupportedSecureChannelProtocols)	string (enum)	Types of Secure channel protocols.
<b>ServerEndpointGroups</b>	StorageGroup	array	Groups of server endpoints in this storage group.
	StorageService	object	Server endpoint groups.
<b>ServerEndpoints</b>	Volume (Link	array	An array of references to the server

Property Name	Defined In Schema(s)	Type	Description
	s)		Endpoints associated with this volume.
<b>SetCompressionState (Action)</b>	StoragePool (Actions)	object	This action is used to set the compression state of the pool.
<b>SetDeduplicationState (Action)</b>	StoragePool (Actions)	object	This action is used to set the dedupe state of the pool.
<b>SetEncryptionKey (Action)</b>	StorageService (Actions)	object	This action is used to set the encryption key for the storage subsystem.
<b>SetEncryptionState (Action)</b>	StoragePool (Actions)	object	This action is used to set the encryption state of the pool.
<b>SetIdentifier</b>	StoragePool (NVMeSetProperties)	string	A 16-bit hex value that contains the NVMe Set group identifier.
<b>Snapshot</b>	CapacitySource (ProvidedCapacity)	object	The capacity information relating to snapshot or backup data.
<b>SpareResourceSets</b>	FileSystem (Links), StoragePool (Links), Volume (Links)	array	An array of references to SpareResourceSets.
	StorageService	array	An array of SpareResourceSets.
<b>SplitReplication (Action)</b>	ConsistencyGroup (Actions)	object	This action is used to split the replication relationship and suspend data synchronization between a source and target consistency group.
	Volume (Actions)	object	This action is used to split the replication relationship and suspend data synchronization between a source and target volume.
<b>StateChangeCount</b>	StoragePoolMetrics	number	The number of state changes (changes in Status.State) for this storage pool.
	VolumeMetric	number	The number of state changes

Property Name	Defined In Schema(s)	Type	Description
	cs		(changes in Status.State) for this volume.
<b>Status</b>	FileShare	object	Indicates the status of the file share.
	ConsistencyGroup	object	The property contains the status of the ConsistencyGroup.
	StorageGroup	object	The property contains the status of the StorageGroup.
	StoragePool	object	The property contains the status of the StoragePool.
	StorageService	object	The property contains the status of the StorageService.
	Volume	object	The property contains the status of the Volume.
	NVMeDomain	object	The status and health of the resource and its subordinate or dependent resources.
<b>StorageAccessCapability</b>	DataStorageLineOfService (AccessCapabilities), DataStorageLoSCapabilities (SupportedAccessCapabilities), FileShare (DefaultAccessCapabilities), FileSystem (AccessCapabilities), Volume (AccessCapabilities)	string (enum)	Values of StorageAccessCapability describe abilities to read or write storage.
<b>StorageGroups</b>	Volume (Links)	array	An array of references to the StorageGroups associated with this volume.
	Volume	object	An array of references to Storage Groups that includes this volume.
	StorageService	object	StorageGroups.

Property Name	Defined In Schema(s)	Type	Description
	e		
<b>StoragePools</b>	StorageService	object	StoragePools.
<b>StorageSubsystems</b>	StorageService	array	A reference to storage subsystems managed by this storage service.
<b>StripSizeBytes</b>	Volume (Actions > Change RAIDLayout (Action))	integer	The number of blocks (bytes) requested for new strip size.
	Volume	integer (bytes)	The number of blocks (bytes) in a strip in a disk array that uses striped data mapping.
<b>SupportedAccessCapabilities</b>	DataStorageLoSCapabilities	array	Supported access capabilities.
<b>SupportedAccessProtocols</b>	IOConnectivityLoSCapabilities	array	SupportedAccessProtocols.
<b>SupportedAntivirusEngineProviders</b>	DataSecurityLoSCapabilities	array	Supported AntiVirus providers.
<b>SupportedAntivirusScanPolicies</b>	DataSecurityLoSCapabilities	array	Supported policies that trigger an AntiVirus scan.
<b>SupportedChannelEncryptionStrengths</b>	DataSecurityLoSCapabilities	array	Supported key sizes for transport channel encryption.
<b>SupportedDataSanitizationPolicies</b>	DataSecurityLoSCapabilities	array	Supported data sanitization policies.
<b>SupportedHostAuthenticationTypes</b>	DataSecurityLoSCapabilities	array	Supported authentication types for hosts (servers) or initiator endpoints.
<b>SupportedIOWorkloads</b>	IOPerformanceLoSCapabilities	array	A collection of supported workloads.
<b>SupportedLinesOfService</b>	DataProtectionLoSCapabilities	array	Collection of known and supported DataProtectionLinesOfService.

