Dell Unity™ Family

Version 5.5

Unisphere® Management REST API Reference Guide

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Unisphere Management REST API Reference Guide

The Unisphere Management REST API lets you manage Unisphere through web browsers.and application programs. This API conforms to Representational State Transfer (REST) design principles, which is a frequent choice for many web-based APIs. In a REST API, each resource type (object) has a unique Universal Resource Identifier (URI), and each resource instance has a unique identifier. You interact with the resources exposed by the API by accessing resources using HTTP GET, POST, and DELETE requests. The server sends response data in JavaScript Object Notation (JSON) format.

The Unisphere Management REST API is compliant with the EMC Data Access API (EDAA) style, which follows REST industry best practices. Once you are familiar with one Dell EDAA-compliant REST API, you can easily learn to use the other Dell EDAA-compliant REST APIs.

This online Help system describes the resource types, methods, and attributes in the Unisphere Management REST API, along with other API information such as data types and enumerations. The tree on the left lets you access the Help topics for individual resoure types by category or alphabetically.

- To access the the Help topic for a resource type by category, expand the **Resource types by category** node, expand the category for which you want to view resource types, and double-click on the desired Help topic.
- To access the Help topic for a resource type alphabetically, expand the **Alphabetical list of all resources** node, navigate to the Help topic you want to view, and double click on it.

Enumerations

AccessPolicyEnum

File system security access policies.

Value	Enumeration	Description
0	Native	Native Security.
1	Unix	UNIX Security.
2	Windows	Windows Security.

ACEAccessLevelEnum

CIFS share access level granted or denied for a user or domain.

Value	Enumeration	Description
1	Read	Read access.
2	Write	Write access.
4	Full	Read and write access.

ACEAccessTypeEnum

Indicates whether the CIFS share access is granted or denied for a user. Use **None** to remove the Access Control Entries (ACEs) for a Security Identifier (SID) from the CIFS share.

Value	Enumeration	Description
0	Deny	Deny CIFS share access to a user.
1	Grant	Grant CIFS share acccess to a user.
2	None	Remove the ACE for a SID from a CIFS share.

AdvancedDeduplicationUnsupportedReasonEnum

Reason why advanced deduplication is not supported on the pool.

Value	Enumeration	Description
0	None	Advanced deduplication is supported.
1	Feature_Disabled	Advanced deduplication feature is disabled.
2	License_Uninstalled	Advanced deduplication license is not installed.
3	Pool_Type	Advanced deduplication is not supported because it is not Extreme Performance pool.
4	System_Model	Advanced deduplication is not supported on this system model.
5	Flash_Not_Enough	Advanced deduplication is not supported because pool flash percentage is not enough.

AlertStateEnum

Alert state enum.

Value	Enumeration	Description
0	Active_Manual	Indicates the alert event will not be cleared automatically and needs manual clear up.
1	Active_Auto	Indicates the alert event is still active.
2	Inactive	Indicates the alert event is no longer active which means the problem has been resolved.
3	Updating	Indicates the alert event is still updating it's state, only will appear when system is upgrading from 4.5.x or lower versions.

AllocationStatusEnum

Value	Enumeration

0	Not_Started
1	Running
2	Completed
3	Failed

AUSizeEnum

Allocation Unit possible sizes. The AUSize is granularity at which LUN's space is allocated in the pool.

Value	Enumeration	Description
8,192	AuSize_8K	8K Allocation Unit.
16,384	AuSize_16K	16K Allocation Unit.
32,768	AuSize_32K	32K Allocation Unit.
65,536	AuSize_64K	64K Allocation Unit.

AuthenticationTypeEnum

Type of authentication for the LDAP-based directory server.

Value	Enumeration	Description
0	Anonymous	Anonymous authentication means no authentication occurs and the NAS server uses an anonymous login to access the LDAP-based directory server.
1	Simple	Simple authentication means the NAS server must provide a bind distinguished name and password to access the LDAP-based directory server.
2	Kerberos	Kerberos authentication means the NAS server uses a KDC to confirm the identity when accessing the Active Directory.

AuthTypeEnum

Authentication type of smtp server.

Value	Enumeration	Description
0	None	Authorization protocol: None.
1	Plain	Authorization protocol: PLAIN(Uses Base64 encoding).
2	Login	Authorization protocol: LOGIN(Uses Base64 encoding).
3	CRAM_MD5	Authorization protocol: CRAM-MD5
4	DIGEST_MD5	Authorization protocol: DIGEST-MD5

AutodownloadSoftwareTypeEnum

Image type of autodownloaded software.

Value	Enumeration	Description
0	Software	NDU software type.
1	Firmware	Disk firmware software type.
2	LanguagePack	Language pack software type.
3	DynamicPUHC	Dynamic PUHC image type.

BackendStorageTypeEnum

Value	Enumeration
0	Unknown
1	VNX3
2	CloudArray

BindContextEnum

Value	Enumeration
0	Normal
1	RebindStart

BlockDedupRateEnum

Possible System Deduplication rates.

Value	Enumeration	Description
1	High	High deduplication rate.
2	Medium	Medium deduplication rate.
3	Low	Low deduplication rate.
4	None	Deduplication rate is not initialized by the storage system. Do not use this value in Modify requests: the storage system will respond with error.

BlockDedupStateEnum

Block deduplication states.

Value	Enumeration	Description
0	Invalid	Invalid state.
1	Active	Deduplication is active, session is ongoing.
2	Idle	Enabled. Deduplication has never been run or it has partially been run but the schedule window is closed.
3	Pending	Waiting to be run inside the schedule window.
4	Paused	Paused by user.
5	Completed	Completed deduplication session in the scheduled window.
6	Off	Deduplication is disabled.

BlockHostAccessEnum

Indicates the type of access a host has to a LUN or consistency group.

Value	Enumeration	Description
0	Off	Access is disabled.
1	On	Access is enabled.
2	Mixed	(Applies to Consistency Groups only.) Indicates that LUNs in a consistency group have different host access.

CapabilityServiceLevelEnum

This is service level enumearation for capability profile's constraint.

Value	Enumeration
0	Basic
1	Bronze
2	Silver
3	Gold
4	Platinum

CapabilityTypeEnum

Value	Enumeration
0	FastCache
1	DiskTier
2	RaidType
3	SpaceEfficiency
4	TieringPolicy
5	UsageTag
6	ServiceLevel
7	QOSLimitType
8	QOSLimitUsage
9	QOSBurstDuration
10	QOSMaxRate
11	QOSMaxBandwidth
12	QOSBurstRate

CertificateErrorCodeEnum

Certificate verification error code.

Value	Enumeration
0	OK
1	UNABLE_GET_ISSER_CERT
2	CERTIFICATE_EXPIRED
3	HOSTNAME_MISMATCH
4	CERTIFICATE_INVALID

CertificateTypeEnum

Types of certificates.

Value	Enumeration	Description
1	CA	Certificate Authority (CA) certificate.
2	Server	Server certificate.
3	Client	Client certificate.

4	TrustedPeer	Trusted Peer certificate.
99	Unknown	Unknown certificate type.

CHAPSecretTypeEnum

CHAP secret type.

Value	Enumeration	Description
0	Binary	CHAP secret is binary.
1	ASCII	CHAP secret is ASCII.

CifsAccessLevelEnum

Cifs Share access levels.

Value	Enumeration	Description
1	Write	No access.
3	None	Read-Write access.

CifsShareACEPrivilegeEnum

CIFS privilege levels.

Value	Enumeration	Description
0	None	No user or group access.
1	Read	Read only user or group access.
2	Write	Write only user or group access.
3	FullControl	Full user or group access.

CifsShareDefaultAccessEnum

Default access level for all hosts that can access the share.

Value	Enumeration	Description
0	NoAccess	Deny access to the share for the hosts.
2	ReadWrite	Allow read write access to the share for the hosts.

CifsShareOfflineAvailabilityEnum

Defines a valid states of Offline Availability.

Value	Enumeration	Description
0	Manual	Only specified files will be available offline.
1	Documents	All files that users open will be available offline.
2	Programs	Program will preferably run from the offline cache even when connected to the network. All files that users open will be available offline.
3	None	Prevents clients from storing documents and programs in offline cache (default).
255	Invalid	Invalid state.

CIFSTypeEnum

CIFS share type.

Value	Enumeration	Description
1	Cifs_Share	The share is created on a filesystem.
2	Cifs_Snapshot	The share is created on a snapshot.

CompressionStatusEnum

Inline Compression status of the storage resource.

Value	Enumeration	Description
0	Disabled	Compression for the storage resource is disabled.
1	Enabled	Compression for the storage resource is enabled.
65,535	Mixed	There is a mix of compression enabled and disabled LUNs. This only applies to Consistency Groups.

CompressionUnsupportedReasonEnum

Reason why Inline Compression (ILC) is not supported on the pool.

Value	Enumeration	Description
0	None	Inline compression (ILC) is supported.

1	Feature_Disabled	Inline compression (ILC) feature is disabled.
2	License_Uninstalled	Inline compression (ILC) license is not installed.
3	Pool_Type	Inline compression (ILC) is not supported because it is not Extreme Performance pool.
4	Filesystem_Compression_Not_Supported	Inline compression (ILC) is not supported for filesystems.
5	Flash_Not_Enough	Inline compression (ILC) is not supported because pool flash percentage is not enough.

ConnectivityTypeEnum

Value	Enumeration
0	Unknown
1	ISCSI_Software
2	ISCSI_Offload
3	FC

ConnectorTypeEnum

Supported Connector types.

Value	Enumeration	Description
0	Unknown	Connector Type is unknown.
1	RJ45	Connector Type is RJ45.
2	LC	Connector Type is LC.
3	MiniSAS_HD	Connector Type is Mini SAS HD.
4	Copper_Pigtail	
5	No_Separable_Connector	
6	NAS_Copper	
7	Not_Present	

CopyStateEnum

Value	Enumeration
3	Unsynchronized
4	Synchronized
13	Skewed
14	Mixed

CRLReasonCodeEnum

Reason codes - per RFC5280 - for certificate revocation. NOTE: value 7 is not used

Value	Enumeration	Description
0	Unspecified	The revocation reason was not specified.
1	Key_Compromise	The associated private key has been compromised.
2	Ca_Compormise	The Certificate Authority (CA) that signed the certificate has been compromised.
3	Affiliation_Changed	The certificate affiliation has changed.
4	Superseded	The certificate has been superseded by another certificate.
5	Cessation_Of_Operation	The certificate is no longer used.
6	Certificate_Hold	The certificate is being held.
8	Remove_From_CRL	The certificate is being removed from the CRL.
9	Privilege_Withdrawn	The certificate privileges have been withdrawn.
10	Aa_Compromise	The Attribute Authority (AA) has been compromised.
99	Unknown	Unknown revocation reason.

DataCollectionProfileEnum

Profiles for collecting service information.

Value	Enumeration	Description
0	Default	Default profile.
1	Performance_Assessment	Profile for performance assessment collection.
2	Performance_Trace	Profile for performance analysis.
3	Other	Other profile used internally.
4	Minimum	Profile for minimum collection, useful when service storage space is very low.

DataReductionStatusEnum

DataReduction status of the storage resource.

Value	Enumeration	Description
0	Disabled	DataReduction for the storage resource is disabled.
1	Enabled	DataReduction for the storage resource is enabled.
65,535	Mixed	There is a mix of DataReduction enabled and disabled LUNs. This only applies to Consistency Groups.

DatastoreTypeEnum

Versions of VMFS datastore file system.

Value	Enumeration	Description
0	Unknown	VMFS type unknown.
1	VMFS3	VMFS version 3.
2	VMFS5	VMFS version 5.
3	VMFS6	VMFS version 6.

DayOfWeekEnum

Enumeration of days of the week.

Value	Enumeration	Description
1	Sunday	Sunday
2	Monday	Monday
3	Tuesday	Tuesday
4	Wednesday	Wednesday
5	Thursday	Thursday
6	Friday	Friday
7	Saturday	Saturday

DCMigrationStateEnum

Value	Enumeration
1	Normal
2	PrepareForMigration
3	SourceDisabledForIO
4	SourceMigrationInProgress
5	SourceMigrationCompleted
6	SourceAborted
2,989	Unknown

DedupStatusEnum

Deduplication status of the storage resource.

Value	Enumeration	Description
0	Disabled	Deduplication for the storage resource is disabled.
1	Enabled	Deduplication for the storage resource is enabled.
65,535	Mixed	There is a mix of deduplication enabled and disabled LUNs. This only applies to Consistency Groups.

DhsmConnectionModeEnum

A DhsmConnModeEnum represents the current operation mode of the file mover participating in this connection

Value	Enumeration	Description
0	Enabled	Enabled allows both the creation of stub files and data migration through reads and writes.
1	Disabled	Disabled means neither stub files nor data migration is possible
2	RecallOnly	Recallonly means the policy engine is not allowed to create stub files, but the user is still able to trigger data migration by using a read or write request from the secondary file system to the Unity.

DiskTechnologyEnum

Possible drive technologies.

Value	Enumeration	Description
1	SAS	The Serial attached SCSI (SAS) drive can be used for the Performance storage tier. This drive type provides high performance and medium capacity storage for applications

		that requires a balance between performance and capacity.
2	NL_SAS	The Near-line serial attached SCSI (NL-SAS) drive can be used for the Capacity storage tier. This drive type provides high capacity storage, but with lower overall performance than regular SAS and Flash drives.
6	SAS_FLASH_2	The Medium Endurance SAS Flash drive can be used for the Extreme Performance storage pool and for the FAST Cache.
7	SAS_FLASH_3	The Low Endurance SAS Flash drive can be used for the Extreme Performance storage pool tier but not for the FAST Cache.
8	SAS_FLASH_4	The Read Intensive SAS Flash drive can be used for the Extreme Performance storage pool tier but not for the FAST Cache.
9	SAS_FLASH_5	Even lower endurance SAS flash drive cannot be used for FAST Cache.
50	Mixed	Applies only as an attribute value of an object containing mixed different types of drives. Drive cannot have this type.
99	Virtual	

DiskTierEnum

Drive Type tiers.

Value	Enumeration	Description
0	ExtremePerformanceTier	Tier that maps to SAS Flash drives.
1	PerformanceTier	Tier that maps to SAS drives.
2	CapacityTier	Tier that maps to NL-SAS drives.
3	ExtremeMultiTier	Multi-tiered pool that includes SAS Flash tier.
4	MultiTier	Multi-tiered pool that does not include Flash tier.

DiskTypeEnum

Possible drive types.

Value	Enumeration	Description
0	Unknown	Unsupported drive type.
5	SAS	The Serial attached SCSI (SAS) drive can be used for Performance storage tier.
9	SAS_FLASH	The SAS Flash drive can be used for Extreme Performance storage pool tier and the FAST Cache.
10	NL_SAS	The Near-line serial attached SCSI (NL-SAS) drive type can be used for the Capacity storage tier.
11	SAS_FLASH_2	The Medium Endurance SAS Flash drive can be used for the Extreme Performance storage pool and for the FAST Cache.
12	SAS_FLASH_3	The Low Endurance SAS Flash drive can be used for the Extreme Performance storage pool tier but not for the FAST Cache.

DMOLockTypeEnum

DMO Lock Type Enumeration

Value	Enumeration	Description
1	Read	Read Lock
2	Write	Write Lock

DMONotificationTypeEnum

DMO Notification Type Enumeration

Value	Enumeration	Description
0	Creation	Creation Notification
1	Modification	Modification Notification
2	Deletion	Deletion Notification

DNSServerOriginEnum

Source of the DNS server addresses.

Value	Enumeration	Description
0	Unknown	Source of DNS server addresses is unknown.
1	Static	DNS server addresses are set manually.
2	DHCP	DNS server addresses are configured by DHCP.

EnclosureTypeEnum

Value	Enumeration	Description

0	Unknown_Enclosure	Unknown Enclosure.
20	Derringer_6G_SAS_DAE	25 Drive 6G DAE.
26	Pinecone_6G_SAS_DAE	12 Drive 6G DAE.
27	Steeljaw_6G_SAS_DPE	12 Drive 6G DPE.
28	Ramhorn_6G_SAS_DPE	25 Drive 6G DPE.
29	Tabasco_12G_SAS_DAE	25 Drive 12G DAE.
30	Ancho_12G_SAS_DAE	15 Drive 12G DAE.
32	Naga_12G_SAS_DAE	80 Drive 12G DAE.
36	Miranda_12G_SAS_DPE	25 Drive 12G DPE.
37	Rhea_12G_SAS_DPE	12 Drive 12G DPE.
38	Scorp_12G_SAS_DPE	25 Drive 12G DPE.
100	Virtual_DPE	Virtual DPE.
999	Unsupported_Enclosure	Unsupported Enclosure.

EncryptionModeEnum

Data at Rest Encryption encryption mode

Value	Enumeration	Description
16	Unencrypted	No Data at Rest Encryption is activated.
32	Controller_Based_Encryption	Controller Based Encryption within the Data at Rest Encryption Feature on the targeted array is activated.

EncryptionStatusEnum

Data at Rest Encryption status on the storage system

Value	Enumeration	Description
65,535	Invalid	Invalid encryption status.
0	Fbe_Invalid	Invalid encryption status with internal errors.
1	Not_Encrypting	Not Encrypting.
16	Encrypting	Encrypting.
32	Encrypted	Encrypted.
64	Scrubbing	Scrubbing.
254	No_License	The Data at Rest Encryption license is not installed.
255	Unsupported	The Data at Rest Encryption is not supported.

EPSpeedValuesEnum

Supported Ethernet port transmission speeds.

Value	Enumeration	Description
0	Auto	Auto detected Ethernet port transmission speed.
10	_10Mbps	10 Mbps Ethernet port transmission speed.
100	_100Mbps	100 Mbps Ethernet port transmission speed.
1,000	_1Gbps	1 Gbps Ethernet port transmission speed.
10,000	_10Gbps	10 Gbps Ethernet port transmission speed.
25,000	_25Gbps	25 Gbps Ethernet port transmission speed.
40,000	_40Gbps	40 Gbps Ethernet port transmission speed.
100,000	_100Gbps	100 Gbps Ethernet port transmission speed.
1,000,000	_1Tbps	1 Tbps Ethernet port transmission speed.

EsrsConfigStatusEnum

ESRS configuration status enum.

Value	Enumeration	Description
0	Not_Attempted	ESRS configuration is not attempted
1	Success	ESRS configuration has successed
2	Failed	ESRS configuration failed
3	Success_CallHome_Only	ESRS configured with only callhome support, which is just reserved but not used
4	Success_One_Way	ESRS configured with one way connection
5	Success_Two_Way	ESRS configured with two way connection

EsrsLevelEnum

ESRS configuration level enum.

Value	Enumeration	Description
0	Not_Set	ESRS level is not set.
1	Callhome_Only	ESRS with callhome support only, which is just reserved but not used.
2	One_Way	ESRS with one way connection support.
3	Two_Way	ESRS with two way connection support.

EsrsPolicyManagerStatusEnum

Policy Manager configuration and connection statuses.

Value	Enumeration	Description
0	Disabled	Embedded ESRS Policy Manager is not enabled.
1	Connected	Embedded ESRS Policy Manager is enabled and connected.
2	Not_Connected	Embedded ESRS Policy Manager is enabled, but not running.
3	Unknown	Embedded ESRS Policy Manager status cannot be determined.

EsrsProxyStatusEnum

Value	Enumeration	Description
0	Disabled	Integrated Remote Support proxy server is not enabled.
1	Enabled	Embedded ESRS proxy server is enabled, but not connected.
2	Connected	Embedded ESRS proxy server is enabled and connected (on-line).
3	Not_Connected	Embedded ESRS proxy server is enabled, but not running (off-line).
4	Unknown	Embedded ESRS proxy server status cannot be determined.

EsrsStatusEnum

ESRS connection statuses.

Value	Enumeration	Description
0	Disabled	Remote Support is disabled.
1	Connected	Remote Support is functioning normally.
2	Not_Connected	Remote Support is enabled, but not connected.
3	Unknown	Remote Support status could not be determined.
5	Managed_Offline	Device is being managed by Remote Support server, but if offline.
6	Managed_Missing	Device is being managed by Remote Support server, but is not connected.
7	Managed_Removed	Device is removed from Remote Support server.
11	Unmanaged_Online	Device is in a transitioning state, it is not being managed by Remote Support server, it was previously online.
12	Unmanaged_Offline	Device is in a transitioning state, it is not being managed by Remote Support server, it was previously offline.
13	Unmanaged_Missing	Device is in a transitioning state, it is not being managed by Remote Support server, it was previously in a missing state.
14	Unmanaged_Removed	Device is in a transitioning state, it is not being managed by Remote Support server, it was previously in a removed state.
15	PendingAdd_Online	Device is in a transitioning state, it is pending managed, it was previously online.
16	PendingAdd_Offline	Device is in a transitioning state, it is pending managed, it was previously offline.
17	PendingAdd_Missing	Device is in a transitioning state, it is pending managed, it was previously in a missing state.
18	PendingAdd_Removed	Device is in a transitioning state, it is pending managed, it was previously in a removed state.
19	PendingDelete_Online	Device is in a transitioning state, it is pending for deletion, it was previously online.
20	PendingDelete_Offline	Device is in a transitioning state, it is pending for deletion, it was previously offline.
21	PendingDelete_Missing	Device is in a transitioning state, it is pending for deletion, it was previously in a missing state.
22	PendingDelete_Removed	Device is in a transitioning state, it is pending for deletion, it was previously in a removed state.
23	Managed_UnRegistered	Device is in a transitioning state, it will change to connected state once the pending request for managed state is processed.

ESXFilesystemBlockSizeEnum

VMFS block sizes.

Value	Enumeration	Description
1	_1MB	1MB block.
2	_2MB	2MB block.
4	_4MB	4MB block.
8	_8MB	8MB block.

ESXFilesystemMajorVersionEnum

VMFS file system major versions.

Value	Enumeration	Description
3	VMFS_3	VMFS version 3.x.
5	VMFS_5	VMFS version 5.x.
6	VMFS_6	VMFS version 6.x.

ESXMountProtocolEnum

The protocol type used for remote share mount on ESXi server.

Value	Enumeration	Description
3	NFSv3	NFSv3 mount.
4	NFSv4	NFSv4 mount.

EthernetPortStatusEnum

Possible Ethernet port statuses.

Value	Enumeration	Description
0	Unknown	Ethernet port status is unknown.
2	OK	Ethernet port status is OK.
3	Degraded	Ethernet port status is degraded.
32,784	Link_Up	Ethernet port status is degraded.
32,785	Link_Down	Ethernet port status is link down.
32,786	Speed_Negotiation_Failed	Ethernet port status is speed negotiation failed.
33,024	Uninitialized	Ethernet port status is uninitialized.
33,025	Empty	Ethernet port status is empty.
33,026	Missing	Ethernet port status is missing.
33,027	Faulted	Ethernet port status is faulted.
33,028	Unavailable	Ethernet port status is unavailable.
33,029	Disabled	Ethernet port status is disabled.
33,280	SFP_Not_Present	Ethernet port status is SFP not present.
33,281	Module_Not_Present	Ethernet port status is module not present.
33,282	Port_Not_Present	Ethernet port status is port not present.
33,283	Missing_SFP	Ethernet port status is missing SFP.
33,284	Missing_Module	Ethernet port status is missing module.
33,285	Incorrect_SFP_Type	Ethernet port status is incorrect SFP type.
33,286	Incorrect_Module	Ethernet port status is incorrect module.
33,287	SFP_Read_Error	Ethernet port status is SFP read error.
33,288	Unsupported_SFP	Ethernet port status is unsupported SFP.
33,289	Module_Read_Error	Ethernet port status is module read error.
33,290	Exceeded_Maximum_Limits	Ethernet port status is exceeded maximum limits.
33,291	Module_Powered_Off	Ethernet port status is module powered off.
33,292	Unsupported_Module	Ethernet port status is unsupported module.
33,293	Database_Read_Error	Ethernet port status is database read error.
33,294	Faulted_SFP	Ethernet port status is faulted SFP.
33,295	Hardware_Fault	Ethernet port status is hardware Fault.
33,296	Disabled_User_Initiated	Ethernet port status is Disabled user initiated.
33,297	Disabled_Encryption_Required	Ethernet port status is disabled encryption required.
33,298	Disabled_Hardware_Fault	Ethernet port status is disabled hardware fault.
33,299	Asymmetric_SFP	Ethernet port status is asymmetric SFP.

EventCategoryEnum

Event category.

Value	Enumeration	Description
0	User	User event.
1	Audit	Audit event.
2	Authentication	Authentication event.

FastCacheOperationalStatusEnum

Value	Enumeration
0	Unknown
1	Other
2	OK
3	Degraded
4	Stressed
5	Predictive_Failure
6	Error
7	Non_Recoverable_Error
8	Starting
9	Stopping
10	Stopped
11	In_Service
12	No_Contact
13	Lost_Communication
14	Aborted
15	Dormant
16	Supporting_Entity_in_Error
17	Completed
18	Power_Mode
32,769	No_Backend_Object
32,770	Under_Construction

FastCacheStateEnum

FAST Cache states.

Value	Enumeration	Description
0	Off	FAST Cache is off.
1	On	FAST Cache is on.

FastVPRelocationRateEnum

Possible FAST VP relocation rates.

Value	Enumeration	Description
1	High	High relocation rate.
2	Medium	Medium relocation rate.
3	Low	Low relocation rate.
4	None	Relocation rate is not initialized by the storage system. Do not use this value in Modify requests: the storage system will respond with error.

FastVPStatusEnum

Possible FAST VP statuses.

Value	Enumeration	Description
1	Not_Applicable	Not applicable.
2	Paused	FAST VP is paused.
3	Active	FAST VP relocation or rebalancing is active.
4	Not_started	FAST VP relocation or rebalancing has not occurred yet.
5	Completed	Most recent FAST VP relocation or rebalancing completed successfully.
6	Stopped_by_user	Most recent FAST VP relocation or rebalancing stopped by user.
7	Failed	Most recent FAST VP relocation or rebalancing failed.

FastVPUnsupportedReasonEnum

Reason why FastVP is not supported on the pool.

Value	Enumeration	Description
0	None	FastVP is supported on the pool.
1	Feature_Disabled	FastVP feature is disabled.
2	License_Uninstalled	FastVP license is not installed.
3	Single_Tier	FastVP is not supported because the pool has a single tier only.

FcSpeedEnum

Supported FC port speeds.

Value	Enumeration	Description
0	Auto	Auto detected FC port transmission speed.
1	_1Gbps	1 Gbps FC port transmission speed.
2	_2Gbps	2 Gbps FC port transmission speed.
4	_4Gbps	4 Gbps FC port transmission speed.
8	_8Gbps	8 Gbps FC port transmission speed.
16	_16Gbps	16 Gbps FC port transmission speed.
32	_32Gbps	32 Gbps FC port transmission speed.

FcStatusEnum

Possible FC port statuses.

Value	Enumeration	Description
0	Unknown	FC port status is unknown.
2	OK	FC port status is OK.
3	Degraded	FC port status is degraded.
32,784	Link_Up	FC port status is link up.
32,785	Link_Down	FC port status is link down.
33,024	Uninitialized	FC port status is uninitialized.
33,025	Empty	FC port status is empty.
33,026	Missing	FC port status is missing.
33,027	Faulted	FC port status is faulted.
33,028	Unavailable	FC port status is unavailable.
33,029	Disabled	FC port status is disabled.
33,280	SFP_Not_Present	FC port status is SFP not present.
33,281	Module_Not_Present	FC port status is module not present.
33,282	Port_Not_Present	FC port status is port not present.
33,283	Missing_SFP	FC port status is missing SFP.
33,284	Missing_Module	FC port status is missing module.
33,285	Incorrect_SFP_Type	FC port status is incorrect SFP type.
33,286	Incorrect_Module	FC port status is incorrect module.
33,287	SFP_Read_Error	FC port status is SFP read error.
33,288	Unsupported_SFP	FC port status is unsupported SFP.
33,289	Module_Read_Error	FC port status is module read error.
33,290	Exceeded_Maximum_Limits	FC port status is exceeded maximum limits.
33,291	Module_Powered_Off	FC port status is module powered off.
33,292	Unsupported_Module	FC port status is unsupported module.
33,293	Database_Read_Error	FC port status is database read error.
33,294	Faulted_SFP	FC port status is faulted SFP.
33,295	Hardware_Fault	FC port status is hardware fault.
33,296	Disabled_User_Initiated	FC port status is disabed user initiated.
33,297	Disabled_Encryption_Required	FC port status is disabled encryption required.
33,298	Disabled_Hardware_Fault	FC port status is disabled hardware fault.
33,299	Asymmetric_SFP	FC port status is asymmetric SFP.

FeatureReasonEnum

Defines the reason if a license is not properly configured.

Value	Enumeration
1	FeatureReasonUnlicensed

2	FeatureReasonExpiredLicense
3	FeatureReasonPlatformRestriction
4	FeatureReasonExcluded

FeatureStateEnum

Defines the applicable definition of the license.

Value	Enumeration	Description
1	FeatureStateDisabled	The feature is not available on this storage system.
2	FeatureStateEnabled	The feature is available. Either it does not require a license or there is a valid license installed.
3	FeatureStateHidden	The feature is available, but currently not accessible to user because of the reason stated in the featureReason field

FileEventsPublisherFTLevelTypeEnum

Post-event notification policies for the File Event Service.

Value	Enumeration	Description
0	Ignore	Continue and tolerate lost events.
1	Accumulate	Continue and use a persistence file as a circular event buffer for lost events.
2	Guarantee	Continue and use a persistence file as a circular event buffer for lost events until the buffer is filled and then deny access to files systems where Events Publishing is Enabled.
3	Deny	Deny access to files systems where Events Publishing is enabled.

FileEventTypesEnum

The list of valid events for File Event Service.

Value	Enumeration	Description
0	OpenFileNoAccess	Sends a notification when a file is opened for a change other than read or write access. Protocols: CIFS, NFS(v4).
1	OpenFileRead	Sends a notification when a file is opened for read access. Protocols: CIFS, NFS(v4).
2	OpenFileWrite	Sends a notification when a file is opened for write access. Protocols: CIFS, NFS(v4).
3	CreateFile	Sends a notification when a file is created. Protocols: CIFS, NFS(v3/v4).
4	CreateDir	Sends a notification when a directory is created. Protocols: CIFS, NFS(v3/v4).
5	DeleteFile	Sends a notification when a file is deleted. Protocols: CIFS, NFS(v3/v4).
6	DeleteDir	Sends a notification when a directory is deleted. Protocols: CIFS, NFS(v3/v4).
7	CloseModified	Sends a notification when a file was modified before closing. Protocols: CIFS, NFS(v4).
8	CloseUnmodified	Sends a notification when a file was not modified before closing. Protocols: CIFS, NFS(v4).
9	RenameFile	Sends a notification when a file is renamed. Protocols: CIFS, NFS(v3/v4).
10	RenameDir	Sends a notification when a directory is renamed. Protocols: CIFS, NFS(v3/v4).
11	SetAclFile	Sends a notification when the security descriptor (ACL) on a files is modified. Protocols: CIFS.
12	SetAclDir	Sends a notification when the secuirty descriptor (ACL) on a directory is modified. Protocols: CIFS.
13	OpenDir	Sends a notification when a directory is opened. Protocols: CIFS, NFSv4.
14	CloseDir	Sends a notification when a directory is closed. Protocols: CIFS, NFSv4.
15	FileRead	Sends a notification when a file read is received over NFS. Protocols: NFS(v3/v4).
16	FileWrite	Sends a notification when a file write is received over NFS. Protocols: NFS(v3/v4).
17	SetSecFile	Sends a notification when a file security modification is received over NFS. Protocols: NFS(v3/v4).
18	SetSecDir	Sends a notification when a directory security modification is received over NFS. Protocols: NFS(v3/v4).
19	OpenFileReadOffline	Sends a notification when a offline file is opened for read access. Protocols: CIFS.
20	OpenFileWriteOffline	Sends a notification when a offline file in opened for write access. Protocols: CIFS.

FileInterfaceRoleEnum

Role of NAS server network interface.

Value	Enumeration	Description
0	Production	Production network interfaces are used for all file protocols and services of NAS server. They are inactive while NAS server is in destination mode.
1	Backup	Backup network interfaces are used only for NDMP/NFS backup or Disaster Recovery testing. They are always active in all NAS server modes.

FilesystemSnapAccessTypeEnum

Indicates whether Checkpoint or Protocol access is granted to the file system snap.

Value	Enumeration	Description
1	Checkpoint	Checkpoint access to enable access through a .ckpt folder in the file system.
2	Protocol	Protocol access to enable access through a file share.

FilesystemTypeEnum

The file system types.

Value	Enumeration	Description
1	FileSystem	Underlying file system associated with a file system storage resource.
2	VMware	Underlying file system associated with a VMware NFS storage resource.

FLRVersionEnum

FLR version represents which File Level Retention (FLR) version is enabled on the file system. .

Value	Enumeration	Description
0	Off	FLR is OFF on the file system.
1	Enterprise	FLR enterprise type is enabled on the file system. FLR enterprise type protects data content from changes made by users through CIFS, NFS, and FTP. It is intended for self-regulated archiving.
2	Compliance	FLR compliance type is enabled on the file system. FLR compliance type protects data content from changes made by users through CIFS, NFS, and FTP, from changes made by administrators, and also meets the requirements of SEC rule 17a-4(f). It is intended to assist those companies that have to comply with regulations such as SEC rule 17a-4(f). The main difference between enterprise and compliance include compliance does write verify to ensure the quality and accuracy of the storage media recording process and prevents any modification or deletion of protected files by administrators.

FSFormatEnum

UFS files system formats.

Value	Enumeration	Description
0	UFS32	UFS32 file system.
2	UFS64	UFS64 file system.

FSLockingPolicyEnum

File system locking policies. These policy choices control whether the NFSv4 range locks must be honored. Because NFSv3 is advisory by design, this policy allows specifying whether the NFSv4 locking feature behaves like NFSv3 (advisory mode) in order to be backward compatible with applications expecting an advisory locking scheme.

Value	Enumeration	Description
0	Advisory	No lock checking for NFS and honor SMB lock range only for SMB.
1	Mandatory	Honor SMB and NFS lock range.

FSRenamePolicyEnum

File system folder rename policies. These policy choices control whether directory can be renamed from NFS or SMB clients if at least one file is opened in the directory or in one of its child directories.

Value	Enumeration	Description
0	All_Rename_Allowed	All protocols are allowed to rename directories without any restrictions.
1	SMB_Rename_Forbidden	A directory rename from the SMB protocol will be denied if at least one file is opened in the directory or in one of its child directories.
2	All_Rename_Forbidden	Any directory rename request will be denied regardless of the protocol used, if at least one file is opened in the directory or in one of its child directories.

FSSupportedProtocolEnum

Network share protocols supported by file system.

Value	Enumeration	Description
0	NFS	Only NFS share protocol supported by file system.

1	CIFS	Only SMB (also known as CIFS) share protocol is supported by file system.
2	Multiprotocol	Both share protocols NFS and SMB (also known as CIFS) are supported by file system.

HealthCheckModeEnum

Health check mode

Value	Enumeration	Description
0	General	General health check
1	NDU	Health check for software upgrade
2	ODFU	Health check for drive firmware upgrade

HealthEnum

Possible values for health attribute.

Value	Enumeration	Description
0	UNKNOWN	Unknown.
5	OK	OK.
7	OK_BUT	OK But Minor Warning
10	DEGRADED	Degraded.
15	MINOR	Minor Issue.
20	MAJOR	Major Issue.
25	CRITICAL	Critical Issue.
30	NON_RECOVERABLE	Non Recoverable Issue.

HostContainerPotentialHostImportOptionEnum

This enumeration gives the recommendation for how to import candidate hosts based on the matching condition with the existing host.

Value	Enumeration	Description
0	Import_New	Create a new host
1	Import_Existing	Matched an imported host by UUID. We will allow it to be imported
2	Import_Conflict	Matched multiple hosts on the array or matches UUID or initiators with other potential hosts. We will not allow the import
3	Import_Match	Match one host on the array. Will allow importing to replace that host
4	Import_Warn	Match ip address with another potential host. Will allow importing.

HostContainerPotentialHostMatchConditionEnum

This enumeration describes how the discovered candidate host matches the existing host/hosts that is/are already known to the storage array.

Value	Enumeration	Description
0	Match_Unknown	Unknown match condition
1	Match_UUID	UUID matches
2	Match_AllInitiators	all initiators match
3	Match_UUID_AllInitiators	UUID and all initiators match
4	Match_AllNetworkAddresses	all network addresses match
5	Match_UUID_AllNetworkAddresses	UUID and all network addresses match
6	Match_AllInitiators_AllNetworkAddresses	all initiators and all network addresses match
7	Match_UUID_AllInitiators_AllNetworkAddresses	UUID and all initiators and all network addresses match
8	Match_SomeInitiators	some initiators match
9	Match_UUID_SomeInitiators	UUID and some initiators match
12	Match_AllNetworkAddresses_SomeInitiators	all network addresses and some initiators match
13	Match_UUID_AllNetworkAddresses_SomeInitiators	UUID and all network addresses and some initiators match
16	Match_SomeNetworkAddresses	some network addresses match
17	Match_UUID_SomeNetworkAddresses	UUID and some network addresses match
18	Match_AllInitiators_SomeNetworkAddresses	some initiators and some network addresses match
19	Match_UUID_AllInitiators_SomeNetworkAddresses	UUID and some initiators and some network addresses match
24	Match_SomeInitiators_SomeNetworkAddresses	some initiators and some network addresses match
25	Match_UUID_SomeInitiators_SomeNetworkAddresses	UUID and some initiators and some network addresses match

HostContainerTypeEnum

A VMware host container type for managed VMs.

Value	Enumeration	Description
0	UNKNOWN	Unknown type.
1	ESX	ESXi type.
2	VCENTER	vCenter type.

HostGroupAccessMergeTypeEnum

Specify how the host access is going to be merged when the host is added/modified in host group.

Value	Enumeration	Description
0	NoChange	Do not change the existing host access.
1	Customized	Customized host access.
2	MergeFromHostGroup	Add host access to the LUNs that are accessible by all hosts in the host group.
3	MergeToHostGroup	Add host access to the LUNs that are accessible by all hosts in the host group, and the LUNs that are accessible by the specified host will be accessible by all hosts in the host group.
4	RemoveAccessFromHostGroup	Remove host access to the LUNs that are accessible by all hosts in the host group.

HostGroupTypeEnum

Specify the type of a host group.

Value	Enumeration	Description
0	General	General host group, only general host can be added to the host group.
1	ESX	ESX host group, only ESX host can be added to the host group.

HostInitiatorChapSecretTypeEnum

This enumeration describes the possible encoding types for the iSCSI chap secret.

Value	Enumeration	Description
0	CHAPSECRET_TYPE_BINARY	Encoded in binary mode.
1	CHAPSECRET_TYPE_ASCII	Encoded in ascii mode.

HostInitiatorFailoverModeEnum

This enumeration describes the possible failover mode of an initiator.

Value	Enumeration	Description
0	Auto_Trespass	Any media access to the non owning SP is rejected.
1	Passive_Not_Ready	A command failure during I/O is sent to the non owning SP.
2	DMP_Mode	Quiet trespass on I/O to non owning SP.
3	Passive_Always_Ready	Some commands, e.g. Test Unit Ready, returns PAR status.
4	ALUA_Mode	Initiators are permitted to send I/O to a LUN regardless of which SP actually owns the LUN. This is the system default mode.

HostInitiatorIscsiTypeEnum

This enumeration describes the possible iSCSI types of an initiator.

Value	Enumeration	Description
0	ISCSI_TYPE_UNKNOWN	Unknown iSCSI type or not an iSCSI initiator.
1	ISCSI_TYPE_HARDWARE	Hardware iSCSI type.
2	ISCSI_TYPE_SOFTWARE	Software iSCSI type.
3	ISCSI_TYPE_DEPENDENT	Hardware dependent adapter device. The iSCSI initiator needs to be bound to an IP address before it can be used.

HostInitiatorPathTypeEnum

Indicates how the host initiator path is registered.

Value	Enumeration	Description
0	Manual	Registered manually.
1	ESX_Auto	Registered automatically by an ESXi host.
2	Other_Auto	Registered automatically by a non-ESXi host.

HostInitiatorSourceTypeEnum

This enumeration describes the possible source types of an initiator. This type regulates some aspects of system behavior.

Value	Enumeration	Description
0	Unknown	Unknown.
2	HP_Autotrespass	HP with Auto-trespass.
3	Open_Native	Open native (a.k.a. CLARiiON Open). This is the system default type.
9	SGI	Silicon Graphics.
10	HP_No_Autotrespass	HP without Auto-trespass.
19	Dell	Dell.
22	Fujitsu_Siemens	Fujitsu-Siemens.
25	Clariion_Array_CMI	Remote CLARiiON array.
28	Tru64	Compaq Tru64.
31	Recoverpoint	RecoverPoint.

HostInitiatorTypeEnum

This enumeration describes the possible protocol types of an initiator.

Value	Enumeration	Description
0	UNKNOWN	Unknown initiator type.
1	FC	Fibre channel initiator.
2	ISCSI	iSCSI initiator.

HostIOSizeEnum

Typical size of writes from the server or other computer using the file system or LUN to the storage system. This setting is used to match the storage block size to the I/O of the primary application using the storage, which can optimize performance. Choose one of the suggested applications if you are using one of them, or check the setup guide or performance tuning information for the primary application, or stay with default 8K size for general use.

Value	Enumeration	Description
8,192	General_8K	Host I/O size is 8K for general purpose
16,384	General_16K	Host I/O size is 16K for general purpose
32,768	General_32K	Host I/O size is 32K for general purpose
65,536	General_64K	Host I/O size is 64K for general purpose
8,193	Exchange2007	Host I/O size is 8K for Exchange 2007 application
32,769	Exchange2010	Host I/O size is 32K for Exchange 2010 application
32,770	Exchange2013	Host I/O size is 32K for Exchange 2013 application
8,194	Oracle	Host I/O size is 8K for Oracle DB application
8,195	SQLServer	Host I/O size is 8K for Microsoft SQL Server application
8,196	VMwareHorizon	Host I/O size is 8K for VMware Horizon VDI application
32,771	SharePoint	Host I/O size is 32K for SharePoint application
8,197	SAP	Host I/O size is 8K for SAP application

HostLUNAccessEnum

Indicates the type of access a host has to a LUN or consistency group.

Value	Enumeration	Description
0	NoAccess	No access.
1	Production	Access to production LUNs only.
2	Snapshot	Access to LUN snapshots only.
3	Both	Access to both production LUNs and their snapshots.
65,535	Mixed	(Applies to consistency groups only.) Indicates that LUNs in a consistency group have different host access. Do not use this value in Create or Modify requests.

HostLUNTypeEnum

Indicates the type of LUN to which a host has access.

Value	Enumeration	Description
0	Unknown	Unknown LUN type.
1	LUN	Production LUN.
2	LUN_Snap	Snapshot LUN.

HostManageEnum

Indicates how the host is managed.

Value	Enumeration	Description
0	UNKNOWN	Managed manually.
1	VMWARE	Automatically managed by an ESXi server.
2	OTHERS	Managed by another method.

HostOperationalStatusEnum

Value	Enumeration
0	Unknown
1	Other
2	OK
3	Degraded
4	Stressed
5	Predictive_Failure
6	Error
7	Non_Recoverable_Error
8	Starting
9	Stopping
10	Stopped
11	In_Service
12	No_Contact
13	Lost_Communication
14	Aborted
15	Dormant
16	Supporting_Entity_in_Error
17	Completed
18	Power_Mode
19	Temp_Unmounted
20	Perm_Unmounted
32,768	Initiators_Config_not_HA
32,769	No_LoggedIn_Initiator
32,770	Initiators_Data_Inconsistent
32,771	Network_Addresses_Data_Inconsistent
32,772	Tenant_Data_Inconsistent
34,048	Credential_Invalid
34,049	Storage_Not_Found
34,050	Certificate_Invalid

HostPortTypeEnum

This enumeration describes the possible IP address types of a host port.

Value	Enumeration	Description
0	IPv4	IPv4.
1	IPv6	IPv6.
2	NetworkName	Network name.

HostRegistrationTypeEnum

Indicates how initiators are registered to the host.

Value	Enumeration	Description
0	UNKNOWN	Registration type is unknown.
1	MANUAL	Initiator is registered manually.
2	ESXAUTO	Initiator is registered automatically by an ESXi server.

HostTypeEnum

Indicates the type of the host.

Value	Enumeration	Description
0	Unknown	Host configuration is unknown.
1	HostManual	A manually defined individual host system.
2	Subnet	All the hosts in a subnet.
3	NetGroup	A netgroup, used for NFS access. Netgroups are defined by NIS, and only available when NIS is active.
4	RPA	A RecoverPoint appliance host.
5	HostAuto	An auto-managed host - the system or an external agent identifies and updates the information for this host.

255	VNXSanCopy	Host defined for Block Migration from VNX Platform system.

HotSparePolicyStatusEnum

Value	Enumeration
0	OK
741	Violated

ImportCapabilityEnum

Value	Enumeration
0	Importable
1	Non_importable_internal_error
2	Non_importable_only_support_vnx
3	Non_importable_src_vdm_name_in_use_sess_completed
4	Non_importable_src_vdm_name_in_use_sess_active
5	Non_importable_src_vdm_name_in_use
6	Non_importable_no_up_src_clnt_if
7	Non_importable_no_fs_on_src_vdm
8	Non_importable_reach_src_fs_limit
9	Non_importable_nfsv4_not_support
10	Non_importable_secnfs_not_support
11	Non_importable_vdm_cannot_have_cifs_server
12	Non_importable_srcmigif_more_error
13	Non_importable_srcmigif_error
14	Non_importable_invalid_vdm
15	Non_importable_reach_src_if_limit
16	Non_importable_src_cs_not_primary

ImportOpStatusEnum

Value	Enumeration
0	Unknown
7	Non_Recoverable_Error
32,768	Configuring_Target_Resource
32,769	Enabling_Target_Resource_Access
32,770	Migrator_Cannot_Discover_Target_Resource
32,771	Ready_To_Migrate
32,772	Initial_Transfer_Inprogress
32,773	Delta_Transfer_Inprogress
32,774	Paused
32,776	Ready_To_Cutover
32,777	Lost_Communication
32,779	Target_Luns_Offline
32,780	Pending
32,781	Cutover_Sync_Complete
32,782	Session_Cleanup_Complete
32,783	Final_Transfer_Inprogress
33,532	Session_Exceed_Limit
33,024	Initialized
33,025	Starting
33,026	Start_Failed
33,027	Migrating_Data
33,028	Migrating_Data_Stopped
33,029	Migrating_Data_Failed
33,030	Migrating_Data_Failed_Stopped
33,031	Migrating_Configuration
33,032	Migrating_Configuration_Failed
33,033	Migrating_Configuration_Paused
33,280	Cutting_Over
33,281	Cutover_Failed
33,282	Syncing_Data
33,283	Syncing_Data_Stopped
33,284	Syncing_Data_Failed
33,285	Syncing_Data_Failed_Stopped
33,536	Ready_To_Complete
33,537	Completing

33,538	Complete_Failed
33,539	Completed
33,540	Cancelling
33,541	Cancel_Failed
33,542	Cancelled
33,543	Migrating_Data_Stopping
33,544	Syncing_Data_Stopping
33,547	Provisioning_Target_Paused
34,048	FS_OK
34,049	FS_Source_IO_Failure
34,050	FS_Destination_IO_Failure
34,051	FS_Connection_Failure
34,052	FS_Unrecoverable_Failure
34,304	VMO_Faulted
34,305	VMO_Offline
34,560	Element_Import_OK
34,561	Element_Import_Unable_To_Locate_Device
34,562	Element_Import_Bad_Block_On_Source_Device
34,563	Element_Import_Unable_To_Access_Device
34,564	Element_Import_LU_Trespassed
34,565	Element_Import_Source_Device_Inaccessible
34,566	Element_Import_Low_User_Link_Bandwidth
34,567	Element_Import_Concurrent_SanCopy_Session_Destinations
34,568	Element_Import_Error_Communicating_With_SanpView
34,569	Element_Import_Error_Communicating_With_SanpView_1
34,570	Element_Import_Session_Inconsistent_State
34,571	Element_Import_Destination_Inconsistent_State
34,572	Element_Import_Auto_Recovery_Resume_Failed
34,573	Element_Import_All_Paths_failure
34,574	Element_Import_Access_Denied_To_Device
34,575	Element_Import_Not_Enough_Memory
34,576	Element_Import_Source_Device_Failure
34,577	Element_Import_Destination_Device_Failure
34,578	Element_Import_Destination_Device_Not_found
34,579	Element_Import_Target_LU_Not_Initialized
34,580	Element_Import_Command_TimedOut
34,581	Element_Import_Verifying_Frontend_TimedOut
34,582	Element_Import_Verifying_Frontend_TimedOut_Another_Operation
34,583	Element_Import_Source_Connectivity_TimedOut
34,584	Element_Import_Destination_Connectivity_TimedOut
34,585	Element_Import_RLP_IO_Failure
34,586	Element_Import_Total_Sessions_Limit_Reached
34,587	Element_Import_Incremental_Sessions_Limit_Reached
34,588	Element_Import_Incremental_Sessions_Total_Number_Reached
34,589	Element_Import_Limit_Of_Total_Sessions_Reached
34,590	Element_Import_Limit_Of_Total_Incremental_Sessions_Reached
34,591	Element_Import_Copy_Command_Queued
34,592	Element_Import_Session_Failed_On_Source_Or_Destination
34,593	Element_Import_Device_Cannot_Be_Located
34,594	Element_Import_No_Unused_Rlp_Luns
34,595	Element_Import_Reserved_Lun_Not_Support_Incremental_Sessions
34,596	Element_Import_Snapview_Reserved_Lun_Not_Enough_Space
34,597	Element_Import_Too_Many_Snapshots_On_Source_Lu
34,598	Element_Import_Cannot_Open_Reserved_Lun
34,599	Element_Import_Cannot_Get_Reserved_Lun_info
34,600	Element_Import_No_Space_On_Rlp
34,601	Element_Import_Rlp_Maximum_Devices
34,602	Element_Import_Session_With_No_Cache_Devices
34,603	Element_Import_Session_Failed_Write_To_Target_Device_Insufficient_Storage
34,604	Element_Import_Session_Device_Not_Ready
34,605	Element_Import_Session_Source_Device_Unavailable
34,606	Element_Import_Session_Source_In_Import_Session

ImportStageEnum

Import synchronization stage.

Value	Enumeration	Description
0	Initial	Initial sync.
1	Incremental	Incremental sync.
2	Final	Final sync.

ImportStateEnum

Import state.

Value	Enumeration	Description
0	Unknown	
50,000	Initialized	Initialized.
50,001	Initial_Copy	Initial Copy .
50,002	Ready_to_Cutover	Ready to Cutover .
50,003	Paused	Paused .
50,004	Cutting_Over	Cutting Over .
50,005	Incremental_Copy	Incremental Copy .
50,006	Ready_to_Commit	Ready to Commit.
50,007	Committing	Committing .
50,008	Completed	Completed.
50,009	Cancelling	Cancelling .
50,010	Cancelled	Cancelled.
50,011	Pending	Pending.
50,012	Syncing	Syncing.
50,013	Error	Error.

ImportTypeEnum

Type of import session.

Value	Enumeration
0	block
1	nas

ImportUnixDirectoryServiceEnum

Value	Enumeration
0	Local
1	NIS
2	LDAP
3	LocalThenNis
4	LocalThenLdap
5	None
6	DirectMatch

InterfaceConfigModeEnum

Configuration mode of management interfaces.

Value	Enumeration	Description
0	Disabled	Management access is disabled.
1	Static	Management interface address is set manually.
2	Auto	Management interface address is configured by DHCP/SLAAC.

IOLimitPolicyIOTypeEnum

Value	Enumeration	Description
1	Block	policy for block
2	File	policy for file

IOLimitPolicyStateEnum

Value	Enumeration	Description
1	Global_Paused	Global Paused
2	Paused	Paused
3	Active	Active

IOLimitPolicyTypeEnum

Value	Enumeration	Description
1	Absolute	Absolute Value
2	Density_Based	Density-based Value

IoModuleStatusEnum

Possible IO Module statuses.

Value	Enumeration	Description
0	Unknown	IO Module status is unknown.
2	OK	IO Module status is OK.
32,768	Not_Symmetric	IO Module status is not symmetric.
32,769	Ready_For_Configuration	IO Module status is ready for configuration.
33,024	Uninitialized	IO Module status is uninitialized.
33,025	Empty	IO Module status is empty.
33,026	Missing	IO Module status is missing.
33,027	Faulted	IO Module status is faulted.
33,028	Unsupported	IO Module status is unsupported.
32,800	Not_Present	IO Module status is not present.
32,801	PROM_Read_Error	IO Module status is PROM read error.
32,802	Incorrect_Module	IO Module status is incorrect module.
32,803	Unsupported_Module	IO Module status is unsupported module.
32,804	Powered_Off	IO Module status is powered off.
32,805	Power_Up_Failed	IO Module status is power up failed.
32,806	POST_BIOS_Failed	IO Module status is POST BIOS failed.
32,807	Unsupported_Not_Committed	IO Module status is unsupported not committed.

IpInterfaceTypeEnum

Type of network interface.

Value	Enumeration	Description
1	Mgmt	Network interfaces are used for management access.
2	ISCSI	Network interfaces are used for iSCSI access.
3	File	Network interfaces are used for File access.
4	Replication	Network interfaces are used for replication.

IpProtocolTypeEnum

Value	Enumeration	Description
0	UDP	User Datagram Protocol
1	TCP	Transmission Control Protocol, without encryption
3	Vendor_Specific	Vendor specific protocol
4	Other	Other protocol
5	TLS	Transport Layer Security, TCP connection secured by TLS

IpProtocolVersionEnum

IP version of network interface.

Value	Enumeration	Description
4	IPv4	Network interface uses IPv4 address.
6	IPv6	Network interface uses IPv6 address.

IPRecommendUsageEnum

Value	Enumeration
1	File
2	ISCSI

ISCSIConnectionStateEnum

Value	Enumeration	Description

0	Unknown	iscsi connection state is unkown.
1	Logged_In	Connection is active and logged in.
2	Reconnecting	Currently trying to re-establish the connection.
3	Free	Target is discovered but not logged in.
4	No_Target	Target for the initiator has been removed.

JobStateEnum

Job state.

Value	Enumeration	Description
1	Queued	Job is queued to run.
2	Running	Job is running.
3	Suspended	Job is suspended.
4	Completed	Job completed successfully.
5	Failed	Job is failed, interrupted or terminated.
6	Rolling_Back	Job has failed and is attempting to roll back.
7	Completed_With_Problems	Job ran to the end, but a task returned an error.

JobTaskStateEnum

Job task state. A job task is defined by the jobTask resource type.

Value	Enumeration	Description
0	Not_Started	Job task is waiting to run.
1	Running	Job task is running.
2	Completed	Job task completed successfully.
3	Failed	Job task failed.
5	Rolling_Back	Job task is rolling back.
6	Completed_With_Problems	Job ran to the end, but a task returned an error.
7	Suspended	Job is suspended.

KdcTypeEnum

Type of Kerberos Domain Controller used for secure NFS service.

Value	Enumeration	Description
0	Custom	Use the custom Kerberos Domain Controller for secure NFS service. This requires a configured Kerberos server and an uploaded Kerberos key table file.
1	Unix	Use the Unix Kerberos Domain Controller (MIT/Heimdal) for secure NFS service. This requires a configured Kerberos server.
2	Windows	Use the Windows Kerberos Domain Controller for secure NFS service. This requires a configured SMB server joined to an Active Directory domain.

KeyManagerBackupKeysStatusEnum

Key store backup retrieval status

Value	Enumeration	Description
65,535	Invalid	Invalid.
0	No_Retrieval_Required	No backup keys retrieval is required.
16	Retrieval_Required	Backup keys retrieval is required.
32	Retrieval_In_Progress	The backup keys retrieval is in progress.
64	Retrieval_Completed	The backup keys retrieval is completed.
128	Keystore_Inaccessible	The Keystore is inaccessible.

KmipServerStatusEnum

KMIP server status

Value	Enumeration	Description
0	Down	Server is down.
1	Up	Server is up.
2	Unknown	Server status is unknown.

KmipStatusEnum

Key Management Interoperability Protocol (KMIP) compliant external key management feature status @author zhangp

Value	Enumeration	Description
0	Disabled	KMIP feature is disabled.
1	Enabled	KMIP feature is enabled.
255	Unsupported	KMIP feature is not supported.
65,535	Unknown	KMIP feature status is unknown. It cannot be determined.

LDAPProtocolEnum

Indicates whether the LDAP protocol uses SSL for secure network communication. SSL encrypts data over the network and provides message and server authentication.

Value	Enumeration	Description
0	ldap	LDAP protocol without SSL.
1	ldaps	(Default) LDAP protocol with SSL. When you enable LDAPS, make sure to specify the appropriate LDAPS port (usually port 636) and to upload an LDAPS trust certificate to the LDAP server.
2	unknown	Unknown protocol.

LicenseProductLineEnum

Indicates the Dell product family for which this license is valid.

Value	Enumeration	Description
0	Unknown	Invalid product type
1	EUVSA	Dell UnityVSA product family
3	EU	Dell Unity product family

LicenseUnitOfMeasurementEnum

Unit of measurement for compliance with the given license instance

Value	Enumeration	Description
0	Unknown	Indicates an invalid unit of measurement in license file.
1	CA	Indicates the unit of measurement will be registered capacity in TiB.
2	CB	Indicates the unit of measurement will be raw capacity in TiB.
3	CC	Indicates the unit of measurement will be usable capacity in TiB.
4	IC	Indicates the unit of measurement will be instance measured per storage array.

LocaleEnum

Value	Enumeration
0	en_US
1	es_AR
2	de_DE
3	fr_FR
5	ja_JP
6	ko_KR
7	pt_BR
8	ru_RU
9	zh_CN

LUNTypeEnum

Types of LUNs.

Value	Enumeration	Description
1	GenericStorage	Generic Storage Volume, i.e. LUN associated with Consistency group.
2	Standalone	Standalone Storage Volume (LUN), not associated with Consistency group.
3	VmWareISCSI	VMWare Storage Volume for VMFS datastore.

MetricTypeEnum

Value	Enumeration
2	counter32
3	counter64
4	rate
5	fact
6	text

7	virtualcounter32
8	virtualcounter64

MetricUnitEnum

Value	Enumeration
0	OTHER
1	BYTES
2	BYTES_PER_SECOND
3	PERCENTAGE
4	COUNT
5	MILLISECONDS
6	IOS
7	IOS_PER_SECOND
8	PACKETS_PER_SECOND
9	MICROSECONDS
10	KILOBYTES
11	KILOBYTES_PER_SECOND
12	MEGABYTES
13	COUNT_PER_SECOND

MirrorConditionEnum

Mirror condition

Value	Enumeration	Description
0	Unknown	Condition of mirror is unknown.
1	Master	Condition of mirror is master.
2	Normal	Condition of mirror is normal.
3	Admin_Fracture	Condition of mirror is admin fracture.
4	Sys_Fracture	Condition of mirror is system fracture.
5	Synch_Queue	Condition of mirror is sync queue.
6	Syncing	Condition of mirror is syncing.
7	Waiting_On_Admin	Condition of mirror is waiting on admin.

MirrorStateEnum

Mirror state.

Value	Enumeration	Description
100	Unknown	Mirror state is unknown.
101	Out_Of_Sync	Mirror state is out of sync.
102	In_Sync	Mirror state is in sync.
103	Consistent	Mirror state is consistent.
104	Syncing	Mirror state is syncing.

MoveSessionPriorityEnum

An enumeration that represents the spectrum of priorities for a move session.

Value	Enumeration	Description
0	Idle	With an idle priority the migration session there is no copy I/O generated. The migration session will continue to mirror host I/O.
1	Low	The low priority is designated for migration sessions that have the least precedence over other migration sessions.
2	Below_Normal	Migration sessions that have a below normal priority are slightly less critical than the average (or normal) migration session.
3	Normal	The default priority that is appropriate for most use cases.
4	Above_Normal	Migration sessions that have an above normal priority are slightly more critical than the average (or normal) migration session.
5	High	The high priority is reserved for migration sessions that take the highest precedence over other migration sessions.

MoveSessionStateEnum

An enumeration that represents the spectrum of priorities for a move session.

Value	Enumeration	Description
0	Initializing	The migration session is in the process of initializing.

1	Queued	The migration session is queued to run. The system will begin the data transfer when there are sufficient resources.
2	Running	The running state indicates that the migration session is transferring data.
3	Failed	The migration session has failed. Consult the health of migration session for more details.
4	Cancelling	The cancelling state indicates that the migration session is in the process of being cancelled
5	Cancelled	The cancelled state indicates that the migration session has been cancelled.
6	Completed	The data transfer for the migration session has completed.

MoveSessionStatusEnum

An enumeration that represents the various status values for a move session.

Value	Enumeration	Description
0	OK	The migration(move) object is operating normally
1	PoolOffline	The pool went offline and the migration cannot continue. Please remove the migration session, address the issue, and recreate the migration session
2	PoolOutOfSpace	The pool exhausted the space available and the migration cannot continue. Please remove the migration session, address the issue, and recreate the migration session.
3	InternalError	The managed object encountered an internal error. Please contact your service provider.

MoveSessionThrottleEnum

Value	Enumeration
0	Idle
10	Low
20	Below_Normal
30	Normal
40	Above_Normal
50	High

NasServerFileTypeEnum

The available types for NAS server scope file uploads and downloads.

Value	Enumeration	Description
0	Unknown	
1	Ldap_Configuration	Upon configuration of your LDAP settings your NAS server attempts to connect to the LDAP server and automatically detects default LDAP schema depending on by the type of your LDAP server (such as SFU or OpenLDAP).
2	Ldap_CA_Certificate	A Certificaton Authority (CA) Certificate is used for validating certificate of the LDAP Server.
3	Username_Mappings	A NAS server text file (NTXMAP) to map Windows and UNIX user accounts with different names.
4	Virus_Checker_Configuration	Antivirus configuration file with parameters of CAVA service.
5	Users	Unix-style local users "passwd" file. Used for resolving unix users for NFS, FTP. Each line contains: username, encrypted password (optional), UID, GID.
6	Groups	Unix-style groups file. Each line contains: group name, GID (Group ID), and list of UIDs (group members user IDs).
7	Hosts	Unix-style hosts file. Each line contains: IP address, corresponding host name, and (optionally) an alias.
8	Netgroups	Unix-style file with network groups. Each line contains: group name and members such as hosts and other groups.
9	User_Mapping_Report	The report generated by an explicit request, for dry-run of users mapping update (typically before enabling multiprotocol on a NAS Server). This contains a reports about user mapping problems and upcoming NAS server changes.
10	Kerberos_Key_Table	Kerberos Key Table (keytab) file is required for secure NFS with custom Kerberos settings. It contains service principal names (SPNs), encryption methods and keys for secure NFS service.
11	Homedir	Configuration file with users name and home directory. Each line contains: a Windows domain (optional), a user name, a home directory (related to the NAS server root) and non-mandatory options.

NasServerTypeEnum

Value	Enumeration
32	Type32
64	Type64

NasServerUnixDirectoryServiceEnum

Define the Unix directory service used for looking up identity information for Unix such as UIDs, GIDs, net groups, and so on.

Value	Enumeration	Description
0	None	No Unix Directory Services is used.
1	Local	Use local files for looking up identity information.
2	NIS	Use NIS servers for looking up identity information.
3	LDAP	Use LDAP servers for looking up identity information.
4	LocalThenNIS	
5	LocalThenLDAP	

NFSAccessLevelEnum

NFS Share access levels.

Value	Enumeration	Description
0	Read	Read-only access.
1	Write	Read-Write access.
2	Root	Read-Write, Root access.
3	None	No access.

NFSShareDefaultAccessEnum

Default access level for all hosts that can access the share.

Value	Enumeration	Description
0	NoAccess	Deny access to the share for the hosts.
1	ReadOnly	Allow read only access to the share for the hosts.
2	ReadWrite	Allow read write access to the share for the hosts.
3	Root	Allow read write root access to the share for the hosts.
4	RoRoot	Allow read only root access to the share for the hosts.

NFSShareRoleEnum

Role of NAS server network interface.

Value	Enumeration	Description
0	Production	Production NFS shares are used to access production file systems and snapshots. They are inactive while NAS server is in destination mode.
1	Backup	Backup NFS shares are used to access snapshots for NDMP/NFS backup or Disaster Recovery testing. They are always active in all NAS server modes.

NFSShareSecurityEnum

NFS enforced security type for users accessing an NFS share.

Value	Enumeration	Description
0	Sys	Allow user to authenticate with any NFS security types: UNIX, Kerberos, Kerberos with integrity and Kerberos with encryption.
1	Kerberos	Allow only Kerberos security for user authentication.
2	KerberosWithIntegrity	Allow only Kerberos with integrity and Kerberos with encryption security for user authentication.
3	KerberosWithEncryption	Allow only Kerberos with encryption security for user authentication.

NFSTypeEnum

NFS Share type.

Value	Enumeration	Description
1	Nfs_Share	The NFS share is created on a filesystem.
2	Vmware_Nfs	The NFS share is created on a VMware datastore.
3	Nfs_Snapshot	The NFS share is created on a snapshot.

NodeEnum

Value	Enumeration	Description
0	SPA	
1	SPB	
2,989	Unknown	LUNs may return Unknown for current node when in an intermediate or failed state. Unknown is never valid in a configuration change request.

NotRecommendedReasonEnum

Thin clone operations.

Value	Enumeration	Description
1	None	Snapshot could be used for requested Thin clone operation.
2	NotReadOnly	Snapshot is currently in rw attached mode and cannot be used for Thin clone operation.
3	AutoDeleteSet	Snapshot has auto delete set to true and cannot be used for Thin clone operation.
4	ExpirationTimeSet	Snapshot has retention policy configured to remove snap in some period and cannot be used for Thin clone operation.
5	SystemSnap	Snapshot is system and cannot be used for Thin clone operation.

PayloadTypeEnum

Payload type enum.

Value	Enumeration	Description
0	Callback	Callback - Results of previously submitted structured, binary, or event payloads
1	Customer_Notification	Customer_Notification - Customer notification payloads

PingStatusEnum

Value	Enumeration
0	Alive
1	Unreachable

PolicyComplianceStatusEnum

Overall compliance status of the Virtual Volume.

Value	Enumeration
0	Compliant
1	NonCompliant
2	Unknown

PoolConsumerTypeEnum

PoolConsumerTypeEnum describes different types of object consuming space from pool.

Value	Enumeration	Description
1	FileSystem	storageResource of type filesystem.
2	ConsistencyGroup	storageResource of type consistencyGroup.
3	VMwareNFS	storageResource of type vmwareNfs.
4	VMwareVMFS	storageResource of type vmwareLun.
8	LUN	storageResource of type lun.
9	VVolDatastoreFS	storageResource of type VVol (file).
10	VVolDatastoreISCSI	storageResource of type VVol (block).
32,768	NASServer	nasServer.

PoolDataRelocationTypeEnum

Pool FAST VP data relocation types.

Value	Enumeration	Description
1	Manual	FAST VP relocation is supposed to start manualy.
2	Scheduled	FAST VP relocation is scheduled.
3	Rebalance	FAST VP is now rebalancing the pool.

PoolStateEnum

Pool state.

Value	Enumeration	Description
1	Initializing	The storage pool is being created.
2	Ready	The storage pool is operating normally.
3	Faulted	The storage pool is degraded.
4	Offline	The storage pool is offline.
5	Destroying	The storage pool is being deleted.

PoolTypeEnum

Type of storage pool based on disk types.

Value	Enumeration	Description
0	Unknown	The pool has an unknown tier.
10	Extreme_Performance	The pool has an extreme performance tier only.
20	Performance	The pool has a performance tier only.
30	Capacity	The pool has a capacity tier only.
100	Multi_Tier	The pool has multiple tiers.

PoolUnitOpStatusEnum

This must be merge of operational statuses of all classes derived from poolUnit. Some statuses are applicable for all poolUnit classes, the other are specific for certain subclasses. @author Stanislav Samolenkov

Value	Enumeration
0	Unknown
1	Other
2	OK
3	Degraded
4	Stressed
5	Predictive_Failure
6	Error
7	Non_Recoverable_Error
8	Starting
9	Stopping
10	Stopped
11	In_Service
12	No_Contact
13	Lost_Communication
14	Aborted
15	Dormant
16	Supporting_Entity_in_Error
17	Completed
18	Power_Mode
19	Online
20	Available
21	Offline
22	Available_Connection_Invalid
23	Available_Restore_Possible
32,768	Inconsistency_Detected
32,769	No_Backend_Object
32,770	Under_Construction

PoolUnitTypeEnum

Value	Enumeration
1	RAID_Group
2	Virtual_Disk

PortRepCapabilityEnum

Port replication capability.

Value	Enumeration	Description
0	Sync_Replication	This port can be used for sync replication.
1	RecoverPoint	This port can be used for RecoverPoint.

PowerSupplyInputTypeEnum

Value	Enumeration
0	UNKNOWN
1	AC
2	DC

ProductTypeEnum

Value	Enumeration
0	VNXe
1	VNX

3	CX4
4	vVNX

ProxyProtocolEnum

Proxy server protocols.

Value	Enumeration	Description
0	Http	Support proxy protocol is http.
1	Socks	Support proxy protocol is socks.

PublicKeyAlgoTypeEnum

Cryptographic algorithm used to generate the public key.

Value	Enumeration	Description
1	RSA	RSA algorithm.
2	DSA	Digital Signature Algorithm (DSA).
3	ECDSA	Elliptic Curve Digital Sigature Algorithm (ECDSA).
99	Unknown	Unknown algorithm.

QOSBurstDurationEnum

Burst Duration for the Storage Profile.

Value	Enumeration
0	one_minute
1	three_minutes
2	five_minutes

QOSLimitTypeEnum

Limit Type for the Storage Profile.

Value	Enumeration
0	Density_Per_GB
1	Absolute

QOSLimitUsageEnum

Limit Usage for the Storage Profile.

Value	Enumeration
0	Maximum_Rate
1	Maximum_Bandwidth
2	Both

QuotaPolicyEnum

A quota policy value represents a policy how drive usage (used by a user or within a quota tree) is calculated.

Value	Enumeration	Description
1	Blocks	Calculates drive usage in terms of file system blocks (8 KB units) and the usage of all files including directories and symbolic links. With this policy, any operation resulting in allocation of blocks or removal of blocks such as creating, expanding, or deleting a directory; writing or deleting files; or creating or deleting symbolic links changes block usage. Note: When using the blocks policy, the user can create a sparse file whose size is large (more than the limit), but that actually uses few blocks on the drive.
0	File_Size	Calculates drive usage only in terms of logical file sizes, ignoring directory sizes and symbolic links. Use this policy where file sizes are critical to quotas, such as where user usage is based on the size of the files created, and where sizes or their sum exceeding the limit is unacceptable. This policy is recommended in CIFS environments. With this policy , block usage depends solely on the number of bytes added to or removed from the file. Usage depends only on changes to a regular file. Directories and symbolic links are not considered.

QuotaStateEnum

A QuotaStateEnum value represents a state of the quota record (either user quota or tree quota) period.

Value	Enumeration	Description
0	OK	No quota limits are exceeded.
1	Soft_Exceeded	Soft limit is exceeded, and grace period is not expired yet.
2	Soft_Exceeded_And_Expired	Soft limit is exceeded, and grace period is expired.
3	Hard_Exceeded	Hard limit is exceeded.
4	Unlimited	Grace Period Unlimited.

RaidGroupOpStatusEnum

Now raidGroup does not have operational statuses. Enum exists for compatibility with base class poolUnit. @author Stanislav Samolenkov

Value	Enumeration
0	Unknown
1	Other
2	OK
3	Degraded
4	Stressed
5	Predictive_Failure
6	Error
7	Non_Recoverable_Error
8	Starting
9	Stopping
10	Stopped
11	In_Service
12	No_Contact
13	Lost_Communication
14	Aborted
15	Dormant
16	Supporting_Entity_in_Error
17	Completed
18	Power_Mode

RaidStripeWidthEnum

This enum provides a set of choices for RAID group stripe widths, including parity or mirror disks.
For example, a stripe width of 5 for RAID5 specifies a 4+1 RAID5 configuration.

Value	Enumeration	Description
0	BestFit	BestFir value is used in automatic selection of stripe configuration.
2	_2	A 2 disk group, usable in RAID10 1+1 configuration.
4	_4	A 4 disk group, usable in RAID10 2+2 configuration.
5	_5	A 5 disk group, usable in RAID5 4+1 configuration.
6	_6	A 6 disk group, usable in RAID6 4+2 and RAID10 3+3 configurations.
8	_8	A 8 disk group, usable in RAID6 6+2 and RAID10 4+4 configurations.
9	_9	A 9 disk group, usable in RAID5 8+1 configuration.
10	_10	A 10 disk group, usable in RAID6 8+2 and RAID10 5+5 configurations.
12	_12	A 12 disk group, usable in RAID6 10+2 and RAID10 6+6 configurations.
13	_13	A 13 disk group, usable in RAID5 12+1 configuration.
14	_14	A 14 disk group, usable in RAID6 12+2 configuration.
16	_16	raid strip width including parity disks, can be used in RAID6 14+2 configuration.

RaidTypeEnum

RAID group types or RAID levels.

Value	Enumeration	Description
0	None	None.
1	RAID5	RAID 5 has one parity disk. It provides best performance and space efficiency. RAID 5 groups provide protection for single disk faults and RAID5 is vulnerable to double disk fault. The preferred stripe width configurations are 4+1 and 8+1.
2	RAID0	RAID 0 is a striping RAID. No parity or mirroring protection used. RAID 0 is not used in the storage system.
3	RAID1	RAID 1 provides mirroring protection. RAID 1 is used only to create RAID groups for FAST Cache.
4	RAID3	RAID 3 is not used in the storage system.
7	RAID10	RAID 1/0 is mixture of striping and mirroring. It has a number of parity disks equal to half of the disks in the RAID group. The best for heavy transactional workloads with random writes. The preferred stripe width configuration is 4+4.
10	RAID6	RAID 6 uses two disks for parity, it's mostly used with NL-SAS disks and read intensive workloads, for archives and backups. Two disks in the RAID group may fail simultaneously without data loss. The preferred stripe width configurations are 8+2 and 14+2.
12	Mixed	(Applies to pool objects only.) Indicates that RAID groups in a pool have different RAID levels. Do not use this value in Create or Modify requests.
		Automatic is a valid value for create/modify requests.

48,879	Automatic	Indicates that the default RAID level will be used in pool's Create and Modify requests for the specified TierType. E.g. for SAS disk type (performance tier) RAID5, for NL-SAS disk type (capacity tier) RAID6. You can obtain the default RAID levels by querying the storageTier objects.

RebootPrivilegeEnum

Reboot for a time change is required only if the time shift exceeds a threshold of 1000 seconds. If a reboot is required, and allowed, on a single SP system or a system with only one SP operating, then clients will be unable to access data during the reboot.

Value	Enumeration	Description
0	No_Reboot_Allowed	Set time or NTP server if possible without a reboot.
1	Reboot_Allowed	Set time or NTP server if possible; reboot if needed, but do not allow data unavailability.
2	DU_Allowed	Set time or NTP server if possible; reboot if needed, even if this will cause data unavailability.

RecallPolicyEnum

Represents the recall policy

Value	Enumeration	Description
0	Full	Recalls the whole file to Unity on read request before the data is returned
1	PassThrough	Retrieves data without recalling the data to Unity
2	Partial	Recalls only the blocks required to satisfy the client read request.
3	None	Specifies no override

RecallPolicyOnDeleteEnum

Represents the policy about how to handle the remote data when deleting a DHSM connection.

Value	Enumeration	Description
0	Yes	Migrates the files back to the Unity before the connection is removed
1	No	Deletes the connection without checking for stub files that depend on the connection
2	Fail	Scans the file system for stub files that depend on the connection and fails on the first one.

RemoteObjectTypeEnum

Type of replicated or imported remote object available locally. .

Value	Enumeration
0	lun
1	filesystem
2	consistencyGroup
3	nasServer

RemoteServiceTypeEnum

Remote service type.

Value	Enumeration	Description
0	Disabled	Disabled - Remote connection service is disabled on the storage system.
1	Direct	Direct - Connect to remote service directly.
2	Gateway	Gateway - Connect to remote service through the gateway [Secure Connect Gateway (SCG) 5.12 or higher].

RemoteSyslogCategoryEnum

Remote syslog category types.

Value	Enumeration	Description
0	All_Log	All kinds of categories Logs
1	User_Log	User visible logs besides audit log and authentication log
2	Audit_Log	Audit Log recording changes made to the system
3	Authentication_Log	Log recording authentication activities

RemoteSyslogFacilityTypeEnum

Remote syslog facility types.

Value	Enumeration	Description
0	Kernel_Messages	Kernel Messages

1	User_level_Messages	User-Level Messages
5	Syslogd	Messages Generated Internally by syslogd

RemoteSystemConnectionTypeEnum

Type of remote system connection.

Value	Enumeration	Description
0	Sync	Synchronous replication.
1	Async	Asynchronous replication.
2	Both	Both Synchronous and Asynchronous replication.

RemoteSystemTypeEnum

Remote system platform type.

Value	Enumeration	Description
0	VNXe	VNXe type remote system.
1	VNX	VNX type remote system.
99	Unknown	Unknown.

ReplicationCapabilityEnum

Remote system connection capability

Value	Enumeration	Description
0	Sync	Synchronous replication connection or session
1	Async	Asynchronous replication connection or session
2	Both	Synchronous and Asynchronous replication connection or session
3	None	No regular replication connection or session

ReplicationElementTypeEnum

Replication element type.

Value	Enumeration	Description
0	lun	LUN
1	filesystem	File system

ReplicationEndpointResourceTypeEnum

Replication session end-point storage resource type.

Value	Enumeration	Description
1	filesystem	File system.
2	consistencyGroup	Consistency group.
3	vmwarefs	VMware (NFS).
4	vmwareiscsi	VMware (VMFS).
8	lun	LUN.
10	nasServer	NAS Server

ReplicationFailbackForceDataLossChoiceEnum

Types of replication session failback force data choice.

Value	Enumeration	Description
0	None	Fail the operation if data both ends of the replication have been read/write while the session was stopped.
1	Discard_Destination_Changes	Discard writes to the destination since the replication stopped, and resync from the source.
2	Discard_Source_Changes	Discard writes to the source since the replication stopped, and resync from the destination.

ReplicationOpStatusEnum

Status of replication session end point.

Value	Enumeration	Description
0	Unknown	Unknown.
1	Other	Other.
2	OK	OK.
7	Non_Recoverable_Error	Non-recoverable error.

13	Lost_Communication	Lost communication between source and destination end of the session.
33,792	Failed_Over_with_Sync	Planned failover state - Production access from destination site.
33,793	Failed_Over	DR Failed over - Production access from destination site.
33,794	Manual_Syncing	Sync in-progress for a manual sync session.
33,795	Paused	Session is in paused state.
33,796	Idle	Session is idle.
33,797	Auto_Sync_Configured	Sync in-progress for auto sync session.
33,803	Destination_Extend_Failed_Not_Syncing	Destination resource extend failed, session is not syncing.
33,804	Destination_Extend_In_Progress	Destination resource extend in-progress.
33,805	Active	Replication session is active.
33,806	Lost_Sync_Communication	Synchronous replication connection is down.
33,807	Destination_Pool_Out_Of_Space	Destination resource related pool is out of space.
33,809	Syncing	Replication session is syncing.
34,792	Failed_Over_with_Sync_Mixed	Planned failover state Mixed - Production access from destination site.
34,793	Failed_Over_Mixed	DR Failed over Mixed - Production access from destination site.
34,794	Manual_Syncing_Mixed	Sync in-progress Mixed for a manual sync session.
34,795	Paused_Mixed	Session is in paused mixed state.
34,796	Idle_Mixed	Session is idle mixed.
34,797	Auto_Sync_Configured_Mixed	Sync in-progress for auto sync session.
34,798	Hibernated	Source or destination is in hibernated state.
34,799	Zero_Bandwidth_Configured	Data transfer suspended due to zero bandwidth configured.
34,800	Source_VDM_Performance_Degraded	Performance of source VDM is degraded.
34,801	Source_Resource_Performance_Degraded	Performance of source resource is degraded.
34,802	Temp_Paused_By_Async	Temporarily Paused By Inbound Async Session.

ReplicationPolicyEnum

Indicates the status of the NAS server object operating as a replication destination.

Value	Enumeration	Description
0	Not_Replicated	NAS object is not replicated over to the destination.
1	Replicated	NAS object is automatically synchronized over to the replication destination. Any modify or delete operations at the source will automatically be reflected on the destination.
2	Overridden	NAS object has been manually modified or overridden on the replication destination. Modifications on the source NAS server will have no effect on the overridden object on the replication destination.

ReplicationSessionNetworkStatusEnum

Replication session network status types.

Value	Enumeration	Description
0	Unknown	Unknown.
1	Other	Other.
2	OK	OK.
5	Lost_Communication	Lost communication to remote site.
10	Lost_Sync_Communication	Lost synchronous connection communication.
18	Zero_Bandwidth_Configured	Data transfer is suspended because bandwidth is set to 0

ReplicationSessionReplicationRoleEnum

Value	Enumeration	Description
0	Source	Source side of a remote replication
1	Destination	Destination side of a remote replication
2	Loopback	Session is between resources from the same SP on the local array
3	Local	Session is between resources from different SPs on the local array
4	Unknown	Session role unknown

ReplicationSessionStatusEnum

Status of replication session end point.

Value	Enumeration	Description
0	Unknown	Unknown.
1	Other	Other.
2	OK	OK.
3	Paused	Paused.
4	Fatal_Replication_Issue	Fatal issue.
5	Lost_Communication	Lost communication to remote site.
6	Failed_Over	Failed over.
7	Failed_Over_With_Sync	Planned failed over.
8	Destination_Extend_Not_Syncing	Destination resource extension failed.
9	Destination_Extend_In_Progress	Destination pool full or destination resource is extending.
10	Lost_Sync_Communication	Lost synchronous replication connection.
11	Destination_Pool_Out_Of_Space	Destination pool out of space.
16	Hibernated	Session is hibernated.

ReplicationSessionSyncStateEnum

Status of replication session scheduler.

Value	Enumeration	Description
0	Manual_Syncing	Sync in-proress for manual sync session.
1	Auto_Syncing	RPO sync in-progress for auto sync session.
2	Idle	Session is idle.
100	Unknown	Unknown.
101	Out_Of_Sync	Destination out of sync.
102	In_Sync	Both source and target are in sync.
103	Consistent	Destination is consistent with source data.
104	Syncing	Actively synchronizing.
105	Inconsistent	Destination is not consistent with source.

ReplicationTypeEnum

Replication type for replication session Valid values are: None, Local, Remote and Mixed

Value	Enumeration	Description
0	None	No replication session exists for the resource
1	Local	Async Replication session between resources from local system exists for the resource
2	Remote	Replication session between resources on local system and remote system exists for the resource
3	Mixed	More than one async replication session involved resources on local system

ReplicaTypeEnum

Defines the replica type of VVol. It can be base VVol, snapshot or fast-clone.

Value	Enumeration	Description
0	Base	Base (primary) VVol.
1	PreSnapshot	Prepared snapshot VVol.
2	Snapshot	Snapshot VVol.
3	FastClone	Fast-clone VVol.

ResourcePoolFullPolicyEnum

Value	Enumeration	Description
0	Delete_All_Snaps	Opt to delete all snaps to free up pool space.
1	Fail_Writes	Opt to fail writes.

RetrieveCertErrorCodeEnum

Retrieve certificate error code.

Value	Enumeration
0	OK
1	SETUP_TCP_CONNECT_TIMEOUT

2	DNS_LOOKUP_FAILED
3	RETRIEVE_CERT_FAILED

RoleMappingTypeEnum

The type of role mapping. This may be localuser, ldapuser, or ldapgroup.

Value	Enumeration	Description
0	ldapgroup	LDAP Group role.
1	ldapuser	LDAP User role.
2	localuser	Local User role.
3	unknown	Unknown role type.

SasStatusEnum

Possible SAS port statuses.

Value	Enumeration	Description
0	Unknown	SAS port status is unknown.
2	OK	SAS port status is OK.
3	Degraded	SAS port status is degrated.
32,784	Link_Up	SAS port status is link up.
32,785	Link_Down	SAS port status is link down.
32,816	Maximum_Enclosures_Exceeded	SAS port status is maximum enclosures exceeded.
33,024	Uninitialized	SAS port status is uninitialized.
33,025	Empty	SAS port status is empty.
33,026	Missing	SAS port status is missing.
33,027	Faulted	SAS port status is faulted.
33,028	Unavailable	SAS port status is unavailable.
33,029	Disabled	SAS port status is disabled.
33,280	SFP_Not_Present	SAS port status is SFP not present.
33,281	Module_Not_Present	SAS port status is module not present.
33,282	Port_Not_Present	SAS port status is port not present.
33,283	Missing_SFP	SAS port status is missing sfp.
33,284	Missing_Module	SAS port status is missing module.
33,285	Incorrect_SFP_Type	SAS port status is incorrect SFP type.
33,286	Incorrect_Module	SAS port status is incorrect module.
33,287	SFP_Read_Error	SAS port status is SFP read error.
33,288	Unsupported_SFP	SAS port status is unsupported SFP.
33,289	Module_Read_Error	SAS port status is module read error.
33,290	Exceeded_Maximum_Limits	SAS port status is exceeded maximum limits.
33,291	Module_Powered_Off	SAS port status is module powered off.
33,292	Unsupported_Module	SAS port status is unsupported module.
33,293	Database_Read_Error	SAS port status is database read error.
33,294	Faulted_SFP	SAS port status is faulted SFP.
33,295	Hardware_Fault	SAS port status is hardware fault.
33,296	Disabled_User_Initiated	SAS port status is disabled user initiated.
33,297	Disabled_Encryption_Required	SAS port status is disabled encryption required.
33,298	Disabled_Hardware_Fault	SAS port status is disabled hardware fault.

ScheduleTimezoneCandidatesEnum

Enumeration of possible schedule timezone candidates.

Value	Enumeration	Description
10	UTCm1200CoordinatedUniversalTime	(UTC-12:00) Coordinated Universal Time
20	UTCm1100MidwayNiuePagoPagoSamoa	(UTC-11:00) Midway, Niue, Pago Pago, Samoa
30	UTCm1100CoordinatedUniversalTime	(UTC-11:00) Coordinated Universal Time
40	UTCm1000AdakAtka	(UTC-10:00) Adak, Atka
50	UTCm1000HonoluluJohnstonRarotongaTahiti	(UTC-10:00) Honolulu, Johnston, Rarotonga, Tahiti
60	UTCm1000CoordinatedUniversalTime	(UTC-10:00) Coordinated Universal Time
70	UTCm0930Marquesas	(UTC-09:30) Marquesas
80	UTCm0930CoordinatedUniversalTime	(UTC-09:30) Coordinated Universal Time

90	UTCm0900AlaskaJuneauMetlakatlaSitka	(UTC-09:00) Alaska, Juneau, Metlakatla, Sitka
100	UTCm0900Gambier	(UTC-09:00) Gambier
110	UTCm0900CoordinatedUniversalTime	(UTC-09:00) Coordinated Universal Time
120	UTCm0800BajaNorteEnsenadaLosAngeles	(UTC-08:00) BajaNorte, Ensenada, Los Angeles
130	UTCm0800PacificTimeUSCanada	(UTC-08:00) Pacific Time (US & Canada)
140	UTCm0800Pitcairn	(UTC-08:00) Pitcairn
150	UTCm0800CoordinatedUniversalTime	(UTC-08:00) Coordinated Universal Time
160	UTCm0700BajaSurChihuahuaMazatlan	(UTC-07:00) BajaSur, Chihuahua, Mazatlan
170	UTCm0700BoiseCambridgeBayYellowknife	(UTC-07:00) Boise, Cambridge Bay, Yellowknife
180	UTCm0700MountainTimeUSCanada	(UTC-07:00) Mountain Time (US & Canada)
190	UTCm0700CrestonDawsonCreekHermosilloPhoenix	(UTC-07:00) Creston, Dawson Creek, Hermosillo, Phoenix
200	UTCm0700CoordinatedUniversalTime	(UTC-07:00) Coordinated Universal Time
210	UTCm0600BahiaBanderasMeridaMexicoCityMonterrey	(UTC-06:00) Bahia Banderas, Merida, Mexico City, Monterrey
220	UTCm0600CentralTimeUSCanada	(UTC-06:00) Central Time (US & Canada)
230	UTCm0600ChicagoMatamorosMenominee	(UTC-06:00) Chicago, Matamoros, Menominee
240	UTCm0600EasterIsland	(UTC-06:00) EasterIsland
250	UTCm0600ManaguaSaskatchewanTegucigalpa	(UTC-06:00) Managua, Saskatchewan, Tegucigalpa
260	UTCm0600CoordinatedUniversalTime	(UTC-06:00) Coordinated Universal Time
270	UTCm0500AtikokanBogotaLimaRioBranco	(UTC-05:00) Atikokan, Bogota, Lima, Rio Branco
280	UTCm0500DetroitIqaluitMarengoNewYorkVincennes	(UTC-05:00) Detroit, Iqaluit, Marengo, New York, Vincennes
290	UTCm0500EasternTimeUSCanada	(UTC-05:00) Eastern Time (US & Canada)
300	UTCm0500Havana	(UTC-05:00) Havana
310	UTCm0500CoordinatedUniversalTime	(UTC-05:00) Coordinated Universal Time
320	UTCm0400Asuncion	(UTC-04:00) Asuncion
330	UTCm0400AtlanticBermudaHalifaxMoncton	(UTC-04:00) Atlantic, Bermuda, Halifax, Moncton
340	UTCm0400CampoGrandeCuiaba	(UTC-04:00) Campo Grande, Cuiaba
350	UTCm0400Caracas	(UTC-04:00) Caracas
360	UTCm0400ContinentalPalmerSantiago	(UTC-04:00) Continental, Palmer, Santiago
370	UTCm0400LaPazManausSantoDomingoWest	(UTC-04:00) La Paz, Manaus, Santo Domingo, West
380	UTCm0400CoordinatedUniversalTime	(UTC-04:00) Coordinated Universal Time
390	UTCm0330NewfoundlandStJohns	(UTC-03:30) Newfoundland, St Johns
400	UTCm0330CoordinatedUniversalTime	(UTC-03:30) Coordinated Universal Time
410	UTCm0300AraguainaBahiaBuenosAiresMontevideo	(UTC-03:00) Araguaina, Bahia, Buenos Aires, Montevideo
420	UTCm0300EastSaoPaulo	(UTC-03:00) East, Sao Paulo
430	UTCm0300Godthab	(UTC-03:00) Godthab
440	UTCm0300Miquelon	(UTC-03:00) Miquelon
450	UTCm0300CoordinatedUniversalTime	(UTC-03:00) Coordinated Universal Time
460	UTCm0200DeNoronhaNoronhaSouthGeorgia	(UTC-02:00) DeNoronha, Noronha, South Georgia
470	UTCm0200CoordinatedUniversalTime	(UTC-02:00) Coordinated Universal Time
480	UTCm0100AzoresScoresbysund	(UTC-01:00) Azores, Scoresbysund
490	UTCm0100CapeVerde	(UTC-01:00) Cape Verde
500	UTCm0100CoordinatedUniversalTime	(UTC-01:00) Coordinated Universal Time
510	UTCp0000CasablancaElAaiun	(UTC+00:00) Casablanca, El Aaiun
520	UTCp0000DublinLisbonLondon	(UTC+00:00) Dublin, Lisbon, London
530	UTCp0000LomeMonroviaReykjavikSaoTome	(UTC+00:00) Lome, Monrovia, Reykjavik, Sao Tome
540	UTCp0000Troll	(UTC+00:00) Troll
550	UTCp0000CoordinatedUniversalTime	(UTC+00:00) Coordinated Universal Time
560	UTCp0100AlgiersLagosNdjamenaNiameyTunis	(UTC+01:00) Algiers, Lagos, Ndjamena, Niamey, Tunis
570	UTCp0100AmsterdamBerlinRomeStockholmVienna	(UTC+01:00) Amsterdam, Berlin, Rome, Stockholm, Vienna
580	UTCp0100BelgradeBratislavaBudapestLjubljanaPrague	(UTC+01:00) Belgrade, Bratislava, Budapest, Ljubljana, Prague
590	UTCp0100BrusselsCopenhagenMadridParis	(UTC+01:00) Brussels, Copenhagen, Madrid, Paris
600	UTCp0100SarajevoSkopjeWarsawZagreb	(UTC+01:00) Sarajevo, Skopje, Warsaw, Zagreb
610	UTCp0100CoordinatedUniversalTime	(UTC+01:00) Coordinated Universal Time

620	UTCp0200Amman	(UTC+02:00) Amman
630	UTCp0200AthensBucharest	(UTC+02:00) Athens, Bucharest
640	UTCp0200Beirut	(UTC+02:00) Beirut
650	UTCp0200ChisinauTiraspol	(UTC+02:00) Chisinau, Tiraspol
660	UTCp0200Damascus	(UTC+02:00) Damascus
670	UTCp0200GazaHebron	(UTC+02:00) Gaza, Hebron
680	UTCp0200HarareKaliningradTripoliWindhoek	(UTC+02:00) Harare, Kaliningrad, Tripoli, Windhoek
690	UTCp0200HelsinkiKievRigaSofiaTallinnVilnius	(UTC+02:00) Helsinki, Kiev, Riga, Sofia, Tallinn, Vilnius
700	UTCp0200JerusalemTelAviv	(UTC+02:00) Jerusalem, Tel Aviv
710	UTCp0200CoordinatedUniversalTime	(UTC+02:00) Coordinated Universal Time
720	UTCp0300AsmeraJubaKampalaMinskMoscow	(UTC+03:00) Asmera, Juba, Kampala, Minsk, Moscow
730	UTCp0300BaghdadIstanbulKuwaitRiyadh	(UTC+03:00) Baghdad, Istanbul, Kuwait, Riyadh
740	UTCp0300CoordinatedUniversalTime	(UTC+03:00) Coordinated Universal Time
750	UTCp0330Tehran	(UTC+03:30) Tehran
760	UTCp0400BakuMuscatSamaraTbilisiYerevan	(UTC+04:00) Baku, Muscat, Samara, Tbilisi, Yerevan
770	UTCp0400CoordinatedUniversalTime	(UTC+04:00) Coordinated Universal Time
780	UTCp0430Kabul	(UTC+04:30) Kabul
790	UTCp0500AshgabatKarachiQyzylordaTashkent	(UTC+05:00) Ashgabat, Karachi, Qyzylorda, Tashkent
800	UTCp0500CoordinatedUniversalTime	(UTC+05:00) Coordinated Universal Time
810	UTCp0530ChennaiKolkataMumbai	(UTC+05:30) Chennai, Kolkata, Mumbai
820	UTCp0530CoordinatedUniversalTime	(UTC+05:30) Coordinated Universal Time
830	UTCp0545Katmandu	(UTC+05:45) Katmandu
840	UTCp0545CoordinatedUniversalTime	(UTC+05:45) Coordinated Universal Time
850	UTCp0600AlmatyBishkekChagosDhakaOmsk	(UTC+06:00) Almaty, Bishkek, Chagos, Dhaka, Omsk
860	UTCp0600CoordinatedUniversalTime	(UTC+06:00) Coordinated Universal Time
870	UTCp0630CocosRangoon	(UTC+06:30) Cocos, Rangoon
880	UTCp0630CoordinatedUniversalTime	(UTC+06:30) Coordinated Universal Time
890	UTCp0700BangkokHoChiMinhJakartaNovokuznetsk	(UTC+07:00) Bangkok, Ho Chi Minh, Jakarta, Novokuznetsk
900	UTCp0700Hovd	(UTC+07:00) Hovd
910	UTCp0700CoordinatedUniversalTime	(UTC+07:00) Coordinated Universal Time
920	UTCp0800BeijingChongqingHongKongUrumqi	(UTC+08:00) Beijing, Chongqing, Hong Kong, Urumqi
930	UTCp0800BruneiIrkutskKualaLumpurManila	(UTC+08:00) Brunei, Irkutsk, Kuala Lumpur, Manila
940	UTCp0800PerthSingaporeTaipeiUlaanbaatar	(UTC+08:00) Perth, Singapore, Taipei, Ulaanbaatar
950	UTCp0800CoordinatedUniversalTime	(UTC+08:00) Coordinated Universal Time
960	UTCp0830Pyongyang	(UTC+08:30) Pyongyang
970	UTCp0845Eucla	(UTC+08:45) Eucla
980	UTCp0845CoordinatedUniversalTime	(UTC+08:45) Coordinated Universal Time
990	UTCp0900ChitaSeoulTokyoYakutsk	(UTC+09:00) Chita, Seoul, Tokyo, Yakutsk
1,000	UTCp0900CoordinatedUniversalTime	(UTC+09:00) Coordinated Universal Time
1,010	UTCp0930AdelaideBrokenHillYancowinna	(UTC+09:30) Adelaide, Broken Hill, Yancowinna
1,020	UTCp0930Darwin	(UTC+09:30) Darwin
1,030	UTCp0930CoordinatedUniversalTime	(UTC+09:30) Coordinated Universal Time
1,040	UTCp1000BrisbaneGuamPortMoresbySaipanVladivostok	(UTC+10:00) Brisbane, Guam, Port Moresby, Saipan, Vladivostok
1,050	UTCp1000CanberraHobartMelbourneSydney	(UTC+10:00) Canberra, Hobart, Melbourne, Sydney
1,060	UTCp1000CoordinatedUniversalTime	(UTC+10:00) Coordinated Universal Time
1,070	UTCp1030LHILordHowe	(UTC+10:30) LHI, Lord Howe
1,080	UTCp1030CoordinatedUniversalTime	(UTC+10:30) Coordinated Universal Time
1,090	UTCp1100MagadanNorfolkSakhalinSolomon	(UTC+11:00) Magadan, Norfolk, Sakhalin, Solomon
1,100	UTCp1100CoordinatedUniversalTime	(UTC+11:00) Coordinated Universal Time
1,110	UTCp1200AnadyrFunafutiKamchatka	(UTC+12:00) Anadyr, Funafuti, Kamchatka
1,120	UTCp1200AucklandMcMurdoSouthPole	(UTC+12:00) Auckland, McMurdo, South Pole
1,130	UTCp1200Fiji	(UTC+12:00) Fiji
1,140	UTCp1200CoordinatedUniversalTime	(UTC+12:00) Coordinated Universal Time
1,150	UTCp1245Chatham	(UTC+12:45) Chatham
		(UTC+12:45) Coordinated Universal Time

1,160	UTCp1245CoordinatedUniversalTime	
1,170	UTCp1300Apia	(UTC+13:00) Apia
1,180	UTCp1300EnderburyFakaofoTongatapu	(UTC+13:00) Enderbury, Fakaofo, Tongatapu
1,190	UTCp1300CoordinatedUniversalTime	(UTC+13:00) Coordinated Universal Time
1,200	UTCp1400Kiritimati	(UTC+14:00) Kiritimati
1,210	UTCp1400CoordinatedUniversalTime	(UTC+14:00) Coordinated Universal Time
1,220	UTCLegacy	UTC Legacy

ScheduleTypeEnum

Enumeration of possible snapshot schedule types.

Value	Enumeration	Description
0	N_HOURS_AT_MM	Snap every <interval> hours, at <minutes> past the hour. Supported parameters: interval (required), minutes (optional, default 0)
1	DAY_AT_HHMM	Specify a list of <hour[,...]> to snap one or more times each day at <minutes> past the hour. Supported parameters: hours (at least one required), minutes (optional).
2	N_DAYS_AT_HHMM	Snap every <interval> days at the time <hours>:<minutes>. Supported Parameters: interval (required), hours (optional, exactly one), minutes (optional).
3	SELDAYS_AT_HHMM	Snap on the selected <daysOfWeek>, at the time <hours>:<minutes>. Supported parameters: daysOfWeek (at least one required), hours (optional, default 0), minutes (optional, default 0)
4	NTH_DAYOFMONTH_AT_HHMM	Snap on the selected <daysOfMonth>, at the time <hours>:<minutes>. Supported parameters: daysOfMonth (at least one required), hours (optional, default 0), minutes (optional, default 0).
5	UNSUPPORTED	

ScheduleVersionEnum

Enumeration of snapshot schedule versions.

Value	Enumeration	Description
1	Legacy	Legacy schedule with more than two rules of type HoursList, DaysInterval or MonthDaysList.
2	Simple	Simple schedule with two rules or less of rule type HoursInterval or WeekDaysList.

SchemeTypeEnum

LDAP server scheme type.

Value	Enumeration	Description
0	Unknown	Unknown LDAP scheme.
1	RFC2307	OpenLDAP/iPlanet scheme.
2	Microsoft	Microsoft Identity Management for UNIX (IDMU/SFU) scheme.

SecuritySettingsTLSModeEnum

TLS Mode

Value	Enumeration	Description
0	tls_1_0	TLSv1.0 and above are enabled. **Deprecated:** This attribute is obsolete and will be removed in a future release.
1	tls_1_1	TLSv1.1 and above are enabled. **Deprecated:** This attribute is obsolete and will be removed in a future release.
2	tls_1_2	TLSv1.2 and above are enabled.

SEDStatusEnum

Self encrypting drive status

Value	Enumeration	Description
0	Locking_Disabled	Self encrypting drive is not activated.
1	Locking_Enabled	Self encrypting drive is activated.
255	Unsupported	Self encrypting drive is not supported by the storage system.

ServiceContractStatusEnum

Service contract statuses.

Value	Enumeration	Description
0	Active	Service contract is active.
1	About_To_Expire	Service contract will expire in 90 days.

2	Expired	Service contract has expired.
3	Terminated	Contract is terminated.
4	Pending	Contract is pending. The contract start time is a future time.

ServiceLevelEnum

Service Level for the Capability Profile.

Value	Enumeration	Description
0	Basic	Basic service level.
1	Bronze	Bronze service level.
2	Silver	Silver service level.
3	Gold	Gold service level.
4	Platinum	Platinum service level.

ServiceTypeEnum

Types of services supported with certificate management.

Value	Enumeration	Description
2	VASA_HTTP	HTTP for VASA VVOL.
3	Mgmt_LDAP	LDAP for storage array administrative user authentication and authorization.
4	Mgmt_KMIP	KMIP for remote key storage and retrieval.
5	vSphere	VMware vSphere Service type.
6	RemoteSyslog	Remote Syslog Service type.
99	Unknown	Unknown service type.

SeverityEnum

Severity levels for alerts.

Value	Enumeration	Description
8	OK	OK
7	DEBUG	Debug
6	INFO	Information
5	NOTICE	Notice
4	WARNING	Warning
3	ERROR	Error
2	CRITICAL	Critical
1	ALERT	Alert
0	EMERGENCY	Emergency

SFPProtocolValuesEnum

Supported SFP protocols.

Value	Enumeration	Description
0	Unknown	SFP protocol is unknown.
1	FIBRE_CHANNEL	SFP protocol is Fibre Channel.
2	Ethernet	SFP protocol is Ethernet.
3	SAS	SFP protocol is SAS.

SFPSpeedValuesEnum

Supported SFP speeds.

Value	Enumeration	Description
0	Auto	Auto detected SFP transmission speed.
10	_10Mbps	10 Mbps auto detected SFP transmission speed.
100	_100Mbps	100 Mbps SFP transmission speed.
1,000	_1Gbps	1 Gbps SFP transmission speed.
1,500	_1500Mbps	1500 Mbps SFP transmission speed.
2,000	_2Gbps	2 Gbps SFP transmission speed.
3,000	_3Gbps	3 Gbps SFP transmission speed.
4,000	_4Gbps	4 Gbps SFP transmission speed.
6,000	_6Gbps	6 Gbps SFP transmission speed.

8,000	_8Gbps	8 Gbps SFP transmission speed.
10,000	_10Gbps	10 Gbps SFP transmission speed.
12,000	_12Gbps	12 Gbps SFP transmission speed.
16,000	_16Gbps	16 Gbps SFP transmission speed.
25,000	_25Gbps	25 Gbps SFP transmission speed.
32,000	_32Gbps	32 Gbps SFP transmission speed.
40,000	_40Gbps	40 Gbps SFP transmission speed.
100,000	_100Gbps	100 Gbps SFP transmission speed.
1,000,000	_1Tbps	1 Tibps SFP transmission speed.

SFPSupportedModeEnum

Supported SFP (the small form-factor pluggable) mode.

Value	Enumeration	Description
0	Unknown	SFP mode is Unknown.
1	Single_Mode	SFP mode is SingleMode.
2	Multi_Mode	SFP mode is MultiMode.

SignatureAlgoTypeEnum

Cryptographic algorithm used by the Certificate Authority (CA) to sign the certificate.

Value	Enumeration	Description
1	DSA_With_SHA	Digital Signature Algorithm (DSA) with Signature Hash Algrothm (SHA).
2	DSA_With_SHA1	Digital Signature Algorithm (DSA) with SHA1.
3	MD5_With_RSA_Encryption	MD5 hash with RSA encryption.
4	RIPEMD160_With_RSA	RIPEMD algorithm 160-bit hash with RSA encryption.
5	SHA_With_RSA_Encryption	SHA hash with RSA encryption.
6	SHA1_With_RSA_Encryption	SHA1 hash with RSA encryption.
7	SHA224_With_RSA_Encryption	SHA2 224-bit hash with RSA encryption.
8	SHA256_With_RSA_Encryption	SHA2 256-bit hash with RSA encryption.
9	SHA384_With_RSA_Encryption	SHA2 384-bit hash with RSA encryption.
10	SHA512_With_RSA_Encryption	SHA2 512-bit hash with RSA encryption.
11	ECDSA_With_SHA1	Elliptic Curve Digital Sigature Algorithm (ECDSA) hash with SHA1.
12	ECDSA_With_SHA224	ECDSA hash with SHA2 224-bit.
13	ECDSA_With_SHA256	ECDSA hash with SHA2 256-bit.
14	ECDSA_With_SHA384	ECDSA hash with SHA2 384-bit.
15	ECDSA_With_SHA512	ECDSA hash with SHA2 512-bit.
99	Unknown	Unknown algorithm.

SmtpTypeEnum

Value	Enumeration
0	Default
1	PhoneHome

SnapAccessLevelEnum

Indicates a type of access a host has to a snapshot.

Value	Enumeration	Description
0	ReadOnly	Allow read-only access to the snapshot for a host.
1	ReadWrite	Allow read/write access to the snapshot for a host.
2	ReadOnlyPartial	(Applies to consistency group snapshots only.) Indicates that host has read-only access to some individual snapshots in a consistency group snapshot. Do not use this value in Modify requests.
3	ReadWritePartial	(Applies to consistency group snapshots only.) Indicates that host has read/write access to some individual snapshots in a consistency group snapshot. Do not use this value in Modify requests.
4	Mixed	(Applies to consistency group snapshots only.) Indicates that host has read-only and read/write access to some individual snapshots in a consistency group snapshot. Do not use this value in Modify requests.

SnapCreatorTypeEnum

Enumeration of possible snapshot creator types.

Value	Enumeration	Description
0	None	Not specified.
1	Scheduled	Created by a snapshot schedule.
2	User_Custom	Created by a user with a custom name.
3	User_Default	Created by a user with a default name.
4	External_VSS	Created by Windows Volume Shadow Copy Service (VSS) to obtain an application consistent snapshot.
5	External_NDMP	Created by an NDMP backup operation.
6	External_Restore	Created as a backup snapshot before a snapshot restore.
8	External_Replication_Manager	Created by Replication Manager.
9	Replication	Created by a native replication operation.
11	Snap_CLI	Created inband by SnapCLI.
12	AppSync	Created by AppSync.

SnapReplicationStatusEnum

These are the possible replication statuses for a snapshot.

Value	Enumeration	Description
0	Not_Marked_For_Replication	Replication was not requested for this snap.
1	Marked_For_Replication	Replication was requested for this snap and it is waiting for a replication sync.
2	Replicated_On_Destination	This snap was replicated to the destination successfully.
3	Failed_To_Replicate	This snap was marked for replication but failed to replicate successfully Check Alert for detailed descriptions and recommended actions.
4	In_Progress	This snap was being transferred by replication.

SnapStateEnum

Enumeration of possible snapshot states.

Value	Enumeration	Description
2	Ready	The snaphot is operating normally.
3	Faulted	The storage pool that the snapshot belongs to is degraded.
6	Offline	The snapshot is not accessible possibly because the storage resource is not ready or the storage pool is full.
7	Invalid	The snapshot has become invalid becauuse of a non recoverable error.
8	Initializing	The snapshot is being created.
9	Destroying	The snapshot is being deleted.

SNMPAuthProtocolEnum

Value	Enumeration	Description
0	None	No Authentication.
1	MD5	MD5 Authentication.
2	SHA	SHA Authentication.

SNMPPrivacyProtocolEnum

SNMP privacy protocols

Value	Enumeration	Description
0	None	No privacy protocol.
1	AES	AES privacy protocol.
2	DES	DES privacy protocol.

SNMPVersionEnum

SNMP versions

Value	Enumeration	Description
1	v1	Version 1.
2	v2c	Version 2.
3	v3	Version 3.

SpaceEfficiencyEnum

Space Efficiency enum

Value	Enumeration	Description
0	Thick	Thick allocation.
1	Thin	Thin allocation.

SpeedValuesEnum

Supported SAS port transmission speeds.

Value	Enumeration	Description
3	_3Gbps	3 Gbps SAS port transmission speed.
6	_6Gbps	6 Gbps SAS port transmission speed.
12	_12Gbps	12 Gbps SAS port transmission speed.

SPModelNameEnum

All possible storageprocessor model names

Value	Enumeration	Description
1	SP300	Unity 300 or Unity 300F
2	SP400	Unity 400 or Unity 400F
3	SP500	Unity 500 or Unity 500F
4	SP600	Unity 600 or Unity 600F
5	SP350	Unity 350F
6	SP450	Unity 450F
7	SP550	Unity 550F
8	SP650	Unity 650F
9	VSA2Core	UnityVSA 2Core
10	VSA12Core	UnityVSA 12Core
11	SP380	Unity 380 or Unity 380F
12	SP480	Unity 480 or Unity 480F
13	SP680	Unity 680 or Unity 680F
14	SP880	Unity 880 or Unity 880F

SsdTypeEnum

Possible ssd types.

Value	Enumeration
0	Unknown
1	Sata
2	Nvme

SSLMethodEnum

SSL protocols used in smtp server.

Value	Enumeration	Description
0	None	SSL/TLS protocol: None.
1	StartTLS	SSL/TLS protocol: startTLS. startTLS is a protocol feature which allows SSL/TLS and plain text connections to co-exist on the same port. After sending this startTLS command, both client/server switch to SSL/TLS mode, and cannot switch back to plain text mode.
2	SSL_TLS	SSL/TLS protocol: SSL/TLS.

SSLStrengthEnum

SSL strengths.

Value	Enumeration	Description
0	Unknown	Not set yet.
1	Low	Low SSL Strength - 40 bit.
2	Medium	Medium SSL Strength - 128 bit.
3	High	High SSL Strength - 168 bit.

StoragePoolTypeEnum

Storage Pool types.

Value	Enumeration	Description

1	Traditional	Traditional pool. Traditional pools use traditional fixed size RAID groups of entire disks.
2	Dynamic	Dynamic pool. Dynamic pools utilize advanced RAID technology to support larger drives, faster rebuild times, and improved storage utilization.

StorageProcessorEnum

Value	Enumeration
0	SPA
1	SPB

StorageResourceTypeEnum

Value	Enumeration
1	filesystem
2	consistencyGroup
3	vmwarefs
4	vmwareiscsi
8	lun
9	VVolDatastoreFS
10	VVolDatastoreISCSI

SupportAssistStatusEnum

SupportAssist connectivity status.

Value	Enumeration	Description
0	OK	SupportAssist is functioning normally with good connectivity.
1	Unreachable	SupportAssist is enabled, but connectivity against all endpoints is bad/unreachable.

SupportCredentialStatusEnum

Status of the stored support credential.

Value	Enumeration	Description
0	Not_Set	Support credentials are not set.
1	Unvalidated	Validation could not be performed because of various reasons. For example, there may be no internet connection.
2	Valid	Stored support credentials have been validated previously.
3	Invalid	Stored support credentials are incorrect and cannot pass validation.

SvcCRUTypeEnum

Types of Customer Replaceable Units (CRUs) installed on the storage processors.

Value	Enumeration	Description
0	SLIC	Usually, there is one or more SLIC installed on one SP.
1	SSD	Usually, there is one SSD installed on one SP.

SvcScopeEnum

Scope of service.

Value	Enumeration	Description
0	system	Storage system.
1	SPA	SP A.
2	SPB	SP B.

SvcStorageProcessorStateEnum

Types of the storage processors state.

Value	Enumeration	Description
0	Normal	Indicates that SP is in normal mode.
1	Service	Indicates that SP is in service mode.
2	Hold_In_Reset	Indicates that SP is in hold in reset mode.
3	Rebooting	Indicates that SP is rebooting.

SyncSnapReplicationStatusEnum

These are the possible replication statuses for a snapshot.

Value	Enumeration	Description
0	Not_Marked_For_Replication	Snapshot was created on destination site and will not be replicated on source.
1	Replicated	This snapshot was replicated to the destination successfully.
2	Failed_To_Replicate	Snapshot was created on source site while replication session was in fracture and will not be replicated on destination.

ThinCloneOperationEnum

Thin clone operations.

Value	Enumeration	Description
1	Create	Thin clone create.
2	Refresh	Thin clone refresh.

ThinStatusEnum

Thin provisioning statuses for storage resource objects, as defined by storageResource type.

Value	Enumeration	Description
0	False	The storage resource is not thin-provisioned.
1	True	The storage resource is thin-provisioned.
65,535	Mixed	(Applies only to Consistency groups). If some LUNs in a Consistency group are thin-provisioned but other LUNs are not non-provisioned then the Mixed value is returned for this Consistency group. Do not use Mixed value in creation or modification requests: the storage system will respond with error.

ThumbprintAlgoTypeEnum

Cryptographic algorithm used to hash the public key certificate.

Value	Enumeration	Description
1	SHA	Secure Hash Algorithm (SHA).
2	SHA1	SHA1 algorithm.
3	SHA224	SHA2 algorithm, 224-bit.
4	SHA256	SHA2 algorithm, 256-bit.
5	SHA384	SHA2 algorithm, 384-bit.
6	SHA512	SHA2 algorithm, 512-bit.
7	MD5	MD5 algorithm.
8	RIPEMD160	RIPEMD algorithm, 160-bit.
9	DSS1	Digital Signature Standard (DSS) 1 algorithm.
99	Unknown	Unknown algorithm.

TieringPolicyEnum

Tiering policy choices for how the storage resource data will be distributed among the tiers available in the pool.

Value	Enumeration	Description
0	Autotier_High	The storage resource data will be initially placed on the highest available tier and then optimaly distributed over the pool's tiers by auto-tiering algorithm. This is a default value for most storage resource types.
1	Autotier	The storage resource data will be optimally distributed over the pool's tiers according to the auto-tiering algorithm.
2	Highest	The storage resource data will be placed on the highest available tier.
3	Lowest	The storage resource data will be placed on the lowest available tier.
4	No_Data_Movement	The storage resource data will not be moved between pool's teirs by auto-tiering algorithm. No longer supported. Please specify a different tiering policy. If you use this value in Create or Modify requests, the system will return an error.
65,535	Mixed	(Applies to consistency groups only.) Indicates that the LUNs contained in a consistency group have different pool tiering policies. **Note:** This value applies only to the relocationPolicy attribute of the Consistency group storage resource type. If you use this value in Create or Modify requests, an error will be returned.

TierTypeEnum

Supported pool tier types.

Value	Enumeration	Description
0	None	The disks in the storage pool has no tier type.
10	Extreme_Performance	This storage pool tier provides very fast access times for

		resources and subjects to variable workloads. It contains all supported SAS Flash Disks.
20	Performance	This storage pool tier provides high throughput and good bandwidth at a mid-level price point. It contains all supported SAS disks.
30	Capacity	This storage pool tier provides the highest storage capacity with generally lower performance. It contains all supported NL-SAS disks.

TsCloudProviderOpStatusEnum

Value	Enumeration
0	Unknown
2	OK

UDoctorPackageStatusEnum

Possible install statuses for udoctorPackages.

Value	Enumeration	Description
0	Available	udoctorPackage available status means that the package is downloaded and ready to be installed.
1	Scheduled	udoctorPackage scheduled status means that the package has been scheduled to be installed at a specific date and time.
2	Installing	udoctorPackage installing status means that the package is being installed, and the installation haven't been finished yet.
3	Installed	udoctorPackage installed status means that the package has been installed successfully.
4	InstallFailed	udoctorPackage install failed status means that the package was attempted to be installed but installation failed.

UFS64TypeEnum

The types of UFS64 file system.

Value	Enumeration	Description
0	UFS64_Transactional	Transactional file system provisioned for VMware NFS datastores.
1	UFS64_Traditional	Traditional file system provisioned for CIFS or/and NFS accessed shared folders.

UnbindContextEnum

Value	Enumeration
0	Normal
1	RebindStart
2	RebindEnd

UncPortStatusEnum

Possible Uncommitted port statuses.

Value	Enumeration	Description
0	Unknown	Uncommitted port status is unknown.
2	OK	Uncommitted port status is OK.
3	Degraded	Uncommitted port status is degraded.
33,024	Uninitialized	Uncommitted port status is uninitialized.
33,025	Empty	Uncommitted port status is empty.
33,026	Missing	Uncommitted port status is missing.
33,027	Faulted	Uncommitted port status is faulted.
33,028	Unavailable	Uncommitted port status is unavailabled.
33,029	Disabled	Uncommitted port status is disabled.
33,280	SFP_Not_Present	Uncommitted port status is SFP not present.
33,281	Module_Not_Present	Uncommitted port status is module not present.
33,282	Port_Not_Present	Uncommitted port status is port not present.
33,283	Missing_SFP	Uncommitted port status is missing SFP.
33,284	Missing_Module	Uncommitted port status is missing module.
33,285	Incorrect_SFP_Type	Uncommitted port status is incorrect SFP type.
33,286	Incorrect_Module	Uncommitted port status is incorrect module.
33,287	SFP_Read_Error	Uncommitted port status is SFP read error.
33,288	Unsupported_SFP	Uncommitted port status is unsupported SFP.
33,289	Module_Read_Error	Uncommitted port status is module read error.

33,290	Exceeded_Maximum_Limits	Uncommitted port status is exceeded maximum limits.
33,291	Module_Powered_Off	Uncommitted port status is module powered off.
33,292	Unsupported_Module	Uncommitted port status is unsupported module.
33,293	Database_Read_Error	Uncommitted port status is database read error.
33,294	Faulted_SFP	Uncommitted port status is faulted SFP.
33,295	Hardware_Fault	Uncommitted port status is hardware fault.
33,296	Disabled_User_Initiated	Uncommitted port status is disabled user initiated.
33,297	Disabled_Encryption_Required	Uncommitted port status is disabled encryption required.
33,298	Disabled_Hardware_Fault	Uncommitted port status is disabed hardware fault.

UnitEnum

The unit of measurement.

Value	Enumeration	Description
1	Bytes	The value is measured in bytes.
2	BytesPerSecond	The value is measured in bytes per second.
3	Percentage	The value is measured in percents.
4	Count	The value has no unit of measurement.
5	Milliseconds	The value is measured in milliseconds.
6	IOs	The value is measured in IO operations.
7	IOsPerSecond	The value is measured in IO operations per second.

UpgradeSessionTypeEnum

Value	Enumeration
0	Upgrade
1	Health_Check
2	Storageprocessor_Upgrade
3	Offline_Storageprocessor_Upgrade

UpgradeStatusEnum

Current status of the associated upgrade session.

Value	Enumeration	Description
0	Upgrade_Not_Started	Upgrade session was not started.
1	Upgrade_In_Progress	Upgrade session is in the process of upgrading the system software, language pack, or drive firmware.
2	Upgrade_Completed	Upgrade session completed successfully.
3	Upgrade_Failed	Upgrade session did not complete successfully.
4	Upgrade_Failed_Lock	Upgrade session failed, and the system is in a locked state.
5	Upgrade_Cancelled	Upgrade session was cancelled.
6	Upgrade_Paused	Upgrade session is paused.
7	Upgrade_Acknowledged	Upgrade session was acknowledged.
8	Upgrade_Waiting_For_User	Upgrade session is waiting for user action to continue the upgrade
9	Upgrade_Paused_Lock	Upgrade session is paused past the point of cancellation.

UpgradeTypeEnum

Value	Enumeration
0	Software
1	Firmware
2	LanguagePack

UsageHarvestStateEnum

Pool space harvesting states.

Value	Enumeration	Description
0	Idle	Harvesting is idle and not running now.
1	Running	Harvesting is running now.
2	Could_Not_Reach_LWM	Harvesting was running but could not reach Low Watermark.
3	Paused_Could_Not_Reach_HWM	Harvesting was running but could not reach Hight Watermark and paused.
4	Failed	Harvesting was running but failed.

UserRoleEnum

Value	Enumeration
0	Administrator
1	Storage_Administrator
2	Vm_Administrator
3	Operator
4	Security_Administrator

VasaProviderStateEnum

VASA Provider state

Value	Enumeration
0	Not_Registered
1	Registered
99	Not_Supported
100	Unknown

VDMSupportedProtocolsEnum

Network sharing protocols supported by VDM.

Value	Enumeration	Description
0	NFS	Only NFS sharing protocol supported by VDM.
1	CIFS	Only SMB (also known as CIFS) sharing protocol is supported by VDM.
2	Multiprotocol	Both SMB (also known as CIFS) and NFS sharing protocols are supported by VDM. A file system can be shared via both NFS and CIFS simultaneously.
3	CIFSAndNFS	Both CIFS and NFS sharing protocols are supported by VDM. Any file system can only be share with one or the other.

VMDiskTypeEnum

Virtual Machine disk type enum returned by vSphere.

Value	Enumeration	Description
0	Unknown	Virtual Machine disk type unknown.
1	VMFS_Thick	Virtual Machine disk type thick.
2	VMFS_Thin	Virtual Machine disk type thin.
3	RDM_Physical	Physical compatibility mode (pass-through) raw disk mapping. An rdmp virtual disk passes SCSI commands directly to the hardware, but the virtual disk cannot participate in snapshots. (from vSphere API description)
4	RDM_Virtual	Virtual compatibility mode raw disk mapping. An rdm virtual disk grants access to the entire raw disk and the virtual disk can participate in snapshots. (from vSphere API description)

VMPowerStateEnum

Power State Enum for virtual machines.

Value	Enumeration	Description
0	Unknown	Virtual machine power state unknown.
1	Off	Virtual machine power state off.
2	On	Virtual machine power state on.
3	Suspended	Virtual machine power state suspended.
4	Paused	Virtual machine power state paused.

VmwarePETypeEnum

Defines the type of VMware Protocol Endpoint.

Value	Enumeration
0	NAS
1	SCSI

VVolDatastoreTypeEnum

VVol datastore types.

Value	Enumeration	Description
0	iSCSI	LUN based VVol datastore.
1	NFS	File system based VVol datastore.

VVolTypeEnum

The type of VVol, for instance Config, Data, or Swap.

Value	Enumeration	Description
0	Config	Config VVol type.
1	Data	Data VVol type.
2	Swap	Swap VVol type.
3	Memory	Memory VVol type.
99	Other	Other VVol type.

Resource types by category

Configuring network communication

cifsServer

Information about SMB server of a NAS server. You can configure one SMB server per NAS server.

SMB, which stands for Server Message Block, is a protocol for sharing files and communications abstractions such as named pipes and mail slots between computers. Most usage of SMB involves computers running Microsoft Windows. Others vendors implementing SMB are Samba, MacOS.. SMB was also known as Common Internet File System (CIFS).

An SMB server is created each time Windows shares are enabled on the NAS server. An SMB server could be created as a standalone server or as a server that belongs to a Windows domain (Active Directory). In that case, DNS must be enabled on the NAS server. The credentials of an administrator of the domain are required to join that domain. An NTP server must be defined also, to prevent authentication errors caused by unsynchronized clocks.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the cifsServer instance.
name	String	User-specified name for the SMB server.
description	String	Description of the SMB server.
netbiosName	String	Computer Name of the SMB server in Windows network.
domain	String	Domain name where SMB server is registered in Active Directory, if applicable.
lastUsedOrganizationalUnit	String	Last used organizational unit of the SMB server in Active Directory, if applicable.
workgroup	String	(Applies to stand-alone SMB servers.) Windows network workgroup for the SMB server.
isStandalone	Boolean	Indicates whether the SMB server is standalone. Values are: • true - SMB server is standalone. • false - SMB server is joined to the Active Directory.
health	health	Health information for the SMB server, as defined by the health resource type.
nasServer	nasServer	NAS server that exposes file systems using the SMB server.
fileInterfaces	List<fileInterface>	Interfaces that use the SMB protocol to serve the NAS server's file systems.
smbcaSupported	Boolean	Indicates whether the SMB server supports continuous availability. Values are: • true - SMB server supports continuous availability. • false - SMB server does not support continuous availability.
smbMultiChannelSupported	Boolean	Indicates whether the SMB 3.0+ multichannel feature is supported. Values are: • true - SMB 3.0+ multichannel is supported. • false - SMB 3.0+ multichannel is not supported.
smbProtocolVersions	List<String>	Supported SMB protocols, such as 1.0, 2.0, 2.1, 3.0, and so on.

Query all members of the cifsServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/cifsServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the cifsServer collection.

Query a specific cifsServer instance

Header	Accept: application/json Content-Type: application/json

Method and URI	GET /api/instances/cifsServer/<id> where <id> is the unique identifier of the cifsServer instance to query. Or GET /api/instances/cifsServer/name:<value> where <value> is the name of the cifsServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific cifsServer instance.

Create operation

Create an SMB server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/cifsServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the NAS server which the SMB server belongs to.
netbiosName	in	String[1..15]	Optional	Computer name of the SMB server in Windows network.
name	in	String[1..63]	Optional	User friendly, descriptive name of SMB server.
description	in	String[0..63]	Optional	Description of the SMB server.
domain	in	String[1..155]	Optional	Domain name where SMB server is registered in Active Directory, if applicable.
organizationalUnit	in	String[1..383]	Optional	LDAP organizational unit of SMB server in Active Directory, if applicable.
domainUsername	in	String[1..1023]	Optional	Active Directory domain user name.
domainPassword	in	String[1..1023]	Optional	Active Directory domain password.
reuseComputerAccount	in	Boolean	Optional	Reuse existing SMB server account in the Active Directory.
workgroup	in	String[1..15]	Optional	Standalone SMB server workgroup.
localAdminPassword	in	String[8..40]	Optional	Standalone SMB server administrator password.
interfaces	in	List<fileInterface>	Optional	List of file IP interfaces that service CIFS protocol of SMB server.
id	out	cifsServer	N/A	Unique identifier of the new SMB server.

Delete operation

Delete an SMB server.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/cifsServer/<id> where <id> is the unique identifier of the cifsServer instance to delete. Or DELETE /api/instances/cifsServer/name:<value> where <value> is the name of the cifsServer instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
skipUnjoin	in	Boolean	Optional	Keep SMB server account unjoined in Active Directory after deletion. Values are: • true - Keep SMB server account joined after deletion. • false - Try to unjoin SMB server account form Active Directory before deletion.
domainUsername	in	String[1..1023]	Optional	Username for unjoin.
domainPassword	in	String[1..1023]	Optional	Password for unjoin.

Modify operation

Modify an SMB server.

Header	Accept: application/json

	Content-Type: application/json
Method and URI	POST /api/instances/cifsServer/<id>/action/modify where <id> is the unique identifier of the cifsServer instance. Or POST /api/instances/cifsServer/name:<value>/action/modify where <value> is the name of the cifsServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
netbiosName	in	String[1..15]	Optional	Computer name of the SMB server in Windows network.
name	in	String[1..63]	Optional	User friendly, descriptive name of SMB server.
description	in	String[0..63]	Optional	Description of the SMB server.
domain	in	String[1..155]	Optional	Domain name where SMB server is registered in Active Directory, if applicable.
organizationalUnit	in	String[1..383]	Optional	LDAP organizational unit of SMB server in Active Directory, if applicable.
domainUsername	in	String[1..1023]	Optional	Active Directory domain user name.
domainPassword	in	String[1..1023]	Optional	Active Directory domain password.
skipUnjoin	in	Boolean	Optional	Skip unjoining the current SMB server account from Active Directory. Values are: • true - Skip unjoining the current SMB server account. • false - Unjoin the current SMB server account if needed.
currentUsername	in	String[1..1023]	Optional	Specify the user name of an Active Directory domain in order to unjoin the SMB server from it.
currentPassword	in	String[1..1023]	Optional	Specify the password of an Active Directory domain to unjoin the SMB server from it.
reuseComputerAccount	in	Boolean	Optional	Reuse existing SMB server account in the Active Directory.
workgroup	in	String[1..15]	Optional	Standalone SMB server workgroup.
localAdminPassword	in	String[8..40]	Optional	Standalone SMB server administrator password.
interfaces	in	List<fileInterface>	Optional	List of file IP interfaces that service CIFS protocol of SMB server.

dnsServer

Domain Name System (DNS) settings.

A Domain Name System (DNS) is a hierarchical system responsible for converting domain names to their corresponding IP addresses. The system uses DNS services to resolve network names and IP addresses for the network services it needs (for example, for NTP and SMTP servers), and to obtain IP addresses for hosts addressed by network names rather than IP addresses.

During the initial system configuration process you must specify the network address of at least one DNS server for resolving hostnames to IP addresses. Later, you can add, delete, or change DNS server settings.

You can configure multiple DNS server domains to specify each domain and IP address of the DNS servers for the system to use. By default, the system uses the top entry in the list as the current DNS server. The remaining list provides a hierarchy of DNS servers to use if the first-choice server becomes unavailable. If the first DNS server in the list becomes unavailable, the system proceeds to the next DNS server in the list, and so on. You can also specify default DNS server addresses to indicate which addresses the system will use first.

DNS server addresses are grouped under DNS server domains. Each domain is identified by a domain identifier.

Important: You must configure at least one valid DNS server entry in the domain for the system. Deleting the last DNS server entry can disrupt network communication to the device, and potentially interrupt communication between the system and the hosts that use its storage resources.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the dnsServer instance. This is a singleton resource, so the id is always 0.
domain	String	Name of the DNS domain.
addresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Prioritized list of up to three IP addresses of name servers for the domain.
origin	DNSServerOriginEnum	Source of the DNS server addresses.

Query all members of the dnsServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/dnsServer/instances
Request body arguments	None
Successful return status	200 OK

Successful response body	JSON representation of all members of the dnsServer collection.

Query a specific dnsServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/dnsServer/<id> where <id> is the unique identifier of the dnsServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific dnsServer instance.

Modify operation

Modify DNS server domain settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/dnsServer/<id>/action/modify where <id> is the unique identifier of the dnsServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
addresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	New list of IP addresses to replace the exsting address list for this DNS server.

fileDNSServer

Domain Name System (DNS) settings object of NAS server. You can configure one DNS settings object per NAS server.
A Domain Name System (DNS) is a hierarchical system responsible for converting domain names to their corresponding IP addresses. NAS server's DNS settings should allow DNS resolution of all names within SMB server's domain in order for SMB protocol to operate normally within an Active Directory domain.

Embedded resource types

fileDNSServerSourceParameters

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the DNS object.
nasServer	nasServer	Associated NAS server instance that uses this DNS object. Only one DNS object per NAS server is supported.
addresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Prioritized list of one to three IPv4 and/or IPv6 addresses of DNS server(s) for the domain.
domain	String	Mandatory name of the DNS domain, where NAS Server does host names lookup when FQDN is not specified in the request.
replicationPolicy	ReplicationPolicyEnum	Replication policy of the DNS object.
sourceParameters	fileDNSServerSourceParameters	The DNS parameters of the source NAS server.

Attributes for fileDNSServerSourceParameters

For replication destination NAS servers, information about the corresponding source NAS server's DNS settings.

Attribute	Type	Description
addresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	List of IP addresses of DNS servers of the source NAS server

Query all members of the fileDNSServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileDNSServer/instances

Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileDNSServer collection.

Query a specific fileDNSServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileDNSServer/<id> where <id> is the unique identifier of the fileDNSServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileDNSServer instance.

Create operation

Add a new domain for the DNS server. Only one instance can be created per NAS server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fileDNSServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the NAS server which the DNS server belongs.
domain	in	String[1..255]	Required	DNS domain name.
addresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Required	Prioritized list of one to three IPv4 and/or IPv6 addresses of DNS server(s) for the domain.
id	out	fileDNSServer	N/A	The created fileDNSServer instance.

Delete operation

Delete a DNS domain.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/fileDNSServer/<id> where <id> is the unique identifier of the fileDNSServer instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a DNS domain.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fileDNSServer/<id>/action/modify where <id> is the unique identifier of the fileDNSServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
domain	in	String[1..255]	Optional	DNS domain name.
addresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	The list of DNS server IP addresses.
replicationPolicy	in	ReplicationPolicyEnum	Optional	Status of the LDAP list in the NAS server operating

				as a replication destination.

fileInterface

Information about network interfaces in the storage system. These interfaces control access to Windows (CIFS) and UNIX/Linux (NFS) file storage.

Embedded resource types

fileInterfaceSourceParameters

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the fileInterface instance.
nasServer	nasServer	NAS server to which the network interface belongs, as defined by the nasServer resource type.
ipPort	ipPort	Physical port or link aggregation on the storage processor on which the network interface is running, as defined by the ethernetPort resource type.
health	health	Health of the network interface, as defined by the health resource type.
ipAddress	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IP address of the network interface.
ipProtocolVersion	IpProtocolVersionEnum	IP protocol version of the network interface.
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 netmask for the network interface, if it uses an IPv4 address.
v6PrefixLength	unsigned Integer[32][0..32]	IPv6 prefix length for the interface, if it uses an IPv6 address.
gateway	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 or IPv6 gateway address for the network interface.
vlanId	unsigned Integer[16][1..4094]	Virtual Local Area Network (VLAN) identifier for the interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 1 - 4094.
macAddress	String	MAC address of the Ethernet port used for the network interface.
name	String	Network interface name.
role	FileInterfaceRoleEnum	Role of the network interface.
isPreferred	Boolean	Indicates whether the network interface is a preferred interface for file-based storage. See documentation of preferredInterfaceSettings for details.
replicationPolicy	ReplicationPolicyEnum	Replication policy of the network interface.
sourceParameters	fileInterfaceSourceParameters	The network interface parameters of the source NAS server.
isDisabled	Boolean	Indicates whether the network interface is disabled.

Attributes for fileInterfaceSourceParameters

For an interface on a nasServers that is a replication destinations, this object contains the settings for corresponding interface on the source nasServer.

Attribute	Type	Description
ipAddress	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IP address of the network interface of the source NAS server
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 netmask for the network interface of the source NAS server.
v6PrefixLength	unsigned Integer[32]	IPv6 prefix length for the network interface of the source NAS server.
gateway	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported:	IPv4 or IPv6 gateway address for the network interface of the source NAS server.

	false	
vlanId	unsigned Integer[32]	Virtual Local Area Network (VLAN) identifier for the network interface of the source NAS server.
ipPort	ipPort	Physical port or link aggregation of the network interface of the source NAS server.

Query all members of the fileInterface collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileInterface/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileInterface collection.

Query a specific fileInterface instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileInterface/<id> where <id> is the unique identifier of the fileInterface instance to query. Or GET /api/instances/fileInterface/name:<value> where <value> is the name of the fileInterface instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileInterface instance.

Create operation

Create a network interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fileInterface/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the NAS server to which the network interface belongs, as defined by the nasServer resource type.
ipPort	in	ipPort	Required	Physical port or link aggregation on the storage processor on which the interface is running, as defined by the ethernetPort resource type.
ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Required	IP address of the network interface.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 netmask for the network interface, if it uses an IPv4 address.
v6PrefixLength	in	unsigned Integer[32]	Optional	IPv6 prefix length for the interface, if it uses an IPv6 address.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 or IPv6 gateway address for the network interface.
vlanId	in	unsigned Integer[16] [1..4094]	Optional	Virtual Local Area Network (VLAN) identifier for the interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 1 - 4094.
isPreferred	in	Boolean	Optional	Sets the current IP interface as preferred for associated

				for file-based storage and unsets the previous one.
role	in	FileInterfaceRoleEnum	Optional	
id	out	fileInterface	N/A	Unique identifier of the new fileInterface instance.

Delete operation

Delete a network interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/fileInterface/<id> where <id> is the unique identifier of the fileInterface instance to delete. Or DELETE /api/instances/fileInterface/name:<value> where <value> is the name of the fileInterface instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a network interface configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fileInterface/<id>/action/modify where <id> is the unique identifier of the fileInterface instance. Or POST /api/instances/fileInterface/name:<value>/action/modify where <value> is the name of the fileInterface instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
ipPort	in	ipPort	Optional	Unique identifier of the physical port or link aggregation on the storage processor on which the network interface is running, as defined by the ethernetPort resource type.
ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Optional	IP address of the network interface.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 netmask for the network interface, if it uses an IPv4 address.
v6PrefixLength	in	unsigned Integer[32]	Optional	IPv6 prefix length for the interface, if it uses an IPv6 address.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 or IPv6 gateway address for the network interface. Empty string to unset.
vlanId	in	unsigned Integer[16]	Optional	Virtual Local Area Network (VLAN) identifier for the network interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 1 - 4094. Empty string or null to unset.
isPreferred	in	Boolean	Optional	Sets the current IP interface as preferred for associated for file-based storage and unsets the previous one.
replicationPolicy	in	ReplicationPolicyEnum	Optional	

fileKerberosServer

Information about the Kerberos service used by the storage system for secure connections. You can configure one Kerberos settings object per NAS server.
Kerberos is a distributed authentication service designed to provide strong authentication with secret-key cryptography. It works on the basis of "tickets" that allow nodes communicating over a non-secure network to prove their identity in a

secure manner. When configured to act as a secure NFS server, the NAS server uses the RPCSEC_GSS security framework and Kerberos authentication protocol to verify users and services. You can configure a secure NFS environment for a multiprotocol NAS server or one that supports Unix-only shares. In this environment, user access to NFS file systems is granted based on Kerberos principal names.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the Kerberos instance.
nasServer	nasServer	NAS server that is configured with these Kerberos settings.
realm	String	Kerberos Realm.
addresses	List<String>	Fully Qualified domain names of the Kerberos Key Distribution Center (KDC) servers.
portNumber	unsigned Integer[16]	KDC servers TCP port. Default: 88.

Query all members of the fileKerberosServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileKerberosServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileKerberosServer collection.

Query a specific fileKerberosServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileKerberosServer/<id> where <id> is the unique identifier of the fileKerberosServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileKerberosServer instance.

Create operation

Create a Kerberos configuration. The operation will fail if a Kerberos configuration already exists.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fileKerberosServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the NAS server to which the Kerberos service belongs.
realm	in	String[1..255]	Required	The Kerberos realm with which to authenticate.
addresses	in	List<String>	Required	DNS names for the Kerberos Key Distribution Center (KDC) servers.
portNumber	in	unsigned Integer[16]	Optional	KDC servers TCP port.
id	out	fileKerberosServer	N/A	The created fileKerberosServer instance.

Delete operation

Delete a Kerberos service configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/fileKerberosServer/<id> where <id> is the unique identifier of the fileKerberosServer instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify an Kerberos service configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fileKerberosServer/<id>/action/modify where <id> is the unique identifier of the fileKerberosServer instance.

Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
realm	in	String[1..255]	Optional	The Kerberos realm with which to authenticate.
addresses	in	List<String>	Optional	DNS names for the Kerberos Key Distribution Center (KDC) servers.
portNumber	in	unsigned Integer[16]	Optional	KDC servers TCP port.

fileLDAPServer

The LDAP settings object for the NAS Server. You can configure one LDAP settings object per NAS server.
The Lightweight Directory Access Protocol (LDAP) is an application protocol for querying and modifying directory services running on TCP/IP networks. LDAP provides central management for network authentication and authorization operations by helping to centralize user and group management across the network. NAS server can use LDAP as a Unix Directory Service to map users, retrieve netgroups, and build a Unix credential. When an initial LDAP configuration is applied, the system checks for the type of LDAP server. It can be an Active Directory schema, iPlanet schema, or an RFC 2307 schema.

Embedded resource types

fileLDAPServerSourceParameters

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ldapServer instance.
nasServer	nasServer	NAS server that is configured with these LDAP settings.
authority	String	Name of the LDAP authority. Base Distinguished Name (BDN) of the root of the LDAP directory tree. The system uses the DN to bind to the LDAP service and locate in the LDAP directory tree to begin a search for information. The base DN can be expressed as a fully-qualified domain name or in X.509 format by using the attribute dc=. For example, if the fully-qualified domain name is mycompany.com, the base DN is expressed as dc=mycompany,dc=com.
profileDN	String	For an iPlanet LDAP server, specifies the DN of the entry with the configuration profile.
serverAddresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	IP addresses of the associated LDAP servers.
portNumber	unsigned Integer[16]	The TCP/IP port used by the NAS server to connect to the LDAP servers. Default value for LDAP is 389 and LDAPS is 636.
authenticationType	AuthenticationTypeEnum	Type of authentication for the LDAP server.
protocol	LDAPProtocolEnum	Type of LDAP protocol.
verifyServerCertificate	Boolean	Indicates whether Certification Authority certificate is used to verify the LDAP server certificate for secure SSL connections. Values are: • true - verifies LDAP server's certificate. • false - doesn't verify LDAP server's certificate.
bindDN	String	Bind Distinguished Name (DN) to be used when binding.
isCifsAccountUsed	Boolean	Indicates whether CIFS authentication is used to authenticate to the LDAP server. Values are: • true - Indicates that the CIFS settings are used for Kerberos authentication. • false - Indicates that Kerberos uses its own settings.
principal	String	Specifies the principal name for Kerberos authentication.
realm	String	Specifies the realm name for Kerberos authentication.
schemeType	SchemeTypeEnum	LDAP server scheme type.
replicationPolicy	ReplicationPolicyEnum	Indicates the status of the LDAP servers addresses list in the NAS server operating as a replication destination. When a replicated LDAP servers list is created on the source NAS server, it is automatically synchronized to the destination.
sourceParameters	fileLDAPServerSourceParameters	For replication destination NAS servers, information about the corresponding source NAS server's LDAP settings.

Attributes for fileLDAPServerSourceParameters

For replication destination NAS servers, information about the corresponding source NAS server's LDAP settings.

Attribute	Type	Description
addresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	List of IP addresses of LDAP servers of the source NAS server

Query all members of the fileLDAPServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileLDAPServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileLDAPServer collection.

Query a specific fileLDAPServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileLDAPServer/<id> where <id> is the unique identifier of the fileLDAPServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileLDAPServer instance.

Create operation

Create an LDAP server configuration. The operation will fail if an LDAP server configuration already exists.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fileLDAPServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the NAS server to which the LDAP server belongs.
authenticationType	in	AuthenticationTypeEnum	Required	Authentication type for the LDAP server.
authority	in	String[1..127]	Required	The Distinguished Name (DN) of the root level in the directory tree.
serverAddresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	The IP addresses of the associated LDAP servers.
portNumber	in	unsigned Integer[16]	Optional	The TCP/IP port associated with the LDAP server.
protocol	in	LDAPProtocolEnum	Optional	Specifies the protocol to be used.
verifyServerCertificate	in	Boolean	Optional	Specify that uploaded Certification Authority (CA) certificates should be used to verify the certificates of LDAP servers for establishing secure SSL connections.
profileDN	in	String[..127]	Optional	For an iPlanet LDAP server, type the DN of the entry with the configuration profile.
bindDN	in	String[1..255]	Optional	The Distinguished Name (DN) to be used when binding to the server.
bindPassword	in	String[1..255]	Optional	the associated password to be used when binding to the server.
isCifsAccountUsed	in	Boolean	Optional	Specify whether you want to use CIFS authentication. For Kerberos authentication only. Values are: • true - Indicates that the CIFS settings are used for Kerberos authentication. • false - Indicates that Kerberos uses its own settings.
principal	in	String[1..255]	Optional	The principal name for Kerberos authentication.
realm	in	String[1..255]	Optional	The realm name for Kerberos authentication.
password	in	String[1..255]	Optional	The associated password for Kerberos authentication.
id	out	fileLDAPServer	N/A	The created fileLDAPServer instance.

Delete operation

Delete an LDAP server configuration.

Header	Accept: application/json

	Content-Type: application/json
Method and URI	DELETE /api/instances/fileLDAPServer/<id> where <id> is the unique identifier of the fileLDAPServer instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
isIgnoreWarnings	in	Boolean	Optional	Ignore any warnings the deletion process. Values are: • true - Ignore any warnings. • false(Default) - Any warnings will interrupt the deletion process.

Modify operation

Modify an LDAP server configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fileLDAPServer/<id>/action/modify where <id> is the unique identifier of the fileLDAPServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
authenticationType	in	AuthenticationTypeEnum	Optional	Authentication type for the LDAP server.
authority	in	String[1..127]	Optional	The Distinguished Name (DN) of the root level in the directory tree.
serverAddresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	The IP addresses of the associated LDAP servers.
portNumber	in	unsigned Integer[16]	Optional	The TCP/IP port associated with the LDAP server.
protocol	in	LDAPProtocolEnum	Optional	Specifies the protocol to be used.
verifyServerCertificate	in	Boolean	Optional	Specify that uploaded Certification Authority (CA) certificates should be used to verify the certificates of LDAP servers for establishing secure SSL connections.
profileDN	in	String[0..127]	Optional	For an iPlanet LDAP server, type the DN of the entry with the configuration profile.
bindDN	in	String[1..255]	Optional	The Distinguished Name (DN) to be used when binding to the server.
bindPassword	in	String[1..255]	Optional	the associated password to be used when binding to the server.
isCifsAccountUsed	in	Boolean	Optional	Specify whether you want to use CIFS authentication. For Kerberos authentication only. Values are: • true - Indicates that the CIFS settings are used for Kerberos authentication. • false - Indicates that Kerberos uses its own settings.
principal	in	String[1..255]	Optional	The principal name for Kerberos authentication.
realm	in	String[1..255]	Optional	The realm name for Kerberos authentication.
password	in	String[1..255]	Optional	The associated password for Kerberos authentication.
replicationPolicy	in	ReplicationPolicyEnum	Optional	Status of the LDAP list in the NAS server operating as a replication destination.
isIgnoreWarnings	in	Boolean	Optional	Ignore warnings will interrupt the modification process. Values are: • true - Ignore any warnings. • false(Default) - Ant warnings will interrupt the modification process.

fileNDMPServer

The NDMP server for the NAS Server. You can configure one NDMP server per NAS server.
The Network Data Management Protocol (NDMP) provides a standard for backing up file servers on a network. NDMP allows centralized applications to back up file servers that run on various platforms and platform versions. NDMP reduces network congestion by isolating control path traffic from data path traffic, which permits centrally managed and monitored local backup operations. Storage systems support NDMP v2-v4 over the network. Direct-attach NDMP is not supported. This means that the tape drives need to be connected to a media server, and the NAS server communicates with the media server over the network. NDMP has an advantage when using multiprotocol file systems because it backs up the Windows ACLs as well as the UNIX security information.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique instance id.
nasServer	nasServer	NAS server that is configured with these NDMP settings.
username	String	User name for accessing the NDMP server.

Query all members of the fileNDMPServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileNDMPServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileNDMPServer collection.

Query a specific fileNDMPServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileNDMPServer/<id> where <id> is the unique identifier of the fileNDMPServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileNDMPServer instance.

Create operation

Create an NDMP server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fileNDMPServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the associated NAS server.
password	in	String[8..40]	Optional	The password for the NDMP server.
id	out	fileNDMPServer	N/A	Unique identifier of the new NDMP server.

Delete operation

Delete an NDMP server.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/fileNDMPServer/<id> where <id> is the unique identifier of the fileNDMPServer instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify an NDMP server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fileNDMPServer/<id>/action/modify where <id> is the unique identifier of the fileNDMPServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
password	in	String[8..40]	Optional	The password for the NDMP server.

fileNISServer

The NIS settings object for the NAS Server. You can configure one NIS settings object per NAS server.
The Network Information Service (NIS) consists of a directory service protocol for maintaining and distributing system configuration information, such as user and group information, hostnames etc.

Embedded resource types

fileNISServerSourceParameters

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the nisServer instance.
nasServer	nasServer	NAS server that is configured with these NIS settings.
addresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Prioritized list of one to ten NIS server IP addresses for the domain.
domain	String	Name of the NIS server domain.
replicationPolicy	ReplicationPolicyEnum	Indicates the status of the NIS servers addresses list in the NAS server operating as a replication destination. When a replicated NIS servers list is created on the source NAS server, it is automatically synchronized to the destination.
sourceParameters	fileNISServerSourceParameters	For replication destination NAS servers, information about the corresponding source NAS server's NIS settings.