Property Name	Defined In Schema(s)	Type	Description
	ies		
	DataSecurityLoSCapabilities	array	Collection of known and supported DataSecurityLinesOfService.
	DataStorageLoSCapabilities	array	Collection of known and supported DataStorageLinesOfService.
	IOConnectivityLoSCapabilities	array	Collection of known and supported IOConnectivityLinesOfService.
	IOPerformanceLoSCapabilities	array	Collection of known and supported IOPerformanceLinesOfService.
<b>SupportedMediaEncryptionStrengths</b>	DataSecurityLoSCapabilities	array	Supported key sizes for media encryption.
<b>SupportedMinLifetimes</b>	DataProtectionLoSCapabilities	array	Supported minimum lifetime that replica must be maintained.
<b>SupportedPoolTypes</b>	StoragePool	array	A collection of the Pool Types supported by the storage pool.
<b>SupportedProvisioningPolicies</b>	DataStorageLoSCapabilities	array	Thin allows over allocation of storage.
	StoragePool	array	This collection specifies all supported storage allocation properties for the Storage Pool.
<b>SupportedRAIDTypes</b>	StoragePool	array	A collection of the RAID Types supported by the storage pool.
<b>SupportedRecoveryGeographicObjectives</b>	DataProtectionLoSCapabilities	array	Supported types of failure domains.
<b>SupportedRecoveryPointObjectiveTimes</b>	DataProtectionLoSCapabilities	array	Supported time intervals defining how much source information can be lost on failure.
<b>SupportedRecoveryTimeObjectives</b>	DataProtectionLoSCapabilities	array	Supported expectations for time to access an alternate replica.
	DataStorageL	array	Supported expectations for time to

Property Name	Defined In Schema(s)	Type	Description
	oSCapabilities		access the primary store after recovery.
<b>SupportedReplicaOptions</b>	DataProtectionLoSCapabilities (Links)	array	Collection of known and supported replica Classes of Service.
<b>SupportedReplicaTypes</b>	DataProtectionLoSCapabilities	array	Supported replica types.
<b>SupportedSecureChannelProtocols</b>	DataSecurityLoSCapabilities	array	Supported protocols that provide encrypted communication.
<b>SupportedUserAuthenticationTypes</b>	DataSecurityLoSCapabilities	array	Supported authentication types for users (or programs).
<b>SupportsAtomicTransactionSize</b>	Volume (NVMeNamespaceProperties > NamespaceFeatures)	boolean	Indicates that the NVM fields for Namespace preferred write granularity (NPWG), write alignment (NPWA), deallocate granularity (NPDG), deallocate alignment (NPDA) and optimal write size (NOWS) are defined for this namespace and should be used by the host for I/O optimization.
<b>SupportsDeallocatedOrUnwrittenLBError</b>	Volume (NVMeNamespaceProperties > NamespaceFeatures)	boolean	This property indicates that the controller supports deallocated or unwritten logical block error for this namespace.
<b>SupportsIOPerformanceHints</b>	Volume (NVMeNamespaceProperties > NamespaceFeatures)	boolean	Indicates that the Namespace Atomic Write Unit Normal (NAWUN), Namespace Atomic Write Unit Power Fail (NAWUPF), and Namespace Atomic Compare and Write Unit (NACWU) fields are defined for this namespace and should be used by the host for this namespace instead of the controller-level properties AWUN, AWUPF, and ACWU.

Property Name	Defined In Schema(s)	Type	Description
	Volume (NVMeNamespaceProperties)	boolean	Indicates whether the namespace supports IO performance hints.
<b>SupportsIsolated</b>	DataProtectionLoSCapabilities	boolean	Allocating a replica in a separate fault domain is supported.
<b>SupportsMultipleNamespaceAttachments</b>	Volume (NVMeNamespaceProperties)	boolean	Indicates whether the namespace may be attached to two or more controllers.
<b>SupportsNGUIDReuse</b>	Volume (NVMeNamespaceProperties > NamespaceFeatures)	boolean	This property indicates that the namespace supports the use of an NGUID (namespace globally unique identifier) value.
<b>SupportsSpaceEfficiency</b>	DataStorageLoSCapabilities	boolean	Allows compression or deduplication of storage.
<b>SupportsThinProvisioning</b>	Volume (NVMeNamespaceProperties > NamespaceFeatures)	boolean	This property indicates whether or not the NVMe Namespace supports thin provisioning.
<b>SuspendReplication (Action)</b>	ConsistencyGroup (Actions)	object	This action is used to suspend active data synchronization between a source and target consistency group, without otherwise altering the replication relationship.
	Volume (Actions)	object	This action is used to suspend active data synchronization between a source and target volume, without otherwise altering the replication relationship.
<b>TargetCHAPPassword</b>	StorageGroup (ChapInfo)	string	The Target CHAP Secret for Mutual (2-way) CHAP authentication by the target.
<b>TargetCHAPUser</b>	StorageGroup (ChapInfo)	string	The Target CHAP Username for Mutual (2-way) CHAP authentication by the target.
<b>TargetConsistencyGroup</b>	ConsistencyGroup (Actions)	string	The Uri to the existing target consistency group.