Attributes for fileNISServerSourceParameters

For replication destination NAS servers, information about the corresponding source NAS server's NIS settings.

Attribute	Type	Description
addresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	List of IP addresses of NIS servers of the source NAS server

Query all members of the fileNISServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileNISServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileNISServer collection.

Query a specific fileNISServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileNISServer/<id> where <id> is the unique identifier of the fileNISServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileNISServer instance.

Create operation

Create an NIS server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fileNISServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the NAS server to which the LDAP server belongs.
domain	in	String[1..255]	Required	Domain name of the NIS server.
addresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false	Required	The IP addresses of the NIS servers to include in the domain.

		• Port supported: false • DNS name supported: false		
id	out	fileNISServer	N/A	The created fileNISServer instance.

Delete operation

Delete an NIS server.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/fileNISServer/<id> where <id> is the unique identifier of the fileNISServer instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
isIgnoreWarnings	in	Boolean	Optional	Ignore any warnings the deletion process. Values are: • true - Ignore any warnings. • false(Default) - Any warnings will interrupt the deletion process.

Modify operation

Modify an NIS server settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fileNISServer/<id>/action/modify where <id> is the unique identifier of the fileNISServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
domain	in	String[1..255]	Optional	Domain name of the NIS server.
addresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	Prioritized list of one to ten NIS server IP addresses for the domain.
replicationPolicy	in	ReplicationPolicyEnum	Optional	Status of the NIS list in the NAS server operating as a replication destination.
isIgnoreWarnings	in	Boolean	Optional	Ignore any warnings during the modification process. Values are: • true - Ignore any warnings. • false(Default) - Any warnings will interrupt the modification process.

fsnPort

(Applies if link aggregation is supported.) In a GUI it is available on General Settings - 'Link aggregation & FSN' page.

Fail-Safe Network (FSN) is a high-availability feature that extends link failover into the network by providing a switch-level redundancy. An FSN appears as a single link with a single MAC address and potentially multiple IP addresses. An FSN can be built from Ethernet Ports and non-FSN link aggregations, or combination of them. Only one connection in an FSN is active at a time. Port with active connection is the Active Port. Unity always uses the primary connection, if available. Port with primary connection is the Primary Port. If the primary connection fails, Unity automatically switches to one of the standby connections. When the primary connection is available again, an FSN automatically switches back to the primary connection.

Note: If you want to include either Ethernet Ports or link aggregations in an FSN Port, configure them before creating an FSN.

Note: You can aggregate only Ethernet Ports and link aggregations with the same MTU size and not included in another FSN Port.

Note: You can not add an Ethernet Port to FSN if there are iSCSI portals on it.

The features of an FSN Port are as follows:

- FSN component devices do not have to be the same device type. A single FSN Port can include Fast Ethernet devices or link aggregations, or a combination of these types, all on the same Unity.
- There can be a maximum of four devices in a FSN.
- Only one component device of an FSN Port is active at a time.
- If all the connections in FSN Port fail, the link is down.

The Unisphere online Help provides more details on FSN configuring.

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete ,RecommendForInterface

Attributes

Attribute	Type	Description
id	String	Unique identifier of an fsnPort instance.
	String	

name		Name for an fsnPort. This name contains a name of parentStorageProcessor. For example, "SP A FSN Port 0 1".
shortName	String	Short name for an fsnPort. This name doesn't contains a name of parentStorageProcessor and it's short form of name of fsnPort object. For example, "FSN Port 0 1".
activePort	ipPort	Active Port of an fsnPort. Active Port is port with active connection. Read-only field.
primaryPort	ipPort	Primary Port of a fail-safe network connection. Only one port of an FSN is active at a time, and this Primary Port will be active whenever it is operating correctly. The Primary Port is required to create an fsnPort, and it will be the Primary Port for the lifetime of the fsnPort. The fsnPort's MAC address will be the same as the Primary Port's MAC address.
secondaryPorts	List<ipPort>	List of secondary ports (Ethernet Ports and / or Link Aggregations), one of which will be activated during any failure of the primary port.
mtuSize	unsigned Integer[32(bytes)]	Maximum transmission unit (MTU) packet size for the linked ports, in bytes.
minMtuSize	unsigned Integer[32(bytes)]	Minimum configurable limit on Maximum transmission unit (MTU) packet size for the linked ports, in bytes.
maxMtuSize	unsigned Integer[32(bytes)]	Maximum configurable limit on Maximum transmission unit (MTU) packet size for the linked ports, in bytes.
supportedMtus	List<Integer>[32(bytes)]	List of MTU sizes supported by an fsnPort. **Deprecated:** This attribute is obsolete and will be removed in a future release.
macAddress	String	MAC address of an fsnPort.
isLinkUp	Boolean	Indicates whether an fsnPort has a link.
health	health	Health information for an fsnPort, as defined by the health resource type.
storageProcessor	storageProcessor	SP on which the FSN Port resides, as defined by the storageProcessor resource type.

Query all members of the fsnPort collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fsnPort/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fsnPort collection.

Query a specific fsnPort instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fsnPort/<id> where <id> is the unique identifier of the fsnPort instance to query. Or GET /api/instances/fsnPort/name:<value> where <value> is the name of the fsnPort instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fsnPort instance.

Create operation

Create an fsnPort.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fsnPort/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
primaryPort	in	ipPort	Required	Primary Port to create an fsnPort. Primary Port will be active whenever an fsnPort is operating correctly.
secondaryPorts	in	List<ipPort>	Required	List of secondary ports (Ethernet Ports / Link Aggregations) to be aggregated.
mtuSize	in	unsigned Integer[32(bytes)] [1280..9216]	Optional	MTU size value for an fsnPort. If you want to support jumbo frames, use 9000 as the MTU size value. If not specified, MTU size of the Primary Port is used.
id	out	fsnPort	N/A	New fsnPort instance.
peerId	out	fsnPort	N/A	Peer fsnPort instance.

Modify operation

Modify an fsnPort.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fsnPort/<id>/action/modify where <id> is the unique identifier of the fsnPort instance. Or POST /api/instances/fsnPort/name:<value>/action/modify where <value> is the name of the fsnPort instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
mtuSize	in	unsigned Integer[32(bytes)] [1280..9216]	Optional	New MTU size value for an fsnPort. If you want to support jumbo frames, use 9000 as the MTU size value.
addPorts	in	List<ipPort>	Optional	List of IpPorts (Ethernet Ports / Link Aggregations) to add to an fsnPort.
removePorts	in	List<ipPort>	Optional	List of IpPorts (Ethernet Ports / Link Aggregations) to remove from an fsnPort. Primary Port can not be removed.

Delete operation

Delete an fsnPort. When fsnPort is deleted, all File Interfaces will be assigned to the Primary Port.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/fsnPort/<id> where <id> is the unique identifier of the fsnPort instance to delete. Or DELETE /api/instances/fsnPort/name:<value> where <value> is the name of the fsnPort instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

RecommendForInterface operation

Recommend appropriate fsnPorts for creation of network interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fsnPort/action/recommendForInterface
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the RecommendForInterface operation

Argument	In/ out	Type	Required?	Description
storageProcessor	in	storageProcessor	Required	SP on which to recommend fsnPorts.
recommendations	out	List<fsnPort>	N/A	List of identifiers for the recommended fsnPorts.

ftpServer

Information about the File Transfer Protocol (FTP) and Secure File Transfer Protocol (SFTP) servers of a NAS server.

You can configure one FTP server and one SFTP server per NAS server. File Transfer Protocol (FTP) is a standard network protocol used to transfer files from one host to another host over a TCP-based network, such as the Internet. For secure transmission that encrypts the username, password, and content, FTP is secured with SSH (SFTP).

You can activate an FTP server and SFTP server independently on each NAS server. The FTP and SFTP clients are authenticated using credentials defined on a Unix name server (such as an NIS server or a LDAP server) or a Windows domain. Windows user names need to be entered using the 'username@domain' or 'domain\\username' formats. Each FTP and SFTP must have a home directory defined in the name server that must be accessible on the NAS server. FTP allows also clients to connect as anonymous users.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ftpServer instance.
nasServer	nasServer	NAS server that is configured with the FTP server.
isFtpEnabled	Boolean	Indicates whether the FTP server is enabled on the NAS server specified in the nasServer attribute. Values are: • true - FTP server is enabled on the specified NAS server. • false - FTP server is disabled on the specified NAS

		server.
isSftpEnabled	Boolean	Indicates whether the SFTP server is enabled on the NAS server specified in the nasServer attribute. Values are: • true - SFTP server is enabled on the specified NAS server. • false - SFTP server is disabled on the specified NAS server.
isCifsUserEnabled	Boolean	Indicates whether FTP and SFTP clients can be authenticated using a CIFS user name. These user names are defined in a Windows domain controller, and their formats are user@domain or domain\\user. Values are: • true - CIFS user names are accepted for authentication. • false - CIFS user names are not accepted for authentication.
isUnixUserEnabled	Boolean	Indicates whether FTP and SFTP clients can be authenticated using a Unix user name. Unix user names are defined in LDAP or NIS servers. Values are: • true - Unix user names are accepted for authentication. • false - Unix user names are not accepted for authentication.
isAnonymousUserEnabled	Boolean	Indicates whether FTP clients can be authenticated anonymously. Values are: • true - Anonymous user name is accepted. • false - Anonymous user name is not accepted.
isHomedirLimitEnabled	Boolean	Indicates whether an FTP or SFTP user's area is limited to his or her home directory.. For information about CIFS home directories, see *Using a VNXe3200 System with CIFS File Systems*, which is available on the Dell Online Support website. Values are: • true - An FTP or SFTP user can access his or her own home directory only. • false - FTP and SFTP users can access any NAS server directory, according to NAS server permissions.
defaultHomedir	String	(Applies when the value of isHomedirLimitEnabled is false.) Default directory of FTP and SFTP clients who have a home directory that is not defined or accessible. This parameter is an absolute path relative to the root of the NAS server.
welcomeMsg	String	Welcome message displayed on the console of FTP and SFTP clients before their authentication. The length of this message is limited to 511 bytes, and the length of each line is limited to 80 bytes.
motd	String	Message of the day displayed on the console of FTP clients after their authentication. The length of this message is limited to 511 bytes, and the length of each line is limited to 80 bytes.
isAuditEnabled	Boolean	Indicates whether the activity of FTP and SFTP clients is tracked in audit files. Values are: • true - FTP/SFTP activity is tracked. • false - FTP/SFTP activity is not tracked.
auditDir	String	(Applies when the value of isAuditEnabled is true.) Directory of FTP/SFTP audit files. This parameter is an absolute path relative to the root of the NAS server.
auditMaxSize	unsigned Integer[64(bytes)]	(Applies when the value of isAuditEnabled is true.) Maximum size of FTP/SFTP audit files.
hostsList	List<String>	Allowed or denied hosts, depending on the value of the isAllowHost attribute. A host is defined using its IP address. Subnets using CIDR notation are also supported. • If allowed hosts exist, only those hosts and no others can connect to the NAS server through FTP or SFTP. • If denied hosts exist, they always have access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to NAS server access through FTP or SFTP based on the host IP.
usersList	List<String>	Allowed or denied users, depending on the value of the isAllowUser attribute. • If allowed users exist, only those users and no others can connect to the NAS server through FTP or SFTP. • If denied users exist, they have always access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to the NAS server access through FTP or SFTP based on the user name.
groupsList	List<String>	Allowed or denied user groups, depending on the value of the isAllowGroup attribute. • If allowed groups exist, only users who are members of these groups and no others can connect to the NAS server through FTP or SFTP. • If denied groups exist, all users who are members of those groups have always access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to the NAS server access through FTP or SFTP based on the user group.
isAllowHost	Boolean	Indicates whether the hostsList attribute contains allowed or denied hosts. Values are: • true - hostsList contains allowed hosts. • false - hostsList contains denied hosts.
isAllowUser	Boolean	Indicates whether the usersList attribute contains allowed or denied users. Values are: • true - usersList contains allowed users. • false - usersList contains denied users.
isAllowGroup	Boolean	Indicates whether the groupsList attribute contains allowed or denied user groups. Values are: • true - groupsList contains allowed user groups. • false - groupsList contains denied user groups.

Query all members of the ftpServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ftpServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ftpServer collection.

Query a specific ftpServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ftpServer/<id> where <id> is the unique identifier of the ftpServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ftpServer instance.

Create operation

Create an ftpServer instance.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/ftpServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	NAS server associated with the FTP or SFTP server.
isFtpEnabled	in	Boolean	Optional	Indicates whether the FTP server is enabled on the NAS server specified in the nasServer attribute. Values are: • true - FTP server is enabled on the specified NAS server. • false - FTP server is disabled on the specified NAS server.
isSftpEnabled	in	Boolean	Optional	Indicates whether the SFTP server is enabled on the NAS server specified in the nasServer attribute. Values are: • true - SFTP server is enabled on the specified NAS server. • false - SFTP server is disabled on the specified NAS server.
isCifsUserEnabled	in	Boolean	Optional	Indicates whether FTP and SFTP clients can be authenticated using a CIFS user name. These user names are defined in a Windows domain controller, and their formats are user@domain or domain\\user. Values are: • true - CIFS user names are accepted for authentication. • false - CIFS user names are not accepted for authentication.
isUnixUserEnabled	in	Boolean	Optional	Indicates whether FTP and SFTP clients can be authenticated using a Unix user name. Unix user names are defined in LDAP or NIS servers. Values are: • true - Unix user names are accepted for authentication. • false - Unix user names are not accepted for authentication.
isAnonymousUserEnabled	in	Boolean	Optional	Indicates whether FTP clients can be authenticated anonymously. Values are: • true - Anonymous user name is accepted. • false - Anonymous user name is not accepted.
isHomedirLimitEnabled	in	Boolean	Optional	Indicates whether an FTP or SFTP user's area is limited to his or her home directory. Values are: • true - An FTP or SFTP user can access his or her own home directory only. • false - FTP and SFTP users can access any NAS server directory, according to NAS server permissions.
defaultHomedir	in	String[1..1023]	Optional	(Applies when the value of isHomedirLimitEnabled is false.) Default directory of FTP and SFTP clients who have a home directory that is not defined or accessible.
welcomeMsg	in	String[..511]	Optional	Welcome message displayed on the console of FTP and SFTP clients before their authentication.
motd	in	String[..511]	Optional	Message of the day displayed on the console of FTP clients after their authentication.

isAuditEnabled	in	Boolean	Optional	Indicates whether the activity of FTP and SFTP clients is tracked in audit files. Values are: • true - FTP/SFTP activity is tracked. • false - FTP/SFTP activity is not tracked.
auditDir	in	String[1..1023]	Optional	(Applies when the value of isAuditEnabled is true.) Directory of FTP/SFTP audit files. This parameter is an absolute path relative to the root of the NAS server.
auditMaxSize	in	unsigned Integer[64(bytes)] [8192..1073741824]	Optional	(Applies when the value of isAuditEnabled is true.) Maximum size of FTP/SFTP audit files.
hostsList	in	List<String>	Optional	Allowed or denied hosts, depending on the value of the isAllowHost attribute. A host is defined using its IP address. Subnets using CIDR notation are also supported. • If allowed hosts exist, only those hosts and no others can connect to the NAS server through FTP or SFTP. • If denied hosts exist, they always have access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to NAS server access through FTP or SFTP based on the host IP.
usersList	in	List<String>	Optional	Allowed or denied users, depending on the value of the isAllowUser attribute. • If allowed users exist, only those users and no others can connect to the NAS server through FTP or SFTP. • If denied users exist, they have always access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to the NAS server access through FTP or SFTP based on the user name.
groupsList	in	List<String>	Optional	Allowed or denied user groups, depending on the value of the isAllowGroup attribute. • If allowed groups exist, only users who are members of these groups and no others can connect to the NAS server through FTP or SFTP. • If denied groups exist, all users who are members of those groups have always access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to the NAS server access through FTP or SFTP based on the user group.
isAllowHost	in	Boolean	Optional	Indicates whether the hostList attribute contains allowed or denied hosts.
isAllowUser	in	Boolean	Optional	Indicates whether the usersList attribute contains allowed or denied users.
isAllowGroup	in	Boolean	Optional	Indicates whether the groupsList attribute contains allowed or denied user groups.
id	out	ftpServer	N/A	Unique identifier of the new ftpServer instance.

Delete operation

Delete an ftpServer instance.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/ftpServer/<id> where <id> is the unique identifier of the ftpServer instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
isIgnoreWarnings	in	Boolean	Optional	Ignore warnings related to the deletion process. Values are: • true - Ignore warnings. • false(Default) - Warnings will interrupt the deletion process.

Modify operation

Modify an ftpServer instance.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ftpServer/<id>/action/modify where <id> is the unique identifier of the ftpServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description

isFtpEnabled	in	Boolean	Optional	Indicates whether the FTP server is enabled. Values are: • true - FTP server is enabled. • false - FTP server is disabled.
isSftpEnabled	in	Boolean	Optional	Indicates whether the SFTP server is enabled. Values are: • true - SFTP server is enabled. • false - SFTP server is disabled.
isCifsUserEnabled	in	Boolean	Optional	Indicates whether FTP and SFTP clients can be authenticated using a CIFS user name. These user names are defined in a Windows domain controller and their formats are user@domain or domain\\user. Values are: • true - CIFS user names are accepted for authentication. • false - CIFS user names are not accepted for authentication.
isUnixUserEnabled	in	Boolean	Optional	Indicates whether FTP and SFTP clients can be authenticated using a Unix user name. Unix user names are defined in LDAP or NIS servers. Values are: • true - Unix user names are accepted for authentication. • false - Unix user names are not accepted for authentication.
isAnonymousUserEnabled	in	Boolean	Optional	Indicates whether FTP clients can be authenticated anonymously. Values are: • true - Anonymous user name is accepted. • false - Anonymous user name is not accepted.
isHomedirLimitEnabled	in	Boolean	Optional	Indicates whether an FTP or SFTP user's area is limited to his or her home directory. Values are: • true - An FTP or SFTP user can access his or her own home directory only. • false - FTP and SFTP users can access any NAS server directory, according to NAS server permissions.
defaultHomedir	in	String[1..1023]	Optional	(Applies when the value of isHomedirLimitEnabled is false.) Default directory of FTP and SFTP clients who have a home directory that is not defined or accessible.
welcomeMsg	in	String[..511]	Optional	Welcome message displayed on the console of FTP and SFTP clients before their authentication.
motd	in	String[..511]	Optional	Message of the day displayed on the console of FTP clients after their authentication.
isAuditEnabled	in	Boolean	Optional	Indicates whether the activity of FTP and SFTP clients is tracked in audit files. Values are: • true - FTP/SFTP activity is tracked. • false - FTP/SFTP activity is not tracked.
auditDir	in	String[1..1023]	Optional	(Applies when the value of isAuditEnabled is true.) Directory of FTP/SFTP audit files. This parameter is an absolute path relative to the root of the NAS server.
auditMaxSize	in	unsigned Integer[64(bytes)] [8192..1073741824]	Optional	(Applies when the value of isAuditEnabled is true.) Maximum size of FTP/SFTP audit files.
hostsList	in	List<String>	Optional	Allowed or denied hosts, depending on the value of the isAllowHost attribute. A host is defined using its IP address. Subnets using CIDR notation are also supported. • If allowed hosts exist, only those hosts and no others can connect to the NAS server through FTP or SFTP. • If denied hosts exist, they always have access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to NAS server access through FTP or SFTP based on the host IP.
usersList	in	List<String>	Optional	Allowed or denied users, depending on the value of the isAllowUser attribute. • If allowed users exist, only those users and no others can connect to the NAS server through FTP or SFTP. • If denied users exist, they have always access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to the NAS server access through FTP or SFTP based on the user name.
groupsList	in	List<String>	Optional	Allowed or denied user groups, depending on the value of the isAllowGroup attribute. • If allowed groups exist, only users who are members of these groups and no others can connect to the NAS server through FTP or SFTP. • If denied groups exist, all users who are members of those groups have always access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to the NAS server access through FTP or SFTP based on the user group.
isAllowHost	in	Boolean	Optional	Indicates whether the hostList attribute contains allowed or denied hosts.
isAllowUser	in	Boolean	Optional	Indicates whether the usersList attribute

				contains allowed or denied users.
isAllowGroup	in	Boolean	Optional	Indicates whether the groupsList attribute contains allowed or denied user groups.
force	in	Boolean	Optional	Ignore warnings related to the modify process. Values are: • true - Ignore warnings. • false(Default) - Warnings will interrupt the modify process.

ipInterface

Information about network interfaces in the storage system.

Network interfaces enable and control access between the system, network, and configured hosts.

Supported operations

Collection query , Instance query ,Ping ,Traceroute

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ipInterface instance.
ipPort	ipPort	Physical port or link aggregation on the storage processor on which the interface is running, as defined by the ethernetPort resource type.
ipProtocolVersion	IpProtocolVersionEnum	IP protocol version (IPv4 or IPv6).
ipAddress	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 or IPv6 address for the interface.
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 netmask for the interface, if the interface uses an IPv4 address.
v6PrefixLength	unsigned Integer[32(bits)][0..128]	IPv6 prefix length for the interface, if the interface uses an IPv6 address.
gateway	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Gateway IP address.
vlanId	unsigned Integer[16][1..4094]	Virtual Local Area Network (VLAN) identifier for the interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 1 - 4094.
type	IpInterfaceTypeEnum	Type of the ip interface.

Query all members of the ipInterface collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ipInterface/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ipInterface collection.

Query a specific ipInterface instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ipInterface/<id> where <id> is the unique identifier of the ipInterface instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ipInterface instance.

Ping operation

Ping Destination from IP Interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ipInterface/<id>/action/ping where <id> is the unique identifier of the ipInterface instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK

Successful response body	JSON representation of the returned attributes.

Arguments for the Ping operation

Argument	In/ out	Type	Required?	Description
destination	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Required	IP address or Domain Name of the destination.
result	out	pingResult	N/A	Result of ping command.

Traceroute operation

Traceroute Destination from IP Interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ipInterface/<id>/action/traceroute where <id> is the unique identifier of the ipInterface instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the Traceroute operation

Argument	In/ out	Type	Required?	Description
destination	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Required	IP address or Domain Name of the destination.
result	out	List<tracerouteResult>	N/A	Result of traceroute command.

ipPort

IP Port information.
ipPort is a base class for linkAggregation, ethernetPort and fsnPort.

Supported operations

Collection query , Instance query ,RecommendForInterface

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ipPort instance.
name	String	IP Port name.
shortName	String	Short name of the IP Port.
macAddress	String	MAC address of the ipPort.
isLinkUp	Boolean	Indicates whether the ipPort has link.
isEnslaved	Boolean	Indicates whether the ipPort is a port included in link aggregation or fsnPort. **Deprecated:** This attribute is obsolete and will be removed in a future release. Please use ipPort.isAggregated instead
isAggregated	Boolean	Indicates whether the ipPort is a port included in link aggregation or fsnPort.
storageProcessor	storageProcessor	Parent Storage Processor of the ipPort.

Query all members of the ipPort collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ipPort/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ipPort collection.

Query a specific ipPort instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ipPort/<id> where <id> is the unique identifier of the ipPort instance to query. Or

	GET /api/instances/ipPort/name:<value> where <value> is the name of the ipPort instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ipPort instance.

RecommendForInterface operation

Recommend ipPorts on the specified SP to create the network interfaces on.

This is a static method which applies to the ipPort resource type instead of specific ipPort resource instances.

The most suitable ipPort is placed on top of the returned list.
It is chosen according to its I/O Module number, link status, aggregation state, and the amount of interfaces on it.
The rest of ports is sorted sequentially by I/O Module number, aggregation state and name.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/ipPort/action/recommendForInterface
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the RecommendForInterface operation

Argument	In/ out	Type	Required?	Description
storageProcessor	in	storageProcessor	Required	Storage processor for which to recommend ipPorts.
usage	in	IPRecommendUsageEnum	Optional	ISCSI for iscsiPortals, File for fileIntefaces and replicationInterfaces. If not specified, only ipPorts that represent the non-aggregated Ethernet ports are returned.
recommendedPorts	out	List<ipPort>	N/A	List of recommended ports.

iscsiNode

Information about the iSCSI nodes in the storage system. An iSCSI node represents a single iSCSI initiator or target.
iSCSI nodes are created automatically on every non-aggregated Ethernet port except of ports used for management access.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the iscsiNode instance.
name	String	iSCSI node name.
ethernetPort	ethernetPort	Ethernet port associated with the iSCSI Node. (Each Ethernet port can be associated with one iSCSI node.)
alias	String	Descriptive name of the iSCSI node. This name does not have to be unique.

Query all members of the iscsiNode collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/iscsiNode/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the iscsiNode collection.

Query a specific iscsiNode instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/iscsiNode/<id> where <id> is the unique identifier of the iscsiNode instance to query. Or GET /api/instances/iscsiNode/name:<value> where <value> is the name of the iscsiNode instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific iscsiNode instance.

Modify operation

Modify iSCSI node settings.

Header	Accept: application/json Content-Type: application/json

Method and URI	POST /api/instances/iscsiNode/<id>/action/modify where <id> is the unique identifier of the iscsiNode instance. Or POST /api/instances/iscsiNode/name:<value>/action/modify where <value> is the name of the iscsiNode instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
alias	in	String	Optional	Descriptive name of the iSCSI node. This name does not have to be unique.

iscsiPortal

Information about the iSCSI portals in the storage system.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the iscsiPortal instance.
ethernetPort	ethernetPort	Ethernet port used by the iSCSI portal.
iscsiNode	iscsiNode	iSCSI node used by the iSCSI portal.
ipAddress	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IP address of the iSCSI portal.
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 netmask for the network interface, if it uses an IPv4 address.
v6PrefixLength	unsigned Integer[32(bits)][0..128]	IPv6 prefix length for the interface, if it uses an IPv6 address.
gateway	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 or IPv6 gateway address for the network interface.
vlanId	unsigned Integer[16][1..4094]	Virtual Local Area Network (VLAN) identifier for the interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 1 - 4094.
ipProtocolVersion	IpProtocolVersionEnum	Indicates whether the iSCSI portal is over IPv4 or IPv6.

Query all members of the iscsiPortal collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/iscsiPortal/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the iscsiPortal collection.

Query a specific iscsiPortal instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/iscsiPortal/<id> where <id> is the unique identifier of the iscsiPortal instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific iscsiPortal instance.

Create operation

Create an iSCSI network portal.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/iscsiPortal/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
ethernetPort	in	ethernetPort	Required	Ethernet port used by the iSCSI portal.
ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Required	IP address of the iSCSI portal.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 netmask for the network interface, if it uses an IPv4 address.
v6PrefixLength	in	unsigned Integer[32(bits)] [0..128]	Optional	IPv6 prefix length for the iSCSI portal, if it uses an IPv6 address.
vlanId	in	unsigned Integer[16] [1..4094]	Optional	Ethernet virtual LAN identifier used for tagging iSCSI portal outgoing packets and for filtering iSCSI portal incoming packets. Values are 1 - 4094.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	Gateway of the iSCSI portal.
id	out	iscsiPortal	N/A	New iscsiPortal instance.

Delete operation

Delete an iSCSI network portal.

iSCSI network portal can not be deleted if there are active iSCSI sessions over it.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/iscsiPortal/<id> where <id> is the unique identifier of the iscsiPortal instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify an iSCSI network portal.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/iscsiPortal/<id>/action/modify where <id> is the unique identifier of the iscsiPortal instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description

ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Optional	IP address of the iSCSI portal.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 netmask for the network interface, if it uses an IPv4 address.
v6PrefixLength	in	unsigned Integer[32(bits)] [0..128]	Optional	IPv6 prefix length for the interface, if it uses an IPv6 address.
vlanId	in	unsigned Integer[16]	Optional	Ethernet virtual LAN identifier used for tagging iSCSI portal outgoing packets and for filtering iSCSI portal incoming packets. Values are 1 - 4094. Empty string or null to unset.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	Gateway of the iSCSI portal. Empty string to unset.

iscsiSettings

Global ISCSI settings.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique instance identifier. This is a singleton resource, so the id is always 0.
isForwardCHAPRequired	Boolean	If True, the iSCSI storage requires checking of the initiator. Forward CHAP secret, which is set for each initiator, otherwise the iSCSI storage does not require Forward CHAP.
reverseCHAPUserName	String	Reverse CHAP user name, empty string indicates that chap is not set yet.
forwardGlobalCHAPUserName	String	Forward global CHAP user name, empty string indicates that chap is not set yet.
iSNSServer	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	iSNS server IP address, if configured.

Query all members of the iscsiSettings collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/iscsiSettings/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the iscsiSettings collection.

Query a specific iscsiSettings instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/iscsiSettings/<id> where <id> is the unique identifier of the iscsiSettings instance to query.

Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific iscsiSettings instance.

Modify operation

Modify ISCSI settings.

For ASCII secret type, the secret must be 12 to 16 characters long and accepts any ASCII character.
For Binary secret type, the secret is 24 to 32 characters long and accepts all hexadecimal characters.
Username must be alphanumeric.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/iscsiSettings/<id>/action/modify where <id> is the unique identifier of the iscsiSettings instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
reverseCHAPUsername	in	String	Optional	Reverse CHAP user name. Put empty string to disable reverse CHAP.
reverseCHAPSecret	in	String	Optional	Reverse CHAP secret. Ignored if reverseCHAPUsername is empty.
reverseCHAPSecretType	in	CHAPSecretTypeEnum	Optional	Reverse CHAP secret type.
isForwardCHAPRequired	in	Boolean	Optional	True if CHAP auth is required for initiators.
forwardGlobalCHAPUsername	in	String	Optional	Global CHAP user name. Put empty string to disable global CHAP.
forwardGlobalCHAPSecret	in	String	Optional	Global CHAP secret. Ignored if forwardGlobalCHAPUsername is empty.
forwardGlobalCHAPSecretType	in	CHAPSecretTypeEnum	Optional	Global CHAP secret type.
iSNSServer	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	iSNS server IP address. Empty string to unset.

linkAggregation

(Applies if link aggregation is supported.) Ethernet port link aggregation settings.

Link aggregation lets you link Ethernet ports (for example, port 0 and port 1) on a Storage Processor (SP) to a single logical port, and therefore lets you use up to four Ethernet ports on the SP. If your system has two SPs, and you link two physical ports, the same ports on both SPs are linked for redundancy. For example, if you link port 0 to port 1, the system creates one link aggregation for these ports on SPA and another link aggregation on SPB.

Note: You can aggregate only Ethernet ports belonging to the same I/O module or on-board Ethernet ports. Aggregation of ports from different I/O modules is not allowed.

Note: You can aggregate only Ethernet ports with the same MTU size.

Note: You can not add an Ethernet port to aggregation if there are iSCSI portals on it.

Link aggregation provides the following advantages:

- Increases overall throughput, since two physical ports are linked into one logical port.
- Provides basic load balancing across linked ports, since the network traffic is distributed across multiple physical ports.
- Provides redundant ports so that if one port in a linked pair fails, the system does not lose connectivity.

Note: With link aggregation, both linked ports must be connected to the same switch, and the switch must be configured to use the link aggregation that uses the Link Aggregation Control Protocol (LACP). The documentation that came with your switch should provide more information about using LACP.

The Unisphere online Help provides more details on cabling the SPs to the Disk-Array Enclosures (DAEs).

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete ,RecommendForAggregation ,RecommendForInterface

Attributes

Attribute	Type	Description
id	String	Unique identifier of the linkAggregation instance.
name	String	Link aggregation name.
shortName	String	Short name for the link aggregation.
masterPort	ethernetPort	Master port of the link aggregation. **Deprecated:** This attribute is obsolete and will be removed in a future release. Please use linkAggregation.primaryPort instead
primaryPort	ethernetPort	Primary port of the link aggregation.
ports	List<ethernetPort>	List of aggregated Ethernet ports, including the primary port.
mtuSize	unsigned Integer[32(bytes)]	Maximum transmission unit (MTU) packet size for the linked ports, in bytes.
minMtuSize	unsigned Integer[32(bytes)]	Minimum configurable limit on Maximum transmission unit (MTU) packet size for the linked ports, in bytes.

maxMtuSize	unsigned Integer[32(bytes)]	Maximum configurable limit on Maximum transmission unit (MTU) packet size for the linked ports, in bytes.
supportedMtus	List<Integer>[32(bytes)]	List of MTU sizes supported by the link aggregation. **Deprecated:** This attribute is obsolete and will be removed in a future release.
macAddress	String	MAC address of the link aggregation.
isLinkUp	Boolean	Indicates whether the link aggregation has link.
health	health	Health information for the link aggregation, as defined by the health resource type.
isIncludedInFSN	Boolean	Indicates whether the link aggregation was included in an FSN (fsnPort).
storageProcessor	storageProcessor	SP on which the link aggregation resides, as defined by the storageProcessor resource type.

Query all members of the linkAggregation collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/linkAggregation/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the linkAggregation collection.

Query a specific linkAggregation instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/linkAggregation/<id> where <id> is the unique identifier of the linkAggregation instance to query. Or GET /api/instances/linkAggregation/name:<value> where <value> is the name of the linkAggregation instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific linkAggregation instance.

Create operation

Create a link aggregation.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/linkAggregation/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
ports	in	List<ethernetPort>	Required	List of Ethernet ports to be aggregated. The first port in the list becomes the primary port.
mtuSize	in	unsigned Integer[32(bytes)] [1280..9216]	Optional	MTU size value for the link aggregation. If you want to support jumbo frames, use 9000 as the MTU size value. **If not specified, MTU size of the primary port is used.**
id	out	linkAggregation	N/A	New linkAggregation instance.
peerId	out	linkAggregation	N/A	Peer linkAggregation instance.

Modify operation

Modify a link aggregation.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/linkAggregation/<id>/action/modify where <id> is the unique identifier of the linkAggregation instance. Or POST /api/instances/linkAggregation/name:<value>/action/modify where <value> is the name of the linkAggregation instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/	Type	Required?	Description

	out			
mtuSize	in	unsigned Integer[32(bytes)] [1280..9216]	Optional	New MTU size value for the link aggregation. If you want to support jumbo frames, use 9000 as the MTU size value.
addPorts	in	List<ethernetPort>	Optional	List of Ethernet ports to add to the link aggregation.
removePorts	in	List<ethernetPort>	Optional	List of Ethernet ports to remove from the link aggregation. Primary port can not be removed.

Delete operation

Delete a link aggregation.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/linkAggregation/<id> where <id> is the unique identifier of the linkAggregation instance to delete. Or DELETE /api/instances/linkAggregation/name:<value> where <value> is the name of the linkAggregation instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

RecommendForAggregation operation

Recommend appropriate link aggregations for an Ethernet port.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/linkAggregation/action/recommendForAggregation
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the RecommendForAggregation operation

Argument	In/ out	Type	Required?	Description
ethernetPort	in	ethernetPort	Required	Ethernet port on which to recommend link aggregations.
recommendedPorts	out	List<linkAggregation>	N/A	List of identifiers for the recommended link aggregations.

RecommendForInterface operation

Recommend appropriate link aggregations for creation of network interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/linkAggregation/action/recommendForInterface
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the RecommendForInterface operation

Argument	In/ out	Type	Required?	Description
storageProcessor	in	storageProcessor	Required	SP on which to recommend link aggregations.
recommendations	out	List<linkAggregation>	N/A	List of identifiers for the recommended link aggregations.

mgmtInterface

Information about management interfaces in the storage system.

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the mgmtInterface instance.
configMode	InterfaceConfigModeEnum	Configuration mode.
ethernetPort	ethernetPort	Ethernet port on the storage processor on which the interface is running.
protocolVersion	IpProtocolVersionEnum	IP protocol version (IPv4 or IPv6).
ipAddress	IPAddress	IPv4 or IPv6 address for the interface.

	• IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 netmask for the interface, if the interface uses an IPv4 address.
v6PrefixLength	unsigned Integer[32(bits)][0..128]	IPv6 prefix length for the interface, if the interface uses an IPv6 address.
gateway	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Gateway IP address.

Query all members of the mgmtInterface collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/mgmtInterface/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the mgmtInterface collection.

Query a specific mgmtInterface instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/mgmtInterface/<id> where <id> is the unique identifier of the mgmtInterface instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific mgmtInterface instance.

Create operation

Create a new network interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/mgmtInterface/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Required	IPv4 or IPv6 address for the interface.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 netmask for the interface, if the interface uses an IPv4 address.
v6PrefixLength	in	unsigned Integer[32(bits)][0..128]	Optional	Prefix length in bits for IPv6 address.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Required	IPv4 or IPv6 gateway address for the interface.
id	out	mgmtInterface	N/A	Unique identifier of the new interface instance.

Modify operation

Modify settings for an interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/mgmtInterface/<id>/action/modify where <id> is the unique identifier of the mgmtInterface instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Optional	IPv4 or IPv6 gateway address for the interface.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 netmask for the interface, if the interface uses an IPv4 IP address.
v6PrefixLength	in	unsigned Integer[32(bits)] [0..128]	Optional	Prefix length in bits for v6 addresses.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 or IPv6 gateway address for the interface.

Delete operation

Delete an interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/mgmtInterface/<id> where <id> is the unique identifier of the mgmtInterface instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

mgmtInterfaceSettings

Global settings for mgmtInterfaces.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique instance identifier. This is a singleton resource, so the id is always 0.
v4ConfigMode	InterfaceConfigModeEnum	IPv4 configuration mode.
v6ConfigMode	InterfaceConfigModeEnum	IPv6 configuration mode.

Query all members of the mgmtInterfaceSettings collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/mgmtInterfaceSettings/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the mgmtInterfaceSettings collection.

Query a specific mgmtInterfaceSettings instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/mgmtInterfaceSettings/<id> where <id> is the unique identifier of the mgmtInterfaceSettings instance to query.

Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific mgmtInterfaceSettings instance.

Modify operation

Modify mgmt interface settings.

It is not allowed to set both IPv4 and IPv6 to Disabled at the same time, in any sequence.
It is not allowed to set both IPv4 and IPv6 to Auto in one request.
IPv4 or IPv6 may be set to Auto only if the other class IP address already exists, either set as a static IP address or obtained in Auto mode.
The Static can be set only implicitly by creating the mgmtInterface object.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/mgmtInterfaceSettings/<id>/action/modify where <id> is the unique identifier of the mgmtInterfaceSettings instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
v4ConfigMode	in	InterfaceConfigModeEnum	Optional	New v4 config mode.
v6ConfigMode	in	InterfaceConfigModeEnum	Optional	New v6 config mode.

nasServer

Information about the NAS server in the storage system.

NAS Servers are software components used to transfer data and provide the connection ports for hosts to access file-level storage resources. NAS servers are independent from each other.

NAS Servers access data on available drives making it available to network hosts via specific protocols (NFS/SMB/FTP/SFTP). Storage system supports NAS Servers for managing file-level storage resources, such as VMware NFS datastores or file systems.
Before you can provision a file-level storage resource, a NAS Server must be created with the necessary sharing protocols enabled. When NAS Servers are created, you can specify the storage pool and owning SP - either SPA or SPB.
In the storage systems, NAS Servers can leverage the Link Aggregation functionality to create a highly available environment. Once a link aggregated port group is available, you create or modify NAS Server network interfaces to leverage the available port group. Because NAS Servers are accessible through only one SP at a time, they will fail over to the other SP when there is an SP failure event.

Supported operations

Collection query , Instance query ,Create ,Delete ,GenerateUserMappingsReport ,UpdateUserMappings ,RefreshConfiguration ,Modify ,Ping ,Traceroute

Attributes

Attribute	Type	Description
id	String	Unique identifier of the nasServer instance.
name	String	User-specified name of the NAS server.
health	health	Health information for the NAS server, as defined by the health resource type.
homeSP	storageProcessor	Storage Processor on which the NAS Server is intended to run.
currentSP	storageProcessor	Storage Processor on which the NAS server is currently running.
pool	pool	Storage pool that stores the NAS server's configuration metadata, as defined by the pool resource type.
sizeAllocated	unsigned Integer[64(bytes)]	Amount of storage pool space used for NAS server configuration.
tenant	tenant	Tenant to which the NAS Server belongs.
isReplicationEnabled	Boolean	Indicates whether a replication session is enabled for the NAS server. The NAS server can't be deleted while replication session is enabled. Values are: • true - Replication session is enabled. • false - Replication session is disabled.
isReplicationDestination	Boolean	Indicates whether the NAS server is a replication destination. Values are: • true - NAS server is a replication destination. • false - NAS server is a not a replication destination.
isBackupOnly	Boolean	Indicates whether the NAS server is used as backup only. Only a replication destination can be set as backup. Values are: • true - NAS server acts as backup only. • false - Normal NAS server.
isMigrationDestination	Boolean	Indicates whether the NAS server is a migration destination. It can't be modified by client. Values are: • true - NAS server is a migration destination. • false - NAS server is a not a migration destination.

replicationType	ReplicationTypeEnum	Replication type.
syncReplicationType	ReplicationTypeEnum	Sync Replication type.
defaultUnixUser	String	Default Unix user name to use for an unmapped Windows user. This value only applies when the value of allowUnmappedUser is true.
defaultWindowsUser	String	Default Windows user name to use for an unmapped Unix user. This value only applies when the value of allowUnmappedUser is true.
currentUnixDirectoryService	NasServerUnixDirectoryServiceEnum	Unix Directory Service used to look up users and hosts.
isMultiProtocolEnabled	Boolean	Indicates whether multiprotocol sharing mode is enabled. This mode enables simultaneous file access for Windows and Unix users. Values are: • true - Multiprotocol sharing mode is enabled. • false - Multiprotocol sharing mode is disabled.
isWindowsToUnixUsernameMappingEnabled	Boolean	Indicates whether a Unix to/from Windows user name mapping is enabled. Values are: • true - Unix to/from Windows user name mapping is enabled. • false - Unix to/from Windows user name mapping is disabled.
allowUnmappedUser	Boolean	Indicates whether an unmappped user can access the NAS server as a default user. Values are: • true - Allow access for unmapped users. • false - Disallow access for unmapped users.
isPacketReflectEnabled	Boolean	Indicates whether the reflection of outbound (reply) packets through the same interface that inbound (request) packets entered is enabled. Values are: • true - (Default) Packet Reflect is enabled. • false - Packet Reflect is disabled.
fileSpaceUsed	unsigned Integer[64(bytes)]	File systems' space used.
dataReductionSizeSaved	unsigned Integer[64(bytes)]	Storage element saved space by data reduction, which includes savings from compression, deduplication and advanced deduplication.
dataReductionPercent	unsigned Integer[16(percent)]	Data reduction percentage is the percentage of the data that does not consume storage - the savings due to data reduction. For example, if 1 TB of data is stored in 250 GB, the data reduction percentage is 75%. 75% data reduction percentage is equivalent to a 4:1 data reduction ratio.
dataReductionRatio	Float	Data reduction ratio. The data reduction ratio is the ratio between the size of the data and the amount of storage actually consumed. For example, 1TB of data consuming 250GB would have a ration of 4:1. A 4:1 data reduction ratio is equivalent to a 75% data reduction percentage.
ioLimitPolicy	ioLimitPolicy	IO limit policy that applies to the nasServer, as defined by the ioLimitPolicy resource type.
cifsServer	List<cifsServer>	The cifsServers associated with the nasServer.
eventPublisher	fileEventsPublisher	The fileEventsPublisher associated with the nasServer.
fileDNSServer	fileDNSServer	The fileDNSServer associated with the nasServer.
fileInterface	List<fileInterface>	The fileInterfaces associated with the nasServer.
filesystems	List<filesystem>	The filesystems associated with the nasServer.
nfsServer	nfsServer	The nfsServer associated with the nasServer.
preferredInterfaceSettings	preferredInterfaceSettings	The preferredInterfaceSettings associated with the nasServer.
virusChecker	virusChecker	The virusChecker associated with the nasServer.

Query all members of the nasServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/nasServer/instances
Request body arguments	None
Successful return status	200 OK

Successful response body	JSON representation of all members of the nasServer collection.

Query a specific nasServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/nasServer/<id> where <id> is the unique identifier of the nasServer instance to query. Or GET /api/instances/nasServer/name:<value> where <value> is the name of the nasServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific nasServer instance.

Create operation

Create a NAS server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/nasServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..255]	Required	Name for the NAS server.
homeSP	in	storageProcessor	Required	Storage processor on which the NAS server will run.
pool	in	pool	Required	A Storage pool that stores NAS server configuration information.
tenant	in	tenant	Optional	A Tenant to which the NAS server will belong.
isReplicationDestination	in	Boolean	Optional	Indicates whether the NAS server is a replication destination. Values are: • true - Replication destination NAS server. • false - Normal NAS server.
isBackupOnly	in	Boolean	Optional	Indicates whether the NAS server is used as backup only. Values are: • true - NAS server acts as backup only. • false - Normal NAS server.
currentUnixDirectoryService	in	NasServerUnixDirectoryServiceEnum	Optional	Directory Service used for quering identity information for Unix (such as UIDs, GIDs, net groups).
isMultiProtocolEnabled	in	Boolean	Optional	Indicates whether multiprotocol sharing mode is enabled. Values are: • true - Enable multiprotocol sharing. • false - Disable multiprotocol sharing.
allowUnmappedUser	in	Boolean	Optional	Use this flag to mandatorily disable access in case of any user mapping failure. Values are: • true - Enable access in case of any user mapping failure. • false - Disable access in case of any user mapping failure.
defaultUnixUser	in	String[0..63]	Optional	Default Unix user name used for granting access in case of Windows to Unix user mapping failure. When empty, access in such case is denied.
defaultWindowsUser	in	String[0..1023]	Optional	Default Windows user name used for granting access in case of Unix to Windows user mapping failure. When empty, access in such case is denied.
isPacketReflectEnabled	in	Boolean	Optional	
ioLimitParameters	in	ioLimitParameters	Optional	The IO limit policy that is applied to this nasServer.

id	out	nasServer	N/A	Unique identifier of the new nasServer instance.

Delete operation

Delete a nasServer instance. This deletes the nasServer and its associated resources. Pre-requirements: Before deleting a NAS server, ensure that there are no file systems or VMware datastores associated with it. Otherwise an error will be returned.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/nasServer/<id> where <id> is the unique identifier of the nasServer instance to delete. Or DELETE /api/instances/nasServer/name:<value> where <value> is the name of the nasServer instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
skipDomainUnjoin	in	Boolean	Optional	Indicates whether to keep the associated SMB servers joined to the Active Directory when the NAS server is deleted. Values are: • true - Keep the associated SMB servers joined to the Active Directory when the NAS server is deleted. • false - (Default) Try to unjoin the associated SMB servers from the Active Directory before deleting the NAS server. •
domainUsername	in	String[1..1023]	Optional	Adminstrator login used to unjoin the associated SMB servers from the Active Directory (AD) domain before deleting the NAS server. This parameter is required when the skipDomainUnjoin parameter is false or not set, and the NAS server has SMB servers joined to an AD domain.
domainPassword	in	String[1..1023]	Optional	Administrator password used to unjoin the associated SMB servers from the Active Directory (AD) domain before deleting the NAS server. This parameter is required when the skipDomainUnjoin parameter is false or not set, and the NAS server has SMB servers joined to an AD domain.

GenerateUserMappingsReport operation

Generate a user mapping report. This report lists unmapped users and users whose Windows to/from Unix mappings have changed.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/nasServer/<id>/action/generateUserMappingsReport where <id> is the unique identifier of the nasServer instance. Or POST /api/instances/nasServer/name:<value>/action/generateUserMappingsReport where <value> is the name of the nasServer instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

UpdateUserMappings operation

Fix the user mappings for all file systems associated with the NAS server. This process updates file ownership on the NAS server's file systems to reflect changes to users' SIDs.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/nasServer/<id>/action/updateUserMappings where <id> is the unique identifier of the nasServer instance. Or POST /api/instances/nasServer/name:<value>/action/updateUserMappings where <value> is the name of the nasServer instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

RefreshConfiguration operation

Refresh the configuration of the NAS server. This process refreshes the configuration of the NAS server when it is the destination of a synchronous replication session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/nasServer/<id>/action/refreshConfiguration where <id> is the unique identifier of the nasServer instance. Or POST /api/instances/nasServer/name:<value>/action/refreshConfiguration where <value> is the name of the nasServer instance.

Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify NAS server settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/nasServer/<id>/action/modify where <id> is the unique identifier of the nasServer instance. Or POST /api/instances/nasServer/name:<value>/action/modify where <value> is the name of the nasServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..255]	Optional	Specify a new NAS server name.
homeSP	in	storageProcessor	Optional	Specify the SP on which the VDM is to run.
isReplicationDestination	in	Boolean	Optional	Specify whether the NAS server is a replication destination. Values are: • true - Replication destination NAS server. • false - Normal NAS server.
isBackupOnly	in	Boolean	Optional	Specify whether the NAS server is used as backup only. Values are: • true - NAS server acts as backup only. • false - Normal NAS server.
currentUnixDirectoryService	in	NasServerUnixDirectoryServiceEnum	Optional	Directory Service used for quering identity information for UNIX (such as UIDs, GIDs, net groups).
isMultiProtocolEnabled	in	Boolean	Optional	Indicates whether multiprotocol sharing mode is enabled. Values are: • true - Enable multiprotocol sharing. • false - Disable multiprotocol sharing.
allowUnmappedUser	in	Boolean	Optional	Use this flag to mandatory disable access in case of any user mapping failure. Values are: • true - Enable access in case of any user mapping failure. • false - Disable access in case of any user mapping failure.
defaultUnixUser	in	String[0..63]	Optional	Default Unix user name used for granting access in case of Windows to Unix user mapping failure. When empty, access in such case is denied.
defaultWindowsUser	in	String[0..1023]	Optional	Default Windows

				user name used for granting access in case of Unix to Windows user mapping failure. When empty, access in such case is denied.
enableWindowsToUnixUsernameMapping	in	Boolean	Optional	Indicates whether a Unix to/from Windows user name mapping is enabled. Values are: • true - Unix to/from Windows user name mapping is enabled. • false - Unix to/from Windows user name mapping is disabled.
isPacketReflectEnabled	in	Boolean	Optional	
isIgnoreWarnings	in	Boolean	Optional	Ignore warnings related to the operation. Values are: • true - Ignore warnings. • false(Default) - Warnings will interrupt the operation.
ioLimitParameters	in	ioLimitParameters	Optional	The IO limit policy that is applied to this nasServer.

Ping operation

Ping Destination from NAS server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/nasServer/<id>/action/ping where <id> is the unique identifier of the nasServer instance. Or POST /api/instances/nasServer/name:<value>/action/ping where <value> is the name of the nasServer instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the Ping operation

Argument	In/ out	Type	Required?	Description
destination	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Required	IP address or Domain Name of the destination.
result	out	pingResult	N/A	Result of ping command.

Traceroute operation

Traceroute Destination from NAS server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/nasServer/<id>/action/traceroute where <id> is the unique identifier of the nasServer instance. Or POST /api/instances/nasServer/name:<value>/action/traceroute where <value> is the name of the nasServer instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the Traceroute operation

Argument	In/ out	Type	Required?	Description
destination	in	IPAddress • IPv6 supported: true	Required	IP address or Domain Name of the destination.

		• Prefix-length supported: false • Port supported: false • DNS name supported: true		
result	out	List<tracerouteResult>	N/A	Result of traceroute command.

nfsServer

Information about the Network File System (NFS) servers used by the storage system. You can configure one NFS server per NAS server. At least one NFS share must be created before an NFS client can connect to the storage system resources. NFS servers support the NFSv3 and NFSv4 protocols. The default protocol is NFSv3.

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the nfsServer instance.
hostName	String	Host name of the NFS server. An administrator should ensure that NFS clients can resolve NAS Server IP addresses using this name. You can configure this hostname and its production IP address(es) inside hosts file on the Unix client machine; or (recommended) add those records into your DNS. NOTE: normally when the NFS hostname matches with an AD-joined SMB/CIFS Server Computer Name all production interfaces and the hostname are already registered within Microsoft DNS service.
nasServer	nasServer	NAS server associated with the NFS server.
fileInterfaces	List<fileInterface>	Interfaces that use the NFS protocol to serve the NAS server's file systems.
nfsv3Enabled	Boolean	Indicates whether NFSv3 is enabled on the NAS server specified in the nasServer attribute. When enabled - NFS shares can be accessed with NFSv3 protocol. When disabled - NFS shares cannot be accessed with NFSv3 protocol. Values are: • true - NFSv3 is enabled on the specified NAS server. • false - NFSv3 is disabled on the specified NAS server.
nfsv4Enabled	Boolean	Indicates whether NFSv4 is enabled on the NAS server specified in the nasServer attribute. When enabled - NFS shares can be accessed with NFSv4 protocol. When disabled - NFS shares cannot be accessed with NFSv4 protocol. Values are: • true - NFSv4 is enabled on the specified NAS server. • false - NFSv4 is disabled on the specified NAS server.
isSecureEnabled	Boolean	Indicates whether secure NFS is enabled on the NFS server. Values are: • true - Secure NFS is enabled. • false - Secure NFS is disabled.
kdcType	KdcTypeEnum	Type of Kerberos Domain Controller used for secure NFS service.
servicePrincipalName	String	The Service Principal Name (SPN) for the NFS Server. This name is updated automatically when the NFS server configuration changes.
isExtendedCredentialsEnabled	Boolean	Indicates whether the NFS server supports more than 16 Unix groups in a Unix credential. Values are: • true - NFS server supports more than 16 Unix groups in a Unix credential. The NFS Server will send additional request to Unix Directory service to identify Unix groups. • false - NFS server does not support more than 16 Unix groups in a Unix credential. **Note:** The NFS server builds its own Unix credential when it supports more than 16 groups. This process can slow performance.
credentialsCacheTTL	DateTime[Interval]	Sets the Time-To-Live expiration stamp for a Windows entry in the credentials cache. When failed mapping entries expire, the system retries mapping the UID to the SID.

Query all members of the nfsServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/nfsServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the nfsServer collection.

Query a specific nfsServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/nfsServer/<id> where <id> is the unique identifier of the nfsServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific nfsServer instance.

Create operation

Create an nfsServer instance.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/nfsServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	NAS server associated with the NFS server.
hostName	in	String[1..255]	Optional	Host name of the NFS server. If host name is not specified then SMB server name or NAS server name will be used to auto generate the host name.
nfsv3Enabled	in	Boolean	Optional	Indicates whether the NFSv3 is enabled on the NAS server specified in the nasServer attribute. When enabled - NFS shares can be accessed with NFSv3 protocol. When disabled - NFS shares cannot be accessed with NFSv3 protocol. Values are: • true(Default) - NFsv3 is enabled on the specified NAS server. • false - NFSv3 is disabled on the specified NAS server.
nfsv4Enabled	in	Boolean	Optional	Indicates whether the NFSv4 is enabled on the NAS server specified in the nasServer attribute. When enabled - NFS shares can be accessed with NFSv4 protocol. When disabled - NFS shares cannot be accessed with NFSv4 protocol. Values are: • true - NFsv4 is enabled on the specified NAS server. • false(Default) - NFSv4 is disabled on the specified NAS server.
isSecureEnabled	in	Boolean	Optional	Indicates whether the secure NFS is enabled. Values are: • true - Secure NFS is enabled. • false(Default) - Secure NFS is disabled.
kdcType	in	KdcTypeEnum	Optional	Type of Kerberos Domain Controller used for secure NFS service.
kdcUsername	in	String	Optional	Kerberos Domain Controller administrator's name.
kdcPassword	in	String	Optional	Kerberos Domain Controller administrator's password.
isExtendedCredentialsEnabled	in	Boolean	Optional	Support for more than 16 Unix groups. Values are: • true - NFS server supports more than 16 unix groups in a Unix credential. • false(Default) - NFS server doesn't support more than 16 unix groups in a Unix credential.
credentialsCacheTTL	in	DateTime[Interval - h+:mm:ss[.sss]]	Optional	Credential cache refresh timeout. Resolution is in minutes. Default value is 15 minutes. [The value of interval will be rounded down to minutes.]
id	out	nfsServer	N/A	Unique identifier of the new nfsServer instance.

Modify operation

Modify an nfsServer instance.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/nfsServer/<id>/action/modify where <id> is the unique identifier of the nfsServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
hostName	in	String[1..255]	Optional	Host name of the NFS server.
nfsv3Enabled	in	Boolean	Optional	Indicates whether the NFSv3 protocol is enabled on the NAS server specified in the nasServer attribute. When enabled - NFS shares can be accessed with NFSv3 protocol. When disabled - NFS shares cannot be accessed with NFSv3 protocol. Values are: • true - NFsv3 is enabled on the specified NAS server. • false - NFSv3 is disabled on the specified NAS server.

nfsv4Enabled	in	Boolean	Optional	Indicates whether the NFSv4 protocol is enabled on the NAS server specified in the nasServer attribute. When enabled - NFS shares can be accessed with NFSv4 protocol. When disabled - NFS shares cannot be accessed with NFSv4 protocol. Values are: • true - NFsv4 is enabled on the specified NAS server. • false - NFSv4 is disabled on the specified NAS server.
isSecureEnabled	in	Boolean	Optional	Indicates whether the secure NFS is enabled. Values are: • true - secure NFS is enabled. • false - secure NFS is disabled. If kdcType was set to Windows and skipUnjoin is not set to true then kdcUsername/kdcPassword are required.
kdcType	in	KdcTypeEnum	Optional	Type of Kerberos Domain Controller used for secure NFS service. When KDC type is changed to Windows then kdcUsername/kdcPassword are required. When KDC type is changed to Custom from Windows and skipUnjoin is not set to true then kdcUsername/kdcPassword are required.
skipUnjoin	in	Boolean	Optional	Keep Service Principal Name (SPN) in Kerberos Domain Controller. Values are: • true - Do not remove the SPN from Kerberos Domain Controller. kdcUsername/kdcPassword are ignored. • false(Default) - Remove the SPN from Kerberos Domain Controller when it's needed. When disabling secure NFS or changing KDC type to Custom then kdcUsername/kdcPassword must be specified.
kdcUsername	in	String	Optional	Kerberos Domain Controller administrator's name to add/remove the SPN.
kdcPassword	in	String	Optional	Kerberos Domain Controller administrator's password to add/remove the SPN.
isExtendedCredentialsEnabled	in	Boolean	Optional	Support for more than 16 Unix groups. Values are: • true - NFS server supports more than 16 unix groups in a Unix credential. • false(Default) - NFS server doesn't support more than 16 unix groups in a Unix credential.
credentialsCacheTTL	in	DateTime[Interval - h+:mm:ss[.sss]]	Optional	Credential cache refresh timeout. Resolution is in minutes. Default value is 15 minutes. [The value of interval will be rounded down to minutes.]

Delete operation

Delete an nfsServer instance.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/nfsServer/<id> where <id> is the unique identifier of the nfsServer instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
skipUnjoin	in	Boolean	Optional	Keep Service Principal Name (SPN) in Kerberos Domain Controller. Values are: • true - Do not remove the SPN from Kerberos Domain Controller. kdcUsername/kdcPassword are ignored. • false(Default) - Remove the SPN from Kerberos Domain Controller when it's needed. If secure NFS is enabled and KDC type is Windows then kdcUsername/kdcPassword must be specified.
kdcUsername	in	String	Optional	Kerberos Domain Controller administrator's name to remove the SPN.
kdcPassword	in	String	Optional	Kerberos Domain Controller administrator's password to remove the SPN.

preferredInterfaceSettings

The preferred interface of NAS server is an interface from which all the non-local outbound connections of this NAS server are initiated. The non-local connections are those which hosts can be accessed from this NAS server interfaces only via some router (gateway).

The preferred interfaces for IPv4 and IPv6 are independent from each other. During the replication, the production interfaces could be activated and deactivated automatically, so the separate preferred interface settings are required for production and backup & DR testing interfaces. For each NAS server, the following preferred interface settings exist:

1. Production interfaces, IPv4.
2. Production interfaces, IPv6.
3. Backup & DR testing interfaces, IPv4.
4. Backup & DR testing interfaces, IPv6.

Each of these settings could be set to the explicit interface. If it isn't set, corresponding interface will be selected automatically.

The acting preferred interfaces, one for IPv4 and one for IPv6, are selected among active interfaces by the following rules, ordered by priority (highest first):

1. Manually selected interfaces have priority over automatically selected ones.
2. Production interfaces have priority over backup and DR testing ones.

3. The interface with the default gateway has priority over one not having one.
4. From the otherwise equal priority interfaces, one with the most routes has the priority.
5. From the otherwise equal priority interfaces, one with the minimal value of IP address (Sic!) has the priority.

Note: During the replication, on the destination side, only Backup & DR testing interfaces could be active.

For the automatic selection, the interface re-selected each time any of this NAS interfaces or routes are changed. If the interface has been explicitly selected as preferred and then deleted, this type/class group setting (e.g. "Production/IPv6") gets reset to automatic selection.

During the replication, on the destination side, only the production interfaces settings could be overridden. It is controlled by the single flag both for IPv4 and IPv6 interfaces. Note that this flag is independent from the "override" flag of the interface itself. If an interface is explicitly selected as preferred and then overridden, the interface is kept preferred.

The acting preferred interfaces are marked by the corresponding property value, fileInterface.isPreferred == true. To get the list of the acting preferred interfaces of a NAS server, iterate its interface list checking the isPreferred property.

Embedded resource types

preferredInterfaceSourceParameters

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the Preferred Interface Settings object.
nasServer	nasServer	Identifier of the file server instance that uses this Preferred Interface Settings object. Only one Preferred Interface Settings object per file server is supported.
productionIpV4	fileInterface	Requested IPv4 production preferred interface
productionIpV6	fileInterface	Requested IPv6 production preferred interface
backupIpV4	fileInterface	Requested IPv4 backup preferred interface
backupIpV6	fileInterface	Requested IPv6 backup preferred interface
sourceParameters	preferredInterfaceSourceParameters	Requested production preferred interfaces of the source NAS server. On the destination side of the active replication session: • The replicated IPv4 and IPv6 production interface settings are returned in the sourceParameters.productionIpV4 and sourceParameters.productionIpV6 fields. • Regardless of the replicationPolicy settings, this property returns the replicated settings. Without the active replication session or on the source side of such session: • Property is not populated.
replicationPolicy	ReplicationPolicyEnum	Acting replication policy of the production preferred interfaces. On the destination side of the active replication session: • "Replicated" means that the settings for the production IPv4 and IPv6 preferred interface settings are replicated from the source side. • "Overridden" means that the settings for the production IPv4 and IPv6 preferred interface settings are overridden on the destination side. Without the active replication session or on the source side of such session: • Property is not populated.

Attributes for preferredInterfaceSourceParameters

Information about preferred interface settings of the source NAS server.

Attribute	Type	Description
productionIpV4	fileInterface	Requested IPv4 production preferred interface of the source NAS server
productionIpV6	fileInterface	Requested IPv6 production preferred interface of the source NAS server

Query all members of the preferredInterfaceSettings collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/preferredInterfaceSettings/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the preferredInterfaceSettings collection.

Query a specific preferredInterfaceSettings instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/preferredInterfaceSettings/<id> where <id> is the unique identifier of the preferredInterfaceSettings instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific preferredInterfaceSettings instance.

Modify operation

Modify Preferred Interface Settings.

To set a type/class group to automatic selection, unset the corresponding parameter.

On the destination side of the active replication session:

- To override the production preferred interface settings, set any of the production settings to any value, including the same it has now.
- Setting the replicationPolicy to "Overridden" makes the production preferred interface settings overridden w/o changing their current values.
- To reset the overridden settings to the replicated state, set the replicationPolicy to "Replicated".

Without the active replication session or on the source side of such session:

- Setting the replicationPolicy to any value results in error.

The full logics of these settings is described in the class description above.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/preferredInterfaceSettings/<id>/action/modify where <id> is the unique identifier of the preferredInterfaceSettings instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
productionIpV4	in	fileInterface	Optional	Requested IPv4 production preferred interfaces. Empty string or null to unset.
productionIpV6	in	fileInterface	Optional	Requested IPv6 production preferred interfaces. Empty string or null to unset.
backupIpV4	in	fileInterface	Optional	Requested IPv4 backup preferred interfaces. Empty string or null to unset.
backupIpV6	in	fileInterface	Optional	Requested IPv6 backup preferred interfaces. Empty string or null to unset.
replicationPolicy	in	ReplicationPolicyEnum	Optional	Replication policy of the production preferred interfaces.

route

Manages static IP routes, including creating, modifying, and deleting these routes.

A route determines where to send a packet next so it can reach its final destination. A static route is set explicitly and does not automatically adapt to the changing network infrastructure. A route is defined by an interface, destination IP address range and an IP address of a corresponding gateway.

Note: IP routes connect an interface (IP address) to the larger network through gateways. Without routes, the interface is no longer accessible outside of its immediate subnet. As a result, network shares and exports associated with the interface are no longer available to clients outside their immediate subnet.

Routes can be created only for iSCSI portals.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the route instance.
ipInterface	ipInterface	Reference to IP interface.
iscsiPortal	iscsiPortal	Reference to iscsiPortal.
fileInterface	fileInterface	Reference to file Interface.
destination	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IP address of the target network node based on the specific route type. Values are: • For a default route, there is no value, because the system will use the specified gateway IP address. • For a host route, the value is the IP address. • For a subnet route, the value is a subnet IP address.
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 netmask for the route, if it uses an IPv4 address.
v6PrefixLength	unsigned Integer[32(bits)] [0..128]	IPv6 prefix length for the route, if it uses an IPv6 address.
gateway	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IP address of the gateway associated with the route.
health	health	Health of the route. The health can be impaired if the corresponding interface is changed in a manner incompatible with the route. Modify the route to make it consistent with the interface to restore health to normal, or remove the route if no longer needed.
isRouteToExternalServices	Boolean	Indicates whether this route is used for external services access like DNS, LDAP, NIS etc.

Query all members of the route collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/route/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the route collection.

Query a specific route instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/route/<id> where <id> is the unique identifier of the route instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific route instance.

Create operation

Create a route.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/route/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
ipInterface	in	ipInterface	Required	Reference to IP interface.
destination	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Required	IP address of the target network node for the newroute, based on the specific route type. Values are: • For a default route, there is no value, because the system will use the specified gateway IP address. • For a host route, the value is the IP address. • For a subnet route, the value is a subnet IP address.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	For a new subnet route, the IP address of the subnet mask.
v6PrefixLength	in	unsigned Integer[32(bits)] [0..128]	Optional	IPv6 prefix length for the route, if the interface uses an IPv6 address.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IP address of the gateway associated with the route.
id	out	route	N/A	New route instance.

Delete operation

Delete a route.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/route/<id> where <id> is the unique identifier of the route instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a route.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/route/<id>/action/modify where <id> is the unique identifier of the route instance.
Request body arguments	See the arguments table below.

Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
ipInterface	in	ipInterface	Optional	Reference to IP interface.
destination	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IP address of the target network node for the route, based on the specific route type. Values are: • For a default route, there is no value, because the system will use the specified gateway IP address. • For a host route, the value is the IP address. • For a subnet route, the value is a subnet IP address.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	For IPv4 subnet route, the IP address of the subnet mask.
v6PrefixLength	in	unsigned Integer[32(bits)] [0..128]	Optional	IPv6 prefix length for the route, if the interface uses an IPv6 address.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IP address of the gateway associated with the route. To remove gateway from route put empty string.

smtpServer

Information about the SMTP servers in the storage system. You can define up to two SMTP servers:

- The default SMTP server sends email alerts to the IP addresses specified in the AlertConfigSNMPTarget resource when it encounters alert or error conditions.
- The ConnectEMC SMTP server sends the same alerts to the dial-home addresses specified in the AlertConfigSNMPTarget resource. It also sends additional information, if any, to Dell Support.
- If EMC Secure Remote Support (ESRS) is configured, the system uses that mechanism instead of the ConnectEMC SMTP server to send alert information.

Supported operations

Collection query , Instance query ,Modify ,Create ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the smtpServer instance.
address	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	IP address of the SMTP server. If a port is not specified, default port 25 will be used.
username	String	User name.
authType	AuthTypeEnum	Authentication type.
sslMethod	SSLMethodEnum	SSL Method.
isBypassProxyEnabled	Boolean	Whether to bypass the global proxy settings in supportProxy resource. By default, this value is false, and the SMTP server is accessed according to the proxy settings in the supportProxy resource. If this is set to true, the SMTP server will be accessed directly instead of using the supportProxy proxy settings.
type	SmtpTypeEnum	SMTP server type.

Query all members of the smtpServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/smtpServer/instances

Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the smtpServer collection.

Query a specific **smtpServer** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/smtpServer/<id> where <id> is the unique identifier of the smtpServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific smtpServer instance.

Modify operation

Modify SMTP server settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/smtpServer/<id>/action/modify where <id> is the unique identifier of the smtpServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
userName	in	String	Optional	User Name of the SMTP server.
password	in	String	Optional	Password of the SMTP server.
authType	in	AuthTypeEnum	Optional	Authentication type of the SMTP server.
sslMethod	in	SSLMethodEnum	Optional	SSL Method of the SMTP server.
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Required	IP address of the SMTP server. If a port is not specified, default port 25 will be used.
isBypassProxyEnabled	in	Boolean	Optional	Whether to bypass global proxy settings.

Create operation

Create a new SMTP server (Default or PhoneHome).

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/smtpServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Required	IP address of the SMTP server. If a port is not specified, default port 25 will be used.
type	in	SmtpTypeEnum	Required	SMTP server type.
userName	in	String	Optional	User Name of the SMTP server.
password	in	String	Optional	Password of the SMTP server.
authType	in	AuthTypeEnum	Optional	Authentication type of the SMTP server.
sslMethod	in	SSLMethodEnum	Optional	SSL Method of the SMTP server.
isBypassProxyEnabled	in	Boolean	Optional	Whether to bypass global proxy settings. The default value is false. Values are: • true - bypass global proxy settings. • false - use global proxy settings.
	out		N/A	

id		smtpServer	Unique identifier of the smtpServer instance.

Delete operation

Delete a SMTP Server.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/smtpServer/<id> where <id> is the unique identifier of the smtpServer instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

tenant

A tenant is a representation of a datacenter client, who uses an independent network structure and gets the independent and exclusive access to certain storage resources. On the storage array, it corresponds to a NAS server group with an independent IP addressing. At the moment, iSCSI and management resources do not support multi-tenant access. For each tenant a corresponding Linux network namespace is created. In the current design, traffic separation between the tenants is done by the VLANs. Each tenant reserves a group of VLANs, and each VLAN can belong to one tenant maximum. Every tenant gets a name and the Universally Unique Identifier (UUID). The UUID cannot be changed during the tenant life cycle. The asynchronous replication of the NAS servers is allowed only between the servers belonging to the tenants with the same UUID. The NAS servers and VLANs can still belong to no tenant. Such NAS servers and VLANs operate in the Linux base network namespace, together with management and iSCSI interfaces. The control stack of the system does not allow user to log in in the tenant administrator role. All the tenants, NAS servers and VLANs are managed from the single system administrator account. To allow this, the corresponding GUI and CLI modifications are made.

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the tenant instance.
name	String	User-specified name of the tenant.
uuid	String	UUID of the tenant.
vlans	List<Integer>[32][1..4094]	VLAN IDs assigned to the tenant.
hosts	List<host>	The hosts associated with the tenant.

Query all members of the tenant collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/tenant/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the tenant collection.

Query a specific tenant instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/tenant/<id> where <id> is the unique identifier of the tenant instance to query. Or GET /api/instances/tenant/name:<value> where <value> is the name of the tenant instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific tenant instance.

Create operation

Create a tenant.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/tenant/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
name	in	String	Required	Name.
uuid	in	String	Optional	UUID of tenant object.
vlans	in	List<Integer>[32][1..4094]	Required	List of VLAN IDs.
id	out	tenant	N/A	Unique identifier of the new tenant instance.

Modify operation

Modify a tenant.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/tenant/<id>/action/modify where <id> is the unique identifier of the tenant instance. Or POST /api/instances/tenant/name:<value>/action/modify where <value> is the name of the tenant instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String	Optional	New tenant name.
vlans	in	List<Integer>[32][1..4094]	Optional	List of VLAN IDs to set.

Delete operation

Destroy a tenant.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/tenant/<id> where <id> is the unique identifier of the tenant instance to delete. Or DELETE /api/instances/tenant/name:<value> where <value> is the name of the tenant instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

urServer

Information for registering a storage system with Unisphere Central.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
address	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	IP address of the Unisphere Central server.
id	String	Unique identifier of the urServer instance. This value is always 0, because the object is a singleton.

Query all members of the urServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/urServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the urServer collection.

Query a specific urServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/urServer/<id> where <id> is the unique identifier of the urServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific urServer instance.

Modify operation

Modify storage system registration information.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/urServer/<id>/action/modify where <id> is the unique identifier of the urServer instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	Unisphere Central server IP address.
certificateHash	in	String	Optional	Hash of the existing certificate.
sharedSecret	in	String	Optional	Challenge phrase used by the Unisphere Central server to sign the certificate.

virusChecker

Information about the anti-virus service of a NAS server.

The storage system supports third-party anti-virus servers that perform virus scans and reports back to the storage system. For example, when an SMB client creates, moves, or modifies a file, the NAS server invokes the anti-virus server to scan the file for known viruses. During the scan any access to this file is blocked. If the file does not contain a virus, it is written to the file system. If the file is infected, corrective action (fixed, removed or placed in quarantine) is taken as defined by the anti-virus server. You can optionally set up the service to scan the file on read access based on last access of the file compared to last update of the third-party anti-virus date.
A virusChecker object is created each time the anti-virus service is enabled on a NAS server. A configuration file (named viruschecker.conf) needs to be uploaded on the NAS server before enabling the anti-virus service.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique instance id.
nasServer	nasServer	NAS server that is configured with these anti-virus settings.
isEnabled	Boolean	Indicates whether the anti-virus service is enabled on this NAS server. Value are: • true - Anti-virus service is enabled. Each file created or modified by an SMB client is scanned by the third-party anti-virus servers. If a virus is detected, the access to the file system is denied. If third-party anti-virus servers are not available, according the policy, the access to the file systems is denied to prevent potential viruses propagation. • false - Anti-virus service is disabled. File systems of the NAS servers are available for access without virus checking

Query all members of the virusChecker collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/virusChecker/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the virusChecker collection.

Query a specific virusChecker instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/virusChecker/<id> where <id> is the unique identifier of the virusChecker instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific virusChecker instance.

Modify operation

Modify the Virus Checker settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/virusChecker/<id>/action/modify where <id> is the unique identifier of the virusChecker instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isEnabled	in	Boolean	Optional	Indicates whether the anti-virus service is enabled on this NAS server. Value are: • true - Anti-virus service is enabled. Each file created or modified by an SMB client is scanned by the third-party anti-virus servers. If a virus is detected, the access to the file system is denied. If third-party anti-virus servers are not available, the access to the file systems is denied to prevent potential viruses propagation. • false - Anti-virus service is disabled. File systems of the NAS servers are available for access without virus checking

vlanInfo

Information about VLAN IDs.

Embedded resource types

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the vlanInfo instance.
vlanId	unsigned Integer[32]	VLAN ID.
interfaces	List<ipInterface>	List of IP interfaces created on this VLAN.
tenant	tenant	Tenant to which the VLAN belongs.

Query all members of the vlanInfo collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/vlanInfo/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the vlanInfo collection.

Query a specific vlanInfo instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/vlanInfo/<id> where <id> is the unique identifier of the vlanInfo instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific vlanInfo instance.

vmwareNasPEServer

A resource representing NAS VMware Protocol Endpoint Server. Only one instance per NAS Server can be created.

Supported operations

Collection query , Instance query ,Create ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of NAS VMware Protocol Endpoint Server.
nasServer	nasServer	NAS server for this protocol endpoint.
fileInterfaces	List<fileInterface>	A list of file IP interfaces to be used by NAS VMware Protocol Endpoint Server.
boundVVolCount	unsigned Integer[64]	The number of bound VVols associated with NAS VMware Protocol Endpoint Server.

Query all members of the vmwareNasPEServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/vmwareNasPEServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the vmwareNasPEServer collection.

Query a specific vmwareNasPEServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/vmwareNasPEServer/<id> where <id> is the unique identifier of the vmwareNasPEServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific vmwareNasPEServer instance.

Create operation

Create a new NAS VMware Protocol Endpoint Server. The id is returned upon success.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/vmwareNasPEServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	NAS server associated with the NAS VMware Protocol Endpoint Server.
fileInterfaces	in	List<fileInterface>	Required	A list of file IP interfaces, associated with NAS server, that will be used by NAS VMware Protocol Endpoint Server.
id	out	vmwareNasPEServer	N/A	Id of created instance.

Delete operation

Delete an existing NAS VMware Protocol Endpoint Server.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/vmwareNasPEServer/<id> where <id> is the unique identifier of the vmwareNasPEServer instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
force	in	Boolean	Optional	Specifying force flag with unconditionally removes all VMware NAS Protocol Endpoints using this NAS VMware Protocol Endpoint Server and unbinds all Virtual Volumes that are bound using them.

Managing events and alerts

alert

Information about alerts generated by the storage system.

Alerts are usually events that require attention from the system administrator. Most, although not all, alerts indicate that there is a problem with the storage system. For example, you might receive an alert telling you that a drive has faulted, or that the storage system is running out of space.

For information about configuring alerts, see the Help topics for the alertConfig and AlertConfigSNMPTarget resource types.

Some of the user-visible attributes in this object should be changed to eng-only.

Supported operations

Collection query , Instance query ,Modify ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the alert instance.
timestamp	DateTime	Date and time when the alert event occurred, in Greenwich Mean Time (GMT)
severity	SeverityEnum	Severity level of the alert.
component	resourceRef	System component that caused the alert. This field can be empty in cases where the alert is not specific to any component. For example, this field will be empty for log messages that become alerts without associated health state changes.
messageId	String	Message identifier for the alert in the message catalog. This identifier is used for localization purposes.
message	String	Localized alert message.
descriptionId	String	Description identifier for the alert in the message catalog. This identifier is used to identify a description of the alert condition.
description	String	Localized description of the alert condition.

resolutionId	String	Unique identifier of the help topic for the alert.
resolution	String	URI that points to a Help topic containing resolution information for the alert.
isAcknowledged	Boolean	Indicates whether the alert is acknowledged.
duplicateCount	unsigned Integer[32]	Indicates how many duplicate alerts occurred after this alert happened within predefined 3 minutes period, 0 if none; its own occurrence time is indicated by its timestamp.
state	AlertStateEnum	The state of the alert.

Query all members of the **alert** collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/alert/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the alert collection.

Query a specific **alert** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/alert/<id> where <id> is the unique identifier of the alert instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific alert instance.

Modify operation

Update the "ack" status or/and the state of the alert.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/alert/<id>/action/modify where <id> is the unique identifier of the alert instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isAcknowledged	in	Boolean	Optional	Whether alert is acknowledged.
state	in	AlertStateEnum	Optional	New state of the alert. The new state should be "Inactive" since the only valid transition supported is from "Active_Manual" to "Inactive".

Delete operation

Delete an alert.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/alert/<id> where <id> is the unique identifier of the alert instance to delete.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

alertConfig

Alert configuration information.
Note: SNMP trap destinations are defined by the alertConfigSNMPTarget resource type.

Supported operations

Collection query , Instance query ,Modify ,TestUCAlert ,TestEmailAlert ,TestUIAlert ,TestSNMPAlert

Attributes

Attribute	Type	Description
id	String	Unique identifier of the alertConfig instance. This value is always 0, because there is only one occurrence of this resource type.
locale	LocaleEnum	Language in which the system sends email alerts.
isThresholdAlertsEnabled	Boolean	Indicates whether pool space usage percent threshold alerts functionality is enabled, notice that this flag will be ignored and alerts will be sent always when it is thin provisioned and oversubscribed. Values are:

		• true - The pool space usage related alerts will be shown to the user when pool space usage percent reaches the threshold. • false - The pool space usage related alerts will not be shown to the user when pool space usage percent reaches the threshold.
emailFromAddress	String	The email from address which is used when sending alert emails.
minSNMPTrapNotificationSeverity	SeverityEnum	Minimum severity level for SNMP trap alerts.
callHomeSuppressionStartTime	DateTime	Date and time when the call home suppression was started. The start time is current system time when user set the suppressionEndTime from null to a valid time. This is available only when callHomeSuppressionEndTime is set.
callHomeSuppressionEndTime	DateTime	Date and time when the call home suppression will end. The total suppression window (the difference between suppressionStartTime and suppressionEndTime) should be more than 1 hour and less than 48 hours. If this value is not null then call home suppression is enabled, otherwise call home suppression is disabled.

Query all members of the alertConfig collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/alertConfig/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the alertConfig collection.

Query a specific alertConfig instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/alertConfig/<id> where <id> is the unique identifier of the alertConfig instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific alertConfig instance.

Modify operation

Modify the alert configuration settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/alertConfig/<id>/action/modify where <id> is the unique identifier of the alertConfig instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
alertLocale	in	LocaleEnum	Optional	Language in which the system sends email alerts.
isThresholdAlertsEnabled	in	Boolean	Optional	Whether pool space usage related alerts will be sent.
minSNMPTrapNotificationSeverity	in	SeverityEnum	Optional	Minimum severity level for SNMP trap alerts.
emailFromAddress	in	String	Optional	Email from address used when sending alert emails.
callHomeSuppressionEndTime	in	DateTime	Optional	The date and time when the call home suppression will end. The total suppression window (the difference between suppressionStartTime and suppressionEndTime) should be more than 1 hour and less than 48 hours. Set to null to diable the call home suppression.

TestUCAlert operation

Test Unisphere Central alert notification by sending a test alert to a Unisphere Central destination.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/alertConfig/<id>/action/testUCAlert where <id> is the unique identifier of the alertConfig instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

TestEmailAlert operation

Test email alert notification by sending a test alert to all configured email destinations.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/alertConfig/<id>/action/testEmailAlert where <id> is the unique identifier of the alertConfig instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

TestUIAlert operation

Test GUI alert notification by sending a test alert to all open CEM GUIs.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/alertConfig/<id>/action/testUIAlert where <id> is the unique identifier of the alertConfig instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

TestSNMPAlert operation

Test SNMP trap notification by sending an alert to all configured SNMP trap destinations.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/alertConfig/<id>/action/testSNMPAlert where <id> is the unique identifier of the alertConfig instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

alertConfigSNMPTarget

Information about the Simple Network Management Protocol (SNMP) destinations used by alerts.
The system uses SNMP to transfer system alerts as traps to an SNMP destination host. Traps are asynchronous messages that notify the SNMP destination when system and user events occur.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the alertConfigSNMPTarget instance.
address	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Host address and port for the SNMP destination. The default UDP port number is 162.
version	SNMPVersionEnum	SNMP version used to send the traps or informs.
community	String	Community string used by SNMP v2c, not applicable for SNMP v3.
username	String	Username used to access the SNMP destination.
authProto	SNMPAuthProtocolEnum	Protocol used to authenticate access to the SNMP destination.
privacyProto	SNMPPrivacyProtocolEnum	Protocol used to enable privacy on the SNMP destination. The privacy protocol encrypts the SNMP packets.

Query all members of the alertConfigSNMPTarget collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/alertConfigSNMPTarget/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the alertConfigSNMPTarget collection.

Query a specific alertConfigSNMPTarget instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/alertConfigSNMPTarget/<id> where <id> is the unique identifier of the alertConfigSNMPTarget instance to query.
Request body arguments	None
Successful return status	200 OK

Successful response body	JSON representation of a specific alertConfigSNMPTarget instance.

Create operation

Create a new SNMP v3/v2c trap destination.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/alertConfigSNMPTarget/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
targetAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Required	Host address and port for the new SNMP destination. The default UDP port number is 162.
username	in	String	Optional	Username used to access the SNMP destination, v3 only.
authProtocol	in	SNMPAuthProtocolEnum	Optional	Protocol used to authenticate access to the new SNMP destination, v3 only.
authPassword	in	String	Optional	Password used to access the new SNMP destination, v3 only.
privProtocol	in	SNMPPrivacyProtocolEnum	Optional	Protocol used to enable privacy on the new SNMP destination. The privacy protocol encrypts the SNMP packets, v3 only.
privPassword	in	String	Optional	Privacy password for the privacy protocol, v3 only.
version	in	SNMPVersionEnum	Optional	SNMP version used to send the traps or informs.
community	in	String	Optional	Community string used by SNMP v2c, not applicable for SNMP v3.
id	out	alertConfigSNMPTarget	N/A	Unique identifier of the new alertConfigSNMPTarget instance.

Delete operation

Delete an SNMPv3 destination.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/alertConfigSNMPTarget/<id> where <id> is the unique identifier of the alertConfigSNMPTarget instance to delete.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

Modify operation

Modify an SNMP destination.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/alertConfigSNMPTarget/<id>/action/modify where <id> is the unique identifier of the alertConfigSNMPTarget instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
targetAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	Host address and port for the new SNMP destination. The default UDP port number is 162.
username	in	String	Optional	Username used to access the SNMP destination, v3 only.
authProtocol	in	SNMPAuthProtocolEnum	Optional	Protocol used to authenticate access to the new SNMP destination, v3 only.
authPassword	in	String	Optional	
privProtocol	in	SNMPPrivacyProtocolEnum	Optional	Protocol used to enable privacy on the new SNMP destination. The privacy protocol encrypts the

				SNMP packets, v3 only.
privPassword	in	String	Optional	Privacy password for the privacy protocol, v3 only.
community	in	String	Optional	Community string used by SNMP v2c, not applicable for SNMP v3.

alertEmailConfig

Alert email configuration information. Each email address will receive alerts that meet the criteria.

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the alert email configuration.
emailAddress	String	Destination email address.
minNotificationSeverity	SeverityEnum	Minimum severity level for alerts sent to this email address.

Query all members of the alertEmailConfig collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/alertEmailConfig/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the alertEmailConfig collection.

Query a specific alertEmailConfig instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/alertEmailConfig/<id> where <id> is the unique identifier of the alertEmailConfig instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific alertEmailConfig instance.

Create operation

Add an email to receive notifications based on severity.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/alertEmailConfig/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
emailAddress	in	String	Required	Email address to receive alert notifications of certain severity.
minNotificationSeverity	in	SeverityEnum	Optional	Minimum severity level for alerts sent to this email address. The default value is NOTICE.
id	out	alertEmailConfig	N/A	

Modify operation

Modify the alert email configuration settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/alertEmailConfig/<id>/action/modify where <id> is the unique identifier of the alertEmailConfig instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
emailAddress	in	String	Optional	Email to receive alert notifications.
minNotificationSeverity	in	SeverityEnum	Optional	Minimum severity level for email alerts.

Delete operation

Remove the alert email configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/alertEmailConfig/<id> where <id> is the unique identifier of the alertEmailConfig instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

event

Information about the events reported by the storage system.

The system monitors and reports on a variety of system events. It collects the events and writes them to the user log, which contains a record for each event.

The health and alert providers promote some events to be alerts, which are usually events that require attention from the system administrator. For information about alerts, see the Help topic for the alert resource type.

In the username attribute, is the value N/A or blank if a user did not cause the event or the account is unavailable?

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the event instance.
node	NodeEnum	Storage Processor that generated the event.
creationTime	DateTime	1. Date and time when the event was created.
severity	SeverityEnum	Severity of the event.
messageId	String	Identifier of the message, without arguments or localization.
arguments	List<String>	Arguments in the event message.
message	String	Localized description of the event's cause or effects.
username	String	If a user caused the event, and the user account still exists, the user associated with the event.
category	EventCategoryEnum	Event category.
source	String	System component that caused the event. This information is intended for service personnel.

Query all members of the event collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/event/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the event collection.

Query a specific event instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/event/<id> where <id> is the unique identifier of the event instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific event instance.

Managing jobs

job

Information about the jobs in the storage system.

A job represents one management request, it consists of a series of tasks.
A job could also contain a series of primitive REST API POST requests, each of which maps to a task in the job. Such job is known as \"batch request job\".
Client can query the job instance to track its progress, results, and details of each task.

When a job is failed, the system might leave behind unneeded resources that consume space. You can manually delete any resources that were created for the failed job.

Embedded resource types

affectedResource, jobTask, jobTaskRequest

Supported operations

Collection query , Instance query ,Create ,Cancel ,Delete

Attributes

Attribute	Type	Description

id	String	Unique identifier of the job instance.
description	String	Job description.
state	JobStateEnum	Current state of the job.
stateChangeTime	DateTime	Date and time of the last state change for the job.
submitTime	DateTime	Date and time when the job was submitted.
startTime	DateTime	Date and time when the job started.
endTime	DateTime	Date and time when the job ended.
elapsedTime	DateTime[Interval]	Amount of time for which the job has been running.
estRemainTime	DateTime[Interval]	Estimated time remaining until the job completes.
progressPct	unsigned Integer[16(Percent)] [0..100]	Approximate percentage of the job that has completed.
tasks	List<jobTask>	Set of tasks within the job, as defined by the jobTask object.
parametersOut	String	Output parameters and their values of what the job is calling.
messageOut	message	Status messages for job
isJobCancelable	Boolean	Is job cancelable
isJobCancelled	Boolean	Is job cancelled
clientData	String	User-specified data for the job, provided by the client in the clientData request parameter.
affectedResource	affectedResource	Primary resource affected by this job.

Attributes for affectedResource

affectedResource is a resource entity affected by a job instance.

Attribute	Type	Description
resource	String	The resource name of the referenced instance (for GUI navigation).
id	String	The id of the referenced instance.
name	String	The name of the reference instance, if applicable.

Attributes for jobTask

An embedded task within a job. A job consists a series of tasks. In case of batch request job, each jobTask maps to a primitive REST API POST request.

For information about jobs, see the Help topic for the job resource type.

Attribute	Type	Description
name	String	Task name.
description	String	Description of the task.
object	String	Object name of corresponding primitive REST API request if this jobTask belongs to a batch request job.
action	String	Name of associated request action if this jobTask belongs to a batch request job.
state	JobTaskStateEnum	Current state of the job task.
messages	List<message>	Message(s) for this task.
steps	List<jobTask>	Task steps for this task.
parametersIn	String	Request body of associated request action. This is nearly the same as a primitive REST API POST request body except that it could use \"@.\" notation, which implies using the output value of a previous step as input value.
parametersOut	String	Output parameters and their values of what the associated request action is calling if this jobTask belongs to a batch request job.
submitTime	DateTime	Date and time when the jobTask was submitted if this jobTask belongs to a batch request job.
startTime	DateTime	Date and time when the jobTask started if this jobTask belongs to a batch request job.
affectedResource	affectedResource	Primary resource affected by this task.

Attributes for jobTaskRequest

The batch job consists of a group of primitive REST API POST requests. Each is considered to be a task of the job. This object is to represent such primitive request.

For information about jobs, see the Help topic for the job resource type.

Attribute	Type	Description
name	String	Name of the task. Should be unique within a batch request job.
description	String	Description of the task. UTF-8 character message is acceptable.
submitTime	DateTime	Date and time when the jobTask was submitted.
startTime	DateTime	Date and time when the jobTask started.
object	String	Object name of corresponding primitive REST API request.
action	String	Name of associated request action.
parametersIn	baseRequest	Request body of associated request action. This is nearly the same as a primitive REST API POST request body except that it could use \"@.\" notation, which implies using the output value of a previous step as input value.
dependencies	List<String>	jobTaskRequest name list. Current REST request will not be posted until the requests in the list are finished.

Query all members of the job collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/job/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the job collection.

Query a specific job instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/job/<id> where <id> is the unique identifier of the job instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific job instance.

Create operation

Create a job that consists of one or more tasks, each maps to a primitive REST API POST request action. The task will map to jobTaskRequest which contains all needed elements for a single REST API action. This job creation action serves as a batch request that supports grouping, executing and tracking one or more REST API actions in a single request.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/job/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
description	in	String	Required	Description of the created job.
tasks	in	List<jobTaskRequest>	Required	A list of jobTaskRequest instances, each of which maps to a primitive REST API POST request action.
isSerialized	in	Boolean	Optional	Indicate that serializes the tasks in specified order.
majorStepIndex	in	unsigned Integer[32]	Optional	Index of a step which is the major task force of a batch job. Affected resource of this step will be promoted to the batch job instance. Index starts from 1.
id	out	job	N/A	Instance of created job.

Cancel operation

Cancel a job.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/job/<id>/action/cancel where <id> is the unique identifier of the job instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

Delete operation

Delete a completed or failed job. Deleting a job does not revert the action that was completed.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/job/<id> where <id> is the unique identifier of the job instance to delete.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

Managing remote systems

cifsShare

Information about Common Internet File System (CIFS) shares in the storage system.

CIFS shares use the CIFS protocol to provide an access point for configured Windows hosts to access file system storage. The system uses Active Directory to authenticate user and user group access to the share.

Note: To manage CIFS shares for snaps, use the operations for this resource type. To manage CIFS shares for file systems, use the applicable operations for the storageResource resource type, as described in the help topic for that resource type.

Supported operations

Collection query , Instance query ,Create ,Delete ,GetACEs ,SetACEs ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the cifsShare instance.
type	CIFSTypeEnum	The type of CIFS Share.
filesystem	filesystem	(Applies to CIFS shares that are not snaps.) Parent file system associated with the CIFS share, as defined by the filesystem resource type. If the CIFS share is a snapshot, the value of this attribute is null.
snap	snap	(Applies to CIFS shares of snapshots.) Parent file system snap associated with the CIFS share, as defined by the snap resource type. If the CIFS share is not a snapshot, the value of this attribute is null.
isReadOnly	Boolean	Indicates whether the CIFS share is read-only. Values are: • true - CIFS share is read-only. • false - CIFS share is read-write.
name	String	CIFS share name.
path	String	Local path to a location within a file system. By default, the system creates a share to the root of the file system (top-most directory) at file system creation time. This path specifies the unique location of the file system on the storage system. CIFS shares allow you to create multiple network shares with the same local path. You can specify different host-side access controls for different users, while setting up network shares within the file system to access common content. If you want the CIFS network shares within the same file system to access different content, you must first create a share to the root of the file system. Then, you can connect from a Windows host, create additional directories from Windows, and create corresponding network shares using the REST API, Unisphere GUI, or Unisphere CLI.
exportPaths	List<String>	List of export paths which can be used to mount and access share. The list is a combination of above name with all the IP addresses of the SMB server.
description	String	User defined CIFS share description.
creationTime	DateTime	Date and time when the CIFS share was created.
modifiedTime	DateTime	Date and time when the CIFS share was last modified.
isContinuousAvailabilityEnabled	Boolean	Indicates whether continuous availability for Server Message Block (SMB) 3.0 is enabled for the CIFS share. Values are: • true - Continuous availability for SMB 3.0 is enabled for the CIFS share. • false - Continuous availability for SMB 3.0 is disabled for the CIFS share.
isEncryptionEnabled	Boolean	Indicates whether CIFS encryption for Server Message Block (SMB) 3.0 is enabled at the shared folder level. Values are: • true - CIFS encryption for SMB 3.0 is enabled. • false - CIFS encryption for SMB 3.0 is disabled.
isACEEnabled	Boolean	Indicates whether the CIFS share access-level permissions are enabled. Values are: • true - CIFS share access-level permissions are enabled. • false - CIFS share access-level permissions are disabled.
isABEEnabled	Boolean	Access-based Enumeration filters the list of available files and folders on a server to include only those, that the requesting user has access to. Values are: • true - Enumerating is enabled. • false - Enumerating is disabled.
isBranchCacheEnabled	Boolean	BranchCache optimization technology copies content from your main office or hosted cloud content servers and caches the content at branch office locations, allowing client computers at branch offices to access the content locally rather than over the WAN. Values are: • true - BranchCache is enabled. • false - BranchCache is disabled.
isDFSEnabled	Boolean	Distributed File System allows administrators to group shared folders located on different servers by transparently connection them to one or more DFS namespaces. DFS simplifies the process of moving data from one file server to another. Values are: • true - DFS is enabled. • false - DFS is disabled.
offlineAvailability	CifsShareOfflineAvailabilityEnum	Whether the system supports the Offline Files feature, which allows user to configure the CIFS client use files from the share even when not connected. Values are: • true - Offline Files feature is supported. • false - Offline Files feature is not supported.
umask	String	The default UNIX umask for new files created on the share. If not specified the umask defaults to 022.
defaultAccess	CifsShareDefaultAccessEnum	Default CIFS share access-level permissions.

exportOption	unsigned Integer[64]	Specifies the bitmask of various options of the CIFS share. Values are: • 0x0001 - hostString - if set, the access to the CIFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.
noAccessHosts	List<host>	Hosts with no access to the Cifs share or its snapshots, as defined by the host resource type.
noAccessHostsString	String	Hosts with no access to the Cifs share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readWriteHosts	List<host>	Hosts with read and write access to the Cifs share and its snapshots, as defined by the host resource type.
readWriteHostsString	String	Hosts with read-write access to the Cifs share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.

Query all members of the cifsShare collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/cifsShare/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the cifsShare collection.

Query a specific cifsShare instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/cifsShare/<id> where <id> is the unique identifier of the cifsShare instance to query. Or GET /api/instances/cifsShare/name:<value> where <value> is the name of the cifsShare instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific cifsShare instance.

Create operation

Create a CIFS share for a file system snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/cifsShare/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
snap	in	snap	Required	Parent file system associated with the CIFS share, as defined by the filesystemSnap resource type.
path	in	String[1..1023]	Required	Local path to a location within a file system. By default, the system creates a share to the root of the file system (top-most directory) at file system creation time. This path specifies the unique location of the file system on the storage system. CIFS shares allow you to create multiple network shares with the same local path. You can specify different host-side access controls for different users, while setting up network shares within the file system to access common content. If you want the CIFS network shares within the same file system to access different content, you must first create a share to the root of the file system. Then, you can connect from a Windows host, create additional directories from Windows, and create corresponding network shares using the REST API, Unisphere GUI, or

				Unisphere CLI.
name	in	String[1..80]	Required	CIFS share name.
description	in	String[..255]	Optional	CIFS share description.
isABEEnabled	in	Boolean	Optional	Specifies Access-based Enumeration state. Values are: • true - Enumerating is enabled. • false - Enumerating is disabled.
isBranchCacheEnabled	in	Boolean	Optional	Specifies BranchCache state for Server Message Block (SMB) 3.0 and later. Values are: • true - Branch Cache is enabled. • false - Branch Cache is disabled.
offlineAvailability	in	CifsShareOfflineAvailabilityEnum	Optional	Specifies Offline Availability state.
umask	in	String	Optional	Specifies the default UNIX umask for new files created on the share.
isReadOnly	in	Boolean	Optional	Indicates whether the CIFS share is read-only. Values are: • true - CIFS share is read-only. • false - CIFS share is read-write.
isContinuousAvailabilityEnabled	in	Boolean	Optional	Indicates whether continuous availability for Server Message Block (SMB) 3.0 is enabled for the CIFS share. Values are: • true - Continuous availability for SMB 3.0 is enabled for the CIFS share. • false - Continuous availability for SMB 3.0 is disabled for the CIFS share.
isEncryptionEnabled	in	Boolean	Optional	Indicates whether the CIFS share access-level permissions are enabled. Values are: • true - CIFS share access-level permissions are enabled. • false - CIFS share access-level permissions are disabled.
id	out	cifsShare	N/A	Unique identifier of the new cifsShare instance.
defaultAccess	in	CifsShareDefaultAccessEnum	Optional	Default CIFS share access-level permissions.
noAccessHosts	in	List<host>	Optional	Hosts with no access to the CIFS share or its snapshots, as defined by the host resource type.
readWriteHosts	in	List<host>	Optional	Hosts with read and write access to the CIFS share and its snapshots, as defined by the host resource type.
noAccessHostsString	in	String[..7000]	Optional	Hosts with no access to the CIFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readWriteHostsString	in	String[..7000]	Optional	Hosts with read-write access to the CIFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
exportOption	in	unsigned Integer[64][0..3]	Optional	Bitmask of various options of the CIFS share. Values are: • 0x0001 - hostString - if set, the access to the CIFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.

Delete operation

Delete a CIFS share for a file system snapshot.

Header	Accept: application/json Content-Type: application/json

Method and URI	DELETE /api/instances/cifsShare/<id> where <id> is the unique identifier of the cifsShare instance to delete. Or DELETE /api/instances/cifsShare/name:<value> where <value> is the name of the cifsShare instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

GetACEs operation

Get ACEs for the cifs share

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/cifsShare/<id>/action/getACEs where <id> is the unique identifier of the cifsShare instance. Or POST /api/instances/cifsShare/name:<value>/action/getACEs where <value> is the name of the cifsShare instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args)
Successful response body	JSON representation of the returned attributes.

Arguments for the GetACEs operation

Argument	In/ out	Type	Required?	Description
cifsShareACEs	out	List<cifsShareACE>	N/A	The output list of ACEs associated with the cifs share.

SetACEs operation

Set ACEs for the cifs share

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/cifsShare/<id>/action/setACEs where <id> is the unique identifier of the cifsShare instance. Or POST /api/instances/cifsShare/name:<value>/action/setACEs where <value> is the name of the cifsShare instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the SetACEs operation

Argument	In/ out	Type	Required?	Description
cifsShareACEs	in	List<cifsShareACE>	Optional	The input list of ACEs associated with the cifs share.

Modify operation

Modify a CIFS share for a file system snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/cifsShare/<id>/action/modify where <id> is the unique identifier of the cifsShare instance. Or POST /api/instances/cifsShare/name:<value>/action/modify where <value> is the name of the cifsShare instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
defaultAccess	in	CifsShareDefaultAccessEnum	Optional	Default Cifs share access-level permissions.
noAccessHosts	in	List<host>	Optional	Hosts with no access to the Cifs share or its snapshots, as defined by the host resource type.
readWriteHosts	in	List<host>	Optional	Hosts with read and write access to the Cifs share and its snapshots, as defined by the host resource type.
	in		Optional	

noAccessHostsString		String[..7000]		Hosts with no access to the Cifs share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readWriteHostsString	in	String[..7000]	Optional	Hosts with read-write access to the Cifs share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
exportOption	in	unsigned Integer[64][0..3]	Optional	Bitmask of various options of the CIFS share. Values are: • 0x0001 - hostString - if set, the access to the CIFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. To switch between the 2 modes, clear all existing host access first, or in the same request. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.
description	in	String[..255]	Optional	CIFS share description.
isABEEnabled	in	Boolean	Optional	Specifies Access-based Enumeration state. Values are: • true - Enumerating is enabled. • false - Enumerating is disabled.
isBranchCacheEnabled	in	Boolean	Optional	Specifies BranchCache state for Server Message Block (SMB) 3.0 and later. Values are: • true - Branch Cache is enabled. • false - Branch Cache is disabled.
offlineAvailability	in	CifsShareOfflineAvailabilityEnum	Optional	Specifies Offline Availability state.
umask	in	String	Optional	Specifies the default UNIX umask for new files created on the share.
isContinuousAvailabilityEnabled	in	Boolean	Optional	Indicates whether continuous availability for Server Message Block (SMB) 3.0 is enabled for the CIFS share. Values are: • true - Continuous availability for SMB 3.0 is enabled for the CIFS share. • false - Continuous availability for SMB 3.0 is disabled for the CIFS share.
isEncryptionEnabled	in	Boolean	Optional	Indicates whether SMB encryption for Server Message Block (SMB) 3.0 is enabled on the messages received and sent on the network. Values are: • true - SMB encryption for SMB 3.0 is enabled. • false - SMB encryption for SMB 3.0 is disabled.

datastore

Represents a VMware Datastore that is discovered via vCenter or ESXi.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique instance id.
storageResource	storageResource	storageResource that hosts the datastore.
name	String	Friendly name of datastore displayed on vCenter.
format	DatastoreTypeEnum	Format of datastore.
host	host	The host that owns this datastore.
sizeTotal	unsigned Integer[64(bytes)]	Size of the datastore in bytes reported by vCenter. Could be different from size of the associated storage resource.
sizeUsed	unsigned Integer[64(bytes)]	Used size of the datastore (in bytes) as reported by vCenter. This may be different from the used size of the associated storage resource. For VMware VMFS datastores, this provides information about the actual hosted file system allocation size.
vmDisks	List<vmDisk>	The vmDisks associated with the datastore.
vms	List<vm>	The vms associated with the datastore.

Query all members of the datastore collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/datastore/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the datastore collection.

Query a specific datastore instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/datastore/<id> where <id> is the unique identifier of the datastore instance to query. Or GET /api/instances/datastore/name:<value> where <value> is the name of the datastore instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific datastore instance.

host

Information about host configuration on a storage system. A host's configuration is the logical connection through which the host or application can access storage resources.

Embedded resource types

hostLunModify

Supported operations

Collection query , Instance query ,Create ,Refresh ,Delete ,Modify ,ModifyHostLUNs

Attributes

Attribute	Type	Description
id	String	Unique identifier of the host instance.
health	health	Health information for the host, as defined by the health resource type.
name	String	Host name: • For an automatically-managed ESXi server through vCenter, this is the display name in the vCenter GUI. • For a manually-created host, this is the host name entered by the user.
description	String	Host description.
type	HostTypeEnum	Type of host configuration.
osType	String	Operating system running on the host.
hostUUID	String	(Applies to VCenter server and ESXi host configurations only.) Universal Unique Identifier (UUID) of the host.
hostPushedUUID	String	(Applies to VCenter server and ESXi host configurations only.) Pushed UUID of the host.
hostPolledUUID	String	(Applies to VCenter server and ESXi host configurations only.) Polled UUID of the host.
lastPollTime	DateTime	(Applies to hosts on ESXi servers only.) Indicates the date and time when the storage array received the host configuration data from the ESXi server.
autoManageType	HostManageEnum	Indicates how the host is managed.
registrationType	HostRegistrationTypeEnum	Indicates how initiators are registered to the host.
hostContainer	hostContainer	(Applies to VCenter server and ESXi host configurations only.) Identifier of the parent host container, as defined by the hostContainer resource type.
fcHostInitiators	List<hostInitiator>	Identifiers of the Fibre Channel initiators associated with the host, as defined by the hostInitiator resource type.
iscsiHostInitiators	List<hostInitiator>	Identifiers of the iSCSI initiators associated with the host, as defined by the hostInitiator resource type.
hostIPPorts	List<hostIPPort>	Identifiers of the network ports associated with the host, as defined by the hostIPPort resource type.
storageResources	List<storageResource>	Identifiers of the storage resources used by the host, as defined by the storageResource resource type.
hostLUNs	List<hostLUN>	(Applies to iSCSI and Fibre Channel host configurations only.) Identifiers of the LUNs accessible by the host, as defined by the hostLUN resource type.
isNfsv4Supported	Boolean	(Applies to VCenter server and ESXi host configurations only.) Flag indicating whether ESXi host supports NFSv4.
nfsUsername	String	(Applies to VCenter server and ESXi host configurations only.) NFS user authentication information configured on the ESXihost. The same username should be configured on the VMware NAS datastore to enable secure NFS access with Kerberos.

tenant	tenant	Information about the tenant to which the host is assigned.
hostGroup	hostGroup	Identifiers of the host group the host belongs to.
datastores	List<datastore>	The datastores associated with the host.
hostVVolDatastore	List<hostVVolDatastore>	The hostVVolDatastores associated with the host.
vms	List<vm>	The vms associated with the host.

Attributes for hostLunModify

Parameters used for modifying the HLU of a Host LUN.

This embedded class type is passed to the ModifyHostLUNs method of the host object.

Attribute	Type	Description
hostLUN	hostLUN	Reference to the hostLUN to be modified.
hlu	unsigned Integer[32]	New host LUN ID (HLU) to be assigned to the LUN.

Query all members of the host collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/host/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the host collection.

Query a specific host instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/host/<id> where <id> is the unique identifier of the host instance to query. Or GET /api/instances/host/name:<value> where <value> is the name of the host instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific host instance.

Create operation

Create a host configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/host/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
type	in	HostTypeEnum	Required	Type of host configuration.
name	in	String[1..255]	Required	Host name. The value must match all of following regex expressions • ^(?!-)(^\x00-\x1F\x7F\x80-\x9F/\"\%]+$
description	in	String[..255]	Optional	Host description.
osType	in	String[..255]	Optional	Operating system running on the host.
tenant	in	tenant	Optional	Tenant with which the host is to be associated.
id	out	host	N/A	Unique identifier of the new host instance.

Refresh operation

(Applies to ESXi host configurations only.) Refresh the retrieval of host configuration information from the ESXi server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/host/<id>/action/refresh where <id> is the unique identifier of the host instance. Or POST /api/instances/host/name:<value>/action/refresh where <value> is the name of the host instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)

Successful response body	No body content.

Arguments for the Refresh operation

Argument	In/ out	Type	Required?	Description
doRescan	in	Boolean	Required	Indicates whether to scan the associated hardware when refreshing the ESXi host configuration information. Values are: • true - Rescan associated hardware. This option adds time to the refresh process. • false - Do not rescan associated hardware.

Delete operation

Delete a host configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/host/<id> where <id> is the unique identifier of the host instance to delete. Or DELETE /api/instances/host/name:<value> where <value> is the name of the host instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a host configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/host/<id>/action/modify where <id> is the unique identifier of the host instance. Or POST /api/instances/host/name:<value>/action/modify where <value> is the name of the host instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..255]	Optional	(Applies to manually-created hosts only.) Host name. The value must match all of following regex expressions • ^(?!-)[^\x00-\x1F\x7F\x80-\x9F/\"\%]+$
description	in	String[..255]	Optional	Host description.
osType	in	String[..255]	Optional	(Applies to manually-created hosts only.) Operating system running on the host.

ModifyHostLUNs operation

Modify the Host LUN Identifier (HLU) of one or more LUNs accessible by the host. The method takes a list of hostLUNs, so that the HLUs of one or more LUNs can be changed at once, even if the old and new HLUs overlap.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/host/<id>/action/modifyHostLUNs where <id> is the unique identifier of the host instance. Or POST /api/instances/host/name:<value>/action/modifyHostLUNs where <value> is the name of the host instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyHostLUNs operation

Argument	In/ out	Type	Required?	Description
hostLunModifyList	in	List<hostLunModify>	Required	List of embedded hostLunModify objects. The embedded object has the required hostLUN details to be updated.

hostContainer

A vCenter or a stand alone ESXi container for managed VMs.
ESXi hosts that are discovered via vCenter are available as host objects.

Embedded resource types

potentialHost, vasaProviderParameters

Supported operations

Collection query , Instance query ,Create ,Discover ,Recommend ,Refresh ,RefreshAll ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique instance id.
lastPollTime	DateTime	Last time rescan was performed.
port	unsigned Integer[32]	Port number.
name	String	Alias.
type	HostContainerTypeEnum	Type of this host container.
address	String	Can be IPv4, IPv6 and host name.
description	String[0..128]	Description.
productName	String	Name of the host container.
productVersion	String	Version of the host container.
health	health	Health information.
hosts	List<host>	Vector of ids of embedded potential hosts.
vasaProviderState	VasaProviderStateEnum	Indicates storage system's VASA vendor provider state on the vCenter.

Attributes for potentialHost

This class is used to hold discovered hosts of a vCenter or ESXi Host.

Attribute	Type	Description
name	String	Display name of the discovered ESXi server
serverName	String	DNS name of ESXi server
description	String	Description of ESXi server
osName	String	OS name of ESXi server
osVersion	String	OS version of ESXi server
uuid	String	Vendor unique identifier of ESXi server
kernelIPs	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Kernel IPs of ESXi server
mgmtIPs	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Management IPs of ESXi server
fcInitiators	List<String>	Fibre channel initiators of ESXi server
iscsiInitiators	List<String>	Iscsi initiators of ESXi server
matchedConditions	List<HostContainerPotentialHostMatchConditionEnum>	How the discovered ESXi hosts match the existing hosts already known to the array
matchedHosts	List<host>	Existing hosts that match the discovered vCenter/ESXi Host
matchedPotentialHostsConditions	List<HostContainerPotentialHostMatchConditionEnum>	How the potential ESXi hosts conflict among themseleves
matchedPotentialHosts	List<String>	The names of the other potential hosts that match this potential host in any way
importOption	HostContainerPotentialHostImportOptionEnum	How ESXi server can be imported

Attributes for vasaProviderParameters

An object represents parameters for VASA provider registration.

Attribute	Type	Description
localUsername	String	Username of the local user account which will be used by vSphere to register VASA provider.
localPassword	String	Password of the local user account which will be used by vSphere to register VASA provider.

Query all members of the hostContainer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostContainer/instances

Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostContainer collection.

Query a specific hostContainer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostContainer/<id> where <id> is the unique identifier of the hostContainer instance to query. Or GET /api/instances/hostContainer/name:<value> where <value> is the name of the hostContainer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostContainer instance.

Create operation

Create host container.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/hostContainer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
serviceType	in	HostContainerTypeEnum	Required	The type of the host container.
targetName	in	String	Required	Unique name of target returned from discovery.
targetAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Required	ipv4, ipv6 or host name of the vCenter or standalone ESXi server.
username	in	String	Required	Username to connect to the host container.
password	in	String	Required	Pwd to connect to the host container.
description	in	String	Optional	Brief description.
vasaProviderParameters	in	vasaProviderParameters	Optional	VASA provider parameters. If specified, storage system's VASA provider will be registered on vSphere.
potentialHosts	in	List<potentialHost>	Optional	A list of embedded potential host objects to be imported with the host container creation.
id	out	hostContainer	N/A	Uis host container reference.

Discover operation

Discover the esx servers that can be managed by vc to present to the user as candidates for importing.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/hostContainer/<id>/action/discover where <id> is the unique identifier of the hostContainer instance. Or POST /api/instances/hostContainer/name:<value>/action/discover where <value> is the name of the hostContainer instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args)
Successful response body	JSON representation of the returned attributes.

Arguments for the Discover operation

Argument	In/ out	Type	Required?	Description
potentialHosts	out	List<potentialHost>	N/A	A list of host candidates that can be imported.

Recommend operation

Get a list of candidate hosts that can be imported for a VC or an ESXi server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/hostContainer/action/recommend
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args)
Successful response body	JSON representation of the returned attributes.

Arguments for the Recommend operation

Argument	In/ out	Type	Required?	Description
type	out	HostContainerTypeEnum	N/A	The type of the VC/ESXi server.
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Required	The IP address of the VC or ESXi server.
username	in	String	Required	The user name to access VC/ESXi server.
password	in	String	Required	The password to connect to VC or ESXi server.
containerName	out	String	N/A	The name of VC or ESXi server.
containerVersion	out	String	N/A	The software version of VC or ESXi server.
vasaProviderState	out	VasaProviderStateEnum	N/A	Indicates storage system's VASA vendor provider state on the vCenter.
potentialHosts	out	List<potentialHost>	N/A	The list of candidate hosts that can be imported.

Refresh operation

Refresh all the hosts managed by the host container.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/hostContainer/<id>/action/refresh where <id> is the unique identifier of the hostContainer instance. Or POST /api/instances/hostContainer/name:<value>/action/refresh where <value> is the name of the hostContainer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Refresh operation

Argument	In/ out	Type	Required?	Description
doRescan	in	Boolean	Required	Whether a full rescan is requested.

RefreshAll operation

Refresh all known vCenters and ESXi servers.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/hostContainer/action/refreshAll
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the RefreshAll operation

Argument	In/ out	Type	Required?	Description
doRescan	in	Boolean	Required	Whether a full rescan is requested.

Delete operation

Delete a host container.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/hostContainer/<id> where <id> is the unique identifier of the hostContainer instance to delete. Or DELETE /api/instances/hostContainer/name:<value> where <value> is the name of the hostContainer instance to delete.

Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify an existing host container.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/hostContainer/<id>/action/modify where <id> is the unique identifier of the hostContainer instance. Or POST /api/instances/hostContainer/name:<value>/action/modify where <value> is the name of the hostContainer instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
targetAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	The new address of the host container.
description	in	String	Optional	The new description of the host container.
username	in	String	Optional	The new user name to access the host container.
password	in	String	Optional	The new password to access the host container.
vasaProviderParameters	in	vasaProviderParameters	Optional	VASA provider parameters. If specified, storage system's VASA provider will be registered on vSphere.
potentialHosts	in	List<potentialHost>	Optional	A list of new candidate hosts that will be associated with this host container.
newHosts	out	List<host>	N/A	A list of newly imported hosts.

hostGroup

Information about host group on a storage system. A host group contains a set of hosts for quicker attaching/detaching LUNs and customizing Host LUN IDs. It supports attaching all hosts in host group to LUNs by adding LUNs to host group; detaching all hosts in host group from LUNs by removing LUNs from host group; adding hosts to host group to attach to the LUNs in host group; customizing Host LUN IDs.

Embedded resource types

hostGroupHostModify, hostGroupHostParam, hostGroupLunModify, hostGroupLunParam, hostGroupVmwareLunModify, hostGroupVmwareLunParam

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify ,ModifyLuns ,ModifyVmwareLuns

Attributes

Attribute	Type	Description
id	String	Unique identifier of the host group instance.
name	String	Name of the host group.
description	String	Host group description.
type	HostGroupTypeEnum	Host group type.
hosts	List<host>	Hosts associated with this host group.
hostGroupLUNs	List<hostGroupLUN>	Identifiers of the LUNs accessible by the host group, as defined by the hostGroupLUN resource type.
hostGroupVmwareLUNs	List<hostGroupVmwareLUN>	Identifiers of the VMware VMFS datastores accessible by the host group, as defined by the hostGroupVmwareLUNs resource type.
health	health	Health information for the host group, as defined by the health resource type.

Attributes for hostGroupHostModify

The mapping relationship between lun/VMware VMFS datastore and hlu id on a host.

This embedded object is embedded in the hostGroupLunParam/hostGroupVmwareLunParam embedded type.

Attribute	Type	Description
host	host	Reference to the host to grant production access to the LUN.
hlu	unsigned Integer[16]	Optional host LUN Identifier (HLU) for the host storage. If not specified, and the host does not have production access for the LUN/VMware VMFS datastore, and corresponding hostGroupLUN has no defaultHlu, then system will generate a host LUN ID for it.

Attributes for hostGroupHostParam

Information about the luns/VMware VMFS datastore accessed by the host.

This embedded object is passed to the modify method of hostGroup.

Attribute	Type	Description
host	host	Reference to the host to be added to host group or the host in host group to be updated.
accessMergeType	HostGroupAccessMergeTypeEnum	An optional HostGroupAccessMergeTypeEnum to specify how the host access is going to be updated when the host is added/modified in host group. If not specified, it is by default MergeFromHostGroup when used in addHostGroupHostParams in hostGroup.modify method, and by default Customized when used in modifyHostGroupHostParams in hostGroup.modify method.
hostGroupLunModifys	List<hostGroupLunModify>	An optional list of embedded hostGroupLunModify object, only valid when accessMergeType property is Customized. The embedded object specifies the LUN for the host to grant production access, and host LUN IDs to be updated for the host. The host access to the LUNs that not in this list will keep unchanged.
hostGroupVmwareLunModifys	List<hostGroupVmwareLunModify>	An optional list of embedded hostGroupVmwareLunModify object, only valid when accessMergeType property is Customized. The embedded object specifies the VMware VMFS datastore for the host to grant production access, and host LUN IDs to be updated for the host.

Attributes for hostGroupLunModify

The mapping relationship between lun and hlu id on a host.

This embedded object is embedded in the hostGroupHostParam embedded type.

Attribute	Type	Description
lun	lun	Reference to the lun that the host will grant production access to it.
hlu	unsigned Integer[16]	Optional host LUN Identifier (HLU) for the host storage. If not specified, and the host does not have production access for the LUN, and corresponding hostGroupLUN has no defaultHlu, then system will generate a host LUN ID for it.

Attributes for hostGroupLunParam

Information about the hosts access the lun.

This embedded object is passed to the create and modifyLuns method of hostGroup.

- It is not allowed to specify host that is not in the host group in hostGroupHostModifys property.
- If the hlu property is not specified and this embedded object is used in addHostGroupLunParams parameter of hostGroup.modifyLuns, or hostGroupLunParams parameter of hostGroup.create:
  - If the hostGroupHostModifys property is absent or it is an empty list, the LUN specified by lun property will be modified to be accessible by all hosts in the host group.
  - For the hosts that is in the host group, but not appear in the hostGroupHostModifys property, the LUN will be modified to be accessible by these hosts.
  - For the hosts that is in the host group and listed in the hostGroupHostModifys property, the LUN will be updated according to these embedded hostGroupHostModify objects.
- If the hlu property is not specified and this embedded object is used in modifyHostGroupLunParams parameter of hostGroup.modifyLuns:
  - If the hostGroupHostModifys property is absent or it is an empty list, the LUN specified by lun property will keep unchanged.
  - For the hosts that is in the host group, but not appear in the hostGroupHostModifys property, the host access to the LUN will keep unchanged.
  - For the hosts that is in the host group and listed in the hostGroupHostModifys property, the LUN will be updated according to these embedded hostGroupHostModify objects.

Attribute	Type	Description
lun	lun	Reference to the lun to be added to the host group or the lun that the host access for it to be updated.
hlu	unsigned Integer[16]	An optional host LUN ID to be set to all hosts in the host group. If specified, then all hosts in the host group will grant production access for this LUN with this host LUN ID, and the hostGroupHostModifys property will be ignored.
hostGroupHostModifys	List<hostGroupHostModify>	An optional list of embedded hostGroupHostModify object to customize host LUN ID for each host. It is not allowed to specify host that is not in the host group.

Attributes for hostGroupVmwareLunModify

The mapping relationship between VMware VMFS datastore and hlu id on a host.

This embedded object is embedded in the hostGroupHostParam embedded type.

Attribute	Type	Description
storageResource	storageResource	Reference to the VMware VMFS datastore that the host will grant production access to it.
hlu	unsigned Integer[16]	Optional host lun Identifier (HLU) for the host storage. If not specified, and the host does not have production access for the VMware VMFS datastore, and corresponding hostGroupVmwareLun has no defaultHlu, then system will generate a host lun ID for it.

Attributes for hostGroupVmwareLunParam

Information about the hosts access the VMware VMFS datastore.

This embedded object is passed to the create and modifyVmwareLuns method of hostGroup.

- It is not allowed to specify host that is not in the host group in hostGroupHostModifys property.
- If the hlu property is not specified and this embedded object is used in addHostGroupVmwareLunParams parameter of hostGroup.modifyVmwareLuns, or hostGroupVmwareLunParams parameter of hostGroup.create:
  - If the hostGroupHostModifys property is absent or it is an empty list, the VMware VMFS datastore specified by storageResource property will be modified to be accessible by all hosts in the host group.
  - For the hosts that is in the host group, but not appear in the hostGroupHostModifys property, the VMware VMFS datastore will be modified to be accessible by these hosts.
  - For the hosts that is in the host group and listed in the hostGroupHostModifys property, the VMware VMFS datastore will be updated according to these embedded hostGroupHostModify objects.
- If the hlu property is not specified and this embedded object is used in modifyHostGroupVmwareLunParams parameter of hostGroup.modifyVmwareLuns:
  - If the hostGroupHostModifys property is absent or it is an empty list, the VMware VMFS datastore specified by storageResource property will keep unchanged.
  - For the hosts that is in the host group, but not appear in the hostGroupHostModifys property, the host access to the VMware VMFS datastore will keep unchanged.
  - For the hosts that is in the host group and listed in the hostGroupHostModifys property, the VMware VMFS datastore will be updated according to these embedded hostGroupHostModify objects.

Attribute	Type	Description
storageResource	storageResource	Reference to the VMware VMFS datastore to be added to the host group or the VMware VMFS datastore that the host

		access for it to be updated.
hlu	unsigned Integer[16]	An optional host LUN ID to be set to all hosts in the host group. If specified, then all hosts in the host group will grant production access for this VMware VMFS datastore with this host LUN ID, and the hostGroupHostModifys property will be ignored.
hostGroupHostModifys	List<hostGroupHostModify>	An optional list of embedded hostGroupHostModify object to customize host LUN ID for each host. It is not allowed to specify host that is not in the host group.

Query all members of the hostGroup collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostGroup/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostGroup collection.

Query a specific hostGroup instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostGroup/<id> where <id> is the unique identifier of the hostGroup instance to query. Or GET /api/instances/hostGroup/name:<value> where <value> is the name of the hostGroup instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostGroup instance.

Create operation

Create a host group.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/hostGroup/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..255]	Required	Host group name. The value must match all of following regex expressions • ^(?!-)[^\x00-\x1F\x7F\x80-\x9F/\"\%]+$
description	in	String[..255]	Optional	Host group description.
type	in	HostGroupTypeEnum	Optional	Host gorup type. Default value is General.
hosts	in	List<host>	Required	List of hosts to be added to the host group.
hostGroupLunParams	in	List<hostGroupLunParam>	Optional	List of embedded hostGroupLunParam objects. The embedded object specifies the LUN to be added to the host group and optional host LUN ID.
hostGroupVmwareLunParams	in	List<hostGroupVmwareLunParam>	Optional	List of embedded hostGroupVmwareLunParam objects. The embedded object specifies the VMware VMFS datastore to be added to the host group and optional host LUN ID.
id	out	hostGroup	N/A	Unique identifier of the new host group instance.

Delete operation

Delete a host group. All hosts in this host group will be removed from this host group, but these hosts will not be deleted and they will keep their current access to LUNs.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/hostGroup/<id> where <id> is the unique identifier of the hostGroup instance to delete. Or DELETE /api/instances/hostGroup/name:<value>

	where <value> is the name of the hostGroup instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a host group.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/hostGroup/<id>/action/modify where <id> is the unique identifier of the hostGroup instance. Or POST /api/instances/hostGroup/name:<value>/action/modify where <value> is the name of the hostGroup instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..255]	Optional	Host group name. The value must match all of following regex expressions • ^(?!-)[^\x00-\x1F\x7F\x80-\x9F/\"\%]+$
description	in	String[..255]	Optional	Host group description.
addHostGroupHostParams	in	List<hostGroupHostParam>	Optional	List of embedded hostGroupHostParam objects. The embedded object specifies host to be added to the host group and its access to LUNs and optional host LUN IDs for these LUNs.
modifyHostGroupHostParams	in	List<hostGroupHostParam>	Optional	List of embedded hostGroupHostParam objects. The embedded object specifies host to be modified with its access to LUNs and optional host LUN IDs for these LUNs.
removeHosts	in	List<host>	Optional	Hosts to be removed from this host group. After removed the hosts from host group, the hosts will keep their current access to LUNs.

ModifyLuns operation

Modify the luns in the host group.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/hostGroup/<id>/action/modifyLuns where <id> is the unique identifier of the hostGroup instance. Or POST /api/instances/hostGroup/name:<value>/action/modifyLuns where <value> is the name of the hostGroup instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyLuns operation

Argument	In/ out	Type	Required?	Description
addHostGroupLunParams	in	List<hostGroupLunParam>	Optional	List of embedded hostGroupLunParam objects. The embedded object specifies the LUN to be added to the host group and and optional host LUN ID.
modifyHostGroupLunParams	in	List<hostGroupLunParam>	Optional	List of embedded hostGroupLunParam objects. The embedded object specifies the LUN to be modified in the host group and optional host LUN ID.
removeLuns	in	List<lun>	Optional	Luns to be removed from this host group. After removed the LUNs from host group, all hosts in this host group will have no production access to the removed LUNs. The LUNs are not deleted from the storage system when it is removed from host group.

ModifyVmwareLuns operation

Modify the VMware VMFS datastores in the host group.

Header	Accept: application/json

	Content-Type: application/json
Method and URI	POST /api/instances/hostGroup/<id>/action/modifyVmwareLuns where <id> is the unique identifier of the hostGroup instance. Or POST /api/instances/hostGroup/name:<value>/action/modifyVmwareLuns where <value> is the name of the hostGroup instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyVmwareLuns operation

Argument	In/ out	Type	Required?	Description
addHostGroupVmwareLunParams	in	List<hostGroupVmwareLunParam>	Optional	List of embedded hostGroupVmwareLunParam objects. The embedded object specifies the VMware VMFS datastore to be added to the host group and and optional host LUN ID.
modifyHostGroupVmwareLunParams	in	List<hostGroupVmwareLunParam>	Optional	List of embedded hostGroupVmwareLunParam objects. The embedded object specifies the VMware VMFS datastore to be modified in the host group and optional host LUN ID.
removeVmwareLuns	in	List<storageResource>	Optional	VMware VMFS datastores to be removed from this host group. After removed the VMware VMFS datastores from host group, all hosts in this host group will have no production access to the removed VMware VMFS datastores. The VMware VMFS datastores are not deleted from the storage system when it is removed from host group.

hostGroupLUN

Information about the LUNs to which a host group has access.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the hostGroupLUN instance.
hostGroup	hostGroup	Information about the host group that has access to the LUN, as defined by the host resource type.
hostCountForLunAccess	unsigned Integer[32]	Number of hosts that have access to the LUN.
hostCountForNoLunAccess	unsigned Integer[32]	Number of hosts that have no access to the LUN.
lun	lun	LUN, as defined by the lun resource type.
defaultHlu	unsigned Integer[16]	The default Host LUN ID to be assigned to host when a host that has no access to this LUN is added to the host group.

Query all members of the hostGroupLUN collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostGroupLUN/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostGroupLUN collection.

Query a specific hostGroupLUN instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostGroupLUN/<id> where <id> is the unique identifier of the hostGroupLUN instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostGroupLUN instance.

hostGroupVmwareLUN

Information about the VMware VMFS datastores to which a host group has access.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the hostGroupVmwareLUN instance.
hostGroup	hostGroup	Information about the host group that has access to the VMware VMFS datastore, as defined by the host resource type.
hostCountForVmwareLunAccess	unsigned Integer[32]	Number of hosts that have access to the VMware VMFS datastore.
hostCountForNoVmwareLunAccess	unsigned Integer[32]	Number of hosts that have no access to the VMware VMFS datastore.
storageResource	storageResource	VMware VMFS datastore, as defined by the storageResource type.
defaultHlu	unsigned Integer[16]	The default Host LUN ID to be assigned to host when a host that has no access to this VMware VMFS datastore is added to the host group.

Query all members of the hostGroupVmwareLUN collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostGroupVmwareLUN/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostGroupVmwareLUN collection.

Query a specific hostGroupVmwareLUN instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostGroupVmwareLUN/<id> where <id> is the unique identifier of the hostGroupVmwareLUN instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostGroupVmwareLUN instance.

hostIPPort

Information about the host's IP settings.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the hostIPPort instance.
name	String	Port name.
type	HostPortTypeEnum	IP address type.
address	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	IP address or network name of the port.
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	(Applies to IPV4 only.) Subnet mask for the IP address, if any.
v6PrefixLength	unsigned Integer[32]	(Applies to IPV6 only.) Subnet mask length.
isIgnored	Boolean	(Applies to NFS access only.) Indicates whether the port should be ignored when storage access is granted to the host. Values are: • true - Ignore the port when granting storage access to the host. • false - Include the port when granting storage access to the host.
host	host	Identifier of the associated host, as defined by the host resource type.

Query all members of the hostIPPort collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostIPPort/instances
Request body arguments	None

Successful return status	200 OK
Successful response body	JSON representation of all members of the hostIPPort collection.

Query a specific **hostIPPort** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostIPPort/<id> where <id> is the unique identifier of the hostIPPort instance to query. Or GET /api/instances/hostIPPort/name:<value> where <value> is the name of the hostIPPort instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostIPPort instance.

Create operation

Create a host IP port.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/hostIPPort/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
host	in	host	Required	Identifier of the associated host.
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: true	Required	IP address, network name, or netgroup name of the port.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	Subnet mask for the IP address, if any.
v6PrefixLength	in	unsigned Integer[32(bits)] [0..128]	Optional	Prefix length for the IP (IPv6) address, if any. Not applicable to IPv4.
isIgnored	in	Boolean	Optional	Indicates whether the port should be ignored when storage access is granted to the host. Values are: • true - Ignore the port when granting storage access to the host. • false - Include the port when granting storage access to the host.
id	out	hostIPPort	N/A	New IP port instance, as defined by the hostIPPort resource type.

Delete operation

Delete a host IP port.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/hostIPPort/<id> where <id> is the unique identifier of the hostIPPort instance to delete. Or DELETE /api/instances/hostIPPort/name:<value> where <value> is the name of the hostIPPort instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a host IP port.

Header	Accept: application/json

	Content-Type: application/json
Method and URI	POST /api/instances/hostIPPort/<id>/action/modify where <id> is the unique identifier of the hostIPPort instance. Or POST /api/instances/hostIPPort/name:<value>/action/modify where <value> is the name of the hostIPPort instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	IP address, network name, or netgroup name of the port.
netmask	in	String	Optional	Subnet mask for the IP address, if any.
v6PrefixLength	in	unsigned Integer[32(bits)] [0..128]	Optional	Prefix length for the IP (IPv6) address, if any. Not applicable to IPv4.
isIgnored	in	Boolean	Optional	Indicates whether the port should be ignored when storage access is granted to the host. Values are: • true - Ignore the port when granting storage access to the host. • false - Include the port when granting storage access to the host.

hostInitiator

Information about host initiators in the storage system.

After you create a host configuration for controlling host access to storage on the system, you need to create a host initiator for each host configuration that accesses iSCSI or Fibre Channel (FC) storage. The initiator connects the host to the target iSCSI or FC node on the system.

Initiator-based registration allows you to register the initiator to a host without having to manage individual paths. By default, when an initiator is registered to a host, all of its paths, including those specified after the registration takes place, are automatically granted access to any storage provisioned for the host.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the hostInitiator instance.
health	health	Health information for the host initiator, as defined by the health resource type.
type	HostInitiatorTypeEnum	Host initiator type.
initiatorId	String	Host initiator name: • For an iSCSI initiator, this is the iSCSI Qualified Name (IQN). • For an FC initiator, this is the Worldwide Name (WWN).
parentHost	host	Information about the host to which the host initiator is assigned, as defined by the host resource type.
isIgnored	Boolean	Indicates whether the host initiator should be included when storage access is granted to the host. Values are: • true - Do not include the host initiator when storage is granted to the associated host. • false - Include the host initiator when storage is granted to the associated host.
nodeWWN	String[..128]	(Applies to FC initiators only.) Node Worldwide Name (WWN) of the initiator.
portWWN	String[..128]	(Applies to FC initiators only.) Port Worldwide Name (WWN) of the initiator.
chapUserName	String	(Applies to iSCSI initiators only.) CHAP user name. By default, this is the host initiator's iSCSI Qualified Name (IQN).
isChapSecretEnabled	Boolean	(Applies to iSCSI initiators only.) Indicates whether CHAP authentication is enabled for the host initiator. Values are: • true - CHAP authentication is enabled. • false - CHAP authentication is disabled.
paths	List<hostInitiatorPath>	Host initiator paths, as defined by the hostInitiatorPath resource type.
iscsiType	HostInitiatorIscsiTypeEnum	(Applies to iSCSI initiators only.) iSCSI initiator type.
isBound	Boolean	(Applies to iSCSI initiators only.) Indicates whether the iSCSI initiator is bound to an IP address. This is only applicable to hardware-dependent adapter devices. Values are: • true - iSCSI initiator is bound to an IP address. • false - iSCSI initiator is not bound to an IP address.

initiatorSourceType	HostInitiatorSourceTypeEnum	Initiator source type.
failoverMode	HostInitiatorFailoverModeEnum	Fail-over mode.
isLunZEnabled	Boolean	If lunZ is enabled.
isArraySerialNumber	Boolean	If true, array serial number, otherwise LUN serial number will be used for Unit Serial Number in Vital Product Data Page 0x80 in SCSI-3 interface.
onAllowList	Boolean	If true, the initiator in on the allow list, Otherwise not on the allow list.
onWhiteList	Boolean	If true, the initiator in on the white list, Otherwise not on the white list. **Deprecated:** This attribute is obsolete and will be removed in a future release. Please use onAllowList instead

Query all members of the hostInitiator collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostInitiator/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostInitiator collection.

Query a specific hostInitiator instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostInitiator/<id> where <id> is the unique identifier of the hostInitiator instance to query. Or GET /api/instances/hostInitiator/name:<value> where <value> is the name of the hostInitiator instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostInitiator instance.

Create operation

Create a host initiator.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/hostInitiator/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
host	in	host	Required	Host to which to assign the host initiator, as defined by the host resource type.
initiatorType	in	HostInitiatorTypeEnum	Required	Host initiator type. FC initiators can be created only if the FC protocol is supported on the system and the corresponding license is installed.
initiatorWWNorIqn	in	String	Required	One of the following: • For an iSCSI initiator, the iSCSi Qualified Name (IQN). • For a FC initiator, the Worldwide Name (WWN).
chapUser	in	String	Optional	(Applies to iSCSI initiators only.) CHAP user name. By default, this is the initiator's iSCSI Qualified Name (IQN).
chapSecret	in	String	Optional	(Applies to iSCSI initiators only.) CHAP secret to use to authenticate iSCSI sessions.
chapSecretType	in	CHAPSecretTypeEnum	Optional	(Applies to iSCSI initiators only.) CHAP secret encoding type.
isIgnored	in	Boolean	Optional	Specifies whether to include the host initiator when storage access is granted to the host. Values are: • true - Include the host initiator when storage is granted to the associated host. • false -Do not include the host initiator when storage is granted to the associated host. By default, it is false.
initiatorSourceType	in	HostInitiatorSourceTypeEnum	Optional	Initiator source type. By default, it is Open_Native.
failoverMode	in	HostInitiatorFailoverModeEnum	Optional	Initiator failover mode. By default, it is ALUA_Mode.

isLunZEnabled	in	Boolean	Optional	Specifies if LunZ is enabled. Values are: • true - LunZ is enabled. • false -LunZ is not enabled. By default, it is true.
isArraySerialNumber	in	Boolean	Optional	Specifies if the Unit Serial Number is Array or LUN. Values are: • Array - The Unit Serial Number is Array. • LUN - The Unit Serial Number is LUN. By default, it is Array.
id	out	hostInitiator	N/A	Unique identifier for the new hostInitiator instance.

Delete operation

Delete a host initiator and all of its paths from the host. This removes host access from the initiator to the system. To reuse the initiator, you must use modify method to associate it a host.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/hostInitiator/<id> where <id> is the unique identifier of the hostInitiator instance to delete. Or DELETE /api/instances/hostInitiator/name:<value> where <value> is the name of the hostInitiator instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
force	in	Boolean	Optional	Specifies whether to force deletion of this host initiator. If the initiator is stale but the associated host still has lun access, the delete of the initiator will fail, as will deletes of the accessible luns. The force flag will allow the initiator delete to proceed. Ensure that the host is not using the initiator before using the force flag.

Modify operation

Modify host initiator settings. Once an initiator is associated to a host, access to storage devices can be granted to that host through the paths defined on the initiator.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/hostInitiator/<id>/action/modify where <id> is the unique identifier of the hostInitiator instance. Or POST /api/instances/hostInitiator/name:<value>/action/modify where <value> is the name of the hostInitiator instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isIgnored	in	Boolean	Optional	Indicates whether the initiator should be included when storage access is granted to the host. Values are: • true - Include the initiator when storage is granted to the associated host. • false -Do not include the initiator when storage is granted to the associated host.
chapUser	in	String	Optional	(Applies to SCSI initiators only.) CHAP user name. By default, this is the initiator's iSCSI Qualified Name (IQN).
chapSecret	in	String	Optional	(Applies to iSCSI initiators only.) Chap secret used to authenticate iSCSI sessions.
chapSecretType	in	CHAPSecretTypeEnum	Optional	(Applies to iSCSI initiators only.) Chap secret encoding type.
initiatorSourceType	in	HostInitiatorSourceTypeEnum	Optional	Initiator source type.
failoverMode	in	HostInitiatorFailoverModeEnum	Optional	Initiator failover mode.
isLunZEnabled	in	Boolean	Optional	Specifies if LunZ is enabled. Values are: • true - LunZ is enabled. • false -LunZ is not enabled.
isArraySerialNumber	in	Boolean	Optional	Specifies if the Unit Serial Number is Array or LUN. Values are: • Array - The Unit Serial Number is Array. • LUN - The Unit Serial Number is LUN.

host	in	host	Optional	
addToAllowList	in	Boolean	Optional	
addToWhiteList	in	Boolean	Optional	**Deprecated:** This parameter is obsolete and will be removed in a future release. Please use addToAllowList instead

hostInitiatorPath

Information about host initiator paths in the storage system. Each initiator can be associated with multiple initiator paths.

Supported operations

Collection query , Instance query ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the hostInitiatorPath instance.
registrationType	HostInitiatorPathTypeEnum	Indicates how the initiator in the path was registered to the host.
isLoggedIn	Boolean	Indicates whether the host initiator is logged into the storage system. Values are: • true - Host initiator is logged into the storage system. • false - Host initiator is not logged into the storage system.
hostPushName	String	(Applies when the value of the registrationType attribute is set to ESXAuto.) Name of the host that is automatically associated with the initiator path through host push.
sessionIds	List<String>	(Applies to iSCSI paths only.) Session identifiers in the host initiator path.
initiator	hostInitiator	Host initiator associated with the host initiator path, as defined by the hostInitiator resource type.
fcPort	fcPort	(Applies to Fibre Channel paths only.) Target Fibre Channel port, as defined by the fcPort resource type.
iscsiPort	iscsiPort	(Applies to iSCSI paths only.) iSCSI portal, as defined by the iscsiPort resource type.

Query all members of the hostInitiatorPath collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostInitiatorPath/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostInitiatorPath collection.

Query a specific hostInitiatorPath instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostInitiatorPath/<id> where <id> is the unique identifier of the hostInitiatorPath instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostInitiatorPath instance.

Delete operation

Delete a host initiator path. This interface works for stale initiator path only. Normally, a host initiator path will disappear automatically if it is logged out from thehost or cable disconnected. But in some cases such as an FC host which is auto created, the initiator path may stay in logged out state when cable disconnected.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/hostInitiatorPath/<id> where <id> is the unique identifier of the hostInitiatorPath instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

hostLUN

Information about the LUNs and LUN snapshots to which a host has access.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the hostLUN instance.

host	host	Information about the host that has access to the LUN or LUN snapshot, as defined by the host resource type.
type	HostLUNTypeEnum	Indicates whether this instance of the hostLUN resource type represents a LUN or LUN snapshot.
hlu	unsigned Integer[16]	Host LUN Identifier (HLU) for the host storage group.
lun	lun	(Applies to LUNs only.) LUN, as defined by the lun resource type.
snap	snap	(Applies to LUN snapshots only.) LUN snapshot, as defined by the lunSnap resource type.
isReadOnly	Boolean	Indicates whether the host access to the LUN or LUN snapshot is read-only. Values are: • true - Host access is read-only. • false - Host access is read-write.
isDefaultSnap	Boolean	(Applies to LUN snapshots only.) Indicates whether this instance of the hostLUN resource type represents a default snapshot. • true - instance represents HLU for default snapshot. • false - instance does not represent HLU for default snapshot

Query all members of the hostLUN collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostLUN/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostLUN collection.

Query a specific hostLUN instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostLUN/<id> where <id> is the unique identifier of the hostLUN instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostLUN instance.

hostVVolDatastore

Information about the VVolDatastore to which a host has access.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the hostVVolDatastore instance.
storageResource	storageResource	Information about the VVol Datastore, as defined by the storageResource type.
host	host	Information about the host that has access to the VVol Datastore, as defined by the host resource type.

Query all members of the hostVVolDatastore collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostVVolDatastore/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostVVolDatastore collection.

Query a specific hostVVolDatastore instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostVVolDatastore/<id> where <id> is the unique identifier of the hostVVolDatastore instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostVVolDatastore instance.

nfsShare

Information about Network File System (NFS) shares in the storage system.

NFS shares use the NFS protocol to provide an access point for configured Linux/Unix hosts or IP subnets to access shared folder storage. NFS network shares are associated with an NFS shared folder.

Note: To manage NFS shares for snapshots, use the operations for this resource type. To manage NFS shares for file systems and VMware NFS datastores, use the applicable operations for the storageResource resource type, as described in the help topic for that resource type.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the nfsShare instance.
type	NFSTypeEnum	Type of the NFS Share.
role	NFSShareRoleEnum	Role of the NFS share.
filesystem	filesystem	(Applies to NFS shares that are not on snapshots.) Parent file system associated with the NFS share, as defined by the filesystem resource type.
snap	snap	(Applies to NFS shares on snapshots.) Parent file system snapshot associated with the NFS share, as defined by the snap resource type.
name	String	NFS share name.
path	String	Local path to a location within the file system. With NFS, each share must have a unique local path. By default, the system creates a share to the root of the file system (top-most directory) at file system creation time. This path specifies the unique location of the file system on the storage system. Before you can create additional shares within an NFS shared folder, you must create directories within it from a Linux/Unix host that is connected to the file system. After a directory has been created from a mounted host, you can create a corresponding share and set access permissions accordingly.
exportPaths	List<String>	Export paths that can be used to mount and access share. The list is a combination of above name with all IP addresses fo the NFS server.
description	String	User defined NFS share description.
isReadOnly	Boolean	Indicates whether the NFS share is read-only. Values are: • true - NFS share is read-only. • false - NFS share is read-write.
creationTime	DateTime	Date and time when the NFS share was created.
modificationTime	DateTime	Date and time when the NFS share was modified.
defaultAccess	NFSShareDefaultAccessEnum	Default NFS share access-level permissions.
minSecurity	NFSShareSecurityEnum	Minimal security level that must be provided by a client to mount the NFS share.
nfsOwnerUsername	String	(Applies to NFS shares of VMware NFS storage resources.) Default owner of the NFS share associated with the datastore. Required if secure NFS enabled. For NFSv3 or NFSv4 without Kerberos, the default owner is root.
noAccessHosts	List<host>	Hosts with no access to the NFS share or its snapshots, as defined by the host resource type.
readOnlyHosts	List<host>	Hosts with read-only access to the NFS share and its snapshots, as defined by the host resource type.
readWriteHosts	List<host>	Hosts with read and write access to the NFS share and its snapshots, as defined by the host resource type.
readOnlyRootAccessHosts	List<host>	Hosts with read-only root access to the NFS share and its snapshots, as defined by the host resource type.
rootAccessHosts	List<host>	Hosts with root access to the NFS share and its snapshots, as defined by the host resource type.
noAccessHostsString	String	Hosts with no access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readOnlyHostsString	String	Hosts with read-only access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readWriteHostsString	String	Hosts with read-write access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readOnlyRootHostsString	String	Hosts with read-only root access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readWriteRootHostsString	String	Hosts with read-write root access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
anonymousUID	unsigned Integer[32]	Specifies the user ID of the anonymous account.
anonymousGID	unsigned Integer[32]	Specifies the group ID of the anonymous account.
exportOption	unsigned Integer[64]	Specifies the bitmask of various options of the NFS share. Values are: • 0x0001 - hostString - if set, the access to the NFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.
hostCount	unsigned Integer[64]	The total number of hosts associated with the nfsShare. If hostString is set in exportOption, the hosts will be calculated based on noAccessHostsString, readOnlyHostsString, readWriteHostsString, readOnlyRootHostsString, readWriteRootHostsString.

		Otherwise, the hosts will be calculated based on noAccessHosts, readOnlyHosts, readWriteHosts, readOnlyRootAccessHosts, rootAccessHosts.

Query all members of the nfsShare collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/nfsShare/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the nfsShare collection.

Query a specific nfsShare instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/nfsShare/<id> where <id> is the unique identifier of the nfsShare instance to query. Or GET /api/instances/nfsShare/name:<value> where <value> is the name of the nfsShare instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific nfsShare instance.