Property Name	Defined In Schema(s)	Type	Description
	> AssignReplicaTarget (Action), ConsistencyGroup (Actions > RemoveReplicaRelationship (Action)), ConsistencyGroup (Actions > ResumeReplication (Action)), ConsistencyGroup (Actions > ReverseReplicationRelationship (Action)), ConsistencyGroup (Actions > SplitReplication (Action)), ConsistencyGroup (Actions > SuspendReplication (Action))		
<b>TargetPassword</b>	StorageGroup (ChapInfo)	string	This property is deprecated in favor of TargetCHAPPassword.
<b>TargetStoragePool</b>	ConsistencyGroup (Actions > CreateReplicaTarget (Action)), Volume (Actions > CreateReplicaTarget (Action))	string	The Uri to the existing target Storage Pool.
<b>TargetVolume</b>	Volume (Actions > AssignReplicaTarget (Action)), Volume (Actions	string	The Uri to the existing target volume.

Property Name	Defined In Schema(s)	Type	Description
	> RemoveReplicaRelationship (Action)), Volume (Actions > ResumeReplication (Action)), Volume (Actions > ReverseReplicationRelationship (Action)), Volume (Actions > SplitReplication (Action)), Volume (Actions > SuspendReplication (Action))		
<b>ThinProvisioningSavingsBytes</b>	FileSystemMetrics	integer (bytes)	Current thin provisioning savings in the file system in Bytes.
	StoragePoolMetrics	integer (bytes)	Current thin provisioning savings on the storage pool in Bytes.
	StorageServiceMetrics	integer (bytes)	Current thin provisioning savings on the storage service in Bytes.
	VolumeMetrics	integer (bytes)	Current thin provisioning savings on the volume in Bytes.
<b>TimeToProvision</b>	SpareResourceSet	string	Amount of time needed to make an on-hand resource available as a spare.
<b>TimeToReplenish</b>	SpareResourceSet	string	Amount of time needed to get more on-hand resources.
<b>TotalDomainCapacityBytes</b>	NVMeDomain	integer (bytes)	The total capacity in bytes of this NVMe Domain.
<b>Type</b>	Volume (NVMeNamespaceProperties)	string (enum)	Identifies the type of namespace.
<b>UnallocatedDomainCapacityBytes</b>	NVMeDomain	integer (bytes)	The total unallocated capacity in bytes of this NVMe Domain.
<b>UnallocatedNVMeName</b>	StoragePool	integer	Indicates the unallocated capacity

Property Name	Defined In Schema(s)	Type	Description
<b>espaceCapacityBytes</b>	(NVMeSetProperties)	(bytes)	of the NVMe Set in bytes.
<b>UncorrectableIOReadErrorCount</b>	StoragePoolMetrics	integer	The number of the uncorrectable read errors for the lifetime of the storage pool.
	VolumeMetrics	integer	The number of the uncorrectable read errors for the lifetime of the volume.
<b>UncorrectableIOWriteErrorCount</b>	StoragePoolMetrics	integer	The number of the uncorrectable write errors for the lifetime of the storage pool.
	VolumeMetrics	integer	The number of the uncorrectable write errors for the lifetime of the volume.
<b>UserAuthenticationType</b>	DataSecurityLineOfService	string (enum)	Authentication type for users (or programs).
<b>Vendor</b>	NVMeFirmwareImage	string	The vendor or manufacturer associated with this NVMe firmware image.
<b>Version</b>	FeaturesRegistry (FeatureMappings), FeaturesRegistry (Features)	string	The Version of the feature.
<b>Volume</b>	StorageGroup (MappedVolumes)	object	A mapped Volume.
<b>VolumeName</b>	Volume (Actions > CreateReplicaTarget (Action))	string	The Name for the new target volume.
<b>Volumes</b>	ConsistencyGroup, StorageGroup	array	Volumes in this storage group.
	StorageService	object	Volumes.
<b>VolumesAreExposed</b>	StorageGroup	boolean	Storage volumes are exposed to paths defined by the client and

Property Name	Defined In Schema(s)	Type	Description
			server endpoints.
<b>VolumeType</b>	Volume	string (enum)	The type of this volume.
<b>VolumeUsage</b>	Volume	string (enum)	Indicates the Volume usage type setting for the Volume.
<b>WriteCachePolicy</b>	Volume	string (enum)	Indicates the write cache policy setting for the Volume.
<b>WriteCacheState</b>	Volume	string (enum)	Indicates the WriteCacheState policy setting for the Volume.
<b>WriteHoleProtection Policy</b>	Volume	string (enum)	The policy that the RAID volume is using to address the write hole issue.
<b>WritePolicy</b>	FileShare	string (enum)	Defines how writes are replicated to the shared source.