Create operation

Create an NFS share for a snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/nfsShare/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
snap	in	snap	Required	Parent file system associated with the NFS share, as defined by the filesystemSnap resource type.
path	in	String[..1023]	Required	Local path to a location within the file system. With NFS, each share must have a unique local path. By default, the system creates a share to the root of the file system (top-most directory) at file system creation time. This path specifies the unique location of the file system on the storage system. Before you can create additional shares within an NFS shared folder, you must create directories within it from a Linux/UNIX host that is connected to the file system. After a directory has been created from a mounted host, you can create a corresponding share and set access permissions accordingly.
name	in	String[1..255]	Required	NFS share name.
description	in	String[..255]	Optional	NFS share description.
isReadOnly	in	Boolean	Optional	Indicates whether the NFS share is read-only. Values are: • true - NFS share is read-only. • false - NFS share is read-write.
defaultAccess	in	NFSShareDefaultAccessEnum	Optional	Default NFS share access-level permissions.
minSecurity	in	NFSShareSecurityEnum	Optional	Minimal security level that must be provided by a client to mount the NFS share.
noAccessHosts	in	List<host>	Optional	Hosts with no access to the NFS share or its snapshots, as defined by the host resource type.
readOnlyHosts	in	List<host>	Optional	Hosts with read-only access to the NFS share and its snapshots, as defined by the host resource type.
readWriteHosts	in	List<host>	Optional	Hosts with read and write access to the NFS share and its snapshots, as defined by the host resource type.
readOnlyRootAccessHosts	in	List<host>	Optional	Hosts with read-only root access to the NFS share and its snapshots,

				as defined by the host resource type.
rootAccessHosts	in	List<host>	Optional	Hosts with read-write root access to the NFS share and its snapshots, as defined by the host resource type.
noAccessHostsString	in	String[..7000]	Optional	Hosts with no access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readOnlyHostsString	in	String[..7000]	Optional	Hosts with read-only access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readWriteHostsString	in	String[..7000]	Optional	Hosts with read-write access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readOnlyRootHostsString	in	String[..7000]	Optional	Hosts with read-only root access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readWriteRootHostsString	in	String[..7000]	Optional	Hosts with read-write root access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
anonymousUID	in	unsigned Integer[32]	Optional	user ID of the anonymous account.
anonymousGID	in	unsigned Integer[32]	Optional	group ID of the anonymous account.
exportOption	in	unsigned Integer[64][0..3]	Optional	Bitmask of various options of the NFS share. Values are: • 0x0001 - hostString - if set, the access to the NFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.
id	out	nfsShare	N/A	Unique identifier of the new NFS share.

Delete operation

Delete an NFS share for a snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/nfsShare/<id> where <id> is the unique identifier of the nfsShare instance to delete. Or DELETE /api/instances/nfsShare/name:<value> where <value> is the name of the nfsShare instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify an NFS share for a snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/nfsShare/<id>/action/modify where <id> is the unique identifier of the nfsShare instance. Or POST /api/instances/nfsShare/name:<value>/action/modify where <value> is the name of the nfsShare instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
description	in	String[..255]	Optional	NFS share description.
defaultAccess	in	NFSShareDefaultAccessEnum	Optional	Default NFS share access-level permissions.
minSecurity	in	NFSShareSecurityEnum	Optional	Minimal security level that must be provided by a client to mount the NFS share.
noAccessHosts	in		Optional	

		List<host>		Hosts with no access to the NFS share or its snapshots, as defined by the host resource type. Replaces the existing no-access hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
readOnlyHosts	in	List<host>	Optional	Hosts with read-only access to the NFS share and its snapshots, as defined by the host resource type. Replaces the existing read-only hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
readWriteHosts	in	List<host>	Optional	Hosts with read and write access to the NFS share and its snapshots, as defined by the host resource type. Replaces the existing read-write root hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
readOnlyRootAccessHosts	in	List<host>	Optional	Hosts with read-only root access to the NFS share and its snapshots, as defined by the host resource type. Replaces the existing read-only root hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
rootAccessHosts	in	List<host>	Optional	Hosts with read-write root access to the NFS share and its snapshots, as defined by the host resource type. Replaces the existing read-write root hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
addNoAccessHosts	in	List<host>	Optional	Hosts to be added with no access to the NFS share or its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to no-access list.
addReadOnlyHosts	in	List<host>	Optional	Hosts to be added with read-only access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-only list.
addReadWriteHosts	in	List<host>	Optional	Hosts to be added with read and write access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-write list.
addReadOnlyRootAccessHosts	in	List<host>	Optional	Hosts to be added with read-only root access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-only root list.
addRootAccessHosts	in	List<host>	Optional	Hosts to be added with read-write root access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-write root list.
removeHosts	in	List<host>	Optional	Hosts to be restored with default access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list should already be in one of the access lists. It removes the host from existing list.
noAccessHostsString	in	String[..7000]	Optional	Hosts with no access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing no access hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
readOnlyHostsString	in	String[..7000]	Optional	Hosts with read-only access to the NFS share and its snapshots, defined as comma-separated list of

				hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-only hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
readWriteHostsString	in	String[..7000]	Optional	Hosts with read-write access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-write hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
readOnlyRootHostsString	in	String[..7000]	Optional	Hosts with read-only root access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-only root hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
readWriteRootHostsString	in	String[..7000]	Optional	Hosts with read-write root access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-write root hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
addNoAccessHostsString	in	String[..7000]	Optional	Hosts to be added with no access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to no-access list.
addReadOnlyHostsString	in	String[..7000]	Optional	Hosts to be added with read-only access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to read-only list.
addReadWriteHostsString	in	String[..7000]	Optional	Hosts to be added with read-write access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to read-write list.
addReadOnlyRootHostsString	in	String[..7000]	Optional	Hosts to be added with read-only root access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to read-only root list.
addReadWriteRootHostsString	in	String[..7000]	Optional	Hosts to be added with read-write root access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. May not be used with replacement HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to read-write root list.
removeHostsString	in	String[..7000]	Optional	Hosts to be restored with default access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list should already be in one of the access lists. It removes the host from existing list.
anonymousUID	in	unsigned Integer[32]	Optional	user ID of the anonymous account.
anonymousGID	in	unsigned Integer[32]	Optional	group ID of the anonymous account.
exportOption	in	unsigned Integer[64][0..3]	Optional	Bitmask of various options of the NFS share. Values are:

				• 0x0001 - hostString - if set, the access to the NFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. To switch between the 2 modes, clear all existing host access first, or in the same request. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.

rpChapSettings

CHAP accounts management for RPA cluster. RPA iSCSI ports act as initiators and log into storage targets, meanwhile, storage iSCSI ports act as initiators and log into RPA targets as well. For security reason, forward CHAP is supported on both directions. Outgoing forward CHAP account is used by storage ports to log into RPAs and incoming foward CHAP account is used by storage to authenticate RPA initiators. However, for now incoming forward account is managed by iscsiSettings and it will be moved here in later releases.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique instance identifier.
outgoingForwardChapUsername	String	Outgoing Forward CHAP user name, null string indicates chap not set.

Query all members of the rpChapSettings collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/rpChapSettings/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the rpChapSettings collection.

Query a specific rpChapSettings instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/rpChapSettings/<id> where <id> is the unique identifier of the rpChapSettings instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific rpChapSettings instance.

Modify operation

Modify RPA CHAP account.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/rpChapSettings/<id>/action/modify where <id> is the unique identifier of the rpChapSettings instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
outgoingForwardChapUsername	in	String[..255]	Optional	Username of RPA outgoing forward CHAP. Put empty or null string to unset it.
outgoingForwardChapSecret	in	String	Optional	Secret of RPA outgoing forward CHAP. Ignored if outgoingForwardChapUsername is empty or null.
outgoingForwardChapSecretType	in	CHAPSecretTypeEnum	Optional	Secret type of RPA outgoing forward CHAP.

vm

Represents a virtual machine.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique instance id.

datastore	datastore	The storageResource that hosts configuration data of the VM.
name	String	Friendly name of VM displayed on vCenter.
guestAddresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	The guest addresses of VM. Can be IPv4, IPv6, or both.
guestHostName	String	The host name of VM guest host.
notes	String	Notes for VM.
osType	String	The OS type of VM.
host	host	ESXi host that hosts VM.
state	VMPowerStateEnum	The state of VM.
virtualVolumes	List<virtualVolume>	The virtualVolumes associated with the vm.
vmDisks	List<vmDisk>	The vmDisks associated with the vm.

Query all members of the vm collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/vm/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the vm collection.

Query a specific vm instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/vm/<id> where <id> is the unique identifier of the vm instance to query. Or GET /api/instances/vm/name:<value> where <value> is the name of the vm instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific vm instance.

vmDisk

Virtual Machine disk object.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
datastore	datastore	The datastore that hosts the VM disk.
id	String	Unique instance ID.
vm	vm	The associated VM.
name	String	Friendly name of VM disk displayed on vCenter.
spaceTotal	unsigned Integer[64(bytes)]	Size of the VM disk.
type	VMDiskTypeEnum	Type of the VM disk.
virtualVolumes	virtualVolume	The virtualVolume associated with the vmDisk.

Query all members of the vmDisk collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/vmDisk/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the vmDisk collection.

Query a specific vmDisk instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/vmDisk/<id> where <id> is the unique identifier of the vmDisk instance to query.

	Or GET /api/instances/vmDisk/name:<value> where <value> is the name of the vmDisk instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific vmDisk instance.

vmwarePE

A resource representing VMware protocol endpoint of both possible types: NAS protocol endpoint and SCSI protocol endpoint. An instance of this class is created automatically as part of VVol datastore (storage resource) host access configuration.

Embedded resource types

Supported operations

Collection query , Instance query ,ModifyScsiPe

Attributes

Attribute	Type	Description
id	String	Unique identifier of VMware protocol endpoint.
vmwareNasPEServer	vmwareNasPEServer	For NAS VMware protocol endpoints, the associated NAS VMware protocol endpoint server.
name	String	VMware protocol endpoint name.
type	VmwarePETypeEnum	Protocol Endpoint type.
vmwareUUID	String	VMware UUID for this protocol endpoint.
exportPath	String	For NAS VMware protocol endpoints, the export path.
ipAddress	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	For NAS VMware protocol endpoints, the IP address.
ipProtocolVersion	IpProtocolVersionEnum	For NAS VMware protocol endpoints, IP protocol version (IPv4 or IPv6).
defaultNode	NodeEnum	For SCSI VMware protocol endpoints, the default owning SP.
currentNode	NodeEnum	For SCSI VMware protocol endpoints, the current SP.
wwn	String	WWN for SCSI VMware protocol endpoints.
naa	String	For SCSI VMware protocol endpoints, the VMware protocol endpoint SCSI identifier in naa format.
vvolds	storageResource	For NAS protocol endpoints, the associated datastore type storage resource.
host	host	For SCSI VMware protocol endpoints, the unique identifier of associated host.
lunId	unsigned Integer[32]	For SCSI VMware protocol endpoints, the identifier of assiciated LUN.
boundVVolCount	unsigned Integer[64]	The number of bound VVols associated with NAS VMware Protocol Endpoint.
health	health	Health information for the VMware Protocol Endpoint.

Query all members of the vmwarePE collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/vmwarePE/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the vmwarePE collection.

Query a specific vmwarePE instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/vmwarePE/<id> where <id> is the unique identifier of the vmwarePE instance to query. Or GET /api/instances/vmwarePE/name:<value> where <value> is the name of the vmwarePE instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific vmwarePE instance.

ModifyScsiPe operation

Modify SCSI PE.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/vmwarePE/<id>/action/modifyScsiPe where <id> is the unique identifier of the vmwarePE instance. Or POST /api/instances/vmwarePE/name:<value>/action/modifyScsiPe where <value> is the name of the vmwarePE instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyScsiPe operation

Argument	In/ out	Type	Required?	Description
lunID	in	unsigned Integer[32]	Required	New LUN ID to set.

Managing storage

aclUser

A user associated with a CIFS share level ACL.

Supported operations

Collection query , Instance query ,LookupSIDByDomainUser

Attributes

Attribute	Type	Description
id	String	Unique instance id.
sid	String	Windows user id.
domainName	String	Windows domain name.
userName	String	User name.

Query all members of the aclUser collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/aclUser/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the aclUser collection.

Query a specific aclUser instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/aclUser/<id> where <id> is the unique identifier of the aclUser instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific aclUser instance.

LookupSIDByDomainUser operation

get SID by domain name and user name

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/aclUser/action/lookupSIDByDomainUser
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the LookupSIDByDomainUser operation

Argument	In/ out	Type	Required?	Description
domainName	in	String	Required	Domain name.
userName	in	String	Required	User name.
sid	out	String	N/A	SID, if found.

capabilityProfile

An object representing VASA 2.0 SPBM capability profile. Capability profiles can be queried, created, modified and deleted via the REST API. Capability profiles can then be queried via VASA 2.0 API by vSphere environment and leveraged for policy based provisioning of virtual volumes.

Embedded resource types

capabilityProfileRecommendation

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify ,Recommend

Attributes

Attribute	Type	Description
id	String	Unique identifier of the capability profile.
vmwareUUID	String[1..63]	Automatically generated unique identifier of the capability profile exposed via VASA 2.0 protocol. It will conform to RFC 3151 section 1.1.
name	String[1..63]	The name of the capability profile.
description	String[1..255]	Capability profile description.
pool	pool	The storage pool the capability profile is associated with.
driveTypes	List<DiskTierEnum>	Supported drive types for the capability profile.
fastCacheStates	List<FastCacheStateEnum>	Supported fast cache states for the capability profile.
raidTypes	List<RaidTypeEnum>	Supported RAID types for the capability profile.
spaceEfficiencies	List<SpaceEfficiencyEnum>	Supported space efficiency choices for the capability profile.
tieringPolicies	List<TieringPolicyEnum>	Supported tiering policies for the capability profile.
serviceLevels	List<ServiceLevelEnum>	Supported service level for the capability profile.
usageTags	List<String>[1..63]	Associated usage tags for the capability profile.
inUse	Boolean	Whether any virtual volumes have been created using this capability profile.
health	health	Health information for the capability profile, as defined by the health resource type.
virtualVolumes	List<virtualVolume>	The virtualVolumes associated with the capabilityProfile.

Attributes for capabilityProfileRecommendation

An entity representing a recommendation for a VASA 2.0 SPBM capability profile.

Attribute	Type	Description
driveTypes	List<DiskTierEnum>	List of drive types for individual capabilities.
fastCacheStates	List<FastCacheStateEnum>	List of fast cache states for individual capabilities.
raidTypes	List<RaidTypeEnum>	List of RAID types for individual capabilities.
spaceEfficiencies	List<SpaceEfficiencyEnum>	List of space efficiencies for individual capabilities.
tieringPolicies	List<TieringPolicyEnum>	List of tiering policies for individual capabilities.
serviceLevels	List<ServiceLevelEnum>	List of service levels for individual capabilities.

Query all members of the capabilityProfile collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/capabilityProfile/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the capabilityProfile collection.

Query a specific capabilityProfile instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/capabilityProfile/<id> where <id> is the unique identifier of the capabilityProfile instance to query. Or GET /api/instances/capabilityProfile/name:<value> where <value> is the name of the capabilityProfile instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific capabilityProfile instance.

Create operation

Create a new capability profile.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/capabilityProfile/instances

Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..63]	Required	The user-friendly name of the new capability profile.
description	in	String[0..255]	Optional	Description of the new capability profile.
pool	in	pool	Required	The pool with which the capability profile is associated.
usageTags	in	List<String>[1..63]	Optional	List of user defined usage tags for the new capability profile.
id	out	capabilityProfile	N/A	Reference to the created capability profile instance.

Delete operation

Delete a capability profile.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/capabilityProfile/<id> where <id> is the unique identifier of the capabilityProfile instance to delete. Or DELETE /api/instances/capabilityProfile/name:<value> where <value> is the name of the capabilityProfile instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a capability profile.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/capabilityProfile/<id>/action/modify where <id> is the unique identifier of the capabilityProfile instance. Or POST /api/instances/capabilityProfile/name:<value>/action/modify where <value> is the name of the capabilityProfile instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..63]	Optional	New user-friendly name of the capability profile.
description	in	String[0..255]	Optional	New description of the capability profile.
usageTags	in	List<String>[1..63]	Optional	New list of user defined usage tags for the capability profile.

Recommend operation

Recommend the set of capabilities for a capability profile based on the specified pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/capabilityProfile/action/recommend
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the Recommend operation

Argument	In/ out	Type	Required?	Description
pool	in	pool	Required	Reference to the pool for which a capability profile recommendation is requested.
result	out	List<capabilityProfileRecommendation>	N/A	Result list of capability profile recommendations that specify the set of capabilities for the capability profile and associated constraints.

dhsmConnection

When doing cloud archiving, the Cloud Tiering Applicance (a.k.a CTA) is responsible for moving the local data to cloud. On the other direction, when we need to bring the data back to local, DHSM server will read the data back via a pipe so called dhsm connection. This class represents this dhsm connection @author wangt23

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete

Attributes

Attribute	Type	Description
id	String	Unique instance id.
mode	DhsmConnectionModeEnum	Mode of the connection.
readPolicy	RecallPolicyEnum	The read policy when Unity recall data from secondary storage. • full-recalls the whole file to Unity on read request before the data is returned. • passthrough-retrieves data without recalling the data to Unity • partial-recalls only the blocks required to satisfy the client read request. • none-specifies no override
secondaryUrl	String[1..1024]	Url of the secondary storage. If secondary storage is NFS or CIFS, this URL should point to them directly. If the secondary is cloud or Centera, this Url should point to CTA.
secondaryPort	unsigned Integer[16]	Port of the secondary storage server, only applicable when secondary url points to CTA.
localPort	unsigned Integer[16][1024]	Local port of the DHSM connections
secondaryUsername	String[1..1024]	Defines the username the storage array uses if HTTP digest authentication is required by the secondary storage.
timeout	unsigned Integer[32(seconds)]	Connection timeout when the connection is established to the secondary storage. If recall does not return within the timeout, the NAS server will try another DhsmConnection.
filesystem	filesystem	File system on which the connection is created.

Query all members of the **dhsmConnection** collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/dhsmConnection/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the dhsmConnection collection.

Query a specific **dhsmConnection** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/dhsmConnection/<id> where <id> is the unique identifier of the dhsmConnection instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific dhsmConnection instance.

Create operation

Create a new dhsm connection

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/dhsmConnection/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
secondaryUrl	in	String[1..1024]	Required	url of the secondary storage, if the secondary storage is Centera or Cloud, this url should point to the CTA The value must match all of following regex expressions • ^http://(([\w\-]+(\.[\w\-]+)*(/.+)+)|(\[(.+)\](/.+)+))
secondaryPort	in	unsigned Integer[16]	Optional	only valid when the secondary url points to CTA
localPort	in	unsigned Integer[16][1024]	Optional	local port of the DHSM connection.
readPolicy	in	RecallPolicyEnum	Optional	policy for recalling, can be full, passthrough, partial or none
secondaryUsername	in	String[1..1024]	Optional	defines the username the Unity uses if digest authentication is required by the secondary storage
secondaryPassword	in	String[1..1024]	Optional	defines the password the Unity uses if

				digest authentication is required by the secondary storage
timeout	in	unsigned Integer[32(seconds)]	Optional	timeout of this connection in seconds
filesystemId	in	String	Required	id of the file system for which the connection is created.
mode	in	DhsmConnectionModeEnum	Optional	mode of this connection, value could be enabled, disabled or recallOnly
id	out	dhsmConnection	N/A	connection instance that is created

Modify operation

Modify an existing dhsm connection

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/dhsmConnection/<id>/action/modify where <id> is the unique identifier of the dhsmConnection instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
mode	in	DhsmConnectionModeEnum	Optional	new mode of the connection.
secondaryServerName	in	String[1..1024]	Optional	The value must match all of following regex expressions • ^[\w\-]+(\.[\w\-]+)*
secondaryPort	in	unsigned Integer[16]	Optional	new port of the secondary storage
localPort	in	unsigned Integer[16][1024]	Optional	local port of the DHSM connection.
readPolicy	in	RecallPolicyEnum	Optional	new policy for recall.
secondaryUsername	in	String[1..1024]	Optional	new username of the secondary storage
secondaryPassword	in	String[1..1024]	Optional	new password of the secondary storage
timeout	in	unsigned Integer[32(seconds)]	Optional	new timeout value

Delete operation

Delete a dhsm connection

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/dhsmConnection/<id> where <id> is the unique identifier of the dhsmConnection instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
recallPolicyOnDelete	in	RecallPolicyOnDeleteEnum	Optional	Specifies the recall policy for any migrated file during the delete. • fail-(default) scans the file system for stub files that depend on the connection and fails on the first one. • no-deletes the connection without checking for stub files that depend on the connection • yes-migrates the files back to the Unity before the connection is removed.

dhsmServer

Information about the ASA/DHSM server of a NAS server. You can configure one ASA/DHSM server per NAS server.

ASA stands for Advanced Storage Access. ASA allows VMware administrators to manage appropriately configured host configurations by taking advantage of advanced file operations that optimize NFS storage utilization. Once ASA is enabled on the NAS server, Dell's VSI Unified Storage Management tool can be utilized for the following:

- Simplifying the process of creating NFS datastores,
- Compressing virtual machines in NFS datastores,
- Reducing the amount of storage consumed by virtual machines by using data reduction and Fast Clone technologies. The cloning functions include fast clones (thin copy/snaps) of Virtual Machine Disk (VMDF) files and full clones (full copy) of Virtual Machine Disk (VMDF) files.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the dhsmServer instance

nasServer	nasServer	NAS server that is configured with these DHSM settings.
username	String	User name for authentication to the DHSM/ASA server.
isHTTPSEnabled	Boolean	Require SSL (HTTPS) for DHSM requests to this DHSM server.

Query all members of the dhsmServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/dhsmServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the dhsmServer collection.

Query a specific dhsmServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/dhsmServer/<id> where <id> is the unique identifier of the dhsmServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific dhsmServer instance.

Create operation

Create a DHSM server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/dhsmServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the NAS server which the DHSM server belongs.
password	in	String[8..40]	Optional	The password for the DHSM server
isHTTPSEnabled	in	Boolean	Optional	Require SSL (HTTPS) for DHSM requests to this DHSM server. Values are: • true - HTTPS is required. • false - HTTPS is not allowed.
id	out	dhsmServer	N/A	Unique identifier of the new DHSM server.

Delete operation

Delete a DHSM server.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/dhsmServer/<id> where <id> is the unique identifier of the dhsmServer instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a DHSM server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/dhsmServer/<id>/action/modify where <id> is the unique identifier of the dhsmServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
password	in	String[8..40]	Optional	The password for the DHSM server.
isHTTPSEnabled	in	Boolean	Optional	Require SSL (HTTPS) for DHSM requests to this DHSM

				server. Values are: • true - HTTPS is required. • false - HTTPS is not allowed.

diskGroup

Disk groups classify the drives in the system into groups with equivalent storage characteristics. These characteristics include drive type, capacity, and rotational speed.

The system uses disk groups for creating pools.

Embedded resource types

diskGroupSet

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the diskGroup instance.
name	String[1..32]	Disk group name.
emcPartNumber	String	EMC part number of the drives.
tierType	TierTypeEnum	Drive type.
diskTechnology	DiskTechnologyEnum	Drive technology of the drives in the disk group. There are two hard drive technologies: SAS and NL-SAS, and flash drive technologies are MLC (Multi-Level Cell) and TLC (Triple-Level Cell). MLC drives are referred to as SAS Flash 2 in this API and TLC are referred to as SAS Flash 3. SAS hard drives have greater performance, throughput and less latency than NL-SAS drives.
isFASTCacheAllowable	Boolean	Indicates whether or not drives from this diskGroup are valid to use for FASTCache. Values are: • true - Drives may be used in FASTCache. • false - Drives may not be used in FASTCache.
diskSize	unsigned Integer[64(bytes)]	The capacity of each drive.
advertisedSize	unsigned Integer[64(bytes)]	Capacity written on the label of the drives in the disk group.
rpm	unsigned Integer[32(rpm)]	For non-Flash drives, the rotational speed in revolutions per minute (RPM).
speed	unsigned Integer[64(GB/sec)]	Interface speed of the drives in the disk group.
totalDisks	unsigned Integer[32(disks)]	Total number of drives in the disk group.
minHotSpareCandidates	unsigned Integer[32(disks)]	Minimum number of hot spares required for traditional pools for the disk group. As a rule one Hot spare is required per 30 drives.
hotSparePolicyStatus	HotSparePolicyStatusEnum	Status of the hot spare policy for the disk group.
unconfiguredDisks	unsigned Integer[32(disks)]	The number of unconfigured drives in disk group. Determined by subtracting the number of drives in use by pools, FAST Cache and the number of drives reserved for pools that are in the process of being created or extended from the total number of drives. Hot spares are not included in the determination of this value.
configuredDynamicPoolDisks	unsigned Integer[32(disks)]	The number of configured drives used by dynamic pools.
configuredTraditionalPoolDisks	unsigned Integer[32(disks)]	The number of configured drives used by traditional pools.
traditionalUnconfiguredDrives	unsigned Integer[32(disks)]	The number of traditional unconfigured drive in this disk group.
traditionalTotalDrives	unsigned Integer[32(disks)]	The number of traditional total drives in this disk group.
configuredFastCacheDisks	unsigned Integer[32(disks)]	The number of configured drives used by FAST Cache.
disksPastEOL	unsigned Integer[32(disks)]	The number of drives past EOL (end of life).
disksWithEOLLess30Days	unsigned Integer[32(disks)]	The number of drives in disk group with EOL (end of life) less than 30 days.
disksWithEOLLess60Days	unsigned Integer[32(disks)]	The number of drives in disk group with EOL (end of life) less than 60 days.
disksWithEOLLess90Days	unsigned Integer[32(disks)]	The number of drives in disk group with EOL (end of life) less than 90 days.
disksWithEOLLess180Days	unsigned Integer[32(disks)]	The number of drives in disk group with EOL (end of life) less than 180 days.

Attributes for diskGroupSet

Set of disk groups

Attribute	Type	Description
diskGroups	List<diskGroup>	A list of disk groups compatible for use together in a dynamic pool RAID group. The minimum number of drives for a particular RAID type and stripe width can be met by any combination of drives from the groups in the list.
minimumDriveCount	unsigned Integer[32(disks)]	Minimum number of drives can be used to create or expand pool depending on the operation.
invalidDriveCounts	List<Integer>[32(disks)]	It is not eligible to create or expand dynamic pool with number of drives specified in the list even though the number meets minimumDriveCount.

Query all members of the diskGroup collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/diskGroup/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the diskGroup collection.

Query a specific diskGroup instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/diskGroup/<id> where <id> is the unique identifier of the diskGroup instance to query. Or GET /api/instances/diskGroup/name:<value> where <value> is the name of the diskGroup instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific diskGroup instance.

fastCache

Information about FAST Cache in the storage system. FAST Cache uses Flash drives to cache data in storage system to accelerate access to data. (Applies if FAST Cache is supported on the system and the corresponding license is installed.)

Embedded resource types

raidGroupCache

Supported operations

Collection query , Instance query ,Enable ,Modify ,Disable ,GetConfigurations

Attributes

Attribute	Type	Description
id	String	Unique identifier of the FAST Cache instance.
health	health	Health information for the FAST Cache, as defined by the health resource type.
sizeTotal	unsigned Integer[64(bytes)]	FAST Cache total size.
sizeFree	unsigned Integer[64(bytes)]	Size of logical cache available.
numberOfDisks	unsigned Integer[32(disks)]	Total number of drives in FAST Cache.
raidLevel	RaidTypeEnum	RAID type of the internal RAID Groups in FAST Cache.
raidGroups	List<raidGroupCache>	List of all FAST Cache RAID Groups.

Attributes for raidGroupCache

A set of drives in a RAID Group used by FAST Cache.

Attribute	Type	Description
id	String	Unique identifier of the RAID Group instance.
name	String[1..32]	RAID Group name.
diskGroup	diskGroup	diskGroup containing the raidGroup drives.
raidLevel	RaidTypeEnum	RAID level of the group.
raidModulus	RaidStripeWidthEnum	RAID stripe length.
parityDisks	unsigned Integer[16(disks)]	Number of parity drives in the group.
disks	List<disk>	List of drives in the group.

Query all members of the fastCache collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fastCache/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fastCache collection.

Query a specific fastCache instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fastCache/<id> where <id> is the unique identifier of the fastCache instance to query.

	Or GET /api/instances/fastCache/name:<value> where <value> is the name of the fastCache instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fastCache instance.

Enable operation

Create FAST Cache using specified disk group and number of drives and if specified, Enable FAST Cache on all existing pools.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fastCache/<id>/action/enable where <id> is the unique identifier of the fastCache instance. Or POST /api/instances/fastCache/name:<value>/action/enable where <value> is the name of the fastCache instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Enable operation

Argument	In/ out	Type	Required?	Description
diskgroup	in	diskGroup	Required	Disk group from which to take drives for FAST cache.
numberOfDisks	in	unsigned Integer[32]	Required	Number of drives.
enableOnAllPools	in	Boolean	Optional	Enable FAST Cache for all existing pools.

Modify operation

Modify the FAST cache, either by adding group(s) of drives or removing RAID groups.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fastCache/<id>/action/modify where <id> is the unique identifier of the fastCache instance. Or POST /api/instances/fastCache/name:<value>/action/modify where <value> is the name of the fastCache instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
addDiskGroups	in	List<diskGroup>	Optional	List of disk groups to add to the FAST Cache, as defined by the diskGroup resource type.
addDiskGroupNumDisks	in	List<Integer>[32]	Optional	List of the number of drives from each disk group to add to the FAST Cache.
removeRaidGroups	in	List<String>	Optional	List of raidGroupCache objects to remove from FAST Cache.

Disable operation

Disable FAST cache, freeing the drives for other use.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fastCache/<id>/action/disable where <id> is the unique identifier of the fastCache instance. Or POST /api/instances/fastCache/name:<value>/action/disable where <value> is the name of the fastCache instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

GetConfigurations operation

Get recommended FAST Cache drive configurations.

Header	Accept: application/json Content-Type: application/json

Method and URI	POST /api/instances/fastCache/<id>/action/getConfigurations where <id> is the unique identifier of the fastCache instance. Or POST /api/instances/fastCache/name:<value>/action/getConfigurations where <value> is the name of the fastCache instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the GetConfigurations operation

Argument	In/ out	Type	Required?	Description
configurations	out	List<storageTierConfiguration>	N/A	The list of recommended FAST Cache configuration, output parameter.

fastVP

System FAST VP settings. FAST VP allows performing automatic data relocation between tiers and rebalancing within a tier to improve storage performance. Currently there three types of relocations supported:

- Scheduled relocations
- Manual relocations
- Rebalancing

Scheduled relocations are started according the schedule defined in this resource. Individual pools can be included to or excluded from the scheduled relocation process.
Manual relocations can be performed on demand for each particular pool.
Rebalancing is performed automatically on a pool extend event.
The FAST VP object represents the status of scheduled relocation processes and allows to view or modify the scheduled relocation parameters. It also provides a means to pause or resume all the FAST VP relocation and rebalancing processes currently running on the system.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique instance id.
status	FastVPStatusEnum	FAST VP status. The possible values are "Active" or "Paused".
relocationRate	FastVPRelocationRateEnum	Relocation Rate to perform scheduled relocations.
isScheduleEnabled	Boolean	Indicates whether FAST VP scheduled relocations are enabled.
scheduleDays	List<DayOfWeekEnum>	Days of week to run scheduled relocations.
scheduleStartTime	DateTime[Interval]	Time of day to start scheduled relocation.
scheduleEndTime	DateTime[Interval]	Time of day at which scheduled relocation should end.
sizeMovingDown	unsigned Integer[64(bytes)]	Current estimate of the amount of data that the next scheduled relocation will move to a lower tier.
sizeMovingUp	unsigned Integer[64(bytes)]	Current estimate of the amount of data that the next scheduled relocation will move to a higher tier.
sizeMovingWithin	unsigned Integer[64(bytes)]	Current estimate of the amount of data that the next scheduled relocation will rebalance within a tier.
relocationDurationEstimate	DateTime[Interval]	Based on current amounts of data to move, this is the current estimate of how long a scheduled relocation would take.

Query all members of the fastVP collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fastVP/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fastVP collection.

Query a specific fastVP instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fastVP/<id> where <id> is the unique identifier of the fastVP instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fastVP instance.

Modify operation

Modify System FAST VP settings.
Please note, once Relocation Rate is changed, it will take certain time up to the next scheduled relocation to update estimated relocation time.

Header	Accept: application/json Content-Type: application/json

Method and URI	POST /api/instances/fastVP/<id>/action/modify where <id> is the unique identifier of the fastVP instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
relocationRate	in	FastVPRelocationRateEnum	Optional	Relocation rate.
isScheduleEnabled	in	Boolean	Optional	Enable system relocation schedule.
scheduleDays	in	List<DayOfWeekEnum>	Optional	List of days of the week on which to run scheduled relocations.
scheduleStartTime	in	DateTime[Interval - h+:mm:ss[.sss]]	Optional	Time of day to start scheduled relocations. Maximum resolution is in minutes. [The value of interval will be rounded down to minutes.]
scheduleEndTime	in	DateTime[Interval - h+:mm:ss[.sss]]	Optional	Time of day at which scheduled relocation should end. Maximum resolution is in minutes. [The value of interval will be rounded down to minutes.]
isPaused	in	Boolean	Optional	Pause/Resume data relocation.

fileEventsPool

File Event Service pool is a pool of remote File Event Service servers (machines that run VEE and are capable to handle event notificatons from the NAS Server). NAS Server can have one or several (up to three) File Event Service pools. The File Event Service pool servers are responsible for: - maintaining a topology and state mapping of all consumer applications - delivering event type and associated event metadata through the publishing agent API

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the File Event Service Pool instance.
eventsPublisher	fileEventsPublisher	Associated File Event Service identifier.
name	String	Name assigned to the set of Windows servers where File Event Service software is installed.
servers	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Addresses of the File Event Service servers.
sourceServers	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	For replication destination NAS servers, the list of File Event Service servers from the corresponding source NAS server.
preEvents	List<FileEventTypesEnum>	The list of pre-events. The NAS server sends request event notification to CEPA server before such event occurs and processes the response.
postEvents	List<FileEventTypesEnum>	The list of post-evenets. The NAS server sends notification after such event occrus.
postErrorEvents	List<FileEventTypesEnum>	The list of post-error events. The NAS server sends notification if such event generates an error.
replicationPolicy	ReplicationPolicyEnum	Replication policy of the Events Pool.

Query all members of the fileEventsPool collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileEventsPool/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileEventsPool collection.

Query a specific fileEventsPool instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileEventsPool/<id> where <id> is the unique identifier of the fileEventsPool instance to query. Or GET /api/instances/fileEventsPool/name:<value> where <value> is the name of the fileEventsPool instance to query.

Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileEventsPool instance.

Create operation

Create a File Event Service Pool configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fileEventsPool/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
eventsPublisher	in	fileEventsPublisher	Required	Unique identifier of the File Event Service to which the File Event Service Pool belongs.
name	in	String[1..80]	Required	Name assigned to the set of Windows servers where File Event Service software is installed.
servers	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Required	Addresses of the File Event Service servers.
preEvents	in	List<FileEventTypesEnum>	Optional	Sends notification before selected events occurs. Default is empty list.
postEvents	in	List<FileEventTypesEnum>	Optional	Sends notification before selected events occurs. Default is empty list.
postErrorEvents	in	List<FileEventTypesEnum>	Optional	
id	out	fileEventsPool	N/A	

Delete operation

Delete a File Event Service Pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/fileEventsPool/<id> where <id> is the unique identifier of the fileEventsPool instance to delete. Or DELETE /api/instances/fileEventsPool/name:<value> where <value> is the name of the fileEventsPool instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a File Event Service Pool configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fileEventsPool/<id>/action/modify where <id> is the unique identifier of the fileEventsPool instance. Or POST /api/instances/fileEventsPool/name:<value>/action/modify where <value> is the name of the fileEventsPool instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..80]	Optional	Name assigned to the set of Windows servers where File Event Service software is installed.
servers	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	Addresses of the File Event Service servers.

preEvents	in	List<FileEventTypesEnum>	Optional	Sends notification before selected events occurs.
postEvents	in	List<FileEventTypesEnum>	Optional	Sends notification before selected events occurs.
postErrorEvents	in	List<FileEventTypesEnum>	Optional	
replicationPolicy	in	ReplicationPolicyEnum	Optional	

fileEventsPublisher

File Event Service is a mechanism whereby applications can register to receive event notification and context from sources such as VNX(e). File Event Service is a part of VNX Event Enabler Framework (VEE). VEE provides the working environment for the CAVA and CEPA (Common Event Publishing Agent) facilities. The event publishing agent delivers to the application both event notification and associated context in one message. Context may consist of file metadata or directory metadata needed to decide business policy. The CEPA sub-facilities include: - Auditing.A mechanism for delivering post-events to registered consumer applications in a synchronous manner. Events are delivered individually in real-time. - CQM.A mechanism for delivering pre-events to registered consumer applications in a synchronous manner. Events are delivered individually in real-time, allowing the consumer application to exercise business policy on the event. - VCAPS.A mechanism for delivering post-events in asynchronous mode. The delivery cadence is based on a time period or a number of events. - MessageExchange.A mechanism for delivering post-events in asynchronous mode, when needed, without consumer use of the CEPA API. Events are published from CEPA to the RabbitMQ CEE_Events exchange. A consumer application creates a queue for itself in the exchange from which it can retrieve events.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the File Event Service instance.
nasServer	nasServer	Associated NAS server identifier.
isEnabled	Boolean	State of File Event Servce is currently enabled.
health	health	Health information for the File Event Service, as defined by the health resource type.
heartbeat	DateTime[Interval]	Time interval to scan each CEPA server (in seconds) for online/offline status.
timeout	DateTime[Interval]	Timeout in ms while attempting to send event to a CEPA server to determine that is offline.
postEventPolicy	FileEventsPublisherFTLevelTypeEnum	The fault tolerance policy for handling post-events.
denyAccessWhenAllServersOffline	Boolean	Behaviour when the File Event Service server did not answer. Values are: • false - indicates that nothing changes with I/O in case of File Event Service server is offline. • true - indicates that all I/O is denied in case of File Event Service server is offline.
username	String	Name of a Windows user allowing Events Publishing to connect to CEPA servers. To ensure that a secure connection (via Microsoft RPC protocol) is used disable HTTP by setting isHttpEnabled to false.
isHttpEnabled	Boolean	Indicates whether connection to CEPA servers via HTTP is enabled. Default is true (enabled). When enabled, connection via HTTP is attempted first. If HTTP connection is disabled, or the connection fails, then connection through MSRPC is attempted if all CEPP server(s) are defined by FQDN. The SMB account of the NAS server in the AD comain is used to make the connection via MSRPC. Note that HTTP connections should only be used on secure networks, as it is neither SSL nor authenticated.
port	unsigned Integer[16]	When HTTP is used to connect to the CEPA server(s), the port number to use. Default port number is 12228.

Query all members of the fileEventsPublisher collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileEventsPublisher/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileEventsPublisher collection.

Query a specific fileEventsPublisher instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileEventsPublisher/<id> where <id> is the unique identifier of the fileEventsPublisher instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileEventsPublisher instance.

Modify operation

Modify a File Event Service configuration.

Header	Accept: application/json

	Content-Type: application/json
Method and URI	POST /api/instances/fileEventsPublisher/<id>/action/modify where <id> is the unique identifier of the fileEventsPublisher instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isEnabled	in	Boolean	Optional	State of File Event Service is currently enabled.
username	in	String[..1023]	Optional	Name of a Windows user allowing Events Publishing to connect to CEPA servers.
password	in	String[..15]	Optional	Password of the Windows user defined by the username.
heartbeat	in	DateTime[Interval - h+:mm:ss[.sss]]	Optional	Time interval to scan each File Event Service server (in seconds) for online/offline status. The default is 10 seconds, the allowed range is 1-120 seconds. [The value of interval will be rounded down to seconds.]
timeout	in	DateTime[Interval - h+:mm:ss[.sss]]	Optional	Timeout in ms while attempting to send event to a CEPA server to determine that it is offline. The default is 1000 ms, the allowed range is 50-5000 ms.
port	in	unsigned Integer[16]	Optional	HTTP port number for the connectivity to CEPA server. Default is 12228.
denyAccessWhenAllServersOffline	in	Boolean	Optional	Specifies the behaviour when the File Event Service server did not answer. Value are: • false - indicates that nothing changes with I/O in case of File Event Service server is offline. • true - indicates that all I/O is denied in case of File Event Service server is offline.
postEventPolicy	in	FileEventsPublisherFTLevelTypeEnum	Optional	Fault tolerance level assigned. Default is 'Ignore'.
isHttpEnabled	in	Boolean	Optional	Indicates whether connection to CEPA servers via HTTP is enabled. Default is true.

filesystem

Information about the underlying file system associated with the file system and VMware NFS storage resources in the storage system.

Note: To manage file systems and VMware NFS datastores, use the applicable operations for the storageResource object, as described in the help topic for that resource type.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the file system.
health	health	Health information for the file system, as defined by the health resource type.
name	String	File system name unique to the NAS server.
description	String	File system description.
type	FilesystemTypeEnum	File system type.
sizeTotal	unsigned Integer[64(bytes)]	File system size that the system presents to the host or end user.

sizeUsed	unsigned Integer[64(bytes)]	Size of used space in the file system by the user files.
sizeAllocated	unsigned Integer[64(bytes)]	Size of pool space allocated for the file system: • For a thin-provisioned file system, this as a rule is less than the value of the sizeTotal attribute and slightly greater than or equal to the value of the sizeUsed attribute. • For a not thin-provisioned file system, this is approximately equal to the value of the attribute sizeTotal. This measurement does not include space reserved for snapshots.
sizePreallocated	unsigned Integer[64(bytes)]	Space reserved from the pool by the file system, for future needs to make writes more efficient. The pool may be able to reclaim some of this if space is running low.
sizeAllocatedTotal	unsigned Integer[64(bytes)]	Total pool space used in the pool for the file system. This include the allocated space and allocations for snaps and metadata.
minSizeAllocated	unsigned Integer[64(bytes)]	• For a thin-provisioned file system, this is the minimum allocated size to which the file system can be auto-shrunk. • This attribute does not apply for a thick-provisioned file system This measurement does not include space reserved for snapshots.
isReadOnly	Boolean	Indicates whether the file system is read-only. Values are: • true - File system is read-only. • false - File system is read-write.
isThinEnabled	Boolean	Indicates whether the file system is thin-provisioned. Values are: • true - File system is thin-provisioned. • false - File system is thick-provisoned.
isDataReductionEnabled	Boolean	True if data reduction is enabled, only applies when isThinEnabled is true.
dataReductionSizeSaved	unsigned Integer[64(bytes)]	Storage element saved space by data reduction, which includes savings from compression and deduplication.
dataReductionPercent	unsigned Integer[16(percent)]	Data reduction percentage is the percentage of the data that does not consume storage - the savings due to data reduction. For example, if 1 TB of data is stored in 250 GB, the data reduction percentage is 75%. 75% data reduction percentage is equivalent to a 4:1 data reduction ratio.
dataReductionRatio	Float	Data reduction ratio. The data reduction ratio is the ratio between the size of the data and the amount of storage actually consumed. For example, 1TB of data consuming 250GB would have a ration of 4:1. A 4:1 data reduction ratio is equivalent to a 75% data reduction percentage.
isAdvancedDedupEnabled	Boolean	True if data reduction is enabled, only applies when isThinEnabled is true.
storageResource	storageResource	Storage resource to which the file system belongs, as defined by the storageResource.
flrVersion	FLRVersionEnum	Indicates which File Level Retention (FLR) version is enabled on the file system. Values are: • 0 - FLR is OFF on the file system. • 1 - Enterprise is enabled on the file system. • 2 - Compliance is enabled on the file system.
isFlrProtected	Boolean	Indicates whether the file system is protected because it contains at least one protected file. Values are: • true - file system contains at least one protected file. • false - file system doesn't contain protected file.
flrSoftwareClock	DateTime	Indicates file level retention software clock value. It is file system clock used to track the retention date. It is initialized when an FLR-enabled file system is first mounted on a NAS Server.
flrProtectedMaxRetention	String	Indicates maximum date and time that has been set on any locked file in an FLR-enabled file system. It is a string with a DateTime value that can extend beyond DateTime limitation of no long than 2038 year. Searching and filtering will use string ordering rather than time ordering.
flrMinRetention	DateTime[Interval]	The shortest period for which files on an FLR-enabled file system can be locked and protected from deletion, the format is: h+:mm:ss[.sss].
flrDefaultRetention	DateTime[Interval]	The default retention period is used in an FLR-enabled file system when a file is locked and a retention period is not specified, the format is: h+:mm:ss[.sss]. The REST get value 40000 for this parameter means infinite days.
flrMaxRetention	DateTime[Interval]	The longest period for which files on an FLR-enabled file system can be locked and protected from deletion, the format is: h+:mm:ss[.sss]. The REST get value 40000 for this parameter means infinite days.
isFlrAutoLockEnabled	Boolean	Users can specify whether to automatically lock files in an FLR-enabled file system, as well as a policy interval for how long to wait after files are modified before the files are automatically locked. When enabled, auto-locked files are set with the default retention period value. This attribute indicates whether automatic lock is enabled on the file system. Values are: • true - automatic lock is enabled on the file system. • false - automatic lock is disabled on the file system.
isFlrAutoDeleteEnabled	Boolean	Users can specify whether to automatically delete

		locked files from an FLR-enabled file system once their retention periods have expired. This value indicates whether automatic delete is enabled on the file system. Values are: • true - automatic delete is enabled on the file system. • false - automatic delete is disabled on the file system.
flrAutoLockDelay	DateTime[Interval]	Indicates how long to wait after files are modified before the files are automatically locked. The default value is 1 hour.
errorThreshold	unsigned Integer[16][0..99]	When this used space percentage is exceeded, an error severity alert will be triggered on this filesystem. If the threshold value is set as 0, the alert is disabled. The default errorThreshold is 95. The value warningThreshold is between infoThreshold and errorThreshold.
warningThreshold	unsigned Integer[16][0..99]	When this used space percentage is exceeded, a warning severity alert will be triggered on this filesystem. If the threshold value is set as 0, the alert is disabled. The default warningThreshold is 75. The value warningThreshold is between infoThreshold and errorThreshold.
infoThreshold	unsigned Integer[16][0..99]	When this used space percentage is exceeded, an info severity alert will be triggered on this filesystem. If the threshold value is set as 0, the alert is disabled. The default infoThreshold is 0. The value warningThreshold is between infoThreshold and errorThreshold.
isCIFSSyncWritesEnabled	Boolean	(SMB (also known as CIFS) file systems) Indicates whether the synchronous writes option is enabled on the file system. Values are: • true - Synchronous writes option is enabled on the file system. • false - Synchronous writes option is disabled on the file system.
pool	pool	Storage pool in which file system is allocated, as defined by the pool object.
isCIFSOpLocksEnabled	Boolean	(SMB (also known as CIFS) file systems) Indicates whether opportunistic file locking is enabled on the file system. Values are: • true - Opportunistic file locking is enabled on the file system. • false - Opportunistic file locking is disabled on the file system.
nasServer	nasServer	NAS server that provides network connectivity to the file system from the hosts.
isCIFSNotifyOnWriteEnabled	Boolean	(SMB (also known as CIFS) file systems) Indicates whether notifications on file writes are enabled on the file system. Values are: • true - Notifications on file writes are enabled on the file system. • false - Notifications on file writes are disabled on the file system.
isCIFSNotifyOnAccessEnabled	Boolean	(SMB (also known as CIFS) file systems) Indicates whether notifications on file access are enabled on the file system. Values are: • true - Notifications on file access are enabled on the file system. • false - Notifications on file access are disabled on the file system.
cifsNotifyOnChangeDirDepth	unsigned Integer[32][1..512]	(SMB (also known as CIFS) file systems) Lowest directory level to which the enabled notifications apply, if any.
tieringPolicy	TieringPolicyEnum	(Applies if a FAST VP license is installed.) FAST VP tiering policy for the file system.
supportedProtocols	FSSupportedProtocolEnum	Protocols supported by the file system.
metadataSize	unsigned Integer[64(bytes)]	Size of file system metadata.
metadataSizeAllocated	unsigned Integer[64(bytes)]	Size of pool space allocated for file system metadata.
perTierSizeUsed	List<Integer>[64(bytes)]	Sizes of space allocations by the file system on the tiers of multi-tier storage pool. This list will have the same length as the tiers list on this file system's pool, and the entries will correspond to those tiers. Multi-tier storage pools can be created on a system with the FAST VP license installed.
snapsSize	unsigned Integer[64(bytes)]	Size of space used by file system snapshots.
snapsSizeAllocated	unsigned Integer[64(bytes)]	Size of pool space allocated for file system snapshots.
snapCount	unsigned Integer[32]	Number of file system snapshots.
isSMBCA	Boolean	Indicates whether or not SMB 3.0 is enabled. Values are: • true - SMB 3.0 is enabled. • false - SMB 3.0 is disabled.
accessPolicy	AccessPolicyEnum	Access policies which are supported by file system.
folderRenamePolicy	FSRenamePolicyEnum	Rename policies which are supported by file system. These policy choices control whether directory can be renamed from NFS or SMB clients if at least one file is opened in the directory or in one of its children directory.
lockingPolicy	FSLockingPolicyEnum	Locking policies which are supported by file system. These policy choices control whether the NFSv4 range locks must be honored. Because NFSv3 is advisory by design, this policy allows specifying whether the NFSv4 locking feature behaves like NFSv3 in order to be backward compatibilty with applications expecting an advisory locking scheme.
format	FSFormatEnum	File system format.

hostIOSize	HostIOSizeEnum	Typical write I/O size from the host to the file system.
poolFullPolicy	ResourcePoolFullPolicyEnum	File system behavior to follow when pool is full and a write to this filesystem is attempted.
fileEventSettings	fileEventSettings	Indicates whether File Event Service is enabled for some protocols on the filesystem.
ioLimitPolicy	ioLimitPolicy	IO limit policy that applies to the filesystem, as defined by the ioLimitPolicy resource type.
cifsShare	List<cifsShare>	The cifsShares associated with the filesystem.
nfsShare	List<nfsShare>	The nfsShares associated with the filesystem.

Query all members of the filesystem collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/filesystem/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the filesystem collection.

Query a specific filesystem instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/filesystem/<id> where <id> is the unique identifier of the filesystem instance to query. Or GET /api/instances/filesystem/name:<value> where <value> is the name of the filesystem instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific filesystem instance.

lun

A LUN (block storage) type storage resource, which may be a LUN in a consistency group, a standalone LUN, or a VMWare VMFS LUN. Management of LUNs is performed via the storageResource object.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the LUN.
health	health	Health information for the LUN, as defined by the health resource type.
name	String[1..63]	Name of the LUN.
description	String[0..170]	Description of the LUN.
type	LUNTypeEnum	Type of the LUN.
sizeTotal	unsigned Integer[64(bytes)]	LUN size that the system presents to the host or end user.
sizeUsed	unsigned Integer[64(bytes)]	Used size is not applicable to LUN and this value is not set.
sizeAllocated	unsigned Integer[64(bytes)]	Size of space actually allocated in the pool for the LUN: • For thin-provisioned LUNs this as a rule is less than the sizeTotal attribute until the LUN is not fully populated with user data. • For not thin-provisioned LUNs this is approximately equal to the sizeTotal.
sizePreallocated	unsigned Integer[64(bytes)]	Space reserved from the pool by the LUN, for future needs to make writes more efficient. The pool may be able to reclaim some of this if space is running low.
sizeAllocatedTotal	unsigned Integer[64(bytes)]	Total pool space used in the pool for the LUN.
dataReductionSizeSaved	unsigned Integer[64(bytes)]	Storage element saved space by data reduction, which includes savings from compression, deduplication and advanced deduplication.
dataReductionPercent	unsigned Integer[16(percent)]	Data reduction percentage is the percentage of the data that does not consume storage - the savings due to data reduction. For example, if 1 TB of data is stored in 250 GB, the data reduction percentage is 75%. 75% data reduction percentage is equivalent to a 4:1 data reduction ratio.
dataReductionRatio	Float	Data reduction ratio. The data reduction ratio is the ratio between the size of the data and the amount of storage actually consumed. For example, 1TB of data consuming 250GB would have a ration of 4:1. A 4:1 data reduction ratio is equivalent to a 75% data reduction percentage.
perTierSizeUsed	List<Integer>[64(bytes)]	Sizes of space allocations by the LUN on the tiers of multi-tier storage pool. This list will have the same length as the tiers list on this LUN's pool, and the entries will correspond to those tiers. Multi-tier storage pools can be created on a system with the FAST VP license installed.

isThinEnabled	Boolean	Indicates whether thin provisioning is enabled. • true - The LUN is thin provisioned. • false - The LUN is not thin provisioned.
isDataReductionEnabled	Boolean	True if data reduction is enabled.
isAdvancedDedupEnabled	Boolean	Indicates whether to enable advanced deduplication for the LUN. It can only be enabled on the all flash high end platforms and only when the data reduction is enabled. If data reduction is disable, this is disabled automatically. Deduplicated data will remain as is even after advanced deduplication is disabled. Values are: • true - Advanced deduplication is enabled on this LUN. • false - Advanced deduplication is disabled on this LUN.
storageResource	storageResource	The storage resource with which LUN is associated.
pool	pool	The pool in which the LUN is allocated.
wwn	String	The world wide name of the LUN.
tieringPolicy	TieringPolicyEnum	(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP tiering policy for the LUN.
defaultNode	NodeEnum	The storage processor that is the default owner of this LUN.
isReplicationDestination	Boolean	Indicates whether the LUN is a replication destination. Valid values are: • true - LUN is a replication destination. • false - LUN is not a replication destination.
currentNode	NodeEnum	The storage processor that is the current owner of this LUN.
snapSchedule	snapSchedule	Snapshot schedule for the LUN, as defined by the snapSchedule. This value is not set if the LUN is not associated with a snapshot schedule.
isSnapSchedulePaused	Boolean	(Applies if the LUN has an associated snap schedule.) Indicates whether the snapshot schedule for the LUN is paused. Valid values are: • true - Snapshot schedule for the LUN is paused. • false - Snapshot schedule for the LUN is active.
ioLimitPolicy	ioLimitPolicy	I/O limit policy that applies to the LUN, as defined by the ioLimitPolicy resource type.
metadataSize	unsigned Integer[64(bytes)]	Size of the LUN metadata.
metadataSizeAllocated	unsigned Integer[64(bytes)]	Size of pool space allocated for the LUN's metadata.
snapWwn	String	World Wide Name of the Snap Mount Point.
snapsSize	unsigned Integer[64(bytes)]	Size of the LUN snapshots.
snapsSizeAllocated	unsigned Integer[64(bytes)]	Size of pool space allocated for snapshots of the LUN.
hostAccess	List<blockHostAccess>	Host access permissions for the LUN.
snapCount	unsigned Integer[32]	Number of direct snapshots of the LUN.
isThinClone	Boolean	Indicates whether LUN is a thin clone on not. • true - The LUN is a thin clone. • false - The LUN is not a thin clone.
familyBaseLun	lun	For a Thin Clone of a Standalone LUN/ LUN in a Consistency group, the unique identifier of the Base Source LUN. For a Base LUN, its unique identifier.
parentSnap	snap	For a Thin Clone of a Standalone LUN/LUN in a Consistency group, the unique identifier of the source Snapshot. Applies only for Thin Clones.
originalParentLun	lun	The Parent Lun. Applies only for Thin Clones.
familySnapCount	unsigned Integer[32]	Total number of snapshots created in the LUN Family, including all derivative snapshot objects. This attribute is not applicable for a Thin Clone
familyCloneCount	unsigned Integer[32]	Total number of thin clones created in the LUN Family, including all derivative thin clones objects. This attribute is not applicable for a Thin Clone
nonBaseSizeAllocated	unsigned Integer[64(bytes)]	Total amount of pool space used by LUN snapshots and thin clones. This attribute is not applicable for a Thin Clone
familySizeAllocatedTotal	unsigned Integer[64(bytes)]	Total amount of pool space reserved for the LUN. It is sum of sizeAllocated, nonBaseSizeAllocated and metadataSizeAllocated. This attribute is not applicable for a Thin Clone
nonBaseSize	unsigned Integer[64(bytes)]	Thin Clones and Snapshots subscribed space for the LUN. This attribute is not applicable for a Thin Clone
migrationState	DCMigrationStateEnum	Migration state for Destination PowerStore Orchestration.
hostGroupLUNs	List<hostGroupLUN>	The hostGroupLUNs associated with the lun.
moveSession	moveSession	The moveSession associated with the lun.

Query all members of the lun collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/lun/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the lun collection.

Query a specific lun instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/lun/<id> where <id> is the unique identifier of the lun instance to query. Or GET /api/instances/lun/name:<value> where <value> is the name of the lun instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific lun instance.

moveSession

Information about movesession.

A customer environment is often ever-changing, and as a result the ability to deliver business continuity and flexibility is paramount. The new local LUN migration feature address this concern, by adding the ability to move LUNs and Consistency Groups between Pools on a system. Local LUN migration can be used to rebalance storage resources across Pools when customer activity changes and an individual Pool's usage becomes oversaturated. Another use case for local LUN migration is to provide LUNs with a destination when a Pool is to be decommissioned. By leveraging Unity's Transparent Data Transfer (TDX) engine, host access remains fully online during the migration session.

Supported operations

Collection query , Instance query ,Create ,Delete ,Cancel ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the session.
sourceStorageResource	storageResource	Storage resource to be moved.
sourceMemberLun	lun	The LUN being moved when the corresponding storageResource isn't specific enough, i.e. a Consistency Group member LUN or LUN VMFS Datastore.
destinationPool	pool	Destination pool for the move.
health	health	The health of the session.
progressPct	unsigned Integer[32(percent)]	The progress of the session expressed as a percentage.
currentTransferRate	unsigned Integer[32(Mb/sec)]	The current transfer rate of the session in MB/sec.
avgTransferRate	unsigned Integer[32(Mb/sec)]	The average transfer rate of the session in MB/sec.
estTimeRemaining	DateTime[Interval]	The estimated time remaining based on the current transfer rate.
state	MoveSessionStateEnum	The current state of the session. The session state represents the lifecycle of a session.
status	MoveSessionStatusEnum	The current session status of the TDX session.
priority	MoveSessionPriorityEnum	The priority of this storageResource move relative to other moves.

Query all members of the moveSession collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/moveSession/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the moveSession collection.

Query a specific moveSession instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/moveSession/<id> where <id> is the unique identifier of the moveSession instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific moveSession instance.

Create operation

Create a session to move a storageResource to a new location.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/moveSession/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
sourceStorageResource	in	storageResource	Required	A reference to the source storage resource for the operation.
sourceMemberLun	in	lun	Optional	A reference to the specific lun to move if the storageResource isn't specific enough, i.e. CG member LUN or LUN VMFS Datastore.
destinationPool	in	pool	Required	A reference to the pool that is the target of the operation.
isDestThin	in	Boolean	Optional	Whether or not the destination will be created on sparse storage.
isDataReductionApplied	in	Boolean	Optional	Whether or not the destination will be created with data Reduction enabled.
isAdvancedDedupApplied	in	Boolean	Optional	Whether or not the destination will be created with advance deduplication enabled.
priority	in	MoveSessionPriorityEnum	Optional	The initial priority value for the session.
id	out	moveSession	N/A	The unique id for the session.

Delete operation

Delete a previously created moveSession.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/moveSession/<id> where <id> is the unique identifier of the moveSession instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Cancel operation

Cancel a queued or running moveSession.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/moveSession/<id>/action/cancel where <id> is the unique identifier of the moveSession instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Alter options of a currently running moveSession.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/moveSession/<id>/action/modify where <id> is the unique identifier of the moveSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
priority	in	MoveSessionPriorityEnum	Optional	The storageResource move priority.

pool

Information about pools in the storage system.

Creating pools using Quick Start mode

You can use Quick Start mode to create system recommended pools based on the type and availability of drives in the system. In Quick Start mode, the system recommends separate pools for different drive types and uses default RAID configurations for the drives. A pool configured in Quick Start mode has only one tier.

Quick Start mode is available when both of these conditions are met:

- No pools exist on the system.
- The system is not licensed for FAST VP or FAST Cache.

To create pools using Quick Start mode, follow these steps:

1. Run POST api/types/pool/action/recommendAutoConfiguration.

   The response body contains a set of poolSetting instances.

2. For each poolSetting instance returned in Step 1, run POST /api/types/pool/instances with the following arguments, using values obtained from the poolSetting instance:
   - addRaidGroupParameters : [{dskGroup : poolSetting.storageConfiguration.possibleStorageConfigurations.diskGroup,
   - numDisks : poolSetting.storageConfiguration.possibleStorageConfigurations.raidGroupConfigurations.diskCount,
   - raidType : poolSetting.storageConfiguration.raidType,
   - stripeWidth : poolSetting.storageConfiguration.possibleStorageConfigurations.raidGroupConfigurations.stripeWidths},...]

Pool creation examples:
Simple pool with one RAID5 4+1:
POST /api/types/pool/instances

{"name" : "PerformancePool",
"addRaidGroupParameters" : [
{"dskGroup" : {"id" : dg_15},
"numDisks" : 6,
"raidType" : 1,
"stripeWidth" : 5}
]
}

Pool with raid group RAID10 1+1:
{"name" : "SysDefPool00",
"description" : "The pool is created with RAID10(1+1)",
"addRaidGroupParameters" : [
{"dskGroup" : {"id" : "dg_16"},
"numDisks" : 5,
"raidType" : 7,
"stripeWidth" : 2}
]
}

Embedded resource types

poolConfiguration, poolFASTVP, poolRaidStripeWidthInfo, poolTier

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify ,RecommendAutoConfiguration ,StartRelocation ,StopRelocation ,GetStorageTierConfiguration ,GetStorageTierConfigurationsForDynamicPool

Attributes

Attribute	Type	Description
id	String	Unique identifier of the pool instance.
health	health	Health information for the pool, as defined by the health resource type.
name	String[1..85]	Pool name, unique in the storage system.
description	String[0..170]	Pool description.
raidType	RaidTypeEnum	RAID type with which the pool is configured. A value of Mixed indicates that the pool consists of multiple RAID types.
sizeFree	unsigned Integer[64(bytes)]	Size of free space available in the pool.
sizeTotal	unsigned Integer[64(bytes)]	The total size of space from the pool, which will be the sum of sizeFree, sizeUsed and sizePreallocated space.
sizeUsed	unsigned Integer[64(bytes)]	Space allocated from the pool by storage resources, used for storing data. This will be the sum of the sizeAllocated values of each storage resource in the pool.
sizePreallocated	unsigned Integer[64(bytes)]	Space reserved form the pool by storage resources, for future needs to make writes more efficient. The pool may be able to reclaim some of this if space is running low. This will be the sum of the sizePreallocated values of each storage resource in the pool.
dataReductionSizeSaved	unsigned Integer[64(bytes)]	Amount of space saved for the pool by data reduction (includes savings from compression, deduplication and advanced deduplication).
dataReductionPercent	unsigned Integer[16(percent)]	Data reduction percentage is the percentage of the data that does not consume storage - the savings due to data reduction. For example, if 1 TB of data is stored in 250 GB, the data reduction percentage is 75%. 75% data reduction percentage is equivalent to a 4:1 data reduction ratio.
dataReductionRatio	Float	Data reduction ratio. The data reduction ratio is the ratio between the size of the data and the amount of storage actually consumed. For example, 1TB of data consuming 250GB would have a ration of 4:1. A 4:1 data reduction ratio is equivalent to a 75% data reduction percentage.
flashPercentage	unsigned Integer[16(percent)]	Pool flash tier percentage
sizeSubscribed	unsigned Integer[64(bytes)]	Size of space requested by the storage resources allocated in the pool for possible future allocations. If this value is greater than the total size of the pool, the pool is considered oversubscribed.
alertThreshold	unsigned Integer[32(percent)] [50..84]	Threshold at which the system generates notifications about the size of free space in the pool, specified as a percentage. This threshold is based on the percentage of allocated storage in the pool compared to the total pool size.
hasDataReductionEnabledLuns	Boolean	(Applies if Data Reduction is supported on the system and the corresponding license is installed.) Indicates whether the pool has any Lun that has data reduction ever turned on; Values are: • true - Lun(s) in this pool have had or currently have data reduction enabled. • false - No lun(s) in this pool have ever had data reduction enabled.
hasDataReductionEnabledFs	Boolean	(Applies if Data Reduction is supported on the system and the corresponding license is installed.) Indicates whether the pool has any File System that has data reduction ever turned on; Values are. • true - File system(s) in this pool have had or currently have data reduction enabled. • false - No file system(s) in this pool have ever had data reduction enabled.
isFASTCacheEnabled	Boolean	(Applies if FAST Cache is supported on the system and the corresponding license is installed.) Indicates whether the FAST Cache is enabled for the pool. Values are: • true - FAST Cache is enabled for the pool. • false - FAST Cache is disabled for the pool. FAST Cache is created from Flash SAS drives and applied only to RAID groups created of SAS and NL-SAS hard drives. If the pool is populated by purely Flash drives the FAST Cache is not enabled.
tiers	List<poolTier>	Tiers in the pool, as defined by the poolTier resource

		type.
creationTime	DateTime	Date and time when the pool was created.
isEmpty	Boolean	Indicates whether the pool is unused; that is, whether it has no storage resources provisioned from it. Values are: • true - Pool is unused. • false - Pool is used..
poolFastVP	poolFASTVP	(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP information for the pool, as defined by the poolFastVP resource type. Pool is not eligible to be a multi-tier pool until FAST VP license installed.
isHarvestEnabled	Boolean	Indicates whether the automatic deletion of snapshots through pool space harvesting is enabled for the pool. See properties poolSpaceHarvestHighThreshold and poolSpaceHarvestLowThreshold. Values are: • true - Automatic deletion of snapshots through pool harvesting is enabled for the pool. • false - Automatic deletion of snapshots through pool harvesting is disabled for the pool.
harvestState	UsageHarvestStateEnum	Current state of pool space harvesting.
isSnapHarvestEnabled	Boolean	Indicates whether the automatic deletion of snapshots through snapshot harvesting is enabled for the pool. See properties snapSpaceHarvestHighThreshold and snapSpaceHarvestLowThreshold. Values are: • true - Automatic deletion of snapshots through snapshot harvesting is enabled for the pool. • false - Automatic deletion of snapshots through snapshot harvesting is disabled for the pool.
poolSpaceHarvestHighThreshold	Float	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space high threshold at which the system automatically starts to delete snapshot objects in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used in the pool by all types of objects compared to the total pool size. When the percentage of used space reaches this threshold, the system starts to automatically delete snapshot objects in the pool, until a low threshold (see poolSpaceHarvestLowThreshold) is reached.
poolSpaceHarvestLowThreshold	Float	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space low threshold under which the system stops automatically deleting snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used in the pool by all types of objects compared to the total pool size. When the percentage of used space in the pool falls below this threshold, the system stops the automatic deletion of snapshot objects in the pool, until a high threshold (see poolSpaceHarvestHighThreshold) is reached again.
snapSpaceHarvestHighThreshold	Float	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and pool.) Space used by snapshot objects high threshold at which the system automatically starts to delete snapshot objects in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used in the pool by snapshot objects only compared to the total pool size. When the percentage of space used by snapshots reaches this threshold, the system automatically starts to delete snapshots in the pool, until a low threshold (see snapSpaceHarvestLowThreshold) is reached. Note that if Base LUN has Thin Clones its snapshot space doesn't affect this threshold.
snapSpaceHarvestLowThreshold	Float	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and pool.) Space used by snapshot objects low threshold under which the system automatically stops deleting snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used in the pool by snapshots only compared to the total pool size. When the percentage of pool space used by snapshot objects falls below this threshold, the system automatically stops deletion of snapshots in the pool, until a high threshold (see snapSpaceHarvestHighThreshold) is reached again. Note that if Base LUN has Thin Clones its snapshot space doesn't affect this threshold.
metadataSizeSubscribed	unsigned Integer[64(bytes)]	Size of pool space subscribed for metadata.
snapSizeSubscribed	unsigned Integer[64(bytes)]	Size of pool space subscribed for snapshots.
nonBaseSizeSubscribed	unsigned Integer[64(bytes)]	Size of pool space subscribed for thin clones and snapshots
metadataSizeUsed	unsigned Integer[64(bytes)]	Size of pool space used by metadata.
snapSizeUsed	unsigned Integer[64(bytes)]	Size of pool space used by snapshots.
nonBaseSizeUsed	unsigned Integer[64(bytes)]	Size of pool space used for thin clones and snapshots
rebalanceProgress	unsigned Integer[16(percent)]	(Applies if FAST VP is supported on the system and the corresponding license is installed.) Percent of work completed for data rebalancing.
type	StoragePoolTypeEnum	Indicates type of this pool. Values are: • Dynamic - It is dynamic pool.

		• Traditional - It is traditional pool.
isAllFlash	Boolean	Indicates whether this pool contains only Flash drives. Values are: • true - It is an all Flash pool. • false - This pool contains drives other than Flash drives.

Attributes for poolConfiguration

System-recommended pool configuration settings. Instances of this resource type contain the output of the pool resource type's RecommendAutoConfiguration operation.

Attribute	Type	Description
name	String	Pool name.
description	String	Pool description.
storageConfiguration	storageTierConfiguration	Recommended configuration of the storage tier in the recommended pool, as defined by the storageCapabilityEstimation resource type.
alertThreshold	unsigned Integer[32(percent)]	Threshold at which the system will generate notifications about the amount of space remaining in the pool, specified as a percentage with 1% granularity. This threshold is based on the percentage of allocated storage in the pool compared to the total pool size.
poolSpaceHarvestHighThreshold	Float	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space high threshold at which the system will automatically delete snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of used space in the pool compared to the total pool size. When the percentage of used space reaches this threshold, the system automatically deletes snapshots in the pool, until a low threshold is reached.
poolSpaceHarvestLowThreshold	Float	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space low threshold under which the system will stop automatically deleting snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of used pool space compared to the total pool size. When the percentage of used space in the pool falls below this threshold, the system stops the automatic deletion of snapshots in the pool, until a high threshold is reached.
snapSpaceHarvestHighThreshold	Float	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and the pool.) Snapshot used space high threshold at which the system will automatically delete snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used by pool snapshots compared to the total pool size. When the percentage of space used by snapshots reaches this threshold, the system automatically deletes snapshots in the pool, until a low threshold is reached.
snapSpaceHarvestLowThreshold	Float	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and the pool.) Snapshot used space low threshold under which the system will stop automatically delete snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used by pool snapshots compared to the total pool size. When the percentage of space used by pool snapshots falls below this threshold, the system stops the automatic deletion of snapshots in the pool, until a high threshold is reached.
isFastCacheEnabled	Boolean	(Applies if a FAST Cache license is installed on the system.) Indicates whether the pool will be used in the FAST Cache. Values are: • true - FAST Cache will be enabled for this pool. • false - FAST Cache will be disabled for this pool.
isFASTVpScheduleEnabled	Boolean	(Applies if a FAST VP license is installed on the storage system.) Indicates whether to enable scheduled data relocations for the pool. Values are: • true - Enable scheduled data relocations for the pool. • false - Disable scheduled data relocations for the pool.
isDiskTechnologyMixed	Boolean	Indicates whether the pool contains drives with different drive technologies, such as FLASH, SAS and NL-SAS. Values are: • true - Pool contains drives with different drive technologies. • false - Pool does not contain drives with different drive technologies.
maxSizeLimit	unsigned Integer[64(bytes)]	Maximum pool capacity recommended for the storage system.
maxDiskNumberLimit	unsigned Integer[32]	Maximum number of drives recommended for the storage system.
isMaxSizeLimitExceeded	Boolean	Indicates whether the total size of all recommended pools exceeds that allowed by the storage system. Values are: • true - Total size of all recommended pools exceeds that allowed by the storage system.

		• false - Total size of all recommended pools does not exceed that alllowed by the storage system.
isMaxDiskNumberLimitExceeded	Boolean	Indicates whether the total number of drives in the recommended pools exceeds that allowed by the storage system. Values are: • true - Total size of all recommended pools exceeds that allowed by the storage system. • false - Total size of all recommended pools does not exceed that alllowed by the storage system.
isRPMMixed	Boolean	Indicates whether the pool contains drives with different rotational speeds. Values are: • true - Pool contains drives with different rotational speeds. • false - Pool does not contain drives with different rotational speeds.

Attributes for poolFASTVP

(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP settings for the pool associated with this embedded type.

Attribute	Type	Description
status	FastVPStatusEnum	Data relocation status.
relocationRate	FastVPRelocationRateEnum	Data relocation rate.
isScheduleEnabled	Boolean	Indicates if scheduled data relocations are enabled: • true - Scheduled data relocations are enabled. • false - Scheduled data relocations are disabled.
relocationDurationEstimate	DateTime[Interval]	Estimated time required for the data relocation.
sizeMovingDown	unsigned Integer[64(bytes)]	Size of data to move to a lower tier. This value is 0 for a single tier pool.
sizeMovingUp	unsigned Integer[64(bytes)]	Size of data to move to higher tier. This value is 0 for a single tier pool.
sizeMovingWithin	unsigned Integer[64(bytes)]	Size of data to move within a tier.
percentComplete	unsigned Integer[16]	Percent of data relocated so far in the relocation process.
type	PoolDataRelocationTypeEnum	Data relocation type.
dataRelocated	unsigned Integer[64(bytes)]	Size of data relocated. For a completed data relocation, this is the total size of data relocated since the last data relocation session.
lastStartTime	DateTime	Time of day to start scheduled data relocations.
lastEndTime	DateTime	Time of day at which scheduled data relocations should end.

Attributes for poolRaidStripeWidthInfo

(Applies to dynamic pools only) Information about the stripe width info in the pool.

Attribute	Type	Description
rpm	unsigned Integer[32(rpm)]	Revolutions Per Minute (RPMs).
stripeWidth	RaidStripeWidthEnum	RAID stripe width of the drives in the raid stripe info.
driveTechnology	DiskTechnologyEnum	Drive technology in the raid stripe info.
driveCount	unsigned Integer[32]	The number of physical drives in the raid stripe info.
parityDrives	unsigned Integer[32]	The number of parity drives in the raid stripe info.

Attributes for poolTier

Information about the tiers in the pool.

Attribute	Type	Description
tierType	TierTypeEnum	Tier type.
stripeWidth	RaidStripeWidthEnum	RAID stripe width of the drives in the tier.
raidType	RaidTypeEnum	RAID type of the drives in the tier.
sizeTotal	unsigned Integer[64(bytes)]	Total size of space in the tier.
sizeUsed	unsigned Integer[64(bytes)]	Size of used space in the tier.
sizeFree	unsigned Integer[64(bytes)]	Size of free space in the tier.
sizeMovingDown	unsigned Integer[64(bytes)]	Size of data scheduled to be moved to a lower tier. This value is 0 for a single-tier pool.
sizeMovingUp	unsigned Integer[64(bytes)]	Amount of data scheduled to be moved to a higher tier. This value is 0 for a single tier pool.
sizeMovingWithin	unsigned Integer[64(bytes)]	Amount of data to be rebalanced within the tier.
name	String	Name of the pool.
poolUnits	List<poolUnit>	List of Pool Units, i.e. raidGroup and virtualDisk objects, in the tier.
diskCount	unsigned Integer[32]	The number of physical drives in the tier.
spareDriveCount	unsigned Integer[32]	The drive number of hot spare space for dynamic pool.
raidStripeWidthInfo	List<poolRaidStripeWidthInfo>	(Applies to dynamic pools only and the corresponding license is installed.) Raid Stripe Width Info in the pool, as defined by the poolRaidStripeWidthInfo resource type.

Query all members of the **pool** collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/pool/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the pool collection.

Query a specific pool instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/pool/<id> where <id> is the unique identifier of the pool instance to query. Or GET /api/instances/pool/name:<value> where <value> is the name of the pool instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific pool instance.

Create operation

Create a new pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/pool/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..85]	Required	Pool name.
description	in	String[0..170]	Optional	Pool description.
addRaidGroupParameters	in	List<raidGroupParameters>	Optional	Parameters to add RAID groups to the pool (disk group, number of drives, RAID level, stripe length: see object raidGroupParameters). To create a pool with drives of different type (SAS Flash, SAS, NL-SAS) FAST VP license is required.
addPoolUnitParameters	in	List<poolUnitParameters>	Optional	Pool capacity units (now Virtual Disks only, see virtualDisk object) with associated parameters to add to the pool without RAID protection.
alertThreshold	in	unsigned Integer[32(percent)][50..84]	Optional	Threshold at which the system will generate alerts about the free space in the pool, specified as a percentage. This threshold is based on the percentage of allocated storage in the pool compared to the total pool size.
poolSpaceHarvestHighThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space high threshold at which the system will automatically starts to delete snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used in the pool by all types of objects compared to the total pool size. When the percentage of used space reaches this threshold, the system automatically starts to delete snapshots in the pool, until a low threshold is reached.
poolSpaceHarvestLowThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space low threshold under which the system will automatically stop deletion of snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space in the pool used by all types of obejcts compared to the total pool size. When the percentage of used

				space in the pool falls below this threshold, the system stops the automatic deletion of snapshots in the pool, until a high threshold is reached again.
snapSpaceHarvestHighThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and pool.) Snapshot used space high threshold at which the system automatically starts to delete snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of pool space used by snapshot objects only compared with the total pool size. When the percentage of space used by snapshots reaches this threshold, the system automatically starts to delete snapshots in the pool, until a low threshold is reached.
snapSpaceHarvestLowThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and the pool.) Snapshot used space low threshold below which the system will stop automatically deleting snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used by snapshot objects only as compared to the total pool size. When the percentage of space used by snapshots falls below this threshold, the system stops automatically deleting snapshots in the pool, until a high threshold is reached again.
isHarvestEnabled	in	Boolean	Optional	Indicates whether to enable pool space harvesting (the automatic deletion of snapshots based on pool space usage) for the pool. Values are: • true - Enable pool harvesting for the pool. • false - Disable pool harvesting for the pool.
isSnapHarvestEnabled	in	Boolean	Optional	Indicates whether to enable snapshot harvesting (the automatic deletion of snapshots based on snapshot space usage) for the pool. Values are: • true - Enable snapshot harvesting for the pool. • false - Disable snapshot harvesting for the pool.
isFASTCacheEnabled	in	Boolean	Optional	(Applies if a FAST Cache license is installed on the system.) Indicates whether to enable the FAST Cache for the pool. Values are: • true - FAST Cache will be enabled for this pool. • false - FAST Cache will be disabled for this pool. Only RAID groups created of SAS and NL-SAS hard drives are eligible for FAST Cache. If the pool is populated by only Flash drives this option is not allowed.
isFASTVpScheduleEnabled	in	Boolean	Optional	(Applies when a FAST VP license is installed on the system.) Indicates whether to enable scheduled data relocations for the pool. Values are: • true - Enable scheduled data relocations for the pool. • false - Disable scheduled data relocations for the pool.
type	in	StoragePoolTypeEnum	Optional	Indicates whether to create traditional pool or dynamic pool. • traditional - Create traditional pool. • dynamic - Create dynamic pool. (default)
id	out	pool	N/A	Output parameter for the created pool id. The pool object with this id may not exist at the moment of this method complete because this method only launches background process called Job which is actually creating the pool.

Delete operation

Delete a pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/pool/<id> where <id> is the unique identifier of the pool instance to delete. Or DELETE /api/instances/pool/name:<value> where <value> is the name of the pool instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modifies the existing pool: allows to expand pool capacity and/or modify different parameters of the pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/pool/<id>/action/modify where <id> is the unique identifier of the pool instance. Or POST /api/instances/pool/name:<value>/action/modify where <value> is the name of the pool instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..85]	Optional	Pool new name.
description	in	String[0..170]	Optional	Pool new description.
addRaidGroupParameters	in	List<raidGroupParameters>	Optional	Parameters to add RAID groups to the pool (disk group, number of drives, RAID level, stripe length). If the expansion of the single-tier pool makes it multi-tier pool then FAST VP license is required to be installed on the system.
addPoolUnitParameters	in	List<poolUnitParameters>	Optional	Pool capacity units (now Virtual Disks only) with associated parameters to add to the pool without RAID protection.
alertThreshold	in	unsigned Integer[32(percent)][50..84]	Optional	
poolSpaceHarvestHighThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space high threshold at which the system will automatically starts to delete snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used in the pool by all types of objects compared to the total pool size. When the percentage of used space reaches this threshold, the system automatically starts to delete snapshots in the pool, until a low threshold is reached.
poolSpaceHarvestLowThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space low threshold under which the system will automatically stop deletion of snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space in the pool used by all types of obejcts compared to the total pool size. When the percentage of used space in the pool falls below this threshold, the system stops the automatic deletion of snapshots in the pool, until a high threshold is reached again.
snapSpaceHarvestHighThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and pool.) Snapshot used space high threshold at which the system automatically starts to delete snapshots in the pool, specified as a percentage with .01% granularity.

				This threshold is based on the percentage of pool space used by snapshot objects only compared with the total pool size. When the percentage of space used by snapshots reaches this threshold, the system automatically starts to delete snapshots in the pool, until a low threshold is reached.
snapSpaceHarvestLowThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and the pool.) Snapshot used space low threshold below which the system will stop automatically deleting snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used by snapshot objects only as compared to the total pool size. When the percentage of space used by snapshots falls below this threshold, the system stops automatically deleting snapshots in the pool, until a high threshold is reached again.
isHarvestEnabled	in	Boolean	Optional	Indicates whether to enable pool space harvesting (the automatic deletion of snapshots based on pool space usage) for the pool. Values are: • true - Enable pool harvesting for the pool. • false - Disable pool harvesting for the pool.
isSnapHarvestEnabled	in	Boolean	Optional	Indicates whether to enable snapshot harvesting (the automatic deletion of snapshots based on snapshot space usage) for the pool. Values are: • true - Enable snapshot harvesting for the pool. • false - Disable snapshot harvesting for the pool.
isFASTCacheEnabled	in	Boolean	Optional	(Applies if a FAST Cache license is installed on the system.) Indicates whether to enable the FAST Cache for the pool. Values are:
isFASTVpScheduleEnabled	in	Boolean	Optional	(Applies when a FAST VP license is installed on the system.) Indicates whether to enable scheduled data relocations for the pool. Values are: • true - Enable scheduled data relocations for the pool. • false - Disable scheduled data relocations for the pool.

RecommendAutoConfiguration operation

Recommend a list of pool configurations for the storage system.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/pool/action/recommendAutoConfiguration
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the RecommendAutoConfiguration operation

Argument	In/ out	Type	Required?	Description
poolConfigurations	out	List<poolConfiguration>	N/A	The list of recommended pool configurations, as defined by the poolSetting type.

StartRelocation operation

(Applies if FAST VP is supported on the system and the corresponding license is installed.) Initiate data relocation on the pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/pool/<id>/action/startRelocation where <id> is the unique identifier of the pool instance. Or POST /api/instances/pool/name:<value>/action/startRelocation where <value> is the name of the pool instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the StartRelocation operation

Argument	In/ out	Type	Required?	Description
endTime	in	DateTime[Interval - h+:mm:ss[.sss]]	Optional	Date and time at which to stop the data relocation operation. [The value of interval will be rounded down to minutes.]
relocationRate	in	FastVPRelocationRateEnum	Optional	Data relocation rate.

StopRelocation operation

(Applies if FAST VP is supported on the system and the corresponding license is installed.) Stop data relocation on the pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/pool/<id>/action/stopRelocation where <id> is the unique identifier of the pool instance. Or POST /api/instances/pool/name:<value>/action/stopRelocation where <value> is the name of the pool instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

GetStorageTierConfiguration operation

Return all possible RAID configurations for the specified tier type, RAID type, stripe width, for a specific pool. Applied to traditional pools only.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/pool/<id>/action/getStorageTierConfiguration where <id> is the unique identifier of the pool instance. Or POST /api/instances/pool/name:<value>/action/getStorageTierConfiguration where <value> is the name of the pool instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the GetStorageTierConfiguration operation

Argument	In/ out	Type	Required?	Description
tierType	in	TierTypeEnum	Required	Type of the tier.
raidType	in	RaidTypeEnum	Required	Preferred RAID type (RAID level) for the storage tier.
stripeWidth	in	RaidStripeWidthEnum	Required	Preferred RAID stripe width (RAID modulus) for the tier.
storageConfiguration	out	storageTierConfiguration	N/A	All possible configurations for the tier, as defined by the storageTierConfiguration embedded object.

GetStorageTierConfigurationsForDynamicPool operation

Return all possible RAID configurations for the parameters which specify tier type, RAID type, stripe width, for a specific pool. Applied to dynamic pools only.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/pool/<id>/action/getStorageTierConfigurationsForDynamicPool where <id> is the unique identifier of the pool instance. Or POST /api/instances/pool/name: <value>/action/getStorageTierConfigurationsForDynamicPool where <value> is the name of the pool instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the GetStorageTierConfigurationsForDynamicPool operation

Argument	In/ out	Type	Required?	Description
storageTierParameters	in	List<storageTierConfigurationParameters>	Required	List of sepcified pamameters.
storageTierConfigurations	out	List<storageTierConfiguration>	N/A	All possible configurations for the list of specified parameters, as defined by the storageTierConfiguration embedded object.

poolConsumer

poolConsumer class is representation of single object that consumes storage inside pools. There are two types of pool consumers: storage resources and NAS servers. NAS servers and storage resource except Consistency groups are always wholly allocated in one and only one storage pool. Consistency group can be allocated in more than one storage pool in case if the LUNs belonging to the group allocated in the different pools. The NAS servers consume space in the pool of constant size which is not changed once NAS server created.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique ID of object.

Query all members of the poolConsumer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/poolConsumer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the poolConsumer collection.

Query a specific poolConsumer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/poolConsumer/<id> where <id> is the unique identifier of the poolConsumer instance to query. Or GET /api/instances/poolConsumer/name:<value> where <value> is the name of the poolConsumer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific poolConsumer instance.

poolConsumerAllocation

poolConsumerAllocation class represents size of pool's space allocated by the consumer (storageResources or nasServers) inside the pool. Most of consumers are always wholly allocated in one and only one storage pool. The only exception is consistencyGroup storage resource that can contain different LUNs that reside in different pools.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique ID of poolConsumerAllocation object.
pool	pool	Storage pool reference.
consumer	poolConsumer	The object allocated in the storage pool.
consumerType	PoolConsumerTypeEnum	Type of pool consumer object.
sizeAllocatedTotal	unsigned Integer[64(bytes)]	Total space allocated in the storage pool for the consumer object.
sizePreallocated	unsigned Integer[64(bytes)]	Space reserved from the pool by the consumer object, for future needs to make writes more efficient. The pool may be able to reclaim some of this if space is running low.
snapsSizeAllocated	unsigned Integer[64(bytes)]	Space allocated in the storage pool for snapshots of the consumer object.
nonBaseSizeAllocated	unsigned Integer[64(bytes)]	Storage element used non-base capacity

Query all members of the poolConsumerAllocation collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/poolConsumerAllocation/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the poolConsumerAllocation collection.

Query a specific poolConsumerAllocation instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/poolConsumerAllocation/<id> where <id> is the unique identifier of the poolConsumerAllocation instance to query.
Request body arguments	None
Successful return status	200 OK

Successful response body	JSON representation of a specific poolConsumerAllocation instance.

poolUnit

Pool units contribute space toward pool capacity. Currently, pool units are either external virtual disks (see virtualDisk object), or internal raid groups (see disk and raidGroup objects).

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the pool unit instance.
type	PoolUnitTypeEnum	Type of Pool Unit is either RAID group or external virtual disk.
health	health	Health information for the pool unit, as defined by the health resource type.
name	String[1..32]	Name of the pool unit instance.
description	String[0..128]	Pool Unit description.
wwn	String	World Wide Name (WWN) of the Pool Unit.
sizeTotal	unsigned Integer[64(bytes)]	Total usable size of the Pool Unit
tierType	TierTypeEnum	Pool Unit Tier type.
pool	pool	The pool that is using this pool unit. A RAID group pool unit always belongs to a pool, but virtual disk pool units may exist prior to pool membership.

Query all members of the poolUnit collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/poolUnit/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the poolUnit collection.

Query a specific poolUnit instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/poolUnit/<id> where <id> is the unique identifier of the poolUnit instance to query. Or GET /api/instances/poolUnit/name:<value> where <value> is the name of the poolUnit instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific poolUnit instance.

quotaConfig

A quotaConfig instance represents the quota configuration of either a tree quota or a file system.

Supported operations

Collection query , Instance query ,Modify ,UpdateTreeQuotas ,UpdateUserQuotas

Attributes

Attribute	Type	Description
id	String	Unique identifier.
filesystem	filesystem	Associated file system.
treeQuota	treeQuota	Associated tree quota. Only available for quota configuration of a tree quota.
quotaPolicy	QuotaPolicyEnum	Quota policy.
isUserQuotaEnabled	Boolean	Whether user quota is enabled. Values are: • true - start tracking usages for all users on a file system or a quota tree, and user quota limits would be enforced. • false - stop tracking usages for all users on a file system or a quota tree, and user quota limits will not be enforced.
isAccessDenyEnabled	Boolean	Whether access will be denied when the limit is exceeded. Values are: • true - Attempts to allocate additional storage will fail with out of space error, when the quota hard limit is exceeded or the soft limit is exceeded and the grace period is expired. • false - Attempts to allocate additional storage will not fail because of quota limits.

gracePeriod	unsigned Integer[64(seconds)]	Grace period of soft limits.
defaultHardLimit	unsigned Integer[64(bytes)]	Default hard limit of user quotas and tree quotas.
defaultSoftLimit	unsigned Integer[64(bytes)]	Default soft limit of user quotas and tree quotas.
lastUpdateTimeOfTreeQuotas	DateTime	When tree quotas within a file system were last successfully updated. The value is null if it is a quotaConfig instance of a quota tree.
lastUpdateTimeOfUserQuotas	DateTime	When user quotas within a file system or a quota tree were last successfully updated.

Query all members of the quotaConfig collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/quotaConfig/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the quotaConfig collection.

Query a specific quotaConfig instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/quotaConfig/<id> where <id> is the unique identifier of the quotaConfig instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific quotaConfig instance.

Modify operation

Modify a quota configuration of either a file system or a quota tree.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/quotaConfig/<id>/action/modify where <id> is the unique identifier of the quotaConfig instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
quotaPolicy	in	QuotaPolicyEnum	Optional	Quota policy. Per fs configuration. The quota policy of a quota tree is derived from the file system. Can not be used with isUserQuotaEnabled in the same request.
isUserQuotaEnabled	in	Boolean	Optional	Whether user quotas are enabled. Can not be used with quotaPolicy in the same request.
deleteUserQuotasWithDisable	in	Boolean	Optional	Whether to delete user quotas when disabling user quotas (isUserQuotaEnabled=true).
isAccessDenyEnabled	in	Boolean	Optional	Whether access will be denied when the limit is exceeded.
gracePeriod	in	unsigned Integer[64(seconds)]	Optional	Grace period of soft limits.
defaultHardLimit	in	unsigned Integer[64(bytes)]	Optional	Default hard limit of user quotas and tree quotas.
defaultSoftLimit	in	unsigned Integer[64(bytes)]	Optional	Default soft limit of user quotas and tree quotas.

UpdateTreeQuotas operation

Update all tree quota objects within a file system.
The method is only available for the quotaConfig instance relating to the file system.
Most properties in the treeQuota object are kept up to date, however two properties relating to statistic data (remainingGracePeriod and sizeUsed) are updated only per 24 hours by default. The method will manually update treeQuota objects including their statistic properties in a file system immediately.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/quotaConfig/<id>/action/updateTreeQuotas where <id> is the unique identifier of the quotaConfig instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

UpdateUserQuotas operation

Update all user quota objects within a file system or a quota tree.

Most properties in the userQuota object are kept up to date, however two properties relating to statistic data (remainingGracePeriod and sizeUsed) are updated only per 24 hours by default. The method will manually update userQuota objects including their statistic properties in a file system or a quota tree immediately.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/quotaConfig/<id>/action/updateUserQuotas where <id> is the unique identifier of the quotaConfig instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the UpdateUserQuotas operation

Argument	In/ out	Type	Required?	Description
isUpdateNames	in	Boolean	Optional	Indicates whether to refresh user name in user quota report. Usually user name doesn't change often. And user name will be refreshed once 24 hours automatically.

raidGroup

RAID group objects in the pool and FAST Cache. RAID group is subclass of poolUnit type.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the RAID Group object.
type	PoolUnitTypeEnum	Type of pool unit. This will always be raid group.
health	health	Health information for the RAID group, as defined by the health resource type.
name	String[1..32]	RAID Group name.
description	String[0..128]	RAID Group description.
wwn	String	World Wide Name (WWN) of the RAID Group.
sizeTotal	unsigned Integer[64(bytes)]	User capacity of the RAID Group.
tierType	TierTypeEnum	RAID group tier type.
pool	pool	Pool to which the RAID group adds its capacity.
diskGroup	diskGroup	Disk group that contains the drives of RAID group. Applies to traditional pools only.
diskGroups	List<diskGroup>	List of disk groups to which the RAID group's drives belong.
raidType	RaidTypeEnum	RAID level (or RAID type) of the RAID group.
stripeWidth	RaidStripeWidthEnum	Stripe width (or RAID modulus) of the RAID group.
parityDisks	unsigned Integer[16(disks)]	Number of parity drives in the RAID group.
disks	List<disk>	Drives in the RAID group. For dynamic pool, a drive can be in multiple raid groups in the same pool.

Query all members of the raidGroup collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/raidGroup/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the raidGroup collection.

Query a specific raidGroup instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/raidGroup/<id> where <id> is the unique identifier of the raidGroup instance to query. Or GET /api/instances/raidGroup/name:<value> where <value> is the name of the raidGroup instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific raidGroup instance.

storageResource

Information about storage resources in the storage system.

A storage resource is a specific type of storage entity allocated in the storage system for a particular kind of host or application. The storage system provides the following types of storage resources:

- LUNs
- Consistency groups
- File systems accessed via NFS and/or CIFS shares.
- VMware NFS datastores
- VMware VMFS datastores
- VVol (file)
- VVol (block)

All types of storage resource types can be divided into two major groups:

- Block (or LUN based) storage resources: LUNs, consistency groups, VMware VMFS datastores, VVol (block).
- File system based storage resources: File systems, VMware NFS datastores, VVol (file).

In order to create a storage resource, there must be at least one pool configured on the system. For information about configuring pools, see the help topic for the pool. To provision file system based storage resource there must be at least one nasServer configured on the system.

Embedded resource types

advancedDedupParameters, blockHostAccessParam, capabilityProfileParameters, cifsFilesystemParameters, cifsShareCreate, cifsShareDelete, cifsShareModify, cifsShareParameters, compressionParameters, dataReductionParameters, fastVPParameters, filesystemParameters, lunAdd, lunCreate, lunDelete, lunModify, lunParameters, lunRemove, lunThinCloneCreate, nfsShareCreate, nfsShareDelete, nfsShareModify, nfsShareParameters, replicationParameters, snapScheduleParameters, storageResourceDelete, vmwareIscsiParameters, vmwareNfsParameters, vvolDatastoreCapabilityProfilesParameters

Supported operations

Collection query , Instance query ,CreateLun ,ModifyLun ,CreateConsistencyGroup ,ModifyConsistencyGroup ,CreateVmwareLun ,ModifyVmwareLun ,CreateVmwareNfs ,ModifyVmwareNfs ,CreateFilesystem ,ModifyFilesystem ,Delete ,CreateVVolDatastore ,ModifyVVolDatastore ,EstimateReclaimbleSize ,CreateBulkStandaloneLuns ,CreateLunThinClone ,CreateVmwareLunThinClone ,CreateConsistencyGroupThinClone ,Refresh

Attributes

Attribute	Type	Description
id	String	Unique identifier of the storage resource.
health	health	Health information for the storage resource, as defined by the health type.
name	String[1..95]	Name of the storage resource.
description	String[..255]	Storage resource description.
type	StorageResourceTypeEnum	Storage resource type.
isReplicationDestination	Boolean	Indicates whether the storage resource is a replication destination. Valid values are: • true - Storage resource is a replication destination. • false - Storage resource is not a replication destination.
replicationType	ReplicationTypeEnum	Replication type.
syncReplicationType	ReplicationTypeEnum	Sync Replication type.
sizeTotal	unsigned Integer[64(bytes)]	Storage resource size that the system presents to the host or end user.
sizeUsed	unsigned Integer[64(bytes)]	Size of the storage resource space consumed by the host. Applicable only for file system based storage resource. Indicates the size of file system space occupied by user files.
sizeAllocated	unsigned Integer[64(bytes)]	Size of space actually allocated in the pool for the storage resource: • For all thin-provisioned resources, this can be less than the sizeTotal attribute. For a thin-provisioned file system, this can be greater than or equal to the value of the sizeUsed attribute • For non-thin provisioned resources, this is approximately equal to the value of the sizeTotal attribute.
sizePreallocated	unsigned Integer[64(bytes)]	Space reserved from the pool by the storage resource, for future needs to make writes more efficient. The pool may be able to reclaim some of this if space is running low.
sizeAllocatedTotal	unsigned Integer[64(bytes)]	Total space used in the pool for the storage resource.
thinStatus	ThinStatusEnum	Indicates whether the storage resource is thin-provisioned, not thin-provisioned, or mixed.
advancedDedupStatus	DedupStatusEnum	Deduplication status for the storage resource.
dataReductionStatus	DataReductionStatusEnum	DataReduction status for the storage resource.
dataReductionSizeSaved	unsigned Integer[64(bytes)]	Storage resource saved space by data reduction (includes savings from compression and deduplication).
dataReductionPercent	unsigned Integer[16(percent)]	Data reduction percentage is the percentage of the data that does not consume storage - the savings due to data reduction. For example, if 1 TB of data is stored in 250 GB, the data reduction percentage is 75%. 75% data reduction percentage is equivalent to a 4:1 data reduction ratio.
dataReductionRatio	Float	Data reduction ratio. The data reduction ratio is the ratio between the size of the data and the amount of storage actually consumed. For example, 1TB of data consuming 250GB would have a ration of 4:1. A 4:1 data reduction ratio is equivalent to a 75% data reduction percentage.
esxFilesystemMajorVersion	ESXFilesystemMajorVersionEnum	(Applies to VMware VMFS storage resource type only.) VMFS major version.
esxFilesystemBlockSize	ESXFilesystemBlockSizeEnum	(Applies to VMware VMFS storage resource type only.) VMFS block size. Only applies to storage resources with VMFS major version 3.
snapSchedule	snapSchedule	Snapshot schedule for the storage resource, as defined by the snapSchedule This value is not set if the storage resource is not associated with a snapshot schedule.
isSnapSchedulePaused	Boolean	(Applies if the storage resource has an associated snap schedule.) Indicates whether the snapshot schedule for the storage resource is paused. Valid

		values are: • true - Snapshot schedule for the storage resource is paused. • false - Snapshot schedule for the storage resource is active.
relocationPolicy	TieringPolicyEnum	(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP tiering policy for the storage resource.
perTierSizeUsed	List<Integer>[64(bytes)]	Sizes of space allocations by the storage resource per tiers of the multi-tier storage pool. Multi-tier storage pools can be created on the system when the FAST VP license is installed.
blockHostAccess	List<blockHostAccess>	Host access permissions for a block storage resource types, as defined by the blockHostAccess resource type.
metadataSize	unsigned Integer[64(bytes)]	Size of the storage resource metadata.
metadataSizeAllocated	unsigned Integer[64(bytes)]	Size of pool space allocated for the storage resource metadata.
snapsSizeTotal	unsigned Integer[64(bytes)]	Size of the storage resource snapshots.
snapsSizeAllocated	unsigned Integer[64(bytes)]	Size of pool space allocated for storage resource snapshots.
snapCount	unsigned Integer[32]	Number of storage resource direct snapshots.
vmwareUUID	String	VMware UUID of the VVol datastore assigned by VMware ESXi hypervisor (Applies to VMware VVol datastore resources only.).
pools	List<pool>	List of pools associated with this storage resource. LUNs in a consistency group storage resource can be allocated from different pools.
isThinClone	Boolean	Indicates whether storage resource is a thin clone on not. • true - The storage resource is a thin clone. • false - The storage resource is not a thin clone.
defaultNode	NodeEnum	The storage processor that is the default owner of this LUN.
familyBaseStorageResource	storageResource	The Base Source Storage Resource. Applies only for Thin Clones.
parentSnap	snap	Source Snapshot. Applies only for Thin Clones.
originalParentStorageResource	storageResource	The Parent Source Storage Resource. Applies only for Thin Clones.
familySnapCount	unsigned Integer[32]	Total number of snapshots created in the resource Family, including all derivative snapshot objects. This attribute is not applicable for a Thin Clone
familyCloneCount	unsigned Integer[32]	Total number of thin clones created in the resource Family, including all derivative thin clones objects. This attribute is not applicable for a Thin Clone
nonBaseSizeAllocated	unsigned Integer[64(bytes)]	Total amount of pool space used by resource snapshots and thin clones. This attribute is not applicable for a Thin Clone
familySizeAllocatedTotal	unsigned Integer[64(bytes)]	Total amount of pool space reserved for the Storage Resource. This attribute is not applicable for a Thin Clone
nonBaseSize	unsigned Integer[64(bytes)]	Thin Clones and Snapshots space for the Storage Resource. This attribute is not applicable for a Thin Clone
esxMountProtocol	ESXMountProtocolEnum	(Applies to VMwareNFS storage resources only.) NFS protocol version to use on datastore registration on ESXi side.
datastores	List<datastore>	The datastores associated with the storageResource.
filesystem	filesystem	The filesystem associated with the storageResource.
hostGroupVmwareLUNs	List<hostGroupVmwareLUN>	The hostGroupVmwareLUNs associated with the storageResource.
hostVVolDatastore	List<hostVVolDatastore>	The hostVVolDatastores associated with the storageResource.
luns	List<lun>	The luns associated with the storageResource.
moves	List<moveSession>	The moveSessions associated with the storageResource.
virtualVolumes	List<virtualVolume>	The virtualVolumes associated with the storageResource.

Attributes for advancedDedupParameters

Advanced dedup settings for the storage resource.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
isAdvancedDedupEnabled	Boolean	Indicates whether advanced deduplication is enabled or disabled for the storage resource. Values are: • true - deduplication is enabled. • false - deduplication is disabled.

Attributes for blockHostAccessParam

Host access settings for changing host access of LUNs.

This resource type is embedded in the lunParameters embedded type.

Attribute	Type	Description
host	host	

		Host to grant access to LUN, as defined by host type.
accessMask	HostLUNAccessEnum	Host access mask.
hlu	unsigned Integer[16]	Host LUN Identifier for the host storage. This is the user specified host LUN ID when access the LUN. If not set, system will automatically generate with next available Host LUN ID.

Attributes for capabilityProfileParameters

Parameters used for creation/modification of a VVol Datastore.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
capProfile	capabilityProfile	CapabilityProfile to add to the VVol Datastore, as defined by the VVol Datastore resource type.
sizeTotal	unsigned Integer[64(bytes)]	Pool allocation size of required CapabilityProfile in required VVol container.

Attributes for cifsFilesystemParameters

Settings for a SMB (also known as CIFS) file system..

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
isCIFSSyncWritesEnabled	Boolean	Indicates whether the CIFS synchronous writes option is enabled for the file system. Values are: • true - CIFS synchronous writes option is enabled. • false - CIFS synchronous writes option is disabled.
isCIFSOpLocksEnabled	Boolean	Indicates whether opportunistic file locks are enabled for the file system. Values are: • true - CIFS opportunistic file locks are enabled. • false - CIFS opportunistic file locks are disabled.
isCIFSNotifyOnWriteEnabled	Boolean	Indicates whether the system generates a notification when the file system is written to. Values are: • true - System generates a notification when the file system is written to. • false - System does not generate a notification when the file system is written to.
isCIFSNotifyOnAccessEnabled	Boolean	Indicates whether the system generates a notification when a user accesses the file system. Values are: • true - System generates a notification when a user accesses the file system. • false - System does not generate a notification when a user accesses the file system.
cifsNotifyOnChangeDirDepth	unsigned Integer[32] [1..512]	Indicates the lowest directory level to which the enabled notifications apply, if any.

Attributes for cifsShareCreate

(Applies to SMB (also known as CIFS) file shares.) Parameters used for creating a CIFS share when creating or modifying a file system.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
path	String[1..1023]	Local path to a location within a file system. By default, the system creates a share to the root of the file system (top-most directory) at file system creation time. This path specifies the unique location of the file system on the storage system. CIFS shares allow you to create multiple network shares with the same local path. You can specify different host-side access controls for different users, while setting up network shares within the file system to access common content. If you want the CIFS network shares within the same file system to access different content, you must first create a share to the root of the file system. Then, you can connect from a Windows host, create additional directories from Windows, and create corresponding network shares using the REST API, Unisphere GUI, or Unisphere CLI.
name	String[1..80]	Name of the CIFS share unique to NAS server.
cifsServer	cifsServer	CIFS server to use for CIFS share creation, as defined by the cifsServer type.
cifsShareParameters	cifsShareParameters	CIFS share settings, as defined by the cifsShareParameters type.

Attributes for cifsShareDelete

Parameters used for deleting a CIFS share when modifying a file system.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
cifsShare	cifsShare	CIFS share to delete, as defined by the cifsShare type.

Attributes for cifsShareModify

Parameters used for modifying a CIFS share when modifying a file system.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
cifsShare	cifsShare	CIFS share to modify, as defined by the cifsShare type.
cifsShareParameters	cifsShareParameters	CIFS share settings, as defined by the cifsShareParameters type.

Attributes for cifsShareParameters

Settings for a CIFS share.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
description	String[..255]	CIFS share description.
isReadOnly	Boolean	Indicates whether the CIFS share is read-only. Values are: • true - CIFS share is read-only. • false - CIFS share is read-write.
isEncryptionEnabled	Boolean	Indicates whether CIFS encryption for Server Message Block (SMB) 3.0 is enabled for the CIFS share. Values are: • true - CIFS encryption for SMB 3.0 is enabled. • false - CIFS encryption for SMB 3.0 is disabled.
isContinuousAvailabilityEnabled	Boolean	Indicates whether continuous availability for SMB 3.0 is enabled for the CIFS share. Values are: • true - Continuous availability for SMB 3.0 is enabled for the CIFS share. • false - Continuous availability for SMB 3.0 is disabled for the CIFS share.
isACEEnabled	Boolean	Indicates whether the CIFS share access-level permissions are enabled. Values are: • true - CIFS share access-level permissions are enabled. • false - CIFS share access-level permissions are disabled.
addACE	List<cifsShareACE>	Users, domain users, or group Security Identifiers (SIDs), and associated access-level permissions, to add to the access list, as defined by cifsShareACE resource type.
deleteACE	List<String>	Users, domain users, or group Security Identifiers (SIDs) to remove from the access list.
isABEEnabled	Boolean	Enumerate file with read access and directories with list access in folder listings. Values are: • true - Enumerating is enabled. • false - Enumerating is disabled.
isBranchCacheEnabled	Boolean	Branch Cache optimizes traffic between the NAS server and Branch Office Servers. Values are: • true - Branch Cache is enabled. • false - Branch Cache is disabled.
offlineAvailability	CifsShareOfflineAvailabilityEnum	Offline Files store a version of the shared resources on the client computer in the file system cache, a reserved portion of disk space, which the client computer can access even when it is disconnected from the network.
umask	String	The default UNIX umask for new files created on the share.
defaultAccess	CifsShareDefaultAccessEnum	Default access level for all hosts accessing the CIFS share.
noAccessHosts	List<host>	Hosts with no access to the CIFS share or its snapshots, as defined by the host resource type.
readWriteHosts	List<host>	Hosts with read-write access to the CIFS share and its snapshots, as defined by the host resource type.
noAccessHostsString	String	Hosts with no access to the CIFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readWriteHostsString	String	Hosts with read-write access to the CIFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
exportOption	unsigned Integer[64][0..3]	Specifies the bitmask of various options of the CIFS share. Values are: • 0x0001 - hostString - if set, the access to the NFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.

Attributes for compressionParameters

Inline compression settings for the storage resource.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
isCompressionEnabled	Boolean	Indicates whether inline compression is enabled or disabled for the storage resource. Values are: • true - (default)inline compression is enabled. • false - inline compression is disabled.

Attributes for dataReductionParameters

Data reduction settings for the storage resource.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
isDataReductionEnabled	Boolean	Indicates whether data reduction is enabled or disabled for the storage resource. Values are: • true - data reduction is enabled. • false - (default)data reduction is disabled.

Attributes for fastVPParameters

FAST VP settings for the storage resource.
(Applies if FAST VP is supported on the system and the corresponding license is installed.)
This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
tieringPolicy	TieringPolicyEnum	FAST VP tiering policy for the storage resource.

Attributes for filesystemParameters

Settings for a file system.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
pool	pool	Storage pool to create the file system. The pool is required in creation requests and must not be passed in modification requests.
nasServer	nasServer	NAS server that provides network connectivity to the share from the hosts. The NAS server parameter is required in creation request and must not be passed in modification requests.
supportedProtocols	FSSupportedProtocolEnum	(Applies to create operations only.) Sharing protocols supported by the file system.
flrVersion	FLRVersionEnum	Indicates which File Level Retention (FLR) version is enabled on the file system. Values are: • 0 - FLR is OFF on the file system. • 1 - Enterprise is enabled on the file system. • 2 - Compliance is enabled on the file system.
flrMinRetention	DateTime[Interval]	The shortest period for which files on an FLR-enabled file system can be locked and protected from deletion, the format is: h+:mm:ss[.sss]. The value plus the current date should be before date 2106-Feb-07.
flrDefaultRetention	DateTime[Interval]	The default retention period is used in an FLR-enabled file system when a file is locked and a retention period is not specified, the format is: h+:mm:ss[.sss]. The value plus the current date should be before date 2106-Feb-07.
flrMaxRetention	DateTime[Interval]	The longest period for which files on an FLR-enabled file system can be locked and protected from deletion, the format is: h+:mm:ss[.sss]. The value should be bigger than 0. The value plus the current date should be before date 2106-Feb-07.
isFlrAutoLockEnabled	Boolean	Users can specify whether to automatically lock files in an FLR-enabled file system, as well as a policy interval for how long to wait after files are modified before the files are automatically locked. When enabled, auto-locked files are set with the default retention period value. This attribute indicates whether automatic lock is enabled on the file system. Values are: • true - automatic lock is enabled on the file system. • false - automatic lock is disabled on the file system.
isFlrAutoDeleteEnabled	Boolean	Users can specify whether to automatically delete locked files from an FLR-enabled file system once their retention periods have expired. This value indicates whether automatic delete is enabled on the file system. Values are: • true - automatic delete is enabled on the file system. • false - automatic delete is disabled on the file system.
flrAutoLockDelay	DateTime[Interval]	Indicates how long to wait after files are modified before the files are automatically locked. The default value is 1 hour.
errorThreshold	unsigned Integer[16]	Percentage of high threshold of occupied space for alert in the file system.
warningThreshold	unsigned Integer[16]	Percentage of medium threshold of occupied space for alert in the file system.
infoThreshold	unsigned Integer[16]	Percentage of low threshold of occupied space for alert in the file system.
isThinEnabled	Boolean	(Applies to create operations only.) Indicates whether to enable thin provisioning for file system. Values are: • true - Enable thin provisioning. • false - Disable thin provisioning. **Note:** If you enable thin provisioning for a file system, you cannot disable it later.
isDataReductionEnabled	Boolean	Indicates whether to enable data reduction for the file system. Values are: • true - Enable data reduction(default) • false - Disable data reduction
isAdvancedDedupEnabled	Boolean	Indicates whether to enable advanced dedup for the file system. Values are: • true - Enable advanced dedup • false - Disable advanced dedup(default)
size	unsigned Integer[64(bytes)]	Size of the file system.
hostIOSize	HostIOSizeEnum	Typical write I/O size from the host to the file system.
sizeAllocated	unsigned Integer[64(bytes)]	Allocated size of the file system.
minSizeAllocated	unsigned Integer[64(bytes)]	Minimum size allocated of the file system.
fastVPParameters	fastVPParameters	(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP settings for the file system, as defined by the fastVPParameters.
isCacheDisabled	Boolean	Indicates whether caching is disabled. Values are: • true - Caching is disabled. • false - Caching is enabled.
accessPolicy	AccessPolicyEnum	Access policy.
folderRenamePolicy	FSRenamePolicyEnum	File system folder rename policies. These policy choices control whether directory can be renamed from NFS or SMB clients if at least one file is opened in the directory or in one of its children directory.

lockingPolicy	FSLockingPolicyEnum	Locking policy.
poolFullPolicy	ResourcePoolFullPolicyEnum	Behavior to follow when pool is full and a write to this filesystem is attempted. Values are: • Delete_All_Snaps - All snaps to the File System will be marked for deletion to free up space. • Fail_Writes - Writes to the File System will fail.
fileEventSettings	fileEventSettings	Indicates whether File Event Service is enabled for some protocols on the filesystem.

Attributes for lunAdd

Parameters used for adding a LUN to a Consistency group.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
lun	lun	Existing LUN to add to the Consistency group. This LUN should not belong to any other Consistency group.

Attributes for lunCreate

LUN parameters used for creating a LUN when creating or modifying a Consistency group.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
name	String[1..63]	LUN name unque to the storage system.
description	String[0..170]	LUN description.
lunParameters	lunParameters	(Required) Settings for the LUN, as defined by the lunParameters resource type.

Attributes for lunDelete

Parameters used for deleting a LUN when modifying a Consistency group.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
lun	lun	LUN to remove from the Consistency group and completely delete from the storage system. To remove the LUN from the Consistency group without deletion from the storage system put the LUN into lunRemove object.
forceSnapDeletion	Boolean	Indicates whether to delete all LUN snapshots along with the LUN. Values are: • true - Delete all LUN snapshots. • false - Do not delete LUN snapshots.

Attributes for lunModify

Parameters used for modifying a LUN when modifying a Consistency group.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
lun	lun	LUN to modify.
name	String[1..63]	New name of the LUN unique to the storage system.
description	String[0..170]	New LUN description.
lunParameters	lunParameters	Settings for the LUN, as defined by the lunParameters.

Attributes for lunParameters

Settings for a LUN.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
pool	pool	(Applies only to create requests.) Storage pool from which to create the LUN.
isThinEnabled	Boolean	(Applies only for create requests.) Indicates whether to enable thin provisioning for the LUN. Values are: • true - Enable thin provisioning. • false - Disable thin provisioning. **Note:** If you enable thin provisioning for a LUN, you cannot disable it later.
isDataReductionEnabled	Boolean	Indicates whether to enable data reduction for the LUN. Values are: • true - Enable data reduction(default) • false - Disable data reduction
isAdvancedDedupEnabled	Boolean	Indicates whether to enable advanced deduplication for the LUN. It can only be enabled on the all flash high end platforms and only when the data reduction is enabled. If data reduction is disable, this is disabled automatically. Deduplicated data will remain as is even after advanced deduplication is disabled. Values are: • true - Enable advanced deduplication. • false - Disable advanced deduplication(default).
size	unsigned Integer[64(bytes)]	LUN size. The size is required in creation requests. In the modification requests the size parameter can be greater than the current LUN size in this case the LUN is expanded. To shrink the LUN size this parameter is less than the current LUN size. To allow shrink operation the parameter forceShrink must be set true.
fastVPParameters	fastVPParameters	(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP settings for the LUN, as defined by the fastVPParameters.
defaultNode	NodeEnum	

		Storage Processor (SP) that owns the LUN. If not specified, the system chooses the default owner automatically.
hostAccess	List<blockHostAccessParam>	Host access settings for the LUN, as defined by the blockHostAccessParam embedded resource type. Replaces the existing blockHostAccess list. May not be used with add/remove args.
addHostAccess	List<blockHostAccessParam>	One or more hosts, with access settings, to be added to the access list for the LUN. May not be used with hostAccess args. If used with removeHostAccess then removeHostAccess is applied first. The hosts in this list will be allowed to access the LUN with the specified access settings. Any specified host already with access will be replaced with the new access settings inluding access level and hlu.
removeHostAccess	List<host>	Hosts whose access to the LUN and snapshots should be removed, as defined by the host. May not be used with hostAccess args. The hosts in this list should already be in the access list for the luns.
ioLimitParameters	ioLimitParameters	IO limit settings for the LUN, as defined by the ioLimitParameters.
migrationState	DCMigrationStateEnum	Migration state for Destination PowerStore Orchestration.

Attributes for lunRemove

Parameters used for removing a LUN from a Consistency group.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
lun	lun	LUN to remove from the Consistency group. The LUN removed from Consistency group is not deleted from the storage system and simply becomes a standalone LUN not associated with any Consistency group. A LUN removed from one Consistency group then can be added to another Consistency group. To also delete the LUN after removing it, use the deleteLun parameter instead.

Attributes for lunThinCloneCreate

Parameters used for creating a LUN Thin Clone.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
parentLun	lun	Parent LUN of Thin Clone.
name	String[1..63]	LUN Thin Clone name unique to the storage system.
description	String[0..170]	LUN Thin Clone description.
lunParameters	lunParameters	(Required) Settings for the LUN Thin Clone, as defined by the lunParameters resource type.

Attributes for nfsShareCreate

Parameters used for creating an NFS share when creating or modifying a file system.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
path	String[1..1023]	Local path to a location within the file system. With NFS, each share must have a unique local path. By default, the system creates a share to the root of the file system (top-most directory) at file system creation time. This path specifies the unique location of the file system on the storage system. Before you can create additional shares within an NFS shared folder, you must create directories within it from a Linux/UNIX host that is connected to the file system. After a directory has been created from a mounted host, you can create a corresponding share and set access permissions accordingly.
name	String[1..255]	Unique name of the NFS share.
nfsShareParameters	nfsShareParameters	Common NFS share attributes, as defined by the nfsShareParameters resource type.

Attributes for nfsShareDelete

Parameters used for deleting an NFS share when modifying a file system.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
nfsShare	nfsShare	NFS share to delete.

Attributes for nfsShareModify

Parameters used for modifying an NFS share when modifying a file system.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
nfsShare	nfsShare	NFS share to modify.
nfsShareParameters	nfsShareParameters	NFS share settings, as defined by the nfsShareParameters resource type.

Attributes for nfsShareParameters

Settings for an NFS share.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
description	String[..255]	NFS share description.
isReadOnly	Boolean	Indicates whether the NFS share is read-only. Values are:

		• true - NFS share is read-only. • false - NFS share is read-write.
defaultAccess	NFSShareDefaultAccessEnum	Default access level for all hosts accessing the NFS share.
minSecurity	NFSShareSecurityEnum	Minimal security level that must be provided by a client to mount the NFS share.
nfsOwnerUsername	String	(Applies to NFS shares of VMware NFS storage resources.) Default owner of the NFS share associated with the datastore. Required if secure NFS enabled. Attribute minSecurity should be set to Kerberos value. For NFSv3 or NFSv4 without Kerberos, the default owner is root.
noAccessHosts	List<host>	Hosts with no access to the NFS share or its snapshots, as defined by the host resource type. Replaces the existing no-access hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
readOnlyHosts	List<host>	Hosts with read-only access to the NFS share and its snapshots, as defined by the host resource type. Replaces the existing read-only hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
readWriteHosts	List<host>	Hosts with read-write access to the NFS share and its snapshots, as defined by the host resource type. Replaces the existing read-write hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
readOnlyRootAccessHosts	List<host>	Hosts with read-only root access to the NFS share and its snapshots, as defined by the host resource type. Replaces the existing read-only root hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
rootAccessHosts	List<host>	Hosts with read-write root access to the NFS share and its snapshots, as defined by the host resource type. Replaces the existing read-write root hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
addNoAccessHosts	List<host>	Hosts to be added with no access to the NFS share or its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to no-access list.
addReadOnlyHosts	List<host>	Hosts to be added with read-only access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-only list.
addReadWriteHosts	List<host>	Hosts to be added with read-write access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-write list.
addReadOnlyRootAccessHosts	List<host>	Hosts to be added with read-only root access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-only root list.
addRootAccessHosts	List<host>	Hosts to be added with read-write root access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-write root list.
removeHosts	List<host>	Hosts to be restored with default access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list should already be in one of the access lists. It removes the host from existing list.
noAccessHostsString	String	Hosts with no access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing no access hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
readOnlyHostsString	String	Hosts with read-only access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-only hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
readWriteHostsString	String	Hosts with read-write access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-write hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
readOnlyRootHostsString	String	Hosts with read-only root access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-only root hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.

readWriteRootHostsString	String	Hosts with read-write root access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-write root hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
addNoAccessHostsString	String	Hosts to be added with no access to the NFS share or its snapshots, defined as hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to no-access list.
addReadOnlyHostsString	String	Hosts to be added with read-only access to the NFS share or its snapshots, defined as hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to read-only list.
addReadWriteHostsString	String	Hosts to be added with read-write access to the NFS share or its snapshots, defined as hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to read-write list.
addReadOnlyRootHostsString	String	Hosts to be added with read-only root access to the NFS share or its snapshots, defined as hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to read-only root list.
addReadWriteRootHostsString	String	Hosts to be added with read-write root access to the NFS share or its snapshots, defined as hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to read-write root list.
removeHostsString	String	Hosts to be restored with default access to the NFS share or its snapshots, defined as hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list should already be in one of the access lists. It removes the host from existing list.
anonymousUID	unsigned Integer[32]	Specifies the user ID of the anonymous account.
anonymousGID	unsigned Integer[32]	Specifies the group ID of the anonymous account.
exportOption	unsigned Integer[64]	Specifies the bitmask of various options of the NFS share. Values are: • 0x0001 - hostString - if set, the access to the NFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. To switch between the 2 modes, clear all existing host access first, or in the same request. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.

Attributes for replicationParameters

Replication settings for the storage resource.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
isReplicationDestination	Boolean	Indicates whether the storage resource is a replication destination. Values are: • true - Storage resource is a replication destination. • false - (Default) Storage resource is not a replication destination.

Attributes for snapScheduleParameters

Snapshot schedule settings for the storage resource.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
snapSchedule	snapSchedule	Snapshot schedule assigned to the storage resource, as defined by the snapSchedule type.
isSnapSchedulePaused	Boolean	Indicates whether the assigned snapshot schedule is paused. Values are: • true - Assigned snapshot schedule is paused. • false - Assigned snapshot schedule is not paused.

Attributes for storageResourceDelete

Parameters used for deleting a storage resource when deleting a batch of storage resources.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
storageResource	storageResource	Storage resource to completely delete from the storage system.
forceSnapDeletion	Boolean	Indicates whether to delete a storage resource's snapshots along with the storage resource. . Values are: • true - Delete all the storage resource's snapshots. • false - Do not delete the storage resource's snapshots.
forceVVolsDeletion	Boolean	

		Indicates whether to delete all VVols of the VVol datastore along with the storage resource. Values are: • true - Delete all VVols of the VVol datastore. • false - Do not delete all VVols of the VVol datastore.

Attributes for vmwareIscsiParameters

Settings for an iSCSI LUN used as a VMWare VMFS datastore.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
majorVersion	ESXFilesystemMajorVersionEnum	VMFS major version.
blockSize	ESXFilesystemBlockSizeEnum	VMFS block size.

Attributes for vmwareNfsParameters

Settings for an NFS Share used as a VMware NFS datastore.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
esxMountProtocol	ESXMountProtocolEnum	ESXi Mount Protocol version.

Attributes for vvolDatastoreCapabilityProfilesParameters

Capability profile parameters used for creation/modification of a VVol Datastore.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
addCapabilityProfile	List<capabilityProfileParameters>	CapabilityProfiles to add to the VVol datastore, as defined by the VVol Datastore resource type.
modifyCapabilityProfile	List<capabilityProfileParameters>	CapabilityProfiles, used by the VVol Datastore, support of that should be modified.
removeCapabilityProfile	List<capabilityProfile>	CapabilityProfiles to remove from the VVol datastore, as defined by the VVol Datastore resource type.

Query all members of the storageResource collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/storageResource/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the storageResource collection.

Query a specific storageResource instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/storageResource/<id> where <id> is the unique identifier of the storageResource instance to query. Or GET /api/instances/storageResource/name:<value> where <value> is the name of the storageResource instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific storageResource instance.

CreateLun operation

Create a standalone LUN.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageResource/action/createLun
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateLun operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..63]	Required	Name of the standalone LUN unique to the storage system.
description	in	String[..170]	Optional	Description of the LUN.
replicationParameters	in	replicationParameters	Optional	Replication settings for the LUN, as defined by the replicationParameters resource type.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the LUN, as defined by the snapScheduleParameters.
lunParameters	in	lunParameters	Required	LUN settings for the LUN, as defined by

				the lunParameters. **Note:** The following lunParameters arguments are required for this operation: • pool • size All other lunParameters arguments are optional.
storageResource	out	storageResource	N/A	Storage resource instance that represents the new LUN, as defined by the storageResource. This is an output parameter. **Note:** If this method is called asynchronously then the LUN identified by this output parameter may not yet exist on the system after the call of createLun method.

ModifyLun operation

Modify a standalone LUN.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/modifyLun where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/modifyLun where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyLun operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..63]	Optional	Name of the LUN unique to the storage system.
description	in	String[..170]	Optional	Description of the LUN.
replicationParameters	in	replicationParameters	Optional	Replication settings for the LUN, as defined by the replicationParameters.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the LUN, as defined by the snapScheduleParameters.
lunParameters	in	lunParameters	Optional	LUN settings for the LUN, as defined by the lunParameters. **Note:** Do not pass the following lunParameters arguments to this operation, because their values cannot be changed: • pool • isThinEnabled All other lunParameters arguments are optional.

CreateConsistencyGroup operation

Create a consistency group (former LUN group).

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageResource/action/createConsistencyGroup
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateConsistencyGroup operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..95]	Required	Name of the consistency group unique to the storage system.
description	in	String[..255]	Optional	Description of the consistency group.
replicationParameters	in	replicationParameters	Optional	Replication settings for the consistency group, as defined by the replicationParameters.
advancedDedupParameters	in	advancedDedupParameters	Optional	Advanced deduplication settings for the LUN group, as defined by the advancedDedupParameters.
dataReductionParameters	in	dataReductionParameters	Optional	Data reduction settings for the LUN group, as defined by the dataReductionParameters resource type.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the consistency group, as defined by the snapScheduleParameters.
fastVPParameters	in	fastVPParameters	Optional	(Applies if FAST VP is supported on the system and the

				corresponding license is installed.) FAST VP settings for the consistency group, as defined by the fastVPParameters.
blockHostAccess	in	List<blockHostAccessParam>	Optional	Host access settings for the consistency group, as defined by the blockHostAccess.
lunCreate	in	List<lunCreate>	Optional	LUN to create and add to the consistency group, as defined by the lunCreate. **Note:** The following lunCreate arguments are required for this operation: • name • lunParameters.pool • lunParameters.size All other lunCreate arguments are optional.
lunAdd	in	List<lunAdd>	Optional	Existing LUNs to add to the consistency group, as defined by the lunAdd. These LUNs should not belong to the other consistency group. **Note:** The lunAdd.lun argument is required for this operation.
storageResource	out	storageResource	N/A	Storage resource instance that represents the new consistency group, as defined by the storageResource. **Note:** If this method is called asynchronously then the consistency group identified by this output parameter may yet not exist on the system after the call of createConsistencyGroup method.

ModifyConsistencyGroup operation

Modify a consistency group.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/modifyConsistencyGroup where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/modifyConsistencyGroup where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyConsistencyGroup operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..95]	Optional	Name of the consistency group unique to the storage system.
description	in	String[..255]	Optional	Description of the consistency group.
replicationParameters	in	replicationParameters	Optional	Replication settings for the consistency group, as defined by the replicationParameters.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot protection schedule settings for the consistency group, as defined by the snapScheduleParameters.
fastVPParameters	in	fastVPParameters	Optional	(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP settings for the consistency group, as defined by the fastVPParameters.
advancedDedupParameters	in	advancedDedupParameters	Optional	Advanced deduplication settings for the LUN group, as defined by the advancedDedupParameters.
dataReductionParameters	in	dataReductionParameters	Optional	Data reduction settings for the LUN group, as defined by the dataReductionParameters resource type.
blockHostAccess	in	List<blockHostAccessParam>	Optional	Host access settings for the consistency group, as defined by the blockHostAccess resource type. Replaces existing blockHostAccess list. May not be used with add/remove args.
addBlockHostAccess	in	List<blockHostAccessParam>	Optional	One or more hosts, with access settings, to add to the access list for the consistency group. May not be used with blockHostAccess args. If used with removeBlockHostAccess then removeBlockHostAccess is applied first. The hosts will be allowed to access each LUN in the consistency group with the specified access settings. Any specified host already with other access will be replaced with the new access level.
removeBlockHostAccess	in	List<host>	Optional	Hosts whose access to the consistency group should be removed. May not be used with blockHostAccess args. The hosts in this list should already be in the access list for all the luns in the consistency group.
lunCreate	in	List<lunCreate>	Optional	LUN to create and add to the consistency

				group, as defined by the lunCreate. **Note:** The following lunCreate arguments are required for this operation: • name • lunParameters.pool • lunParameters.size All other lunCreate arguments are optional.
lunModify	in	List<lunModify>	Optional	LUN to modify in the consistency group, as defined by the lunModify. **Notes:** • The lunModify.lun argument is required for this operation. • Do not pass the lunModify.lunParameters.pool, or lunModify.lunParameters.isThinEnabled arguments to this operation, because their values cannot be changed. • All other lunModify arguments are optional.
lunAdd	in	List<lunAdd>	Optional	Existing LUNs to add to the consistency group, as defined by the lunAdd. These LUNs should not belong to the other consistency group. **Note:** The lunAdd.lun argument is required for this operation.
lunRemove	in	List<lunRemove>	Optional	LUNs to remove from the consistency group, as defined by the lunRemove. The LUNs are not deleted from the storage system when you remove them from the consistency group. The LUN removed from consistency group becomes standalone LUN. **Note:** The lunRemove.lun argument is required for this operation.
lunDelete	in	List<lunDelete>	Optional	LUNs to remove from the consistency group and completely delete from the storage system. **Note:** The lunDelete.lun argument is required for this operation.

CreateVmwareLun operation

Create a VMware VMFS datastore.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageResource/action/createVmwareLun
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateVmwareLun operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..62]	Required	Name of the VMware VMFS datastore unique to the storage resource.
description	in	String[..170]	Optional	Description of the VMware VMFS datastore.
replicationParameters	in	replicationParameters	Optional	Replication settings for the VMware VMFS datastore, as defined by the replicationParameters.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the VMware VMFS datastore, as defined by the snapScheduleParameters.
vmwareIscsiParameters	in	vmwareIscsiParameters	Optional	VMware VMFS settings for the VMFS datastore, as defined by the vmwareIscsiParameters.
lunParameters	in	lunParameters	Required	LUN settings for the VMware VMFS datastore, as defined by the lunParameters. **Note:** The following lunParameters arguments are required for this operation: • pool • size All other lunParameters arguments are optional.
storageResource	out	storageResource	N/A	Storage resource instance that represents the new VMware VMFS datastore, as defined by the storageResource. **Note:** If this method is called asynchronously then the VMware VMFS datastore identified by this output parameter may not yet exist on the system after the call of createVmwareLun method.

ModifyVmwareLun operation

Modify a VMware VMFS datastore.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/modifyVmwareLun

	where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/modifyVmwareLun where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyVmwareLun operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..62]	Optional	name of the VMware VMFS datastore unique to the system.
description	in	String[..170]	Optional	Description of the VMware VMFS datastore.
replicationParameters	in	replicationParameters	Optional	Replication settings for the VMware VMFS datastore, as defined by the replicationParameters.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the VMware VMFS datastore, as defined by the snapScheduleParameters.
vmwareIscsiParameters	in	vmwareIscsiParameters	Optional	VMware VMFS settings for the VMFS datastore, as defined by the vmwareIscsiParameters.
lunParameters	in	lunParameters	Optional	LUN settings for the VMware VMFS datastore, as defined by the lunParameters. **Note:** Do not pass the following lunParameters arguments to this operation, because their values cannot be changed: • pool • isThinEnabled All other lunParameters arguments are optional.

CreateVmwareNfs operation

Create a VMware NFS datastore.

Note: Before creating a VMware NFS datastore, at least one NAS server must exist on the storage system.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageResource/action/createVmwareNfs
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateVmwareNfs operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..95]	Required	Unique name of the VMware NFS datastore.
description	in	String[..255]	Optional	Description of the VMware NFS datastore.
replicationParameters	in	replicationParameters	Optional	Replication settings for the VMware NFS datastore, as defined by the replicationParameters.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the VMware NFS datastore, as defined by the snapScheduleParameters.
fsParameters	in	filesystemParameters	Required	File system settings for the VMware NFS datastore, as defined by the filesystemParameters. **Note:** The following fsParameters arguments are required for this operation: • pool • nasServer • size All other fsParameter arguments are optional.
nfsShareParameters	in	nfsShareParameters	Optional	NFS share settings for the VMware NFS datastore, as defined by the nfsShareParameters.
vmwareNfsParameters	in	vmwareNfsParameters	Optional	
storageResource	out	storageResource	N/A	Storage resource instance that represents the new VMware NFS datastore, as defined by the storageResource. **Note:** If this method is called asynchronously then the VMware NFS datastore identified by this output parameter may not yet exist on the system after the call of createVmwareNfs method.

ModifyVmwareNfs operation

Modify a VMware NFS datastore.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/modifyVmwareNfs where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/modifyVmwareNfs where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyVmwareNfs operation

Argument	In/ out	Type	Required?	Description
description	in	String[..255]	Optional	Description of the VMware NFS datastore.
replicationParameters	in	replicationParameters	Optional	Replication parameters for the VMware NFS datastore, as defined by the replicationParameters.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the VMware NFS datastore, as defined by the snapScheduleParameters.
fsParameters	in	filesystemParameters	Optional	File system settings for the VMware datastore, as defined by the filesystemParameters. **Note:** Do not pass the following filesystemParameters to this operation, because their values cannot be changed: • pool • nasServer • supportedProtocols • isFLREnabledarguments
nfsShareParameters	in	nfsShareParameters	Optional	NFS share settings for the VMware NFS datastore, as defined by the nfsShareParameters.
vmwareNfsParameters	in	vmwareNfsParameters	Optional	

CreateFilesystem operation

Create a file system.

Note: Before creating a file system, at least one NAS server must exist on the storage system.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageResource/action/createFilesystem
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateFilesystem operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..95]	Required	Name of the file system. This name must be unique within the associated NAS server.
description	in	String[..255]	Optional	File system description.
replicationParameters	in	replicationParameters	Optional	Replication settings for the file system, as defined by the replicationParameters.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the file system, as defined by the snapScheduleParameters.
fsParameters	in	filesystemParameters	Required	File system settings, as defined by the filesystemParameters. **Note:** The following filesystemParameters arguments are required: • pool • nasServer • size All other filesystemParameters arguments are optional.
cifsFsParameters	in	cifsFilesystemParameters	Optional	CIFS file system settings, as defined by the cifsFsParameters.
nfsShareCreate	in	List<nfsShareCreate>	Optional	Parameters used for creating NFS shares in the file system, as defined by the nfsShareCreate. **Note:** The following nfsShareCreate arguments are required for this operation: • path • name

				All other nfsShareCreate arguments are optional.
cifsShareCreate	in	List<cifsShareCreate>	Optional	Parameters used for creating CIFS shares in the file system, as defined by the cifsShareCreate. **Note:** The following cifsShareCreate arguments are required for this operation: • path • name • cifsServer All other cifsShareCreate arguments are optional.
ioLimitParameters	in	ioLimitParameters	Optional	The IO limit policy that is applied to this filesystem.
storageResource	out	storageResource	N/A	Storage resource instance that represents the new file system, as defined by the storageResource. **Note:** If this method called asynchronously then the file system identified by this output parameter may not yet exist on the system after the call of createFilesystem method.

ModifyFilesystem operation

Modify a file system.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/modifyFilesystem where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/modifyFilesystem where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyFilesystem operation

Argument	In/ out	Type	Required?	Description
description	in	String[..255]	Optional	File system description.
replicationParameters	in	replicationParameters	Optional	Replication settings for the file system, as defined by the replicationParameters.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot protection schedule settings for the file system, as defined by the snapScheduleParameters.
fsParameters	in	filesystemParameters	Optional	File system settings for the file system, as defined by the fsParameters. **Note:** Do not pass the following filesystemParameters arguments to this operation, because their values cannot be changed: • pool • nasServer • supportedProtocols • isFLREnabled All other fsParameters arguments are optional.
cifsFsParameters	in	cifsFilesystemParameters	Optional	CIFS file system settings, as defined by the cifsFilesystemParameters.
nfsShareCreate	in	List<nfsShareCreate>	Optional	Parameters used for creating NFS shares in the file system, as defined by the nfsShareCreate. **Note:** The following nfsShareCreate arguments are required for this operation: • path • name All other nfsShareCreate arguments are optional.
nfsShareModify	in	List<nfsShareModify>	Optional	Parameters used for modifying NFS shares in the file system, as defined by the nfsShareModify. **Note:** The nfsShareModify.nfsShare argument is required for this operation. All other nfsShareModify arguments are optional.
nfsShareDelete	in	List<nfsShareDelete>	Optional	Parameters used for deleting an NFS share in the file system, as defined by the nfsShareDelete. **Note:** The nfsShareDelete nfsShare argument is required for this operation.
cifsShareCreate	in	List<cifsShareCreate>	Optional	Parameters used for creating a CIFS share in the file system, as defined by the cifsShareCreate. **Note:** The following cifsShareCreate nfsShare arguments are required for this operation: • path • name • cifsServer

				All other cifsShareCreate argument values are optional.
cifsShareModify	in	List<cifsShareModify>	Optional	Parameters used for modifying CIFS shares in the file system, as defined by the cifsShareModify. **Note:** The cifsShareModify.cifsShare argument is required for this operation. All other cifsShareModify arguments are optional.
cifsShareDelete	in	List<cifsShareDelete>	Optional	Parameters used for deleting CIFS shares in the file system, as defined by the cifsShareDelete. **Note:** The cifsShareDelete.cifsShare argument is required for this operation.
ioLimitParameters	in	ioLimitParameters	Optional	The IO limit policy that is applied to this filesystem.

Delete operation

Delete a storage resource. If this method is called asynchronously then the storage resource may still exist after the call of delete() method.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/storageResource/<id> where <id> is the unique identifier of the storageResource instance to delete. Or DELETE /api/instances/storageResource/name:<value> where <value> is the name of the storageResource instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
forceSnapDeletion	in	Boolean	Optional	Indicates whether to delete a storage resource's snapshots along with the storage resource. Values are: • true - Delete the storage resource's snapshots. • false - Do not delete the storage resource's snapshots.
forceVvolDeletion	in	Boolean	Optional	

CreateVVolDatastore operation

Create a VVol datastore.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageResource/action/createVVolDatastore
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateVVolDatastore operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..63]	Required	Unique name of the VVol datastore.
vvolDatastoreType	in	VVolDatastoreTypeEnum	Required	VVol datastore type.
description	in	String[..255]	Optional	Description of the VVol datastore.
hosts	in	List<host>	Optional	The list of hosts that allowed to access the VVol datastore.
vvolDatastoreCapabilityProfilesParameters	in	vvolDatastoreCapabilityProfilesParameters	Optional	VVol datastore capability profiles parameters, as defined by the vvolDatastoreCapabilityProfilesParameters.
storageResource	out	storageResource	N/A	Storage resource instance that represents the new VVol datastore, as defined by the storageResource. **Note:** If this method is called asynchronously then the VVol datastore identified by this output parameter may not yet exist on the system after the call of createVVolDatastore() method.

ModifyVVolDatastore operation

Modify a VVol datastore.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/modifyVVolDatastore where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/modifyVVolDatastore where <value> is the name of the storageResource instance.

Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyVVolDatastore operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..63]	Optional	Unique name of the VVol datastore.
description	in	String[..255]	Optional	Description of the VVol datastore.
hosts	in	List<host>	Optional	The list of hosts that are allowed to access the VVol datastore. Replaces the existing hosts with access. May not be used with add/remove args.
addHosts	in	List<host>	Optional	The list of hosts to be added that are allowed to access the VVol datastore. May not be used with hosts args. If used with removeHosts then removeHosts is applied first.
removeHosts	in	List<host>	Optional	The list of hosts to be removed from those allowed to access the VVol datastore. May not be used with hosts args. The hosts in this list should already be in the access list.
force	in	Boolean	Optional	Specifies whether Virtual Volumes shall be unbound in this case, if host access is removed for some hosts that have associated protocol endpoints with bound virtual volumes.
vvolDatastoreCapabilityProfilesParameters	in	vvolDatastoreCapabilityProfilesParameters	Optional	VVol datastore capability profiles parameters, as defined by the vvolDatastoreCapabilityProfilesParameters.

EstimateReclaimbleSize operation

Estimate the reclaimable size of storage resource for shrink operation with a target size.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/estimateReclaimbleSize where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/estimateReclaimbleSize where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the EstimateReclaimbleSize operation

Argument	In/ out	Type	Required?	Description
targetSize	in	unsigned Integer[64(bytes)]	Required	The target size to shrink to.
reclaimableSize	out	unsigned Integer[64(bytes)]	N/A	The estimated reclaimable size.

CreateBulkStandaloneLuns operation

Create a number of standalone LUNs.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageResource/action/createBulkStandaloneLuns
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateBulkStandaloneLuns operation

Argument	In/ out	Type	Required?	Description
fastVPParameters	in	fastVPParameters	Optional	(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP settings of created standalone LUNs, as defined by the fastVPParameters.
blockHostAccess	in	List<blockHostAccessParam>	Optional	Host access settings for created standalone LUNs, as defined by the blockHostAccess.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for created standalone LUNs, as defined by the snapScheduleParameters.
replicationParameters	in	replicationParameters	Optional	Replication settings for created standalone LUNs, as defined by the replicationParameters.
lunCreate	in	List<lunCreate>	Required	LUN to create, as defined by the lunCreate.

				Note: The following lunCreate arguments are required for this operation: • name • lunParameters.pool • lunParameters.size All other lunCreate arguments are optional.
storageResources	out	List<storageResource>	N/A	Storage resource instances that represents the new standalone LUNs, as defined by the storageResource. **Note:** If this method is called asynchronously then the LUNs identified by this output parameter may yet not exist on the system after the call of createBulkStandaloneLuns method.

CreateLunThinClone operation

Create a Standalone LUN Thin Clone.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/createLunThinClone where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/createLunThinClone where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateLunThinClone operation

Argument	In/ out	Type	Required?	Description
snap	in	snap	Required	The reference to the source snapshot object.
name	in	String[1..63]	Required	Name for the new Thin Clone, unique to the system.
description	in	String[..170]	Optional	Description of the Thin Clone.
replicationParameters	in	replicationParameters	Optional	Replication settings for the Thin Clone.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the Thin Clone.
lunParameters	in	lunParameters	Optional	LUN settings for the Thin clone. Only hostAccess and ioLimitParameters settings are applicable for Thin Clones.
storageResource	out	storageResource	N/A	Storage resource instance that represents the new Thin Clone.

CreateVmwareLunThinClone operation

Create a VMware VMFS datastore Thin Clone.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/createVmwareLunThinClone where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name: <value>/action/createVmwareLunThinClone where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateVmwareLunThinClone operation

Argument	In/ out	Type	Required?	Description
snap	in	snap	Required	The reference to the source snapshot object.
name	in	String[1..63]	Required	Name for the new Thin Clone, unique to the system.
description	in	String[..170]	Optional	Description of the Thin clone.
replicationParameters	in	replicationParameters	Optional	Replication settings for the Thin Clone.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the Thin Clone.
lunParameters	in	lunParameters	Optional	LUN settings for the Thin Clone. Only hostAccess and ioLimitParameters settings are applicable for Thin Clones.
storageResource	out	storageResource	N/A	Storage resource instance that

				represents the new Thin Clone.

CreateConsistencyGroupThinClone operation

Create a Consistency Group Thin Clone.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/createConsistencyGroupThinClone where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name: <value>/action/createConsistencyGroupThinClone where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateConsistencyGroupThinClone operation

Argument	In/ out	Type	Required?	Description
snap	in	snap	Required	The reference to the source snapshot object.
name	in	String[1..63]	Required	Name for the new Thin Clone, unique to the system.
description	in	String[..170]	Optional	Description of the Thin Clone.
replicationParameters	in	replicationParameters	Optional	Replication settings for the Thin Clone.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the Thin Clone.
blockHostAccess	in	List<blockHostAccessParam>	Optional	Host access settings for the Thin Clone.
lunThinCloneCreate	in	List<lunThinCloneCreate>	Optional	
storageResource	out	storageResource	N/A	Storage resource instance that represents the new Thin Clone.

Refresh operation

Refresh a Storage Resource. Storage resource will be overwritten with a copy of the data from specified snapshot. When a thin clone storage resource is refreshed, this will be the new value of its parentSnap property. After a snap is taken, named using the copyName parameter, the storage resource will be overwritten with data from the specified snap.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/refresh where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/refresh where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Refresh operation

Argument	In/ out	Type	Required?	Description
snap	in	snap	Required	The reference to the new source snapshot object. The new source snapshot may be any snap of this storage resource's base storage resource, including the current one.
copyName	in	String	Required	Name of the snapshot copy created before the refresh operation occurs.
force	in	Boolean	Optional	When set, the refresh operation will proceed even if host access is configured on the storage resource.
copy	out	snap	N/A	The resulting snapshot.

storageResourceCapabilityProfile

An association between a capability profile and a datastore-type storage resource, with capacity usage information about virtual volumes provisioned accordingly.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the storage resource capability profile.
storageResource	storageResource	The datastore-type storage resource instance.
capabilityProfile	capabilityProfile	Reference to the supported capability profile.

isInUse	Boolean	True, if any VVol's are provisioned in the storage resource with the given capability profile.
sizeUsed	unsigned Integer[64(bytes)]	Used size of virtual volumes provisioned in this storage resource (datastore) using this capability profile.
sizeAllocated	unsigned Integer[64(bytes)]	Storage element allocated size per allocation pool, associated with required capability profile.
sizeTotal	unsigned Integer[64(bytes)]	The maximum capacity, that could be used by the storage element per allocation pool, associated with required capability profile.
logicalSizeUsed	unsigned Integer[64(bytes)]	The maximum capacity, that the storage elements of required capability profile are allowed to use from required pool.

Query all members of the storageResourceCapabilityProfile collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/storageResourceCapabilityProfile/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the storageResourceCapabilityProfile collection.

Query a specific storageResourceCapabilityProfile instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/storageResourceCapabilityProfile/<id> where <id> is the unique identifier of the storageResourceCapabilityProfile instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific storageResourceCapabilityProfile instance.

storageTier

Set of possible RAID configurations that a storage tier can support. (A storage tier is the collection of all drives of a particular type on the storage system.) For example, if you have 11 drives in a tier, you can support R5 (4+1), R5 (8+1), but not R5(12+1).

Use this resource type to create custom pools. For more information, see the help topic for the pool resource type.

Embedded resource types

raidConfiguration, storageTierExtension, stripeWidthConfiguration

Supported operations

Collection query , Instance query ,RecommendPoolConfiguration ,GetStorageTierConfiguration ,GetStorageTierConfigurationsForDynamicPool

Attributes

Attribute	Type	Description
id	String	Unique identifier of the storageTier instance.
tierType	TierTypeEnum	Tier type.
raidConfigurations	List<raidConfiguration>	Possible RAID configurations for the storage tier, as defined by the raidConfiguration embedded object.
disksTotal	unsigned Integer[32(disks)]	Total number of drives in the storage system that have the same storage tier type as that specified by the tierType attribute.
disksUnused	unsigned Integer[32(disks)]	Total number of unused drives in the storage system that have the same tier type as that specified by the tierType attribute.
disksReservedForHotSpare	unsigned Integer[32(disks)]	Total number of hot spare drives in the storage system that have the same tier type as that specified by the tierType attribute.
virtualDisksTotal	unsigned Integer[32]	Total number of virtual drives in the storage system that have the same tier type as that specified by the tierType attribute.
virtualDisksUnused	unsigned Integer[32]	Total number of unused virtual drives in the storage system that have the same tier type as that specified by the tierType attribute.
sizeTotal	unsigned Integer[64(bytes)]	Total raw capacity of all physical drives and virtual drives in the storage system that have the same tier type as that specified by the tierType attribute.
sizeFree	unsigned Integer[64(bytes)]	Total raw capacity of all unused physical drives and virtual drives in the storage system that have the same tier type as that specified by the tierType attribute.

Attributes for raidConfiguration

Possible RAID configurations for the pool tier. These configurations have the same RAID type (or RAID level) and different stripe widths (or RAID moduluses).

Attribute	Type	Description
raidType	RaidTypeEnum	RAID type (or RAID level) of the RAID configuration.
isDefault	Boolean	Indicates whether the RAID configuration is the default RAID configuration for the associated storage tier. Values are: • true - RAID configuration is the default RAID configuration for the associated storage tier. • false - RAID configuration is not the default RAID configuration for the associated storage tier.

stripeWidthConfig	List<stripeWidthConfiguration>	List of supported stripe widths (or RAID moduluses) for the RAID type.

Attributes for storageTierExtension

Set of RAID configurations for each storage tier that can be used for pool expansion.

Attribute	Type	Description
tierType	TierTypeEnum	Tier type.
raidConfigurations	List<raidConfiguration>	List of RAID configurations that can be used to expand the specified tier type, as defined by the raidConfiguration type.

Attributes for stripeWidthConfiguration

Possible stripe width (or RAID modulus) values for the specified RAID type and tier type.

Attribute	Type	Description
id	String	Unique identifier of the stripeWidthConfiguration instance. This identifier can be used to find corresponding profile in CLI.
stripeWidth	RaidStripeWidthEnum	RAID group stripe width.
parityDisks	unsigned Integer[16(disks)]	Number of parity drives.
sizePotential	unsigned Integer[64(bytes)]	Maximum usable capacity. The system calculates this figure by summing up the capacities of all available drives that have the required drive type, RAID type, and stripe width.
isDefault	Boolean	Indicates whether the stripe width is the default stripe width for the associated RAID type. Values are: • true - Stripe width is the default stripe width for the associated RAID type. • false - Stripe width is not the default stripe width for the associated RAID type.
type	StoragePoolTypeEnum	Indicates type of storage pools this stripe width applies to.

Query all members of the storageTier collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/storageTier/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the storageTier collection.

Query a specific storageTier instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/storageTier/<id> where <id> is the unique identifier of the storageTier instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific storageTier instance.

RecommendPoolConfiguration operation

Return all possible storage tier configurations that can be used to expand the specified pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageTier/action/recommendPoolConfiguration
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the RecommendPoolConfiguration operation

Argument	In/ out	Type	Required?	Description
pool	in	pool	Required	Pool for which to return all possible storage tier configurations, as defined by the pool.
recommendedConfiguration	out	List<storageTierExtension>	N/A	Recommended storage tier configurations, as defined by the storageTier.

GetStorageTierConfiguration operation

Return all possible RAID configurations for the tier. Applied to traditional pools only.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageTier/action/getStorageTierConfiguration
Request body arguments	See the arguments table below.
Successful return status	200 OK

Successful response body	JSON representation of the returned attributes.

Arguments for the GetStorageTierConfiguration operation

Argument	In/ out	Type	Required?	Description
tierType	in	TierTypeEnum	Required	Type of the tier.
raidType	in	RaidTypeEnum	Required	Preferred RAID type (RAID level) for the storage tier.
stripeWidth	in	RaidStripeWidthEnum	Required	Preferred RAID stripe width (RAID modulus) for the tier.
storageConfiguration	out	storageTierConfiguration	N/A	All possible configurations for the tier, as defined by the storageTierConfiguration embedded object.

GetStorageTierConfigurationsForDynamicPool operation

Return all possible RAID configurations for the parameters which specify tier type, RAID type, stripe width. Applied to dynamic pools only.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageTier/action/getStorageTierConfigurationsForDynamicPool
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the GetStorageTierConfigurationsForDynamicPool operation

Argument	In/ out	Type	Required?	Description
storageTierParameters	in	List<storageTierConfigurationParameters>	Required	List of sepcified pamameters.
storageTierConfigurations	out	List<storageTierConfiguration>	N/A	All possible configurations for the list of specified parameters, as defined by the storageTierConfiguration embedded object.

systemCapacity

Capacity data for all pools collected for the storage system.

Embedded resource types

systemTierCapacity

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the systemCapacity instance.
sizeFree	unsigned Integer[64(bytes)]	Amount of free space available in the pools on the storage system.
sizeTotal	unsigned Integer[64(bytes)]	Total amount of space in the pools on the storage system, which will be the sum of sizeFree, sizeUsed and sizePreallocated space.
sizeUsed	unsigned Integer[64(bytes)]	Amount of used space in the pools on the storage system.
sizePreallocated	unsigned Integer[64(bytes)]	Space reserved form the pools on the storage system. These space is for future needs to make writes more efficient. pools may be able to reclaim some of this if space is running low.
dataReductionSizeSaved	unsigned Integer[64(bytes)]	Amount of space saved by data reduction (includes savings from compression, deduplication and advanced deduplication) in the pools on the storage system.
dataReductionPercent	unsigned Integer[32(percent)]	Data reduction applied increase of storage space expressed as percentage of summary of used and data reduction saved space size (includes space saved from compression and deduplication).
dataReductionRatio	Float[64]	Storage efficiency ratio of applying data reduction on the system, calculated according to the data reduction savings (includes savings from compression and deduplication) for each block and file object (LUN/Filesystem/datastore) and its snapshots, thus demonstrating the efficiency of data reduction.
sizeSubscribed	unsigned Integer[64(bytes)]	Size of space requested by the storage resources allocated in all pools for possible future allocations. If this value is greater than the total size, it means pools are oversubscribed.
totalLogicalSize	unsigned Integer[64(bytes)]	Total logical provisioned capacity of primary storage objects visible to hosts (as defined by the "size" attribute for each primary storage objects), plus the total logical provisioned capacity of all Snapshots (that is, the total capacity that would be required if every snapshot were a fully provisioned copy instead).
thinSavingsRatio	Float[64]	Storage efficiency ratio of thin provisioned primary storage resources on the system, which demonstrates the efficiency of thin provisioning. This is calculated as follows: (Total provisioned size of all primary storage resources) / (Total

		allocated size of all primary storage resources without including data reduction savings, if any). Because savings due to thin provisioning are virtual savings, this could exceed the total system capacity. This does not include data reduction savings or snapshot savings.
snapsSavingsRatio	Float[64]	Storage efficiency ratio of snapshots on the system, calculated based on the capacity that would have been required for fully provisioned copies, which demonstrates the efficiency of snapshots. This is calculated as follows: (Total snapshot size of all snapshots as if they were full copies) / (Total allocated size of all snapshots without including data reduction savings, if any). This does not include data reduction savings or thin provisioning savings.
overallEfficiencyRatio	Float[64]	System-level storage efficiency ratio, calculated by dividing the total logical capacity of the System by the actual Used capacity on the System, This leverages the efficiency features of thin provisioning, snapshots and data reduction(compression and deduplication).
tiers	List<systemTierCapacity>	Size information (total, free, used) per tier.

Attributes for systemTierCapacity

Capacity data for one tier, collected from all pools.

Attribute	Type	Description
tierType	TierTypeEnum	Tier type.
sizeFree	unsigned Integer[64(bytes)]	Amount of free space available in the tier.
sizeTotal	unsigned Integer[64(bytes)]	Total amount of space (used space plus free space) in the tier.
sizeUsed	unsigned Integer[64(bytes)]	Amount of space used by the tier's associated storage resources.

Query all members of the systemCapacity collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/systemCapacity/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the systemCapacity collection.

Query a specific systemCapacity instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/systemCapacity/<id> where <id> is the unique identifier of the systemCapacity instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific systemCapacity instance.

treeQuota

A treeQuota instance represents a quota limit applied to a specific directory tree in a file system.

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the tree quota instance.
filesystem	filesystem	Associated file system.
quotaConfig	quotaConfig	Associated quotaConfig instance.
path	String	Path relative to the root of the filesystem.
description	String	Description of the tree quota.
state	QuotaStateEnum	State of the tree quota.
hardLimit	unsigned Integer[64(bytes)]	Hard limit.
softLimit	unsigned Integer[64(bytes)]	Soft limit.
remainingGracePeriod	unsigned Integer[64(seconds)]	The remaining grace period, when the soft limit is exceeded. The value 0 means the grace period has been past.
sizeUsed	unsigned Integer[64(bytes)]	The size already used.

Query all members of the treeQuota collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/treeQuota/instances
Request body arguments	None
Successful return status	200 OK

Successful response body	JSON representation of all members of the treeQuota collection.

Query a specific treeQuota instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/treeQuota/<id> where <id> is the unique identifier of the treeQuota instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific treeQuota instance.

Create operation

Create a tree quota.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/treeQuota/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
filesystem	in	filesystem	Required	Filesystem instance.
path	in	String	Required	Path (relative to the root of the file system) of the tree quota.
description	in	String	Optional	Description of the tree quota.
hardLimit	in	unsigned Integer[64(bytes)]	Optional	Hard limit. The default value 0 means no limitation.
softLimit	in	unsigned Integer[64(bytes)]	Optional	Soft limit. The default value 0 means no limitation.
id	out	treeQuota	N/A	New treeQuota instance.

Modify operation

Modify a tree quota.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/treeQuota/<id>/action/modify where <id> is the unique identifier of the treeQuota instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
description	in	String	Optional	Description.
hardLimit	in	unsigned Integer[64(bytes)]	Optional	Hard limit. The value 0 means no limitation.
softLimit	in	unsigned Integer[64(bytes)]	Optional	Soft limit. The value 0 means no limitation.

Delete operation

Delete a tree quota.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/treeQuota/<id> where <id> is the unique identifier of the treeQuota instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

userQuota

A userQuota instance represents a quota limit applied to a user within a quota tree or a file system.

Supported operations

Collection query , Instance query ,Create ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the user quota instance.
filesystem	filesystem	Associated file system.
treeQuota	treeQuota	Associated tree quota. Values are: • null - if the user quota is not within a quota tree. • treeQuota instance - if the user quota is within a quota tree.
uid	unsigned Integer	User ID of the user.
unixName	String	Unix user name for this quota's uid.
windowsNames	List<String>	Windows user name(s) that map to this quota's uid.
windowsSIDs	List<String>	Windows SID(s) that map to this quota's uid.
state	QuotaStateEnum	State of the user quota.
hardLimit	unsigned Integer[64(bytes)]	Hard limit. The value 0 means no limitations.
softLimit	unsigned Integer[64(bytes)]	Soft limit. The value 0 means no limitations.
remainingGracePeriod	unsigned Integer[64(seconds)]	Remaining grace period when the soft limit is exceeded. The grace period of userQuota is set in quotaConfig.
sizeUsed	unsigned Integer[64(bytes)]	Size already used by the user.

Query all members of the **userQuota** collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/userQuota/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the userQuota collection.

Query a specific **userQuota** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/userQuota/<id> where <id> is the unique identifier of the userQuota instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific userQuota instance.

Create operation

Create a user quota within either a file system or a tree quota.
Either the filesystem or treeQuota that will contain the new user quota must be specified.
Exactly one of uid, unixName or winName must be specified.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/userQuota/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
filesystem	in	filesystem	Optional	The filesystem in which the new user quota will be created.
treeQuota	in	treeQuota	Optional	The treeQuota (instead of filesystem) in which the new quota will be created.
uid	in	unsigned Integer	Optional	User ID of the user.
unixName	in	String	Optional	Unix Name of the user.
winName	in	String	Optional	Windows Name of the user. The format is "domain\\user" for the domain user.
hardLimit	in	unsigned Integer[64(bytes)]	Optional	Hard limit. The default value 0 means no limitations.
softLimit	in	unsigned Integer[64(bytes)]	Optional	Soft limit. The default value 0 means no limitations.
id	out	userQuota	N/A	New user quota instance.

Modify operation

Modify a user quota.

Header	Accept: application/json Content-Type: application/json

Method and URI	POST /api/instances/userQuota/<id>/action/modify where <id> is the unique identifier of the userQuota instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
hardLimit	in	unsigned Integer[64(bytes)]	Optional	Hard limit. The value 0 means no limitations.
softLimit	in	unsigned Integer[64(bytes)]	Optional	Soft limit. The value 0 means no limitations.

virtualVolume

VASA 2.0 virtual volume (VVol).

Embedded resource types

virtualVolumeBinding

Supported operations

Collection query , Instance query ,Delete ,CreateSnap ,Restore

Attributes

Attribute	Type	Description
id	String	Unique identifier of the VVol.
health	health	Health information for the virtual volume.
name	String	Virtual volume name.
vvolType	VVolTypeEnum	Type of the VVol.
replicaType	ReplicaTypeEnum	Replica type of the VVol.
parent	virtualVolume	For non-base VVols, the parent VVol.
storageResource	storageResource	The datastore-type storage resource in which the VVol is provisioned.
pool	pool	Pool associated with the VVol.
capabilityProfile	capabilityProfile	Capability profile associated with this VVol.
policyProfileName	String	The name of the VASA Policy Profile that vSphere has associated with this virtual volume.
isCompliant	Boolean	Indicates whether the is VVol compliant with associated policy profile. true - VVol is compliant. false - VVol is not compliant.
isThinEnabled	Boolean	True if thin provisioning is enabled.
sizeTotal	unsigned Integer[64][0]	Logical or addressable size of the object.
sizeUsed	unsigned Integer[64][0]	The amount of space used by the object from the pool.
bindings	List<virtualVolumeBinding>	List of virtualVolumeBinding objects which contain binding information. Empty if virtual volume is not bound.
vmUUID	String	VMware UUID of the hosted virtual machine. Helps to identify virtual machine if VMware integration is not set.
vm	vm	Reference to the virtual machine hosted on the virtual volume. Always empty if VMware integration not configured.
vmDisk	vmDisk	Reference to associated virual machine disk object. Always empty if VMware integration not configured.
maxIOPSDensity	unsigned Integer[64][0]	Density-based IOPS limit. This is applicable only when the maximum IOPS limit is density based.
maxKBPSDensity	unsigned Integer[64][0]	Density-based KBPS limit. This is applicable only when the maximum KBPS limit is density based.
effectiveMaxIOPS	unsigned Integer[64][0]	Effective Maximum IO/second depends on the type of the policy. In case of Density based policy, will be the product of maxIOPSDensity and Size of the attached resource.
effectiveMaxKBPS	unsigned Integer[64][0]	Effective Maximum KBPS depends on the type of the policy. In case of Density based policy, will be the product of maxKBPSDensity and Size of the attached resource.
burstRate	unsigned Integer[32(percentage)]	The percentage of read/write IOPS and Bandwidth over the limits a storage object is allowed to process during a spike in demand.
burstTime	DateTime[Interval]	How long a storage object is allowed to process burst traffic.
burstFrequency	DateTime[Interval]	How often a storage object is allowed to process burst traffic for the duration of burst time
spOwner	storageProcessor	Storage processor where the virtual volume is placed
creationTime	DateTime	Date and time when the virtual volume was created.

Attributes for virtualVolumeBinding

VASA 2.0 VVol bindings, showing the connection between the VVol on the storage array and the VMware protocol endpoint.

Attribute	Type	Description
vmwarePE	vmwarePE	VMware protocol endpoint to which the VVol is bound.

bindingDetails	String	Export path for Virtual Volumes bound with NFS. Secondary SCSI ID for Virtual Volumes bound with iSCSI.

Query all members of the virtualVolume collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/virtualVolume/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the virtualVolume collection.

Query a specific virtualVolume instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/virtualVolume/<id> where <id> is the unique identifier of the virtualVolume instance to query. Or GET /api/instances/virtualVolume/name:<value> where <value> is the name of the virtualVolume instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific virtualVolume instance.

Delete operation

Delete a virtual volume. Virtual volumes are managed from VCenter via the VASA API. Delete is available in REST only for extraordinary cases.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/virtualVolume/<id> where <id> is the unique identifier of the virtualVolume instance to delete. Or DELETE /api/instances/virtualVolume/name:<value> where <value> is the name of the virtualVolume instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
force	in	Boolean	Optional	Unbind and delete the VVol and all of its derivatives.

CreateSnap operation

Create a snapshot of an existing Virtual Volume.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/virtualVolume/<id>/action/createSnap where <id> is the unique identifier of the virtualVolume instance. Or POST /api/instances/virtualVolume/name:<value>/action/createSnap where <value> is the name of the virtualVolume instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateSnap operation

Argument	In/ out	Type	Required?	Description
name	in	String	Optional	
snapVVolId	out	virtualVolume	N/A	Id of snapshot VVol.

Restore operation

Restore the data in the specified virtual volume to the specified one of its snapshots.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/virtualVolume/<id>/action/restore where <id> is the unique identifier of the virtualVolume instance. Or POST /api/instances/virtualVolume/name:<value>/action/restore

	where <value> is the name of the virtualVolume instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Restore operation

Argument	In/ out	Type	Required?	Description
snapVVolId	in	virtualVolume	Required	Id of snapshot VVol.

Managing the environment

battery

(Applies to physical deployments only.) Information about batteries in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the battery instance.
health	health	Health information for the battery, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the battery needs replacement. Values are: • true - Battery needs replacement. • false - Battery does not need replacement.
parent	resourceRef	Resource type and unique identifier of the battery's parent enclosure.
slotNumber	unsigned Integer[32]	Slot number where the battery is located in the parent enclosure.
name	String[1..32]	Battery name.
manufacturer	String	Manufacturer of the battery.
model	String	Manufacturer's model number for the battery.
firmwareVersion	String	Firmware version number for the battery.
emcPartNumber	String	EMC part number for the battery.
emcSerialNumber	String	EMC serial number for the battery.
vendorPartNumber	String	Vendor part number for the battery.
vendorSerialNumber	String	Vendor serial number for the battery.
parentStorageProcessor	storageProcessor	Parent Storage Processor of the battery.

Query all members of the **battery** collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/battery/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the battery collection.

Query a specific **battery** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/battery/<id> where <id> is the unique identifier of the battery instance to query. Or GET /api/instances/battery/name:<value> where <value> is the name of the battery instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific battery instance.

dae

Information about Disk Array Enclosure (DAE) components in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the dae instance.
health	health	Health information for the DAE, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the DAE needs replacement. Values are: • true - DAE needs replacement. • false - DAE does not need replacement.
parent	resourceRef	Resource type and unique identifier of the DAE's parent enclosure.
slotNumber	unsigned Integer[32]	The enclosure number or position where the DAE is located on the bus.
name	String[1..32]	DAE name.
manufacturer	String	Manufacturer of the DAE.
model	String	Manufacturer's model number for the DAE.
emcPartNumber	String	EMC part number for the DAE.
emcSerialNumber	String	EMC serial number for the DAE.
vendorPartNumber	String	Vendor part number for the DAE.
vendorSerialNumber	String	Vendor serial number for the DAE.
enclosureType	EnclosureTypeEnum	DAE enclosure type.
busId	unsigned Integer[32]	Identifier of the bus used by the DAE.
driveTypes	List<DiskTypeEnum>	Disk type of the disks in the DAE.
currentPower	unsigned Integer[32(watts)]	Current amount of power used by the DAE.
avgPower	unsigned Integer[32(watts)]	Average amount of power used by the DAE. The system uses a one hour window of 30-second samples to determine this value.
maxPower	unsigned Integer[32(watts)]	Maximum amount of power used by the DAE. The system uses a one hour window of 30-second samples to determine this value.
currentTemperature	unsigned Integer[32(degrees C)]	Current temperature of the DAE.
avgTemperature	unsigned Integer[32(degrees C)]	Average temperature of the DAE. The system uses a one hour window of 30-second samples to determine this value.
maxTemperature	unsigned Integer[32(degrees C)]	Maximum temperature of the DAE. The system uses a one hour window of 30-second samples to determine this value.
currentSpeed	unsigned Integer[64(bits/sec)]	Current speed of the DAE SAS disk connection.
maxSpeed	unsigned Integer[64(bits/sec)]	Maximum speed of the DAE SAS disk connection. The system uses a one hour window of 30-second samples to determine this value.
parentSystem	system	Parent system of the Disk Array Enclosure (DAE).

Query all members of the dae collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/dae/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the dae collection.

Query a specific dae instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/dae/<id> where <id> is the unique identifier of the dae instance to query. Or GET /api/instances/dae/name:<value> where <value> is the name of the dae instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific dae instance.

disk

Information about the drives's attributes in the storage system.

Supported operations

Collection query , Instance query ,Repurpose

Attributes

Attribute	Type	Description

id	String	Unique identifier of the drive instance.
health	health	Health information of the drive instance as defined by the health resource type.
needsReplacement	Boolean	Indicates whether drive replacement is needed. Values are: • true - Drive replacement is needed. • false - No drive replacement is needed.
parent	resourceRef	Resource type and unique identifier for the drive's parent enclosure.
slotNumber	unsigned Integer[32]	Slot where the drive is located in the parent enclosure.
estimatedEOL	DateTime[Interval]	Estimated remaining life of drive, based on past use. Applies only to flash drives.
busId	unsigned Integer[32]	Identifier of the bus used by the drive.
name	String[1..32]	Drive name. Modifiable for virtual drives only.
manufacturer	String	Drive manufacturer.
model	String	Manufacturer model number.
version	String	Manufacturer version number.
emcPartNumber	String	EMC part number.
emcSerialNumber	String	EMC serial number.
tierType	TierTypeEnum	Drive type.
diskGroup	diskGroup	Disk group is the group that the drive belongs to and as defined by the diskGroup resource type.
rpm	unsigned Integer[32(rpm)]	Revolutions Per Minute (RPMs).
isSED	Boolean	Indicates whether the drive is a Self-Encrypting Drive (SED). • true - Drive is a SED. • false - Drive is not a SED.
currentSpeed	unsigned Integer[64(bytes/sec)]	Current speed.
maxSpeed	unsigned Integer[64(bytes/sec)]	Maximum speed.
pool	pool	Pool that the drive belongs, as defined by the pool resource type.
isInUse	Boolean	Indicates whether the drive contains user-written data. Values are: • true - Drive contains user-written data. • false - Drive does not contain user-written data.
isFastCacheInUse	Boolean	(Applies if FAST Cache is supported on the system and the corresponding license is installed.) Indicates whether the drive is used by the FAST Cache. Values are: • true - Drive is used by the FAST Cache. • false - Drive is not used by the FAST Cache.
size	unsigned Integer[64(bytes)]	Usable capacity.
rawSize	unsigned Integer[64(bytes)]	Raw (unformatted) capacity.
vendorSize	unsigned Integer[64(bytes)]	Vendor capacity of the drive as written on the drive label.
wwn	String	World Wide Name (WWN) of the drive.
diskTechnology	DiskTechnologyEnum	Drive technology.
parentDae	dae	Parent Disk Array Enclosure (DAE) of the disk as defined by the dae resource type.
parentDpe	dpe	Parent Disk Processor Enclosure (DPE) of the drive, as defined by the dpe resource type.
bank	String	Bank where the drive is located in the parent enclosure.
bankSlotNumber	unsigned Integer[32]	Bank slot where the drive is located in the parent enclosure.
bankSlot	String	Combination of the bank and slot name where the drive is located in the parent enclosure.

Query all members of the **disk** collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/disk/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the disk collection.

Query a specific **disk** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/disk/<id> where <id> is the unique identifier of the disk instance to query. Or GET /api/instances/disk/name:<value> where <value> is the name of the disk instance to query.
Request body arguments	None

Successful return status	200 OK
Successful response body	JSON representation of a specific disk instance.

Repurpose operation

This operation will allow a locked foreign drive to be used in the current storage array, all data on the drive will become unrecoverable.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/disk/<id>/action/repurpose where <id> is the unique identifier of the disk instance. Or POST /api/instances/disk/name:<value>/action/repurpose where <value> is the name of the disk instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Repurpose operation

Argument	In/ out	Type	Required?	Description
psid	in	String[..32]	Required	An alpha-numeric string that can be found on the physical label of the drive to repurpose.

dpe

Information about Disk Processor Enclosures (DPEs) in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the dpe instance.
health	health	Health information for the DPE, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the DPE needs replacement. Values are: • true - DPE needs replacement. • false - DPE does not need replacement.
parent	resourceRef	Resource type and unique identifier of the DPE's parent enclosure.
slotNumber	unsigned Integer[32]	The enclosure number or position where the DPE is located on the bus.
name	String[1..32]	DPE name.
manufacturer	String	Manufacturer of the DPE.
model	String	Manufacturer's model number for the DPE.
emcPartNumber	String	EMC part number for the DPE.
emcSerialNumber	String	EMC serial number for the DPE.
vendorPartNumber	String	Vendor part number for the DPE.
vendorSerialNumber	String	Vendor serial number for the DPE.
enclosureType	EnclosureTypeEnum	DPE enclosure type.
busId	unsigned Integer[32]	Identifier of the SAS bus used by the DPE.
driveTypes	List<DiskTypeEnum>	Disk type of the disks in the DPE.
currentPower	unsigned Integer[32(watts)]	Current amount of power used by the DPE.
avgPower	unsigned Integer[32(watts)]	Average amount of power used by the DPE. The system uses a one hour window of 30-second samples to determine this value.
maxPower	unsigned Integer[32(watts)]	Maximum amout of power used by the DPE. The system uses a one hour window of 30-second samples to determine this value.
currentTemperature	unsigned Integer[32(degrees C)]	Current temperature of the DPE.
avgTemperature	unsigned Integer[32(degrees C)]	Average temperature of the DPE. The system uses a one hour window of 30-second samples to determine this value.
maxTemperature	unsigned Integer[32(degrees C)]	Maximum temperature of the DPE. The system uses a one hour window of 30-second samples to determine this value.
currentSpeed	unsigned Integer[64(bits/sec)]	Current speed of the DPE SAS disk connection.
maxSpeed	unsigned Integer[64(bits/sec)]	Maximum speed of the DPE SAS disk connection. The system uses a one hour window of 30-second samples to determine this value.
parentSystem	system	Parent system of the Disk Processor Enclosure (DPE).

Query all members of the dpe collection

Header	Accept: application/json

	Content-Type: application/json
Method and URI	GET /api/types/dpe/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the dpe collection.

Query a specific dpe instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/dpe/<id> where <id> is the unique identifier of the dpe instance to query. Or GET /api/instances/dpe/name:<value> where <value> is the name of the dpe instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific dpe instance.

encryption

Information about the data encryption of the storage system.

Supported operations

Collection query , Instance query ,RetrieveNonce ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the encryption instance.
encryptionMode	EncryptionModeEnum	Encryption mode of the array. At present only Controller Based Encryption (CBE) mode is supported.
encryptionStatus	EncryptionStatusEnum	Encryption status.
encryptionPercentage	Float	Percentage of storage (in-place data) encrypted on the array. The percentage value will range from 0.00 to 100. Once the encryption is activated on the array, encryption percentage will not dip as the new data is written because the new data will be encrypted on the fly.
keyManagerBackupKeyStatus	KeyManagerBackupKeysStatusEnum	Key store back up status.
kmipStatus	KmipStatusEnum	Key Management Interoperability Protocol (KMIP) compliant external key management feature status. Once enabled, this feature enables the storage system to interact with external key management servers that are KMIP compliant for key management associated with Data at Rest Encryption.

Query all members of the encryption collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/encryption/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the encryption collection.

Query a specific encryption instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/encryption/<id> where <id> is the unique identifier of the encryption instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific encryption instance.

RetrieveNonce operation

Retrieve the nonce integer which is required by modify/activate method.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/encryption/<id>/action/retrieveNonce where <id> is the unique identifier of the encryption instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the RetrieveNonce operation

Argument	In/ out	Type	Required?	Description
nonce	out	unsigned Integer[64]	N/A	Key Manager generated nonce integer with 1 minute expiration.

Modify operation

Modify the encryption.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/encryption/<id>/action/modify where <id> is the unique identifier of the encryption instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
kmipStatus	in	KmipStatusEnum	Optional	Enable/Disable KMIP server support.

ethernetPort

Information about Ethernet ports in the storage system.

Supported operations

Collection query , Instance query ,Modify ,RecommendForAggregation

Attributes

Attribute	Type	Description
id	String	Unique identifier of the Ethernet port instance.
health	health	Health information for the Ethernet port, as defined by the health resource type.
storageProcessor	storageProcessor	SP on which the Ethernet port directly or indirectly resides, as defined by the storageProcessor resource type.
needsReplacement	Boolean	Indicates whether the Ethernet port needs replacement. Values are: • true - Ethernet port needs replacement. • false - Ethernet port does not need replacement.
name	String[1..32]	User-specified Ethernet port name.
portNumber	unsigned Integer[32]	Physical Ethernet port sequence number.
speed	EPSpeedValuesEnum	Current link speed of the Ethernet port.
mtu	unsigned Integer[32(bytes)]	Maximum Transmission Unit (MTU) packet size that the Ethernet port can transmit. The default is 1500 bytes per packet.
minMtu	unsigned Integer[32(bytes)]	Lower limit for Maximum Transmisson Unit (MTU) packet size that can be setup on the Ethernet port. The default is 1280 bytes per packet.
maxMtu	unsigned Integer[32(bytes)]	Upper limit for Maximum Transmisson Unit (MTU) packet size that can be setup on the Ethernet port. The default is 9216 bytes per packet.
connectorType	ConnectorTypeEnum	Physical connector type.
bond	Boolean	Indicates whether the Ethernet port is used in a link aggregation. Values are: • true - Ethernet port is used in a link aggregation. • false - Ethernet port is not used in a link aggregation.
isLinkUp	Boolean	Indicates whether the Ethernet port has link. (Applies if the Ethernet port is configured with a link.) Indicates whether the Ethernet port's link is up. Values are: • true - Link is up. • false - Link is down.
macAddress	String	MAC address of the Ethernet port.
isRSSCapable	Boolean	Indicates whether the Ethernet port supports Receive Side Scaling (RSS). Values are: • true - Ethernet port supports RSS. • false - Ethernet port does not support RSS.
isRDMACapable	Boolean	Indicates whether the Ethernet port supports Remote Direct Memory Access (RDMA). Values are: • true - Ethernet port supports RDMA. • false - Ethernet port does not support RDMA.
requestedSpeed	EPSpeedValuesEnum	Link speed requested by the user.
parentIOModule	ioModule	(Applies if the Ethernet port resides on an I/O module.) Parent I/O module of the Ethernet port, as defined by the ioModule resource type.
parentStorageProcessor	storageProcessor	(Applies if the Ethernet port resides directly on an SP.) Parent SP of the Ethernet port, as defined by the storageProcessor resource type.

supportedSpeeds	List<EPSpeedValuesEnum>	Available speed values.
requestedMtu	unsigned Integer[32(bytes)]	MTU size requested by the user.
supportedMtus	List<Integer>[32]	Available MTU sizes. **Deprecated:** This attribute is obsolete and will be removed in a future release.
parent	resourceRef	Resource type and identifier of the Ethernet port's parent enclosure, as defined by the resourceRef resource type.
sfpSupportedSpeeds	List<SFPSpeedValuesEnum>	SFP (the small form-factor pluggable) supported speeds of the Ethernet port.
sfpSupportedProtocols	List<SFPProtocolValuesEnum>	SFP (the small form-factor pluggable) supported protocols of the Ethernet port.

Query all members of the ethernetPort collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ethernetPort/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ethernetPort collection.

Query a specific ethernetPort instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ethernetPort/<id> where <id> is the unique identifier of the ethernetPort instance to query. Or GET /api/instances/ethernetPort/name:<value> where <value> is the name of the ethernetPort instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ethernetPort instance.

Modify operation

Modify the Ethernet port's Maximum Transmission Unit (MTU) size.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ethernetPort/<id>/action/modify where <id> is the unique identifier of the ethernetPort instance. Or POST /api/instances/ethernetPort/name:<value>/action/modify where <value> is the name of the ethernetPort instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
mtuSize	in	unsigned Integer[32(bytes)] [1280..9216]	Optional	MTU packet size that the Ethernet port can transmit, in bytes.
speed	in	EPSpeedValuesEnum	Optional	Requested data transmission speed for the Ethernet port. **Note:** The port will be link down temporarily during change of speed.

RecommendForAggregation operation

Recommend Ethernet ports to use for link aggregation.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/ethernetPort/action/recommendForAggregation
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the RecommendForAggregation operation

Argument	In/ out	Type	Required?	Description
ethernetPort	in	ethernetPort	Required	Ethernet port for which to recommend other ports for link aggregation.

recommendedPorts	out	List<ethernetPort>	N/A	Recommended ports, in order of preference.

fan

(Applies to physical deployments only.) Information about the fans in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the fan instance.
health	health	Health information for the fan, as defined by the health resource type.
parent	resourceRef	Resource type and identifier of the fan's parent enclosure.
slotNumber	unsigned Integer[32]	Slot where the fan is located in the parent enclosure.
name	String[1..32]	Fan name.
emcPartNumber	String	EMC part number for the fan.
emcSerialNumber	String	EMC serial number for the fan.
manufacturer	String	Manufacturer of the fan.
model	String	Manufacturer's model number for the fan.
vendorPartNumber	String	Vendor part number for the fan.
vendorSerialNumber	String	Vendor serial number for the fan.
needsReplacement	Boolean	Indicates whether the fan needs replacement. Values are: • true - Fan needs replacement. • false - Fan does not need replacement.
parentDpe	dpe	Parent Disk Processor Enclosure (DPE) of the fan.
parentDae	dae	Parent Disk Array Enclosure (DAE) of the fan.
storageProcessor	storageProcessor	For fans within a DPE, the storage processor with which the fan is associated.

Query all members of the fan collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fan/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fan collection.

Query a specific fan instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fan/<id> where <id> is the unique identifier of the fan instance to query. Or GET /api/instances/fan/name:<value> where <value> is the name of the fan instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fan instance.

fcPort

Fibre Channel (FC) front end port settings. Applies if the FC protocol is supported on the system and the corresponding license is installed.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the fcPort instance.
health	health	Health information for the FC port, as defined by the health resource type.
parent	resourceRef	Resource type and unique identifier of the FC port's enclosure, as defined by the resourceRef resource type.
slotNumber	unsigned Integer[32]	Physical location of the FC port.
wwn	String	World Wide Name (WWN) of the FC port.

availableSpeeds	List<FcSpeedEnum>	Available data transmission speed values for the FC port.
currentSpeed	FcSpeedEnum	Current data transmission speed of the FC port.
requestedSpeed	FcSpeedEnum	Data transmission speed requested by the user.
sfpSupportedSpeeds	List<SFPSpeedValuesEnum>	SFP (the small form-factor pluggable) supported speeds of the FC port.
sfpSupportedProtocols	List<SFPProtocolValuesEnum>	SFP (the small form-factor pluggable) supported protocols of the FC port.
connectorType	ConnectorTypeEnum	Physical connector type.
storageProcessor	storageProcessor	SP on which the FC port directly or indirectly resides, as defined by the storageProcessor resource type.
needsReplacement	Boolean	Indicates whether the FC port needs replacement. Values are: • true - FC port needs replacement. • false - FC port does not need replacement.
nPortId	unsigned Integer[32]	Port on the node host or storage device used with FC point-to-point or FC switched fabric topologies.
name	String	FC port name.
parentIOModule	ioModule	(Applies if the FC port resides on an I/O module.) Parent I/O module of the FC port, as defined by the ioModule resource type.
parentStorageProcessor	storageProcessor	(Applies if the FC port resides directly on an SP.) Parent SP of the FC port, as defined by the storageProcessor resource type.
portRepCapabilities	List<PortRepCapabilityEnum>	FC port replication capability.
sfpSupportedMode	SFPSupportedModeEnum	SFP (the small form-factor pluggable) supported mode of the FC port.

Query all members of the fcPort collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fcPort/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fcPort collection.

Query a specific fcPort instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fcPort/<id> where <id> is the unique identifier of the fcPort instance to query. Or GET /api/instances/fcPort/name:<value> where <value> is the name of the fcPort instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fcPort instance.

Modify operation

Set the FC port data transmission rate to the requested speed.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fcPort/<id>/action/modify where <id> is the unique identifier of the fcPort instance. Or POST /api/instances/fcPort/name:<value>/action/modify where <value> is the name of the fcPort instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
requestedSpeed	in	FcSpeedEnum	Required	Requested data transmission speed for the FC port. **Note:** The port will be link down temporarily during change of speed.

ioModule

(Applies to physical deployments only.) Information about I/O module SLICs (small I/O cards) in the storage system. I/O modules provide connectivity between SPs and Disk-Array Enclosures (DAEs).

Supported operations

Collection query , Instance query ,CommitIOPorts

Attributes

Attribute	Type	Description
id	String	Unique identifier of the I/O module instance.
health	health	Health information for the I/O module, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the I/O module needs replacement. Values are: • true - I/O module needs replacement. • false - I/O module does not need replacement.
parent	resourceRef	Resource type and unique identifier for the I/O module's parent enclosure.
slotNumber	unsigned Integer[32]	Slot where the I/O module is located in the parent enclosure.
name	String[1..32]	I/O module name.
manufacturer	String	Manufacturer of the I/O module.
model	String	Manufacturer's model number for the I/O module.
emcPartNumber	String	EMC part number for the I/O module.
emcSerialNumber	String	EMC serial number for the I/O module.
vendorPartNumber	String	Vendor part number for the I/O module.
vendorSerialNumber	String	Vendor serial number for the I/O module.
systemName	String	Name of the storage system associated with the I/O module.
parentStorageProcessor	storageProcessor	Parent Storage Processor of the IO Module.

Query all members of the ioModule collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ioModule/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ioModule collection.

Query a specific ioModule instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ioModule/<id> where <id> is the unique identifier of the ioModule instance to query. Or GET /api/instances/ioModule/name:<value> where <value> is the name of the ioModule instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ioModule instance.

CommitIOPorts operation

Commit IO Ports

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/ioModule/action/commitIOPorts
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

kmipServer

Information about the Key Management Interoperability Protocol (kmip) server configuration of the storage system. You can configure one KMIP server which can be a cluster configuration. The KMIP server configuration is needed to enable external key management on the system and the system should either be encrypted or encryption capable in order to add a KMIP server.

The Key Management Interoperability Protocol (KMIP) is a communication protocol that defines message formats for the manipulation of cryptographic keys on a key management server.

After you configure the KMIP server, you can enable key management on the system. Ignition key of the system is managed by the KMIP server and a valid configuration is necessary to boot the system once enabled.

Embedded resource types

kmipServerStatus

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify ,Verify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the KMIP server instance.
addresses	List<IPAddress> • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: true	List of FQDN addresses that correspond to the kmip servers. The system uses the addresses in the order in which they are listed.
port	unsigned Integer[16]	Port number for establishing a connection to a KMIP server.
timeout	unsigned Integer[32(seconds)]	Timeout for establishing a connection to a KMIP server. If the system does not receive a reply from the KMIP server before the specified timeout, it stops sending requests.
username	String	Username for accessing the KMIP server.
members	List<kmipServerStatus>	List of FQDN addresses and corresponding statuses of the KMIP server within a cluster.

Attributes for kmipServerStatus

Address and corresponding status of the KMIP Server.

Attribute	Type	Description
address	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: true	Individual KMIP server FQDN address.
status	KmipServerStatusEnum	Status of the KMIP Server.

Query all members of the kmipServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/kmipServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the kmipServer collection.

Query a specific kmipServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/kmipServer/<id> where <id> is the unique identifier of the kmipServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific kmipServer instance.

Create operation

Add a KMIP server cluster.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/kmipServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
addresses	in	List<IPAddress> • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: true	Required	List of KMIP server FQDN. The FQDN addresses will be obtained using DNS lookup (requires DNS to be configured).
port	in	unsigned Integer[16]	Required	KMIP server port number. Default value is 5696.
timeout	in	unsigned Integer[32]	Required	Timeout for establishing a connection to a KMIP server, in seconds. Maximum value is 30 seconds.
username	in	String[..64]	Required	Username for accessing the KMIP server.
password	in	String	Required	Password for accessing the KMIP server.
id	out	kmipServer	N/A	

Delete operation

Delete a KMIP server cluster.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/kmipServer/<id> where <id> is the unique identifier of the kmipServer instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify the KMIP server configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/kmipServer/<id>/action/modify where <id> is the unique identifier of the kmipServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
addresses	in	List<IPAddress> • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	List of KMIP server FQDN. The FQDN addresses will be obtained using DNS lookup (requires DNS to be configured).
port	in	unsigned Integer[16]	Optional	KMIP server port number.
timeout	in	unsigned Integer[32]	Optional	Timeout for establishing a connection to a KMIP server, in seconds. Maximum value is 30 seconds.
username	in	String[..64]	Optional	Username for accessing the KMIP server.
password	in	String	Optional	Password for accessing the KMIP server.

Verify operation

Verify the connection to KMIP server and update the status of individual servers. The overall status of the KMIP server configuration is also updated by verify. Note that the method simply updates the status property of the kmip server and returns success or failure based on the status.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/kmipServer/<id>/action/verify where <id> is the unique identifier of the kmipServer instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

lcc

(Applies to physical deployments only.) Information about Link Control Cards (LCCs) in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the LCC instance.
health	health	Health information for the LCC, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the LCC needs replacement. Values are: • true - LCC needs replacement. • false - LCC does not need replacement.
parent	resourceRef	Resource type and unique identifier of the LCC's parent enclosure.
slotNumber	unsigned Integer[32]	Slot number where the LCC is located in the parent enclosure.
name	String[1..32]	LCC name.
manufacturer	String	Manufacturer of the LCC.
model	String	Manufacturer's model number for the LCC.
sasExpanderVersions	List<String>	Revision numbers of the LCC firmware.

emcPartNumber	String	EMC part number for the LCC.
emcSerialNumber	String	EMC serial number for the LCC.
vendorPartNumber	String	Vendor part number for the LCC.
vendorSerialNumber	String	Vendor serial number for the LCC.
currentSpeed	unsigned Integer[64(bits/sec)]	Current LCC speed.
maxSpeed	unsigned Integer[64(bits/sec)]	Maximum LCC speed.
parentDae	dae	Parent Disk Array Enclosure (DAE) of the LCC.

Query all members of the lcc collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/lcc/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the lcc collection.

Query a specific lcc instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/lcc/<id> where <id> is the unique identifier of the lcc instance to query. Or GET /api/instances/lcc/name:<value> where <value> is the name of the lcc instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific lcc instance.

memoryModule

(Applies to physical deployments only.) Information about memory modules in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the memory module instance.
health	health	Health information for the memory module, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the memory module needs replacement Values are: • true - Memory module needs replacement. • false - Memory module does not need replacement.
parent	resourceRef	Resource type and unique identifier of the memory module's parent enclosure.
slotNumber	unsigned Integer[32]	Slot number where the memory module is located in the parent enclosure.
name	String[1..32]	Memory module name.
manufacturer	String	Manufacturer of the memory module.
model	String	Manufacturer's model number for the memory module.
firmwareVersion	String	Firmware version number for the memory module.
size	unsigned Integer[32(GigaBytes)]	Memory size.
emcPartNumber	String	EMC part number for the memory module.
emcSerialNumber	String	EMC serial number for the memory module.
vendorPartNumber	String	Vendor part number for the memory module.
vendorSerialNumber	String	Vendor serial number for the memory module.
parentStorageProcessor	storageProcessor	Parent storage processor of the memory module.
isInserted	Boolean	Indicates whether the memory module is inserted: • true - Memory module is inserted. • false - Memory module is not inserted.

Query all members of the memoryModule collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/memoryModule/instances

Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the memoryModule collection.

Query a specific **memoryModule** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/memoryModule/<id> where <id> is the unique identifier of the memoryModule instance to query. Or GET /api/instances/memoryModule/name:<value> where <value> is the name of the memoryModule instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific memoryModule instance.

powerSupply

(Applies to physical deployments only.) Information about power supplies in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the powerSupply instance.
health	health	Health information for the power supply, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the power supply needs replacement. Values are: • true - Power supply needs replacement. • false - Power supply does not need replacement.
parent	resourceRef	Resource type and unique identifier for the power supply's parent enclosure.
slotNumber	unsigned Integer[32]	Slot number where the power supply is located in the parent enclosure.
name	String[1..32]	Power supply name.
manufacturer	String	Manufacturer of the power supply.
model	String	Manufacturer's model number for the power supply.
firmwareVersion	String	Firmware version number for the power supply.
emcSerialNumber	String	EMC serial number for the power supply.
vendorPartNumber	String	Vendor part number for the power supply.
vendorSerialNumber	String	Vendor serial number for the power supply.
emcPartNumber	String	EMC part number for the power supply.
parentDae	dae	Parent Disk Array Enclosures (DAE) of the power supply.
parentDpe	dpe	Parent Disk Processor Enclosure (DPE) of the power supply.
inputType	PowerSupplyInputTypeEnum	Input type of the power supply.
storageProcessor	storageProcessor	Storage Processor that the power supply is associated to.

Query all members of the **powerSupply** collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/powerSupply/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the powerSupply collection.

Query a specific **powerSupply** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/powerSupply/<id> where <id> is the unique identifier of the powerSupply instance to query. Or GET /api/instances/powerSupply/name:<value> where <value> is the name of the powerSupply instance to query.
Request body arguments	None

Successful return status	200 OK
Successful response body	JSON representation of a specific powerSupply instance.

sasPort

(Applies to physical deployments only.) Information about Serial Attached SCSI (SAS) ports in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the SAS port instance.
health	health	Health information for the SAS port, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the SAS port needs replacement. Values are: • true - SAS port needs replacement. • false - SAS port does not need replacement.
parent	resourceRef	Class and identifier of the SAS port's parent enclosure.
name	String[1..32]	SAS port name.
port	unsigned Integer[16]	Physical SAS port number on the storage processor. Valid values are 0 and 1.
currentSpeed	SpeedValuesEnum	Current speed of the SAS port.
connectorType	ConnectorTypeEnum	Physical connector type.
storageProcessor	storageProcessor	SP on which the SAS port directly or indirectly resides, as defined by the storageProcessor resource type.
parentIOModule	ioModule	(Applies if the SAS port resides on an I/O module.) Parent I/O module of the SAS port, as defined by the ioModule resource type.
parentStorageProcessor	storageProcessor	(Applies if the SAS port resides directly on an SP.) Parent SP of the SAS port, as defined by the storageProcessor resource type.

Query all members of the sasPort collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/sasPort/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the sasPort collection.

Query a specific sasPort instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/sasPort/<id> where <id> is the unique identifier of the sasPort instance to query. Or GET /api/instances/sasPort/name:<value> where <value> is the name of the sasPort instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific sasPort instance.

SSC

(Applies to physical deployments only.) Information about System Status Cards (SSCs) in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ssc.
health	health	Health information for the SSC, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the SSC needs replacement. Values are: • true - SSC needs replacement. • false - SSC does not need replacement.
parent	resourceRef	Resource type and unique identifier for the SSC's parent enclosure.
slotNumber	unsigned Integer[32]	Slot where the SSC is located in the parent enclosure.

name	String[1..32]	SSC name.
parentDae	dae	Parent Disk Array Enclosure (DAE) of the SSC.
manufacturer	String	Manufacturer of the SSC.
model	String	Manufacturer's model number for the SSC.
emcPartNumber	String	EMC part number for the SSC.
emcSerialNumber	String	EMC serial number for the SSC.
vendorPartNumber	String	Vendor part number for the SSC.
vendorSerialNumber	String	Vendor serial number for the SSC.

Query all members of the ssc collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ssc/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ssc collection.

Query a specific ssc instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ssc/<id> where <id> is the unique identifier of the ssc instance to query. Or GET /api/instances/ssc/name:<value> where <value> is the name of the ssc instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ssc instance.

ssd

(Applies to physical deployments only.) Information about internal Flash-based Solid State Drives (SSDs, mSATAs) in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ssd.
health	health	Health information for the SSD, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the SSD needs replacement. Values are: • true - SSD needs replacement. • false - SSD does not need replacement.
parent	resourceRef	Resource type and unique identifier for the SSD's parent enclosure.
slotNumber	unsigned Integer[32]	Slot where the SSD is located in the parent enclosure.
name	String[1..32]	SSD name.
type	SsdTypeEnum	SSD type.
manufacturer	String	Manufacturer of the SSD.
model	String	Manufacturer's model number for the SSD.
firmwareVersion	String	SSD firmware revision number.
emcPartNumber	String	EMC part number for the SSD.
emcSerialNumber	String	EMC serial number for the SSD.
vendorPartNumber	String	Vendor part number for the SSD
vendorSerialNumber	String	Vendor serial number for the SSD.
parentStorageProcessor	storageProcessor	Parent storage processor of the ssd.

Query all members of the ssd collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ssd/instances
Request body arguments	None

Successful return status	200 OK
Successful response body	JSON representation of all members of the ssd collection.

Query a specific ssd instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ssd/<id> where <id> is the unique identifier of the ssd instance to query. Or GET /api/instances/ssd/name:<value> where <value> is the name of the ssd instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ssd instance.

storageProcessor

Information about Storage Processors (SPs) in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the storageProcessor instance.
parent	resourceRef	Resource type and unique identifier for the SP's parent enclosure.
health	health	Health information for the SP, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the SP needs replacement. Values are: • true - SP needs replacement. • false - SP does not need replacement.
isRescueMode	Boolean	Indicates whether the SP is in Service Mode. Values are: • true - SP is in Service Mode. • false - SP is not in Service Mode.
model	String	Manufacturer's model number for the SP.
slotNumber	unsigned Integer[32]	Slot where the SP is located in the parent enclosure.
name	String	SP name.
emcPartNumber	String	EMC part number for the SP.
emcSerialNumber	String	EMC serial number for the SP.
manufacturer	String	Manufacturer of the SP.
vendorPartNumber	String	Vendor part number for the SP.
vendorSerialNumber	String	Vendor serial number for the SP.
sasExpanderVersion	String	Version number of the SAS Expander associated with the SP.
biosFirmwareRevision	String	Version number of the SP BIOS.
postFirmwareRevision	String	Version number of the SP Power-On Self-Test software.
memorySize	unsigned Integer[32(MB)]	SP RAM size.
parentDpe	dpe	Parent Disk Processor Enclosure (DPE) of the storage processor.
modelName	SPModelNameEnum	The physical model name of storageProcessor

Query all members of the storageProcessor collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/storageProcessor/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the storageProcessor collection.

Query a specific storageProcessor instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/storageProcessor/<id> where <id> is the unique identifier of the storageProcessor instance to query. Or GET /api/instances/storageProcessor/name:<value> where <value> is the name of the storageProcessor instance to query.

Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific storageProcessor instance.

uncommittedPort

(Applies to physical deployments only.) Information about Uncommitted ports in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the Uncommitted port instance.
health	health	Health information for the Uncommitted port, as defined by the health resource type.
name	String[1..32]	Uncommitted port name.
portNumber	unsigned Integer[16]	Physical Uncommitted port number on the storage processor.
connectorType	ConnectorTypeEnum	Physical connector type.
sfpSupportedSpeeds	List<SFPSpeedValuesEnum>	SFP (the small form-factor pluggable) supported speeds of the Uncommitted port.
sfpSupportedProtocols	List<SFPProtocolValuesEnum>	SFP (the small form-factor pluggable) supported protocols of the Uncommitted port.
needsReplacement	Boolean	Indicates whether the Uncommitted port needs replacement. Values are: • true - Uncommitted port needs replacement. • false - Uncommitted port does not need replacement.
storageProcessor	storageProcessor	SP on which the Uncommitted port directly or indirectly resides, as defined by the storageProcessor resource type.
parentIOModule	ioModule	(Applies if the Ethernet port resides on an I/O module.) Parent I/O module of the Uncommitted port, as defined by the ioModule resource type.
parentStorageProcessor	storageProcessor	(Applies if the Ethernet port resides directly on an SP.) Parent SP of the Uncommitted port, as defined by the storageProcessor resource type.
parent	resourceRef	Resource type and identifier of the Uncommitted port's parent enclosure, as defined by the resourceRef resource type.

Query all members of the uncommittedPort collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/uncommittedPort/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the uncommittedPort collection.

Query a specific uncommittedPort instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/uncommittedPort/<id> where <id> is the unique identifier of the uncommittedPort instance to query. Or GET /api/instances/uncommittedPort/name:<value> where <value> is the name of the uncommittedPort instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific uncommittedPort instance.

Managing the system

autodownloadSoftwareVersion

Information about software upgrade and disk firmware images auto-downloaded to the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the autodownloadSoftwareVersion instance.
version	String	

		~~Version of the autodownloaded software.~~
name	String	File name of the autodownloaded software.
type	AutodownloadSoftwareTypeEnum	Type of the autodownloaded software.

Query all members of the autodownloadSoftwareVersion collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/autodownloadSoftwareVersion/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the autodownloadSoftwareVersion collection.

Query a specific autodownloadSoftwareVersion instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/autodownloadSoftwareVersion/<id> where <id> is the unique identifier of the autodownloadSoftwareVersion instance to query. Or GET /api/instances/autodownloadSoftwareVersion/name:<value> where <value> is the name of the autodownloadSoftwareVersion instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific autodownloadSoftwareVersion instance.

basicSystemInfo

Provides unauthenticated access to system model, system name, software version, and API version information. This is a singleton resource type.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the basicSystemInfo instance.
model	String	Model name of this storage system. This value comes from the model attribute of the system resource.
name	String	Name of this storage system. This value comes from the name attribute of the system resource.
softwareVersion	String	Software version of this storage system. This value comes from the version attribute of the installedSoftwareVersion resource.
softwareFullVersion	String	Software full version of this storage system. This value comes from the fullversion attribute of the installedSoftwareVersion resource.
apiVersion	String	Latest version of the REST API that this storage system supports.
earliestApiVersion	String	Earliest version of the REST API that this storage system supports.

Query all members of the basicSystemInfo collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/basicSystemInfo/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the basicSystemInfo collection.

Query a specific basicSystemInfo instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/basicSystemInfo/<id> where <id> is the unique identifier of the basicSystemInfo instance to query. Or GET /api/instances/basicSystemInfo/name:<value> where <value> is the name of the basicSystemInfo instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific basicSystemInfo instance.

candidateSoftwareVersion

Information about system software upgrades and language packs uploaded to the storage system and available to install.

Embedded resource types

nameValuePair

Supported operations

Collection query , Instance query ,Prepare

Attributes

Attribute	Type	Description
id	String	Unique identifier of the candidateSoftwareVersion instance.
version	String	Version of the candidate software.
fullVersion	String	Full Version of the candidate software.
revision	unsigned Integer[32]	Revision number of the candidate software.
releaseDate	DateTime	Release date of the candidate software.
type	UpgradeTypeEnum	Type of the candidate software.
rebootRequired	Boolean	Package requires reboot of bo5th SPs, one at a time, with services remaining available.
canPauseBeforeReboot	Boolean	Package can utilize the 'pause' feature allowing the user to choose their disruptive window.

Attributes for nameValuePair

List of name value pairs used to embed additional data in an object.

Attribute	Type	Description
name	String	Candidate description name.
value	String	Candidate description value.

Query all members of the candidateSoftwareVersion collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/candidateSoftwareVersion/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the candidateSoftwareVersion collection.

Query a specific candidateSoftwareVersion instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/candidateSoftwareVersion/<id> where <id> is the unique identifier of the candidateSoftwareVersion instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific candidateSoftwareVersion instance.

Prepare operation

Prepare the automated downloaded software image. Create a candidate version given a filename of the automated downloaded software image on the storage syttem.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/candidateSoftwareVersion/action/prepare
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Prepare operation

Argument	In/ out	Type	Required?	Description
filename	in	String	Required	Filename of the automated downloaded software image to change into candidate version.
id	out	candidateSoftwareVersion	N/A	

feature

Information about features on the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description

id	String	Unique identifier of the feature instance.
name	String	Feature name.
state	FeatureStateEnum	State of the feature.
reason	FeatureReasonEnum	Reason for the feature to be in a state other than enabled. If state is enabled, reason is not applicable.
license	license	License that enables the feature, as defined by the license resource type. An empty value indicates that the feature is not license-based.

Query all members of the feature collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/feature/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the feature collection.

Query a specific feature instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/feature/<id> where <id> is the unique identifier of the feature instance to query. Or GET /api/instances/feature/name:<value> where <value> is the name of the feature instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific feature instance.

importSession

Information about import sessions.

Embedded resource types

elementImport, filesystemImportParameters, importSyncProgress, interfacePortPair

Supported operations

Collection query , Instance query ,CreateBlockImport ,CreateVDMImport ,Modify ,Pause ,Resume ,Cutover ,Commit ,Cancel

Attributes

Attribute	Type	Description
id	String	Unique identifier of the importSession instance.
name	String	User-specified import session name.
state	ImportStateEnum	Import state of the import session.
isCutover	Boolean	'True' indicates that the import session has done cutover, 'False' indicates that the import session has not done cutover.
health	health	Health information for the import session, as defined by the health resource type.
remoteSystem	remoteSystem	Source system of the import session.
type	ImportTypeEnum	Session type of the import session.
resourceType	RemoteObjectTypeEnum	Source resource type of the import session.
srcResource	resourceInfo	Source resource in the import session.
targetResource	resourceInfo	Local target resource of the import session.
elementImports	List<elementImport>	Information about the import of each member lun in the group.
throttle	Boolean	'True' indicates session is throttled (throttle value 8 for the session on the VNX system) and 'False' indicates session is not throttled (throttle value 10 for the session on the VNX system).
percentProgress	unsigned Integer[16]	Overall import session progress details.
vdmInfo	vdmInfo	The source VDM information object.
hosts	List<host>	List of Hosts that will be granted access to import destination resources after cutover.
remainingDataSize	unsigned Integer[64(bytes)]	Size of data remaining to sync.
cutoverThreshold	unsigned Integer[16(percent)]	Cutover ready after this percent of data is imported.
remainingDataPercent	unsigned Integer[16]	Percentage of data remaining to sync.
estimatedCutoverWindow	signed Integer[64(minutes)]	Estimated remaining data sync time in minutes.

Attributes for elementImport

Member element import details in an import session.

Attribute	Type	Description
srcElement	resourceInfo	Source element of the element import
targetElement	resourceInfo	Target element of the element import
health	health	Health information for the import element, as defined by the health resource type.
syncProgress	importSyncProgress	Import sync progress details.
state	ImportStateEnum	State of element import.
targetImportIf	replicationInterface	Target replication interface for nas import data transfer between source system and target system.

Attributes for filesystemImportParameters

Settings to import a file system.

Attribute	Type	Description
sourceFilesystemId	String	Source file system id.
targetPool	pool	Target pool.
importAsVMwareDatastore	Boolean	Indicates whether to import this file system as VMware datastore. Values are: • true - Import this file system as VMware datastore, which results in vmwarefs storage resource type. • false - Do not import this file system as VMware datastore, which results in filesystem storage resource type.
isDataReductionEnabled	Boolean	Indicates whether to enable data reduction on the target file system. Values are: • true - Enable data reduction(default) • false - Disable data reduction
isAdvancedDedupEnabled	Boolean	Indicates whether advanced dedup should be enabled on the target file system. Values are: • true - Enable advanced dedup on the target file system. • false - Do not enable advanced dedup on the target file system.
targetAccessPolicy	AccessPolicyEnum	Target access policy.

Attributes for importSyncProgress

This embedded type represents the sync progress details for each iteration of synchronization.

Attribute	Type	Description
syncStage	ImportStageEnum	Import synchronization stage.
iteration	unsigned Integer[32]	Sync iteration number.
percentProgress	unsigned Integer[32]	Sync percent progress.

Attributes for interfacePortPair

List of source system client interface and target system port pairs used to create a VDM import.

Attribute	Type	Description
sourceInterfaceName	String	Source interface name of the interface port pair.
targetPort	ipPort	Target port of the interface port pair.
targetVlanId	unsigned Integer[16][0..4094]	Target VLAN ID of the interface port pair.

Query all members of the importSession collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/importSession/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the importSession collection.

Query a specific importSession instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/importSession/<id> where <id> is the unique identifier of the importSession instance to query. Or GET /api/instances/importSession/name:<value> where <value> is the name of the importSession instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific importSession instance.

CreateBlockImport operation

Create a block import session.

Header	Accept: application/json

	Content-Type: application/json
Method and URI	POST /api/types/importSession/action/createBlockImport
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateBlockImport operation

Argument	In/ out	Type	Required?	Description
remoteSystem	in	remoteSystem	Required	Source system from which the import is being configured.
srcResource	in	resourceInfo	Required	Unique identifier of the source resource.
dstResourceConfig	in	resourceConfig	Required	This the user chosen config for destination resource provisioning.
dstResourceElementConfigs	in	List<resourceConfig>	Optional	This is the user chosen config for each of the member element of the destination resource.
importAsVMwareDatastore	in	Boolean	Optional	Specify if the target resource should be VMware Datastore. Default is 'false' and not application to consistency groups, only standalone luns
throttle	in	Boolean	Optional	Throttle for session. 'True' (Default): Session throttled. 'False': Session not throttled.
hosts	in	List<host>	Optional	List of hosts that will be granted access to import session destination resources.
cutoverThreshold	in	unsigned Integer[16(percent)] [1..99]	Optional	Cutover threshold. Default value: 5
name	in	String	Optional	Name of the import session.
id	out	importSession	N/A	Unique identifier of the import session.

CreateVDMImport operation

Create a NAS server import.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/importSession/action/createVDMImport
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateVDMImport operation

Argument	In/ out	Type	Required?	Description
remoteSystem	in	remoteSystem	Required	Source system from which the import is being configured.
srcResource	in	resourceInfo	Required	Source resource for which the import is being configured.
targetResPool	in	pool	Required	Target pool on which the target resources will be created.
targetImportIf	in	replicationInterface	Optional	Target replication interface for import data transfer between source system and target system.
defaultProductionPort	in	ipPort	Required	Target port on which the target client interfaces will be created by default.
fsImportParams	in	List<filesystemImportParameters>	Optional	List of filesystem import parameters.
productionIfPortPairs	in	List<interfacePortPair>	Optional	List of source system interface and target system port pairs.
name	in	String	Optional	Name of the import Session.
cifsUsername	in	String[1..1023]	Optional	User name for authentication to CIFS server on the source VDM.
cifsPassword	in	String[1..1023]	Optional	Password for authentication to CIFS server on the source VDM.
unixDirectoryService	in	ImportUnixDirectoryServiceEnum	Optional	Target unix directory service.
dhsmUsername	in	String[1..1023]	Optional	User name for authentication to DHSM server on the source Data Mover.
dhsmPassword	in	String[1..1023]	Optional	Password for authentication to DHSM server on the source Data Mover.
skipServerParamCheck	in	Boolean	Optional	Whether to skip server parameters check. Import session creation compares server parameters between VNX and Unity. When import session creation fails with a "Server parameter error", this option allows the creation to

				proceed. The default value is false. Values are: • true - Skip server parameter check. • false - Do not skip server parameter check.
id	out	importSession	N/A	Unique identifier of the import Session.
errorMsgParams	out	List<String>	N/A	Error message parameter value if returned error message needs parameter filled in it.

Modify operation

Modify an import session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/importSession/<id>/action/modify where <id> is the unique identifier of the importSession instance. Or POST /api/instances/importSession/name:<value>/action/modify where <value> is the name of the importSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
throttle	in	Boolean	Optional	Throttle for session. 'True': Session throttled. 'False': Session not throttled.
name	in	String	Optional	Name of the import session.
cutoverThreshold	in	unsigned Integer[8(percent)] [1..99]	Optional	Cutover threshold
srcLocalCifsAdminUsername	in	String[1..1023]	Optional	User name for authentication to CIFS server on the source VDM.
srcLocalCifsAdminPasswd	in	String[1..1023]	Optional	Password for authentication to CIFS server on the source VDM.

Pause operation

Pause an import session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/importSession/<id>/action/pause where <id> is the unique identifier of the importSession instance. Or POST /api/instances/importSession/name:<value>/action/pause where <value> is the name of the importSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Resume operation

Resume an import session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/importSession/<id>/action/resume where <id> is the unique identifier of the importSession instance. Or POST /api/instances/importSession/name:<value>/action/resume where <value> is the name of the importSession instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Cutover operation

Cutover an import session. For block import this switches the production over as well as commit the session. For file import this just switches the production over to destination site.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/importSession/<id>/action/cutover where <id> is the unique identifier of the importSession instance. Or

	POST /api/instances/importSession/name:<value>/action/cutover where <value> is the name of the importSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Cutover operation

Argument	In/ out	Type	Required?	Description
cifsServerInfo	in	cifsServerInfo	Optional	New CIFS server object to be created at the source VDM.
domainUsername	in	String[1..1023]	Optional	Active Directory domain user name.
domainPassword	in	String[1..1023]	Optional	Active Directory domain password.
organizationalUnit	in	String	Optional	Active Directory OU tree. If there are more than 1 OU,then they have to be given as ou=firstOU:ou=secondOU:ou=yythirdOU and so on.

Commit operation

Commit an import session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/importSession/<id>/action/commit where <id> is the unique identifier of the importSession instance. Or POST /api/instances/importSession/name:<value>/action/commit where <value> is the name of the importSession instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Cancel operation

Cancel an import session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/importSession/<id>/action/cancel where <id> is the unique identifier of the importSession instance. Or POST /api/instances/importSession/name:<value>/action/cancel where <value> is the name of the importSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Cancel operation

Argument	In/ out	Type	Required?	Description
domainUsername	in	String[1..1023]	Optional	Active Directory domain user name.
domainPassword	in	String[1..1023]	Optional	Active Directory domain password.
organizationalUnit	in	String	Optional	Active Directory OU tree. If there are more than 1 OU,then they have to be given as ou=firstOU:ou=secondOU:ou=yythirdOU and so on.

installedSoftwareVersion

Information about installed system software and language packs in the VNXe system.

Embedded resource types

firmwarePackage, installedSoftwareVersionLanguage, installedSoftwareVersionPackages

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the installedSoftwareVersion instance.
version	String	Version of the installed software.
revision	unsigned Integer[32]	Revision number of the installed software.
releaseDate	DateTime	Release date of the installed software.
fullVersion	String	Full Version of the installed software.
languages	List<installedSoftwareVersionLanguage>	List of language pack information included in this release.

hotFixes	List<String>	List of installed hotfixes for the installed software instance.
packageVersions	List<installedSoftwareVersionPackages>	List of relevant package names and the version number of the package.
driveFirmware	List<firmwarePackage>	The drive firmware package is part of the installed software bundle which is used to upgrade disk firmware after software upgrade is completed

Attributes for firmwarePackage

The drive firmware package is part of OE bundle List the detail of the drive firmware package

Attribute	Type	Description
name	String	Name of drive firmware package.
version	String	Version of drive firmware package.
releaseDate	DateTime	Release date of drive firmware package.
upgradableDriveCount	unsigned Integer[16(disks)]	The number of upgradable drives in the array.
estimatedTime	unsigned Integer[16(minutes)]	Time estimation to upgrade drive firmware in minutes.
isNewerVersion	Boolean	Indicates whether the drive firmware package is newer than the installed one.

Attributes for installedSoftwareVersionLanguage

List the language pack information (name, version) installed in the release

Attribute	Type	Description
name	String	Name of the installed software language.
version	String	Version of the installed software language.

Attributes for installedSoftwareVersionPackages

List of relevant package information (name, version) installed in the release

Attribute	Type	Description
name	String	Name of the installed software package.
version	String	Version of the installed software package.

Query all members of the installedSoftwareVersion collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/installedSoftwareVersion/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the installedSoftwareVersion collection.

Query a specific installedSoftwareVersion instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/installedSoftwareVersion/<id> where <id> is the unique identifier of the installedSoftwareVersion instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific installedSoftwareVersion instance.

license

Information about licenses on the storage system.

Embedded resource types

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the license instance.
name	String	License name.
isInstalled	Boolean	Indicates whether the license is installed or not.
version	String	License version.
isValid	Boolean	Indicates whether the license is currently valid. Values are: • true - License is valid. It is either permanent, or the expiration date has not yet passed. • false - License is invalid.
issued	DateTime	Date and time when the license became available.
expires	DateTime	Date and time when the license will expire.
isPermanent	Boolean	Indicates whether the license is permanent. Values are:

		• true - License is permanent. • false - License is temporary.
feature	feature	Name of the feature that the license enables.

Query all members of the license collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/license/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the license collection.

Query a specific license instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/license/<id> where <id> is the unique identifier of the license instance to query. Or GET /api/instances/license/name:<value> where <value> is the name of the license instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific license instance.

ntpServer

Network Time Protocol (NTP) server settings.

The system relies on NTP as a standard for synchronizing the system clock with other nodes on the network. NTP provides a way of synchronizing clocks of distributed systems within approximately one millisecond of each other. A Windows Active Directory domain controller can operate as a time server if the Windows Time Service is running on it.

Some applications will not operate correctly if the clock on the system is not synchronized with the clock on connected hosts. Configure the system and any connected hosts to use the same time server. Doing so does the following:

- Minimizes the chance that synchronization issues will arise between the system and connected hosts.
- Reduces the difficulty of reconciling timestamps used for log information in the different systems.

Note: When using a NAS server for CIFS network shares, the system cannot access an Active Directory domain unless the system is synchronized within five minutes of the Active Directory controller for the domain where the network shares reside.

You can configure a total of four NTP server addresses for the system. All NTP server addresses are grouped into a single NTP server record.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ntpServer instance.
addresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	List of NTP server IP addresses.

Query all members of the ntpServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ntpServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ntpServer collection.

Query a specific ntpServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ntpServer/<id> where <id> is the unique identifier of the ntpServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ntpServer instance.

Modify operation

Modify an NTP server.

Header	Accept: application/json Content-Type: application/json
Method and URI	

	POST /api/instances/ntpServer/<id>/action/modify where <id> is the unique identifier of the ntpServer instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
addresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	List of NTP server IP addresses.
rebootPrivilege	in	RebootPrivilegeEnum	Required	Indicates whether a system reboot of the NTP server is required for setting the system time.
timeShift	out	DateTime[Interval -h+:mm:ss[.sss]]	N/A	Time difference between the system time and the new NTP server time. This value appears only if it exceeds the defined limit of 1000 seconds. If you see this value, you cannot apply the new time settings without rebooting the system.

remoteSyslog

Configuration information for storage system remote logging.

When you configure remote logging, you must specify the network address of a host that will receive the log data. The remote host must be accessible from the storage system, and security for the log information must be provided through network access controls or the system security at the remote host.

By default, the storage system transfers log information on port 514 using the UDP protocol.

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete ,VerifyConnection

Attributes

Attribute	Type	Description
id	String	Unique identifier of the remoteSyslog instance.
address	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	IP address of the host where the storage system stores the remote log information. By default, the storage system stores log information on port 514.
protocol	IpProtocolTypeEnum	Protocol used to transfer messages to the remote log. Default protocol is UDP.
facility	RemoteSyslogFacilityTypeEnum	Type of information to record in the remote system log. It is recommended that you specify 1 (User-level-Messages) for this value.
category	RemoteSyslogCategoryEnum	Category of information to record in the remote system log.
enabled	Boolean	Indicates whether the logging to the remote log is enabled. Values are: • true - Logging to the remote log is enabled. • false - Logging to the remote log is disabled.
severity	SeverityEnum	The least severity level of information to record in the remoteSyslog accepts. Default severity is DEBUG.

Query all members of the remoteSyslog collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/remoteSyslog/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the remoteSyslog collection.

Query a specific remoteSyslog instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/remoteSyslog/<id> where <id> is the unique identifier of the remoteSyslog instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific remoteSyslog instance.

Create operation

Create remote log settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/remoteSyslog/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
enabled	in	Boolean	Optional	Indicates whether logging to the remote log is enabled, default value is true. Values are: • true - Logging to the remote log is enabled. • false - Logging to the remote log is disabled.
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Required	IP address of the host where the storage system stores the remote log information. By default, the storage system transfers log information on port 514.
protocol	in	IpProtocolTypeEnum	Optional	Protocol used to transfer messages to the remote log. The default protocol is UDP.
facility	in	RemoteSyslogFacilityTypeEnum	Optional	Type of information to record in the remote system log. It is recommended that you specify 1 (User-level-Messages) for this value.
category	in	RemoteSyslogCategoryEnum	Optional	Category of information to record in the remote system log.
locale	in	LocaleEnum	Optional	Language used to record log messages in the remote log, default locale is en_US.
severity	in	SeverityEnum	Optional	The least severity level to record log messages in the remote log.
id	out	remoteSyslog	N/A	Unique identifier of the new remoteSyslog instance.

Modify operation

Modify remote log settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/remoteSyslog/<id>/action/modify where <id> is the unique identifier of the remoteSyslog instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
enabled	in	Boolean	Optional	Indicates whether logging to the remote log is enabled. Values are: • true - Logging to the remote log is enabled. • false - Logging to the remote log is disabled.
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	IP address of the host where the storage system stores the remote log information. By default, the storage system transfers log information on port 514.
protocol	in	IpProtocolTypeEnum	Optional	Protocol used to transfer messages to the remote log. The default protocol is UDP.
facility	in	RemoteSyslogFacilityTypeEnum	Optional	Type of information to record in the remote system log. It is recommended that you specify 1 (User-level-Messages) for this value.
category	in	RemoteSyslogCategoryEnum	Optional	Category of information to record in the remote system log.
locale	in	LocaleEnum	Optional	Language used to record log messages in the remote log.
severity	in	SeverityEnum	Optional	The least severity level to record log messages in the remote log.

Delete operation

Delete a remote log setting

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/remoteSyslog/<id> where <id> is the unique identifier of the remoteSyslog instance to delete.

Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

VerifyConnection operation

Verify the connection between Unity and the remote system log server of TCP or TLS type.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/remoteSyslog/<id>/action/verifyConnection where <id> is the unique identifier of the remoteSyslog instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

scheduleTimezone

Information about the time zone that is associated with all scheduled snapshots in the storage system.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the timezone instance. Because timezone is a singleton resource type, the value of this field is always 0.
timezone	ScheduleTimezoneCandidatesEnum	Timezone that is associated with all scheduled snapshots.

Query all members of the scheduleTimezone collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/scheduleTimezone/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the scheduleTimezone collection.

Query a specific scheduleTimezone instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/scheduleTimezone/<id> where <id> is the unique identifier of the scheduleTimezone instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific scheduleTimezone instance.

Modify operation

Modify the timezone that is associated with all scheduled snapshots on the storage system.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/scheduleTimezone/<id>/action/modify where <id> is the unique identifier of the scheduleTimezone instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
timezone	in	ScheduleTimezoneCandidatesEnum	Required	New timezone to be applied to all scheduled snapshots.

serviceContract

(Applies if Dell Support is available.) Information about service contracts.

Supported operations

Collection query , Instance query ,Refresh

Attributes

Attribute	Type	Description
id	String	Unique identifier of the serviceContract instance.

contractId	unsigned Integer[64]	Unique service contract identifier.
contractNumber	String	Contract number generated for the customer.
contractStatus	ServiceContractStatusEnum	Current service contract status.
levelOfService	String	Level of service that the service contract provides.
serviceLineId	String	Service offering identifier.
lastUpdated	DateTime	Date of last service contract renewal.
productStartDate	DateTime	Service contract start date.
productEndDate	DateTime	Service contract end date.

Query all members of the serviceContract collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/serviceContract/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the serviceContract collection.

Query a specific serviceContract instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/serviceContract/<id> where <id> is the unique identifier of the serviceContract instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific serviceContract instance.

Refresh operation

Refresh the service contract information from Dell Online Support.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/serviceContract/action/refresh
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

softwareUpgradeSession

Information about a storage system upgrade session.

Create an upgrade session to upgrade the system software or view existing upgrade sessions. The upgrade session installs an upgrade candidate file that was uploaded to the system. Download the latest upgrade candidate from Dell Online Support website. Use the CLI to upload the upgrade candidate to the system before creating the upgrade session. For information, see the*Unisphere CLI User Guide.*

The latest software upgrade candidate contains all available hot fixes. If you have applied hot fixes to your system, the hot fixes are included in the latest upgrade candidate.

Note: All system components must be healthy prior to upgrading the system software. If any system components are degraded, the software update will fail.

Embedded resource types

upgradeMessage, upgradeTask

Supported operations

Collection query , Instance query ,Create ,VerifyUpgradeEligibility ,Resume

Attributes

Attribute	Type	Description
id	String	Unique identifier for the softwareUpgradeSession instance.
type	UpgradeSessionTypeEnum	Type of software to upgrade.
candidate	candidateSoftwareVersion	Candidate software to install in the upgrade session, as defined by the candidateSoftwareVersion resource type.
caption	String	Caption for this upgrade session.
status	UpgradeStatusEnum	Status of the current upgrade session.
messages	List<upgradeMessage>	List of upgrade messages.
creationTime	DateTime	Date and time when the upgrade session was started.
elapsedTime	DateTime[Interval]	Amount of time for which the upgrade session was running.
percentComplete	unsigned Integer[16(percent)] [0..100]	Percentage of the upgrade that is completed.
tasks	List<upgradeTask>	Current upgrade activity in the upgrade session, as defined by the upgradeTask resource type.

Attributes for upgradeMessage

A message occurrence. This is also the message object returned in the body of non-2xx return code REST responses.

Attribute	Type	Description
errorCode	String	Error code for this message.
messages	List<localizedMessage>	List of localized messages.
severity	SeverityEnum	Severity level associated with this message.
httpStatus	unsigned Integer[32]	HTTP status code for this message.

Attributes for upgradeTask

Information about the upgrade task currently in progress.

Attribute	Type	Description
caption	String	Caption for this task.
creationTime	DateTime	Date and time when the upgrade task was started.
status	UpgradeStatusEnum	Current status of the upgrade activity.
type	UpgradeSessionTypeEnum	Upgrade session type.
estRemainTime	DateTime[Interval]	Estimated time remaining for the upgrade task.

Query all members of the softwareUpgradeSession collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/softwareUpgradeSession/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the softwareUpgradeSession collection.

Query a specific softwareUpgradeSession instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/softwareUpgradeSession/<id> where <id> is the unique identifier of the softwareUpgradeSession instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific softwareUpgradeSession instance.

Create operation

Start a session to upgrade the system software with an uploaded upgrade candidate.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/softwareUpgradeSession/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
candidate	in	candidateSoftwareVersion	Optional	Candidate software to install in the upgrade session, as defined by the candidateSoftwareVersion resource type.
selectedModel	in	SPModelNameEnum	Optional	
pauseBeforeReboot	in	Boolean	Optional	Flag to tell that session should stop after the "preinstall" tasks and before first SP reboot.
id	out	softwareUpgradeSession	N/A	The new upgrade session.

VerifyUpgradeEligibility operation

Validate that the system is in a healthy state. This is required for an upgrade and runs automatically when an upgrade is started. You can use this operation to perform a system health check at any time.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/softwareUpgradeSession/action/verifyUpgradeEligibility
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the VerifyUpgradeEligibility operation

Argument	In/ out	Type	Required?	Description
messages	out	List<upgradeMessage>	N/A	List of embedded upgradeMessage which contain the info of message's identifier, localized text, severity and so on.

Resume operation

Resume a session that is currently in paused, failed, or failed_lock state.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/softwareUpgradeSession/<id>/action/resume where <id> is the unique identifier of the softwareUpgradeSession instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

system

Information about general settings for the storage system.

Supported operations

Collection query , Instance query ,Failback ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the system instance.
health	health	Health information for the system, as defined by the health resource type.
name	String	System name.
model	String	System model name.
serialNumber	String	System product serial number.
uuidBase	unsigned Integer[32]	Base value used to generate UUIDs in the host environment(e.g. OVMS host).
internalModel	String	Internal model name for the system.
platform	String	Hardware platform for the system.
isAllFlash	Boolean	Indicates whether sytem is all flash.
macAddress	String	MAC address of the management interface.
isEULAAccepted	Boolean	Indicates whether the End User License Agreement (EULA) was accepted for an upgrade. Once the EULA is accepted, users can upload product licenses and configure the system, or both. Values are: • true - EULA was accepted on the system. Once you set this value, you cannot set it to false later on. • false - EULA was not accepted on the system.
isUpgradeComplete	Boolean	Indicates whether an upgrade completed. Operations that change the configuration of the system are not allowed while an upgrade is in progress. Values are: • true - Upgrade completed. • false - Upgrade did not complete.
isAutoFailbackEnabled	Boolean	Indicates whether the automatic failback of NAS servers is enabled for the system. Values are: • true - Automatic failback for NAS servers is enabled. • false - Automatic failback for NAS servers is disabled.
currentPower	unsigned Integer[32(watts)]	Current amount of power used by the system.
avgPower	unsigned Integer[32(watts)]	Average amount of power used by the system. The system uses a one hour window of 30-second samples to determine this value.
supportedUpgradeModels	List<SPModelNameEnum>	List of all supported models for hardware upgrade.
isRemoteSysInterfaceAutoPair	Boolean	Indicates whether remote system interface automatic pairing is enabled for the system. When enabled, only pingable replication interfaces between two Unity systems are used by replication remote system. The default value is true. Modify the value to false if it is intended to use all replication interfaces for the replication remote system despite their connectivity. Values are: • true - Remote system interface automatic pairing is enabled. • false - Remote system interface automatic pairing is disabled.

Query all members of the system collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/system/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the system collection.

Query a specific system instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/system/<id> where <id> is the unique identifier of the system instance to query. Or GET /api/instances/system/name:<value> where <value> is the name of the system instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific system instance.

Failback operation

Immediately fail back the storage system to the other storage processor.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/system/<id>/action/failback where <id> is the unique identifier of the system instance. Or POST /api/instances/system/name:<value>/action/failback where <value> is the name of the system instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify the system configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/system/<id>/action/modify where <id> is the unique identifier of the system instance. Or POST /api/instances/system/name:<value>/action/modify where <value> is the name of the system instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String	Optional	System name.
uuidBase	in	unsigned Integer[32]	Optional	Base value used to generate UUIDs in the host environment(e.g. OVMS host). This value should be a non-negative number, and not greater than 16385. OpenVMS requires an unique OVMS device UUID for every device visible to an OVMS host, the OVMS device UUID must also be consistent for any given device across all nodes of an OVMS cluster. Dell VNX and Unity systems create the OVMS device UUID by appending the LUN number to the configured Unity or VNX OVMS base UUID. In the situation of multiple storage systems visible to the same OVMS host(s) the storage systems must be configured with unique values which avoid conflicting OVMS device UUIDs. Unity and VNX devices connected to multi-node OVMS clusters should be configured into a consistency group to ensure a consistent OVMS device UUID for the same device across all OVMS cluster nodes.
isUpgradeCompleted	in	Boolean	Optional	Indicates whether to manually mark an upgrade process completed. This value is automatically set to true by the upgrade provider at the end of the upgrade process and back to false by the first GUI request. Values are: • true - Mark the upgrade completed. • false - Do not mark upgrade completed. This attribute is required by the GUI to display the upgrade details window on the first login after the upgrade completes. It does not depend on the session. The user who started an upgrade may not see its results, if another user logged in earlier.
isEulaAccepted	in	Boolean	Optional	Indicates whether to accept the End User License Agreement (EULA) for an upgrade. Once the EULA is accepted, users can upload product licenses and configure the system, or both. Values are: • true - Accept the EULA.. • false - Do not accept the EULA.
isAutoFailbackEnabled	in	Boolean	Optional	Indicates whether to enable the automatic failback of NAS servers in the system. Values are: • true - Enable the automatic failback of NAS servers. • false - Disable the automatic failback of NAS servers.
isRemoteSysInterfaceAutoPair	in	Boolean	Optional	Indicates whether remote system interface

				automatic pairing is enabled for the system. Values are: • true - Remote system interface automatic pairing is enabled. • false - Remote system interface automatic pairing is disabled.

systemInformation

Contact information for storage system.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the systemInformation instance.
contactFirstName	String	Contact first name for the storage system.
contactLastName	String	Contact last name for the storage system.
contactCompany	String	Contact company name for the storage system.
contactPhone	String	Phone number for the person who should be contacted by the service provider for service issues.
contactEmail	String	Contact email address for the storage system.
locationName	String	The physical location of this system within the user's environment. For example: Building C, lab 5, tile C25
streetAddress	String	Street address for the storage system.
city	String	City where the storage system resides.
state	String	State where the storage system resides.
zipcode	String	Zip code or postal code where the storage system resides. --eng Zip Code is not currently supported by the ESRS VE system information api
country	String	Country where the storage system resides.
siteId	String	The ID identifying the site where this system is installed.
contactMobilePhone	String	Mobile phone number for the person who should be contacted by the service provider for service issues.

Query all members of the systemInformation collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/systemInformation/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the systemInformation collection.

Query a specific systemInformation instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/systemInformation/<id> where <id> is the unique identifier of the systemInformation instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific systemInformation instance.

Modify operation

Modify cotact and location information for the storage system displayed in Unisphere Central.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/systemInformation/<id>/action/modify where <id> is the unique identifier of the systemInformation instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
contactFirstName	in	String	Optional	
contactLastName	in	String	Optional	
contactEmail	in	String	Optional	
contactPhone	in	String	Optional	

locationName	in	String	Optional	
contactMobilePhone	in	String	Optional	
siteId	in	String	Optional	
contactCompany	in	String	Optional	
streetAddress	in	String	Optional	
city	in	String	Optional	
state	in	String	Optional	
country	in	String	Optional	
zipcode	in	String	Optional	

systemLimit

Information about system limits.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the systemLimit instance.
name	String	Limit name.
description	String	Limit description.
unit	UnitEnum	Units of measurement for limit and threshold values.
limitValue	unsigned Integer[64]	Boundary value that cannot be exceeded.
thresholdValue	unsigned Integer[64]	Value at which the system generates alert notifications, if any.
resources	List<String>	Resource types to which the limit applies.
license	license	License on which the limit depends, if any, as defined by the license resource type.

Query all members of the systemLimit collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/systemLimit/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the systemLimit collection.

Query a specific systemLimit instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/systemLimit/<id> where <id> is the unique identifier of the systemLimit instance to query. Or GET /api/instances/systemLimit/name:<value> where <value> is the name of the systemLimit instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific systemLimit instance.

systemTime

Current system time.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the systemTime instance. Because systemTime is a singleton resource type, the value of this field is always 0.
time	DateTime	Current system time.

Query all members of the systemTime collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/systemTime/instances

Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the systemTime collection.

Query a specific systemTime instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/systemTime/<id> where <id> is the unique identifier of the systemTime instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific systemTime instance.

Modify operation

Modify the current system time.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/systemTime/<id>/action/modify where <id> is the unique identifier of the systemTime instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
time	in	DateTime	Required	New system time.
rebootPrivilege	in	RebootPrivilegeEnum	Required	Indicates whether to reboot the system after modifying the system time. A reboot is required if the time shift exceeds 1000 seconds.

upgradeSession

Information about a storage system upgrade session.

Create or view an upgrade session to upgrade the system software or hardware.

A hardware upgrade session starts or shows the status of a hardware upgrade.

A software upgrade session installs an upgrade candidate file that was uploaded to the system. Download the latest upgrade candidate from Dell Online Support website. Use the CLI to upload the upgrade candidate to the system before creating the upgrade session. For information, see the *Unisphere CLI User Guide.*

The latest software upgrade candidate contains all available hot fixes. If you have applied hot fixes to your system, the hot fixes are included in the latest upgrade candidate.

Note: All system components must be healthy prior to upgrading the system software. If any system components are degraded, the software update will fail.

Supported operations

Collection query , Instance query ,Create ,VerifyUpgradeEligibility ,Resume ,Cancel ,Acknowledge

Attributes

Attribute	Type	Description
id	String	Unique identifier for the upgradeSession instance.
type	UpgradeSessionTypeEnum	Type of software or hardware upgrade.
candidate	candidateSoftwareVersion	Candidate software to install in the upgrade session, as defined by the candidateSoftwareVersion resource type. This value does not exist for a hardware upgrade session.
caption	String	Caption for this upgrade session.
status	UpgradeStatusEnum	Status of the current upgrade session.
messages	List<upgradeMessage>	List of upgrade messages.
creationTime	DateTime	Date and time when the upgrade session was started.
elapsedTime	DateTime[Interval]	Amount of time for which the upgrade session was running.
percentComplete	unsigned Integer[16(percent)] [0..100]	Percentage of the upgrade that is completed.
tasks	List<upgradeTask>	Current upgrade activity in the upgrade session, as defined by the upgradeTask resource type.

Query all members of the upgradeSession collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/upgradeSession/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the upgradeSession collection.

Query a specific **upgradeSession** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/upgradeSession/<id> where <id> is the unique identifier of the upgradeSession instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific upgradeSession instance.

Create operation

Start a session to upgrade the system software with an uploaded upgrade candidate.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/upgradeSession/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
candidate	in	candidateSoftwareVersion	Optional	Candidate software to install in the upgrade session, as defined by the candidateSoftwareVersion resource type.
selectedModel	in	SPModelNameEnum	Optional	Storage processor model to upgrade to in the online or offline hardware upgrade procedure
pauseBeforeReboot	in	Boolean	Optional	(optional) Flag to tell that session should stop after the "preinstall" tasks and before first SP reboot.
pauseBetweenReboots	in	Boolean	Optional	(optional) Flag to tell that session should stop after the first SP reboot.
offline	in	Boolean	Optional	flag to run a disruptive storage processor upgrade. Offline SP upgrade is faster but all data will be unavailable during the proceedure.
id	out	upgradeSession	N/A	The new upgrade session.

VerifyUpgradeEligibility operation

Validate that the system is in a healthy state. This is required for an upgrade and runs automatically when an upgrade is started. You can use this operation to perform a system health check at any time.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/upgradeSession/action/verifyUpgradeEligibility
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the VerifyUpgradeEligibility operation

Argument	In/ out	Type	Required?	Description
messages	out	List<upgradeMessage>	N/A	List of embedded upgradeMessage which contain the info of message's identifier, localized text, severity and so on.

Resume operation

Resume a session that is currently in paused, failed, or failed_lock state.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/upgradeSession/<id>/action/resume where <id> is the unique identifier of the upgradeSession instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

Cancel operation

Cancel paused or failed upgrade. This will make the upgrade un-resumable, and remove uploaded candidateSoftwareVersion if any.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/upgradeSession/<id>/action/cancel where <id> is the unique identifier of the upgradeSession instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)

Successful response body	No body content.

Acknowledge operation

User acknowledges that an upgrade operation is in a succesful or cancelled state.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/upgradeSession/<id>/action/acknowledge where <id> is the unique identifier of the upgradeSession instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

Monitoring capacity and performance

archive

Performance archive files in the storage system.

Archive file contains performance data for a pre-defined set of metrics in the selected time range. Your service provider may request this file in order to analyze performance issues.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Archive id.
name	String	Archive file name.
startTime	DateTime	Archive start time.
endTime	DateTime	Archive end time.
size	unsigned Integer[64(bytes)]	Archive file size.

Query all members of the archive collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/archive/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the archive collection.

Query a specific archive instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/archive/<id> where <id> is the unique identifier of the archive instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific archive instance.

metric

One of the following:

- Performance measurements for the Unity system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	unsigned Integer[32]	Unique identifier for the metric instance.
name	String	Display name of the metric.
path	String	Stat paths for the historical and real-time metrics. A stat path identifies a metric's location in the stats namespace. There are two types of stat paths: • stat paths for historical metrics • Stat paths for real-time metrics **stat paths for historical metrics** Use the following URI pattern to retrieve stat paths for all historical metrics: /api/types/metric/instances?compact=true&filter=isHistoricalAvailable eq true **Stat path for real-time metrics** Use the following URI pattern to retrieve stat paths for all real-time metrics:

		/api/types/metric/instances?compact=true&filter=isRealtimeAvailable eq true For both historical and real-time quey, the following URI pattern can be used to retrieve stat paths for a group of metrics. In this pattern, %25 is an encoded value for a percent sign (%). /api/types/metric/instances?compact=true&filter=path lk *metric-path*.%25 where *metric-path* is one of the stat paths listed below: • sp.*.blockCache - Counters for cache metrics • sp*.cifs - CIFS protocol statistics • sp.*.fibreChannel - Fibre Channel statistics • sp.*.fs - File system statistics • sp.*.ftp - FTP protocol statistics • sp.*.http - HTTP protocol statistics • sp.*.iscsi - iSCSI protocol statistics • sp.*.memory - Memory statistics • sp.*.ndmp - NDMP protocal statistics • sp.*.cpu - CPU statistics • sp.*.net - Network interface and protocol statistics • sp.*.nfs - NFS protocol statistics • sp.*.ntp - NTP statistics • sp.*.physical - Physical device statistics • sp.*.replication - Replication statistics • sp.*.rpc - RPC statistics • sp.*.ssh - SSH statistics • sp.*.store - Storage hardware interface statistics • sp.*.storage - Storage statistics • sp.*.vhdx - Microsoft Hyper-V virtual disks statistics • sp.*.virusChecker - Virus checker statistics For example, to retrieve a list of available network performance metrics, you can use the following GET collection request: https://*ip-address*/api/types/metric/instances?compact=true&filter=path lk sp.*.net.%25
type	unsigned Integer[32]	Type of metric. Values are: • 2 - 32 bits counter • 3 - 64 bits counter • 4 - rate • 5 - fact • 6 - text • 7 - 32 bits virtual counter • 8 - 64 bits virtual counter
description	String	Short description of the metric.
isHistoricalAvailable	Boolean	Indicates whether the metric is available for historical collection: • true - Metric is supported for historical collection. • false - Metric is not supported for historical collection.
isRealtimeAvailable	Boolean	Indicates whether the metric is supported for real-time collection: • true - Metric is supported for real-time collection. • false - Metric is not supported for real-time collection.
unitDisplayString	String	Localized text used to describe the metric unit.

Query all members of the metric collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/metric/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the metric collection.

Query a specific metric instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/metric/<id> where <id> is the unique identifier of the metric instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific metric instance.

metricCollection

Information about each metrics collection in the VNXe or Unisphere Central system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the metricCollection resource type.
interval	unsigned Integer[32]	Interval associated with the metrics collection.
oldest	DateTime	

		Date and time on which the oldest available metric data in the collection was collected.
retention	unsigned Integer[32(days)]	Number of days for which the metric data in the collection will be retained.

Query all members of the metricCollection collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/metricCollection/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the metricCollection collection.

Query a specific metricCollection instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/metricCollection/<id> where <id> is the unique identifier of the metricCollection instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific metricCollection instance.

metricQueryResult

A set of values for one or more metrics for a given period of time. Each metricQueryResult resource is associated with a metricRealTimeQuery resource (VNXe or Unisphere Central) or metricHistoricalQuery resource (Unisphere Central only).

After you create a query, the results are available as a set of metricQueryResult resources, where the queryId attribute of each metricQueryResult resource matches the id attribute of the associated metricRealTimeQuery or metricHistoricalQuery resource.

You can optionally delete the metricRealTimeQuery resource when it is no longer needed, or it will be deleted automatically when the expiration reached. This API requires a ?filter= URL parameter that filters on a valid queryId.

An example of a valid filter:
https://IP/api/types/metricQueryResult/instances?filter=queryId EQ 1

Embedded resource types

statValue

Supported operations

Collection query

Attributes

Attribute	Type	Description
queryId	unsigned Integer[32]	Identifier of the metricQueryResult instance. This value matches the id attribute of the associated metricRealTimeQuery or metricHistoricalQuery resource.
path	String	Path that corresponds to one of the metric paths specified in the associated metricHistoricalQuery or metricRealTimeQuery resource.
timestamp	DateTime	Date and time when the metrics sample was taken.
values	statValue	Metric values corresponding to the set of metrics listed in the associated query.

Attributes for statValue

A statValue object contains one real-time sample of a single metric. Its JSON representation is the following: statValue {} { values } values pair pair , values pair string : value value float statValue The string in a pair is the ID of an object. The value is the metric value for that object.

Attribute	Type	Description

Query all members of the metricQueryResult collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/metricQueryResult/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the metricQueryResult collection.

metricRealTimeQuery

Represents a query to obtain real-time information for one or more metrics, including a specified sampling frequency.

After you create this query, the results are available as a set of metricQueryResult resources, where the queryId attribute of each metricQueryResult resource matches the id attribute of the associated metricRealTimeQuery resource (VNXe and Unisphere Central) or metricHistoricalQuery resource (Unisphere Central only).

You can optionally delete the metricRealTimeQuery resource when it is no longer needed, or the resource will be deleted automatically when expiration is reached.

Note: The metricRealTimeQuery resource does not support the filtering of response data.

To query real-time information for one or more metrics, please follow below steps:
1, Run POST /api/types/metricRealTimeQuery/instances to create a real-time query.
2, Run GET /api/types/metricQueryResult/instances to get a real-time sample of metrics you queried.

An example to query real-time information of CPU busy and idle ticks:
1, POST api/types/metricRealTimeQuery/instances

```
{
   "paths": ["sp.*.cpu.summary.busyTicks" ,"sp.*.cpu.summary.idleTicks"],
   "interval": 5
}
```

The response will be like the one below,


```
{
  "base": "https://10.108.126.67/api/instances/metricRealTimeQuery",
  "updated": "2017-03-07T05:58:44.669Z",
  "links": [
    {
    "rel": "self",
    "href": "/37"
    }
  ],
  "content": {
    "id": 37, **=====> this id will be used in the second step**
    "paths": [
     "sp.*.cpu.summary.busyTicks",
     "sp.*.cpu.summary.idleTicks"
    ],
    "interval": 5,
    "maximumSamples": -1,
    "expiration": "2017-03-07T05:59:30.000Z"
  }
}
```


2, GET /api/types/metricQueryResult/instances?filter=queryId eq 37
Please note that the queryId here returned in the response of the first POST request.

The response will be like the one below,


```
{
  "base": "https://10.108.126.67/api/types/metricQueryResult/instances?filter=queryId eq 37&per_page=2000",
  "updated": "2017-03-07T05:58:54.040Z",
  "links": [
    {
      "rel": "self",
      "href": "&page=1"
    }
  ],
  "entries": [
    {
      "base": "https://10.108.126.67/api/instances/metricQueryResult",
      "updated": "2017-03-07T05:58:54.040Z",
      "links": [
        {
        "rel": "self",
        "href": "/37"
        }
      ],
      "content": {
        "queryId": 37,
        "path": "sp.*.cpu.summary.busyTicks",
        "timestamp": "2017-03-07T05:58:50.000Z",
        "values": {
          "spa": "3675787",
          "spb": "1520850"
        }
      }
    },
    {
      "base": "https://10.108.126.67/api/instances/metricQueryResult",
      "updated": "2017-03-07T05:58:54.040Z",
      "links": [
        {
        "rel": "self",
        "href": "/37"
        }
      ],
      "content": {
        "queryId": 37,
        "path": "sp.*.cpu.summary.idleTicks",
        "timestamp": "2017-03-07T05:58:50.000Z",
        "values": {
          "spa": "31280263",
          "spb": "34352275"
        }
      }
    }
  ]
}
```


The metricRealTimeQuery resource will be deleted automatically when expiration is reached, or you can manually delete it by running DELETE /api/instances/metricRealTimeQuery/<id>.
1, To delete the query just created in the first step, run DELETE /api/instances/metricRealTimeQuery/37

@docstatus Reviewed

Supported operations

Collection query , Instance query ,Create ,Delete

Attributes

Attribute	Type	Description
id	unsigned Integer[32]	Unique identifier of the metricRealTimeQuery instance.
paths	List<String>	Metric stat paths associated with the query. To learn how to obtain stat paths for real-time metrics, see the description of the path attribute for the metric resource type.
interval	unsigned Integer[32(seconds)] [5..300]	Sampling frequency for the query, in seconds.
expiration	DateTime	Date and time when the query will expire. Once the expiration date/time has been reached, the query will automatically be deleted, along with the corresponding results. This is strictly calculated by the server, and cannot be specified by the client. If the user doesn't retrieve a query result through MetricQueryResult for 10 consecutive sample periods, the session will be deleted. This value shows the time(10 periods after the last query) at which the session will be deleted if no queries are received.

Query all members of the metricRealTimeQuery collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/metricRealTimeQuery/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the metricRealTimeQuery collection.

Query a specific metricRealTimeQuery instance

Header	Accept: application/json Content-Type: application/json
Method and URI	

	GET /api/instances/metricRealTimeQuery/<id> where <id> is the unique identifier of the metricRealTimeQuery instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific metricRealTimeQuery instance.

Create operation

Create a new metrics real-time query.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/metricRealTimeQuery/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
paths	in	List<String>	Required	Metric stat paths associated with the query. To learn how to obtain metric stat paths, see the description for the path attribute for the metric resource type.
interval	in	unsigned Integer[32]	Required	Sampling frequency for the query.
id	out	metricRealTimeQuery	N/A	New metricRealTimeQuery instance.

Delete operation

Delete the specified metricRealTimeQuery instance. All associated metricQueryResult resources will also be deleted.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/metricRealTimeQuery/<id> where <id> is the unique identifier of the metricRealTimeQuery instance to delete.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

metricService

Information about the metrics service configuration. There is only one occurrence of this resource type.

Embedded resource types

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	unsigned Integer[32]	Unique identifier of the metricService instance to modify. The value of this attribute is always 0, since it is a singleton resource type.
isHistoricalEnabled	Boolean	Indicates whether historical metrics collection is enabled: • true - Historical metrics collection is enabled. • false - Historical metrics collection is disabled.

Query all members of the metricService collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/metricService/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the metricService collection.

Query a specific metricService instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/metricService/<id> where <id> is the unique identifier of the metricService instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific metricService instance.

Modify operation

Enable or disable historical collection for metrics.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/metricService/action/modify
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isHistoricalEnabled	in	Boolean	Required	Indicates whether historical metrics collection should be enabled: • true - Enable historical metrics collection. • false - Disable historical metrics collection.

metricValue

Historical values for requested metrics.

Note: The maximum number of returned instances per page is 5 for the metricValue resource type. For more information about paging, see the *Unisphere Management REST API Programmer's Guide.*
Unlike other REST GETs, this API requires a ?filter= URL parameter that filters on at least path. It must be filtered to one or more paths
An example of a valid filter(s) :
https://IP/api/types/metricValue/instances?filter=path EQ "sp.*.physical.disk.*.responseTime"

Embedded resource types

floatOrValueMap

Supported operations

Collection query

Attributes

Attribute	Type	Description
path	String	Stat path for the metric. A stat path identifies the metric's location in the stats namespace.
timestamp	DateTime	Date and time when the metrics data was collected.
interval	unsigned Integer[32(seconds)]	Time interval of the requested sample.
values	Map<String, floatOrValueMap>	Mapping of each returned element, such as LUN1 or LUN2, to its associated floating point value or its further mapping of elements to values.

Attributes for floatOrValueMap

A single floating point value that corresponds to the element in the metric or another mapping of a string to floatOrValueMap. This mapping allows for a hierarchical structure of values mapped to the metrics in the metric object.

Attribute	Type	Description

Query all members of the **metricValue** collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/metricValue/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the metricValue collection.

Protecting data

ldapServer

Information about the Lightweight Directory Access Protocol (LDAP) server used by the storage system as an authentication authority for administrative users. You can configure one LDAP server. The system uses the LDAP settings for facilitating access control to Unisphere and the Unisphere CLI, but not for facilitating access control to storage resources.

LDAP is an application protocol for querying and modifying directory services running on TCP/IP networks. LDAP provides central management for network authentication and authorization operations by helping to centralize user and group management across the network. Integrating the system into an existing LDAP environment provides a way to control user and user group access to the system through Unisphere or the Unisphere CLI.

After you configure LDAP settings for the system, you can manage users and user groups within the context of an established LDAP directory structure. For example, you can assign access permissions to the Unisphere CLI that are based on existing users and groups.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify ,Verify ,RefreshAddressesFromDNS

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ldapServer instance.
authority	String	Name of the LDAP authority.
autoDiscover	Boolean	When true, the LDAP server addresses are obtained using DNS lookup on the LDAP authority (requires DNS to be configured).
serverAddresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported:	List of IP addresses of the LDAP server.

	true	
port	unsigned Integer[16]	Port to connect to the LDAP server.
bindDN	String	Bind Distinguished Name (DN) of the user to be used when binding; that is, authenticating and setting up the connection to the LDAP Server. For example: Administrator@mycompany.com or cn=Administrator,cn=Users,dc=mycompany,dc=com
protocol	LDAPProtocolEnum	Protocol used to connect to the LDAP server.
userSearchPath	String	Path used to search for users on the directory server. For example: ou=People,dc=lss,dc=dell,dc=com
groupSearchPath	String	Path used to search for groups on the directory server. For example: uid=name,ou=people,dc=domaincomponent or dc=domain component
userIdAttribute	String	Name of the LDAP attribute whose value indicates the user ID. Default value is uid.
groupNameAttribute	String	Name of the LDAP attribute whose value indicates the group name. Default value is cn.
userObjectClass	String	LDAP object class for users. Default value is user. In Active Directory, groups and users are stored in the same directory path, and are in a class called group.
groupObjectClass	String	LDAP object class for groups. Default value is group. In Active Directory, groups and users are stored in the same directory path and are in a class called group.
groupMemberAttribute	String	Name of the LDAP attribute whose value contains the names of group members within a group. Default value is member.
timeout	unsigned Integer[32(msec)]	Timeout for establishing a connection to an LDAP server. If the system does not receive a reply from the LDAP server before the specified timeout, it stops sending requests. Default value is 30000 (30 seconds).

Query all members of the ldapServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ldapServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ldapServer collection.

Query a specific ldapServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ldapServer/<id> where <id> is the unique identifier of the ldapServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ldapServer instance.

Create operation

Create an LDAP server configuration. The operation will fail if an LDAP server configuration already exists.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/ldapServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
id	out	ldapServer	N/A	Unique identifier of the new LDAP server configuration.
authority	in	String	Required	Name of the LDAP authority to construct the LDAP server configuration.
protocol	in	LDAPProtocolEnum	Optional	Protocol used to connect to the LDAP server.
autoDiscover	in	Boolean	Optional	Default is true if no server addresses are specified.

				When set as true, the LDAP server addresses are obtained using DNS lookup on the LDAP authority (requires DNS to be configured).
serverAddresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	List of IP addresses or FQDN hostnames of the LDAP server. If not specified, the address will be obtained using DNS lookup on the LDAP authority (requires DNS to be configured).
port	in	unsigned Integer[16]	Optional	Port number to connect to the LDAP server. Cannot be used when specifying a port via (deprecated) serverAddress.
bindDN	in	String	Required	Distinguished Name (DN) of the user to be used when binding; that is, authenticating and setting up the connection to the LDAP Server. For example: Administrator@mycompany.com or cn=Administrator,cn=Users,dc=mycompany,dc=com
bindPassword	in	String	Required	Password to use when binding a new LDAP session.
userSearchPath	in	String	Required	Path used to search for users on the directory server. For example: ou=People,dc=lss,dc=dell,dc=com
groupSearchPath	in	String	Required	Path used to search for groups on the directory server. For example: uid=name,ou=people,dc=domaincomponent or dc=domain component
userIdAttribute	in	String	Optional	Name of the LDAP attribute whose value indicates the user ID. Default value is sAmAccountName.
groupNameAttribute	in	String	Optional	Name of the LDAP attribute whose value indicates the group name. Default value is cn.
userObjectClass	in	String	Optional	LDAP object class for users. Default value is user. In Active Directory, groups and users are stored in the same directory path, and are in a class called group.
groupObjectClass	in	String	Optional	LDAP object class for groups. Default value is group. In Active Directory, groups and users are stored in the same directory path, and are in a class called group.
groupMemberAttribute	in	String	Optional	Name of the LDAP attribute whose value contains the names of group members within a group. Default value is member.
certificateFilePath	in	String	Optional	Path to the server certificate file on the system. This is required for one way server authentication. This argument is required if the value of the protocol argument is ldaps.
timeout	in	unsigned Integer[32(msec)]	Optional	Timeout for establishing a connection to an LDAP server. If the system does not receive a reply from the LDAP server after the specified timeout, it stops sending requests. Default value 30000 (30 seconds).

Delete operation

Delete an LDAP server configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/ldapServer/<id> where <id> is the unique identifier of the ldapServer instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify an LDAP server configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ldapServer/<id>/action/modify where <id> is the unique identifier of the ldapServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)

Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
protocol	in	LDAPProtocolEnum	Optional	Protocol used to connect to the LDAP server.
autoDiscover	in	Boolean	Optional	When true, the LDAP server addresses are obtained using DNS lookup on the LDAP authority (requires DNS to be configured).
serverAddresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	List of IP addresses or FQDN hostnames of the LDAP server.
port	in	unsigned Integer[16]	Optional	Port number to connect to the LDAP server. Cannot be used when specifying a port via (deprecated) serverAddress.
bindDN	in	String	Optional	Distinguished Name (DN) of the user to be used when binding; that is, authenticating and setting up the connection to the LDAP Server. For example: Administrator@mycompany.com or cn=Administrator,cn=Users,dc=mycompany,dc=com
bindPassword	in	String	Optional	Password to use when binding a new LDAP session.
userSearchPath	in	String	Optional	Path used to search for users on the directory server. For example: ou=People,dc=lss,dc=dell,dc=com
groupSearchPath	in	String	Optional	Path used to search for groups on the directory server. For example: uid=name,ou=people,dc=domaincomponent or dc=domain component
userIdAttribute	in	String	Optional	Name of the LDAP attribute whose value indicates the user ID. Default value is uid.
groupNameAttribute	in	String	Optional	Name of the LDAP attribute whose value indicates the group name. Default value is cn.
userObjectClass	in	String	Optional	LDAP object class for users. Default value is user. In Active Directory, groups and users are stored in the same directory path, and are in a class called group.
groupObjectClass	in	String	Optional	LDAP object class for groups. Default value is group. In Active Directory, groups and users are stored in the same directory path, and are in a class called group.
groupMemberAttribute	in	String	Optional	Name of the LDAP attribute whose value contains the names of group members within a group. Default value is member.
certificateFilePath	in	String	Optional	Path to the server certificate file on the system.This is required for one way server authentication.
timeout	in	unsigned Integer[32(msec)]	Optional	Timeout for establishing a connection to an LDAP server. If the system does not receive a reply from the LDAP server after the specified timeout, it stops sending requests. Default value is 30000 (30 seconds).

Verify operation

Verify connectivity to the LDAP server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ldapServer/<id>/action/verify where <id> is the unique identifier of the ldapServer instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

RefreshAddressesFromDNS operation

If auto discover is enabled, refresh the list of server addresses using DNS for the specified LDAP configuration.

Header	Accept: application/json Content-Type: application/json

Method and URI	POST /api/instances/ldapServer/<id>/action/refreshAddressesFromDNS where <id> is the unique identifier of the ldapServer instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

remoteInterface

All local and remote replication interfaces from all remote system connection configurations.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique global identifier of the remoteInterface instance. This is combination of system serial number and the instance id as is from the remote system.
remoteId	String	Unique identifier of the remoteInterface instance as is from remote system.
name	String	User-specified remote interface name.
address	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IP address of the remote interface.
remoteSystem	remoteSystem	Unique identifier of the remote system, as defined by the remoteSystem resource type.
node	NodeEnum	SP or node owning this interface.
capability	ReplicationCapabilityEnum	This property indicates the capability of the interface for replication sessions Values are: • 0 - interface is capable of participating in SYNC replication sessions • 1 - interface is capable of participating in ASYNC replication sessions • 2 - interface is capable of participating in both SYNC and ASYNC replication sessions

Query all members of the remoteInterface collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/remoteInterface/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the remoteInterface collection.

Query a specific remoteInterface instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/remoteInterface/<id> where <id> is the unique identifier of the remoteInterface instance to query. Or GET /api/instances/remoteInterface/name:<value> where <value> is the name of the remoteInterface instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific remoteInterface instance.

remoteSystem

Information about remote storage systems that connect to the system to which you are logged in. The system uses the configuration to access and communicate with the remote system. For example, to use remote replication, create a configuration that specifies the remote system to use as the destination for the replication session.

Embedded resource types

remoteSystemBandwidthSchedule

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete ,Verify ,FailoverAllNasReplicationSessions ,PauseReplicationSessions ,ResumeReplicationSessions

Attributes

Attribute	Type	Description
id	String	Unique identifier of the remoteSystem instance.
name	String	System name as reported by system.name on remote system.

model	String	Model name of the remote system.
serialNumber	String	Serial number of the remote system.
health	health	Health information for the remote system, as defined by the health resource type.
managementAddress	String	Management IP address of the remote system.
altManagementAddressList	List<String>	Alternate management IP addresses of the remote system.
connectionType	ReplicationCapabilityEnum	Type of the replication connection to the remote system.
syncFcPorts	List<String>	Fibre channel ports used for synchronous replication.
username	String	Username for accessing the remote system.
localSPAInterfaces	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	SPA replication interface IP addresses of local system used in remote system connection configuration.
localSPBInterfaces	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	SPB replication interface IP addresses of local system used in remote system connection configuration.
remoteSPAInterfaces	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	SPA replication interface IP addresses of remote system used in remote system connection configuration.
remoteSPBInterfaces	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	SPB replication interface IP addresses of remote system used in remote system connection configuration.
bandwidthSchedules	List<remoteSystemBandwidthSchedule>	A list of bandwidth schedules configured for asynchronous replications on this remote system. The first matched (by comparing current time with the days of the week plus the hours of the day of the bandwidth schedule) bandwidth schedule's bandwidth takes effect in that all synchronous replication sessions on this remote system as source role with active data transfer due to either RPO or manual sync would evenly share the bandwidth.
currentBandwidth	unsigned Integer[32][0..524288000]	Current bandwidth calculated based on the configured bandwidth schedules and the schedule time zone for asynchronous replications on this remote system. Value is in KB/s and ranges from 0 to 524288000. No value means that the asynchronous replications on this remote system with source role will not be throttled.

Attributes for remoteSystemBandwidthSchedule

Information about remote system bandwidth schedule. This object specifies the maximum bandwidth that would be evenly shared by all asynchronous replications on a remote system with source role and having active data transfer due to either RPO or manual sync between the from hour and the to hour on the days of week. Please note the maximum bandwidth is a limit that all replication data transfer total speed should not exceed, the actual replication data transfer speed is up to physical network.

Attribute	Type	Description
fromHour	unsigned Integer[16(hours)][0..23]	Starting hour ranging from 0 to 23 indicating when this bandwidth schedule applies. fromHour value should be smaller than toHour value. fromHour will be based on the schedule time zone configured for snap schedules and asynchronous replication bandwidth schedules.
toHour	unsigned Integer[16(hours)][1..24]	Ending hour ranging from 1 to 24 indicating when this bandwidth schedule applies. toHour value should be bigger than fromHour value. toHour will be based on the schedule time zone configured for snap schedules and asynchronous replication bandwidth schedules.
daysOfWeek	List<DayOfWeekEnum>	Days of the week indicating when this bandwidth schedule applies.
bandwidth	unsigned Integer[32] [0..524288000]	Maximum bandwidth value in KB/s ranging from 0 to 524288000. If not specified, available bandwidth up to physical network bandwidth will be used.

Query all members of the remoteSystem collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/remoteSystem/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the remoteSystem collection.

Query a specific remoteSystem instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/remoteSystem/<id> where <id> is the unique identifier of the remoteSystem instance to query. Or

	GET /api/instances/remoteSystem/name:<value> where <value> is the name of the remoteSystem instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific remoteSystem instance.

Create operation

Configure a remote system

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/remoteSystem/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
managementAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Required	Management IP address of the remote system.
localUsername	in	String[..64]	Optional	Local administrative username used for reverse direction communications from the remote system.
localPassword	in	String	Optional	Local administrative password used for reverse direction communications from the remote system.
remoteUsername	in	String[..64]	Optional	Remote username used to access the remote system.
remotePassword	in	String	Optional	Remote password used to access the remote system.
connectionType	in	ReplicationCapabilityEnum	Optional	Replication connection type to the remote system.
bandwidthSchedules	in	List<remoteSystemBandwidthSchedule>	Optional	A list of bandwidth schedules configured for asynchronous replications on this remote system. The first matched (by comparing current time with the days of the week plus the hours of the day of the bandwidth schedule) bandwidth schedule's bandwidth takes effect in that all asynchronous replication sessions on this remote system as source role with active data transfer due to either RPO or manual sync would evenly share the bandwidth.
id	out	remoteSystem	N/A	Unique identifier for the new remoteSystem instance.

Modify operation

Modify the remote system configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/remoteSystem/<id>/action/modify where <id> is the unique identifier of the remoteSystem instance. Or POST /api/instances/remoteSystem/name:<value>/action/modify where <value> is the name of the remoteSystem instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
managementAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	Management IP address of the remote system.
username	in	String[..64]	Optional	Username for accessing the remote system.
password	in	String	Optional	Password for accessing the remote system.

connectionType	in	ReplicationCapabilityEnum	Optional	Connection type to the remote system.
bandwidthSchedules	in	List<remoteSystemBandwidthSchedule>	Optional	A list of bandwidth schedules configured for asynchronous replications on this remote system. The first matched (by comparing current time with the days of the week plus the hours of the day of the bandwidth schedule) bandwidth schedule's bandwidth takes effect in that all asynchronous replication sessions on this remote system as source role with active data transfer due to either RPO or manual sync would evenly share the bandwidth.

Delete operation

Delete the remote system configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/remoteSystem/<id> where <id> is the unique identifier of the remoteSystem instance to delete. Or DELETE /api/instances/remoteSystem/name:<value> where <value> is the name of the remoteSystem instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Verify operation

Verify and update the remote system settings

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/remoteSystem/<id>/action/verify where <id> is the unique identifier of the remoteSystem instance. Or POST /api/instances/remoteSystem/name:<value>/action/verify where <value> is the name of the remoteSystem instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Verify operation

Argument	In/ out	Type	Required?	Description
connectionType	in	ReplicationCapabilityEnum	Optional	Connection type to the remote system.

FailoverAllNasReplicationSessions operation

Fail over all NAS servers and their file systems replication sessions which replicate from the selected remote system to the local system.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/remoteSystem/<id>/action/failoverAllNasReplicationSessions where <id> is the unique identifier of the remoteSystem instance. Or POST /api/instances/remoteSystem/name: <value>/action/failoverAllNasReplicationSessions where <value> is the name of the remoteSystem instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the FailoverAllNasReplicationSessions operation

Argument	In/ out	Type	Required?	Description
force	in	Boolean	Optional	Skip pre-checks on replication sessions of a NAS server when a replication failover is issued. Values are: • true - Skip pre-checks. • false - Do not skip pre-checks.

PauseReplicationSessions operation

Pause replication sessions which replicate from the local system to the selected remote system, and from the selected remote system to the local system.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/remoteSystem/<id>/action/pauseReplicationSessions where <id> is the unique identifier of the remoteSystem instance.

	Or POST /api/instances/remoteSystem/name:<value>/action/pauseReplicationSessions where <value> is the name of the remoteSystem instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the PauseReplicationSessions operation

Argument	In/ out	Type	Required?	Description
sessionType	in	ReplicationCapabilityEnum	Optional	Specify the type of replication sessions to pause - sync, async, or both. If not specified, the connection type of the remote system is used by default.

ResumeReplicationSessions operation

Resume replication sessions which replicate from the local system to the selected remote system, and from the selected remote system to the local system. For each asynchronous replication session and File synchronous session, 'allowFullCopy' option is used. If more resume options are needed, resume the individual replication session instead.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/remoteSystem/<id>/action/resumeReplicationSessions where <id> is the unique identifier of the remoteSystem instance. Or POST /api/instances/remoteSystem/name:<value>/action/resumeReplicationSessions where <value> is the name of the remoteSystem instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ResumeReplicationSessions operation

Argument	In/ out	Type	Required?	Description
sessionType	in	ReplicationCapabilityEnum	Optional	Specify the type of replication sessions to resume - sync, async, or both. If not specified, the connection type of the remote system is used by default.

replicationInterface

Information about replication interfaces in the storage system. These interfaces are used in remote replication connections and sessions for replication data transfer.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the replicationInterface instance.
ipPort	ipPort	Physical port or link aggregation on the storage processor on which the replication interface is running, as defined by the ipPort resource type.
health	health	Health of the replication interface, as defined by the health resource type.
ipAddress	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IP address of the replication interface.
ipProtocolVersion	IpProtocolVersionEnum	IP protocol version of the replication interface.
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 netmask for the replication interface, if it uses an IPv4 address.
v6PrefixLength	unsigned Integer[32][0..32]	IPv6 prefix length for the replication interface, if it uses an IPv6 address.
gateway	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 or IPv6 gateway address for the replication interface.
vlanId	unsigned Integer[16][4094..0]	Virtual Local Area Network (VLAN) identifier for the replication interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 0 - 4094. The default is 0, which means that the packets

		to accept do not have VLAN tags.
macAddress	String	MAC address of the virtual Ethernet port used for the replication interface. A physical Ethernet port has a different MAC address.
name	String	Replication interface name.

Query all members of the replicationInterface collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/replicationInterface/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the replicationInterface collection.

Query a specific replicationInterface instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/replicationInterface/<id> where <id> is the unique identifier of the replicationInterface instance to query. Or GET /api/instances/replicationInterface/name:<value> where <value> is the name of the replicationInterface instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific replicationInterface instance.

Create operation

Create a replication interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/replicationInterface/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
sp	in	storageProcessor	Required	Storage processor on which the replication interface is running.
ipPort	in	ipPort	Required	Physical port or link aggregation on the storage processor on which the interface is running, as defined by the ethernetPort resource type.
ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Required	IP address of the replication interface.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 netmask for the replication interface, if it uses an IPv4 address.
v6PrefixLength	in	unsigned Integer[32]	Optional	IPv6 prefix length for the interface, if it uses an IPv6 address.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name	Optional	IPv4 or IPv6 gateway address for the replication interface.

		supported: false		
vlanId	in	unsigned Integer[16] [0..4094]	Optional	Virtual Local Area Network (VLAN) identifier for the interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 0 - 4094. The default is 0, which means the packets to accept do not have VLAN tags.
id	out	replicationInterface	N/A	Unique identifier of the new replicationInterface instance.

Delete operation

Delete a replication interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/replicationInterface/<id> where <id> is the unique identifier of the replicationInterface instance to delete. Or DELETE /api/instances/replicationInterface/name:<value> where <value> is the name of the replicationInterface instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a replication interface configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationInterface/<id>/action/modify where <id> is the unique identifier of the replicationInterface instance. Or POST /api/instances/replicationInterface/name:<value>/action/modify where <value> is the name of the replicationInterface instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
ipPort	in	ipPort	Optional	Unique identifier of the physical port or link aggregation on the storage processor on which the replication interface is running, as defined by the ipPort resource type.
ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Optional	IP address of the replication interface.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 netmask for the replication interface, if it uses an IPv4 address.
v6PrefixLength	in	unsigned Integer[32]	Optional	IPv6 prefix length for the replication interface, if it uses an IPv6 address.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported:	Optional	IPv4 or IPv6 gateway address for the replication interface.

		false		
vlanId	in	unsigned Integer[16]	Optional	Virtual Local Area Network (VLAN) identifier for the replication interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 0 - 4094. The default is 0, which means that the packets to accept do not have VLAN tags.

replicationSession

Information about replication sessions.

Replication is a process in which storage data is duplicated either locally or to a remote network device. Replication produces a read-only, point-in-time copy of source data and periodically updates the copy, keeping it consistent with the source data. Replication provides an enhanced level of redundancy in case the main storage backup system fails. As a result, the:

- Downtime associated cost of a system failure is minimized.
- Recovery process from a natural or human-caused disaster is facilitated.

A replication session establishes an end-to-end path for a replication operation between a source and a destination. The replication source and destination may be local or remote. The session establishes the path that the data follows as it moves from source to destination.

Embedded resource types

commonBaseSnap, snapReplicationPolicy

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete ,Precheck ,Resume ,Pause ,Sync ,Failover ,Failback ,Preserve_async

Attributes

Attribute	Type	Description
id	String	Unique identifier of the replicationSession instance.
name	String	User-specified replication session name.
replicationResourceType	ReplicationEndpointResourceTypeEnum	Replication resource type of replication session endpoints.
status	ReplicationOpStatusEnum	Replication status of the replication session.
health	health	Health information for the replication session, as defined by the health resource type.
maxTimeOutOfSync	signed Integer[32(minutes)][-1]	Maximum time to wait before the system syncs the source and destination resources. Value of -1 specifies that automatic sync is not performed.
srcStatus	ReplicationSessionStatusEnum	Status of the source end of the session.
networkStatus	ReplicationSessionNetworkStatusEnum	Status of the network connection used by the replication session.
dstStatus	ReplicationSessionStatusEnum	Status of the destination end of the replication session.
lastSyncTime	DateTime	Date and time of the last replication synchronization.
syncState	ReplicationSessionSyncStateEnum	Synchronization state between source and destination resource of the replication session.
remoteSystem	remoteSystem	The remote system to which this replication session is connected, as defined by the remoteSystem resource type.
localRole	ReplicationSessionReplicationRoleEnum	Role of the local system in the replication session.
srcResourceId	String	Identifier of the source resource in the replication session.
srcSPAInterface	remoteInterface	SP A interface used on the source system for the replication, if the replication session is a remote session.
srcSPBInterface	remoteInterface	SP B interface used on the source system for the replication, if the replication session is a remote session.
dstResourceId	String	Identifier of the destination resource.
dstSPAInterface	remoteInterface	SP A interface used on the destination system for the replication, if the replication session is a remote session.
dstSPBInterface	remoteInterface	SP B interface used on the destination system for the replication, if the replication session is a remote session.
members	List<lunMemberReplication>	Information about the replication of each member lun in the group.
syncProgress	unsigned Integer[16(Percent)][0..100]	Synchronization completion percentage between source and destination resources of the replication session.
currentTransferEstRemainTime	unsigned Integer[64(minutes)]	Estimated time left for the replication synchronization to complete.
hourlySnapReplicationPolicy	snapReplicationPolicy	Hourly snap replication policy.
dailySnapReplicationPolicy	snapReplicationPolicy	Daily snap replication policy.

Attributes for commonBaseSnap

Attribute	Type	Description
replicationSessionId	String	
srcCommonBaseSnap	String	

dstCommonBaseSnap	String	

Attributes for snapReplicationPolicy

Describes or specifies the policy for replicating either hourly or daily scheduled snaps of the source storageResource.

Attribute	Type	Description
isReplicatingSnaps	Boolean	Is replicating scheduled snapshots or not Values are: • true - scheduled snapshots will be replicated to the destination. • false - scheduled snapshots will not be replicated to the destination.
isRetentionSameAsSource	Boolean	(Can be only be applied if isReplicatingSnaps is true.) Indicates whether or not the remote (destination) retention policy applied for snapshots is the same as the local (source) retention policy. Values are: • true - The same retention policy is applied to the destination snaphots. • false - A customized policy is applied to destination snapshots.
isAutoDelete	Boolean	(Can be only be applied if isReplicatingSnaps is true and isRetentionSameAsSource is false.) Indicates whether scheduled snapshots will be replicated to the destination can be automatically. Values are: • true - Snapshots can be automatically deleted by the system per threshold settings. • false - Snapshots cannot be deleted automatically.
retentionDuration	unsigned Integer[64(seconds)]	(Can be only be applied if isReplicatingSnaps is true and isRetentionSameAsSource & isAutoDelete are false.) Number of seconds after which the scheduled snapshots will expire on the destination.

Query all members of the replicationSession collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/replicationSession/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the replicationSession collection.

Query a specific replicationSession instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/replicationSession/<id> where <id> is the unique identifier of the replicationSession instance to query. Or GET /api/instances/replicationSession/name:<value> where <value> is the name of the replicationSession instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific replicationSession instance.

Create operation

Create a replication session. Replication can be configured between like type resources. Interface options are optional and applicable to inter-array replication.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/replicationSession/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
remoteSystem	in	remoteSystem	Optional	Unique identifier of the remote system in the replication session, as defined by the remoteSystem resource type.
srcSPAInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the source SPA.
srcSPBInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the source SPB.
dstSPAInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the destination SPA.
dstSPBInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the destination SPB.
srcResourceId	in	String	Required	Unique identifier of the source resource.

dstResourceId	in	String	Required	Unique identifier of the destination resource.
maxTimeOutOfSync	in	signed Integer[32(minutes)]	Required	Maximum time to wait before the system syncs the source and destination resources. Value of -1 specifies that automatic sync is not performed.
autoInitiate	in	Boolean	Optional	(Applies to replication sessions with manual synchronization.) Indicates whether to perform the first replication sync (a full sync) automatically. Values are: • true - Perform the first replication sync automatically. • false - Perform the first replication sync manually.
name	in	String	Optional	Name of the replication session
members	in	List<lunMemberReplication>	Optional	(Applies to replication sessions for Consistency groups) Specify ALL member luns' pairing between source and destination resource of the session. Treat Consistency groups as a single entity when they are replicated.
hourlySnapReplicationPolicy	in	snapReplicationPolicy	Optional	Hourly Snap Replication Policy.
dailySnapReplicationPolicy	in	snapReplicationPolicy	Optional	Daily Snap Replication Policy.
replicateExistingSnaps	in	Boolean	Optional	Whether or not to replicate snapshots already existing on the resource (one-time option at session creation time). Each replica of these snaps will inherit the source snap retention policy.
noAsyncSnapReplication	in	Boolean	Optional	Whether or not snap replication is enabled in asynchronous replication session. When enabled, snap replication is controlled by snap replication policy setting or user action.
cascadeReplicatedSnap	in	Boolean	Optional	Whether or not to replicate snap in the cascade replication session. When enabled, snap will be automatically replicated in this replication session when it is replicated from the inbound async replication session.
srcCommonBaseSnap	in	snap	Optional	Snapshot that used as common baseline snap for async replication session source side.
dstCommonBaseSnapId	in	String	Optional	Unique identifier of the destination snapshot that used as common baseline snap for async replication session destination side.
skipSnapSignatureCheck	in	Boolean	Optional	Force to use snapshot as common baseline snap for async replication session.
enableCommonBaseAutoSearch	in	Boolean	Optional	Enable auto searching and pairing common base.
overwriteDestination	in	Boolean	Optional	For LUN/CG replications, enabling this option, which defaults to false, will allow replication copying all of source data and overwriting any data already on the destination LUN(s) in the initial-copy.
id	out	replicationSession	N/A	Unique identifier of the new replication session

Modify operation

Modify properties of a replication session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/modify where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/modify where <value> is the name of the replicationSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
maxTimeOutOfSync	in	signed Integer[32(minutes)]	Optional	Maximum time to wait before the system syncs the source and destination resources. Value of -1 specifies that automatic sync is not performed.
name	in	String	Optional	Name of the replication session.

srcSPAInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the source SPA.
srcSPBInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the source SPB.
dstSPAInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the destination SPA.
dstSPBInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the destination SPB.
hourlySnapReplicationPolicy	in	snapReplicationPolicy	Optional	Hourly Snap Replication Policy.
dailySnapReplicationPolicy	in	snapReplicationPolicy	Optional	Daily Snap Replication Policy.
noAsyncSnapReplication	in	Boolean	Optional	Whether or not snap replication is enabled in asynchronous replication session. When enabled, snap replication is controlled by snap replication policy setting or user action.
cascadeReplicatedSnap	in	Boolean	Optional	Whether or not to replicate snap in the cascade replication session. When enabled, snap will be automatically replicated in this replication session when it is replicated from the inbound async replication session.

Delete operation

Delete a replication session. This can be applied in any operational state of the session.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/replicationSession/<id> where <id> is the unique identifier of the replicationSession instance to delete. Or DELETE /api/instances/replicationSession/name:<value> where <value> is the name of the replicationSession instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Precheck operation

Precheck the replication session. Check for a common base snap of a sync replication session, and if it is a NAS Server session, also check each includedfilesystem replication session for a common base snap. A common base snap is identified by the corresponding source and destination snap ids for the replicated common base snap. The result will include each common base snap found, which may be an empty list.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/precheck where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/precheck where <value> is the name of the replicationSession instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the Precheck operation

Argument	In/ out	Type	Required?	Description
precheckOutput	out	List<commonBaseSnap>	N/A	The result of the precheck.

Resume operation

Resume a replication session. This can be applied on a replication session when it's operational status is reported as either Failed over or Paused. The allowFullCopy or forceFullCopy option is needed when a replication session goes out of sync due to a fault. Both allowFullCopy and forceFullCopy cannot be set simultaneously. If the session has no common base snapshot and neither allowFullCopy nor forceFullCopy is specified, a full copy will be performed using the same behavior as when allowFullCopy is set to true for a synchronous file replication. For NAS Server synchronous replication, if allowFullCopy or forceFullCopy is specified as false, the operation will fail since NAS Server synchronous replication has never had a common base snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/resume where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/resume where <value> is the name of the replicationSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Resume operation

Argument	In/ out	Type	Required?	Description
srcSPAInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the source SPA.
srcSPBInterface	in		Optional	

		remoteInterface		(Applies to remote replication) Replication interface for the source SPB.
dstSPAInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the destination SPA.
dstSPBInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the destination SPB.
forceFullCopy	in	Boolean	Optional	Indicates whether to force replicating all data from the source to the destination during the replication session resuming. • true - Replicate all data. • false - Replicate changed data only.
forceDiscardDestinationChanges	in	Boolean	Optional	Normally an asynchronous replication session cannot be resumed when the destination is or has been mounted R/W and may have data written locally. The forceDiscardDestinationChanges option allows resume to proceed. • true - Resync the destination from the source, overwriting any data written to the destination while the replication was not active. • false - The resume command will fail if the destination is R/W and may have data written locally.

Pause operation

Pause a replication session. This can be applied to replication session when in OK state.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/pause where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/pause where <value> is the name of the replicationSession instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Sync operation

Sync a replication session. This operation can be applied to initiate a sync on demand independent of type of session - auto or manual sync.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/sync where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/sync where <value> is the name of the replicationSession instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Failover operation

Fail over a replication session. Note that if a failover occurs and data is written to the new source (original destination), new snaps are taken, and finally a failback occurs: then those snaps will get replicated to the new destination (original source). However, we maintain the local retention for the original source and the remote retention for the original destination. If the same scenario occurs but a resume is requested instead of failback (essentially switching the replication direction), then the local and remote retentions are switched so that the local retention policy is applied on the new source and the remote policy is applied on the new destination.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/failover where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/failover where <value> is the name of the replicationSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Failover operation

Argument	In/ out	Type	Required?	Description
sync	in	Boolean	Optional	Indicates whether to sync the source and destination resources before failing over the asynchronous replication session or whether to keep them in sync after failing over the synchronous replication session. • true - Sync before failing over the asynchronous replication session or keep in sync after failing over the synchronous replication session. • false - Do not sync before failing over the asynchronous replication session or do not keep in sync after failing over the synchronous replication session.
force	in	Boolean	Optional	Indicates to skip pre-checks on file system(s) replication sessions of a NAS server when a replication failover is issued from the source NAS server. • true - skip pre-check.

				• false - Do not skip pre-check.

Failback operation

Fail back a replication session. This can be applied on a replication session that is failed over. Fail back will synchronize the changes done to the original destination back to original source site and will restore the original direction of session. The allowFullCopy or forceFullCopy option is needed when a replication session goes out of sync due to a fault. Both allowFullCopy and forceFullCopy cannot be set simultaneously. If the session has no common base snapshot and neither allowFullCopy nor forceFullCopy is specified, a full copy will be performed using the same behavior as when allowFullCopy is set to true for a synchronous file replication. For NAS Server synchronous replication, if allowFullCopy or forceFullCopy is specified as false, the operation will fail since NAS Server synchronous replication has never had a common base snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/failback where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/failback where <value> is the name of the replicationSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Failback operation

Argument	In/ out	Type	Required?	Description
forceFullCopy	in	Boolean	Optional	Indicates whether to sync back all data from the destination SP to the source SP during the failback session. Values are: • true - Sync back all data. • false - Sync back changed data only.
force	in	Boolean	Optional	Normally a NAS server synchronous replication session cannot be failed back unless associated asynchronous replication sessions are preserved. The force option allows failback to proceed without preserving asynchronous replication sessions. • true - Allow failback without preserving asynchronous replication sessions. • false - Do not allow failback without preserving asynchronous replication sessions.
forceDatalossChoice	in	ReplicationFailbackForceDataLossChoiceEnum	Optional	Normally an asynchronous replication session cannot be failed back if the destination is ReadWrite or has data that was written locally. In this case both the source and destination may have data newer than the replication session stoppage. The forceDatalossChoice option allows a choice of whether to use the source or destination data in this case. • None - the failback operation will fail if both source and destination have been mounted r/w since the replication was stopped. • Discard_Destination_Changes - the source will be synced to the destination before failing back. Any data written to the destination since the replication was stopped will be lost. • Discard_Source_Changes - the destination will be synced to the source before failing back. Any data written to the source since the replication was stopped will be lost.

Preserve_async operation

Preserve an async replication session. Preserve an async replication session associated with original source of this nas server/filesystem sync replication session after a failover. Preserve recreates one prior async replication from the original source. Preserve tries to find the prior async session on the destination remote system identified by the remoteSystem parameter, and if successful, removes the existing session, creates a new async session to the remote system, and starts the replication process. If there is a common base snap available, then that will be used to optimize the initial copy. Preserve requires that the original async sessions are in the hibernated state. It also requires that there is not already an async replication from the local nas_server to the remote system.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/preserve_async where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/preserve_async where <value> is the name of the replicationSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Preserve_async operation

Argument	In/ out	Type	Required?	Description

remoteSystem	in	remoteSystem	Optional	Unique identifier of the asynchronous remote system from local site, as defined by the remoteSystem resource type. To support legacy REST request without the remoteSystem parameter, if remoteSystem is not specified, then the system will check all defined remote systems for a candidate async session. The first candidate one will be preserved.

snap

Information about storage resource snapshots in the storage system.

Embedded resource types

snapHostAccess, snapHostAccessParameters, snapRemoteRetentionPolicy, snapRemoteRetentionPolicyParam

Supported operations

Collection query , Instance query ,Create ,Modify ,Replicate ,Delete ,Refresh ,Copy ,Restore ,Attach ,Detach

Attributes

Attribute	Type	Description
id	String	Unique identifier of the snap instance.
name	String	Snapshot name.
description	String	Snapshot description.
storageResource	storageResource	Storage resource for which the snapshot was taken as defined by the storageResource resource type.
lun	lun	For a snapshot of a LUN in a Consistency group, the unique identifier of the source LUN as defined by the lun resource type.
familyBaseStorageResource	storageResource	The unique identifier of the Base Source Storage Resource.
familyBaseLun	lun	For a snapshot of a LUN in a Consistency group, the unique identifier of the Base Source LUN.
snapGroup	snap	For a snapshot of a LUN in a Consistency group, the unique identifier of the snapshot group to which the snapshot belongs, as defined by the snap resource type.
parentSnap	snap	For a snapshot of another snapshot, the unique identifier of the parent snapshot, as defined by the snap resource type.
creationTime	DateTime	Date and time on which the snapshot was taken.
expirationTime	DateTime	Date and time after which the snapshot will expire.
lastRefreshTime	DateTime	Date and time of last refresh operation
creatorType	SnapCreatorTypeEnum	Type of creator that created this snapshot.
creatorUser	user	For a user-created snapshot, information about the user that created the snapshot, as defined by the user resource type.
creatorSchedule	snapSchedule	For a schedule-created snapshot, information about the snapshot schedule that created the snapshot, as defined by the snapSchedule resource type.
isSystemSnap	Boolean	Indicates whether the snapshot is an internal snapshot. Internal snapshots are created by the Replication feature. End user operations are not permitted on internal snapshots. Values are: • true - Snapshot is internal. • false - Snapshot is external.
isModifiable	Boolean	Indicates whether the snapshot is attached or shared in a manner making it writable by clients. Values are: • true - Snapshot can be modified. • false - Snapshot cannot be modified. Snapshots of file systems and VMware NFS datastores are modifiable when they are created with protocol access. Snapshots of LUNs, Consistency Groups and VMware VMFS datastores are modifiable when they are attached.
attachedWWN	String	For an attached snapshot, the World Wide Name (WWN) of the attached LUN.
accessType	FilesystemSnapAccessTypeEnum	For a file system or VMware NFS datastore snapshot, indicates whether the snapshot has checkpoint or protocol type access.
isReadOnly	Boolean	Indicates whether the snapshot is read-only. Values are: • true - Snapshot cannot be modified. • false - Snapshot can be modified. Snapshots of file systems and VMware NFS datastores are read-only when they are created with checkpoint access. Snapshots of LUNs, Consistency Groups and VMware VMFS datastores are read-only when they are attached with read-only access or without access.
lastWritableTime	DateTime	If not attached or shared, and was attached or shared in the past, time of last unattach or share deletion.
isModified	Boolean	Indicates if the snapshot may have changed since it was created. Values are: • true - Snapshot is or was attached or shared with read/write access. • false - Snapshot was never attached or shared.
isAutoDelete	Boolean	Indicates if this snapshot can be automatically deleted by the system per threshold settings. Values are:

		• true - Snapshot can be automatically deleted by the system per threshold settings. • false - Snapshot cannot be deleted automatically.
state	SnapStateEnum	The snapshot state in Snapshot state enum.
size	unsigned Integer[64(bytes)]	Size of the storage resource when the snapshot was created (LUN snapshots only).
ioLimitPolicy	ioLimitPolicy	IO limit policy that applies to the snapshot, as defined by the ioLimitPolicy resource type.
hostAccess	List<snapHostAccess>	(LUN, LUN Group and VMware VMFS datastore snapshots only). Host access permissions for snapshot, as defined by the snapHostAccess resource type. Value is set only if snapshot is attached to dynamic Snapshot Mount Point.
replicationStatus	SnapReplicationStatusEnum	Indicates the replication status of this snap
syncReplicationStatus	SyncSnapReplicationStatusEnum	Indicates the sync replication status of this snap Values are: • 0 - Not marked for replication • 1 - Replicated • 2 - Failed to replicate
replicationOrigin	remoteSystem	Array from which the snapshot was created. Values are: • null - Indicates that the snapshot is not replicated to any remote system, the original remote system is not registered in current system under cascade replication, or it was replicated from a pre-5.1.0 system. Note: refer to opaqueData for replication origin information for the second case. • Remote system - Indicates the original remote system from which the snapshot was replicated.
snapRemoteRetentionPolicies	List<snapRemoteRetentionPolicy>	Information about the remote policies of snap.

Attributes for snapHostAccess

Host access settings for snapshot.

Attribute	Type	Description
host	host	Host that has access to the snapshot, as defined by the host resource type.
allowedAccess	SnapAccessLevelEnum	Access-level permissions for host.

Attributes for snapHostAccessParameters

Host access settings for snapshot.

Attribute	Type	Description
host	host	Host to grant access to snapshot, as defined by host type.
allowedAccess	SnapAccessLevelEnum	Access-level permissions for host.

Attributes for snapRemoteRetentionPolicy

Snap remote retention policy for each remote system.

Attribute	Type	Description
remoteSystem	remoteSystem	Unique identifier of the remote system paticipate in async snap replication.
isRemoteAutoDelete	Boolean	(Applies when replicating a snap and isRemoteRetentionSameAsSource attributes is false.) Indicates whether this snapshot can be automatically deleted by the system per threshold settings on the destination. Values are: • true - Snapshot can be automatically deleted by the system per threshold settings on the destination. • false - Snapshot cannot be deleted automatically on the destination.
remoteExpirationTime	DateTime	(Applies when replicating a snap and the values of the isRemoteRetentionSameAsSource & isRemoteAutoDelete attributes are false.) Date and time after which the snapshot will expire on the destination.
replicationStatus	SnapReplicationStatusEnum	Indicates the replication status of this snap

Attributes for snapRemoteRetentionPolicyParam

Snap remote retention policy for each remote system.

Attribute	Type	Description
remoteSystem	remoteSystem	The remote system to which these retention settings are to be applied.
isRemoteRetentionSameAsSource	Boolean	Indicates whether the remote policy is same as replication session source.
isRemoteAutoDelete	Boolean	(Applies when replicating a snap and isRemoteRetentionSameAsSource attributes is false.) Indicates whether this snapshot can be automatically deleted by the system per threshold settings on the destination. Values are: • true - Snapshot can be automatically deleted by the system per threshold settings on the destination. • false - Snapshot cannot be deleted automatically on the destination.
remoteRetentionDuration	unsigned Integer[64(seconds)]	Period in seconds specifying how long to retain the replicated snapshot on the destination When the retention period expires, the remote system will delete the replicated snapshot. The default retention period is seven days.

Query all members of the snap collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/snap/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the snap collection.

Query a specific snap instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/snap/<id> where <id> is the unique identifier of the snap instance to query. Or GET /api/instances/snap/name:<value> where <value> is the name of the snap instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific snap instance.

Create operation

Create a snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/snap/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
storageResource	in	storageResource	Required	Id of the storageResource to snap.
name	in	String	Optional	Name for the new snapshot.
description	in	String	Optional	Description for new snapshot.
isAutoDelete	in	Boolean	Optional	Auto delete policy for new snapshot.
retentionDuration	in	unsigned Integer[64(seconds)]	Optional	How long to keep the snapshot (Can be specified only if auto delete is set to false).
isReadOnly	in	Boolean	Optional	Indicates whether the new snapshot should be read-only.
filesystemAccessType	in	FilesystemSnapAccessTypeEnum	Optional	Indicates whether the new snapshot should be created with checkpoint or protocol type access (file system snaps only).
markForReplication	in	Boolean	Optional	
snapRemoteRetentionPolicies	in	List<snapRemoteRetentionPolicyParam>	Optional	List of remote policy parameters of snap.
id	out	snap	N/A	The id of the newly created snapshot.

Modify operation

Modify a snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snap/<id>/action/modify where <id> is the unique identifier of the snap instance. Or POST /api/instances/snap/name:<value>/action/modify where <value> is the name of the snap instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String	Optional	Snapshot name (Applies to block type storage resource snaps only. Filesystem snapshot names cannot be modified).
description	in	String	Optional	Snapshot description.
isAutoDelete	in	Boolean	Optional	Indicates whether the system will automatically delete the snapshot when the pool snapshot space or total pool space reaches an automatic deletion threshold. Valid values are: • System will automatically delete the snapshot based on pool automatic deletion thresholds.. • Snapshot will not automatically delete the snapshot based on pool automatic deletion thresholds. For information about automatic deletion thresholds, see the help topic for the pool resource type.
retentionDuration	in	unsigned Integer[64(seconds)]	Optional	Duration in seconds specifying how long to retain the snapshot. When the retention period expires, the system will delete the snapshot; You cannot recover the snapshot after it has been deleted. The default retention period is seven days.
ioLimitParameters	in	ioLimitParameters	Optional	The IO limit policy that is applied to this snapshot. This is only applicable to attached snapshots.
hostAccess	in	List<snapHostAccessParameters>	Optional	List of hosts with access levels each should have to the snapshot. Replaces the existing snapHostAccess list. May not be used with add/remove args. Only read and write access levels are permitted as host settings. Snapshot must be attached. (Applies to block type storage resource snaps only.)
addHostAccess	in	List<snapHostAccessParameters>	Optional	List of hosts to be added with specified access level to the snapshot. May not be used with hostAccess args. If used with removeHostAccess then removeHostAccess is applied first. Any specified host already with other access will be replaced with the new access level. Snapshot must be attached. (Applies to block type storage resource snaps only.)
removeHostAccess	in	List<host>	Optional	List of hosts to be removed from access to the snapshot. May not be used with hostAccess args. The hosts in this list should already be with access to the snapshot. Snapshot must be attached. (Applies to block type storage resource snaps only.)
force	in	Boolean	Optional	If specified, modify the snap regardless of whether snap source Storage Resource is used as replication destination by sync replication session and the snapshot is marked as replicated. (Applies to file type storage resource snaps only.)

Replicate operation

Mark a snapshot for replication to the destination resource.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snap/<id>/action/replicate where <id> is the unique identifier of the snap instance. Or POST /api/instances/snap/name:<value>/action/replicate where <value> is the name of the snap instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Replicate operation

Argument	In/ out	Type	Required?	Description
snapRemoteRetentionPolicies	in	List<snapRemoteRetentionPolicyParam>	Optional	List of remote policy parameters of snap, each indicates the remote policy for each specified remote system.
force	in	Boolean	Optional	If specified, replicate the snap regardless of whether snapshot replication state could not be updated on the sync replication destination system when the corresponding sync replication session is

				not active. (Applies to file type storage resource snaps only.)

Delete operation

Delete a snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/snap/<id> where <id> is the unique identifier of the snap instance to delete. Or DELETE /api/instances/snap/name:<value> where <value> is the name of the snap instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
overrideLock	in	Boolean	Optional	Whether or not to override a lock held by an application. Setting this to true may have adverse effects on the performance of the applications currently referencing the snap. • 1) If a snap deletion returns an error mentioning the snap is locked. • 2) Do not override the lock to force a delete unless you are sure no application is still referencing the snap.
force	in	Boolean	Optional	Normally, the delete will return an error instead of deleting the snapshot when the snapshot source storage resource is used as a sync replication destination and the snapshot is marked as replicated or if the user requested to manually remove an internal snapshot. (Applies to file type storage resource snapshots only.) Values are: • true - This will override the error and delete the snapshot even though it is internal snapshot or it is a sync replication destination snap. • false - The normal behavior described above default.

Refresh operation

Refresh a snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snap/<id>/action/refresh where <id> is the unique identifier of the snap instance. Or POST /api/instances/snap/name:<value>/action/refresh where <value> is the name of the snap instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Refresh operation

Argument	In/ out	Type	Required?	Description
copyName	in	String	Optional	Name of the snapshot copy created before the refresh operation occurs.
copy	out	snap	N/A	Snapshot copy created before the refresh operation occurs, as defined by the snap resource type, if copyName was specified.

Copy operation

Copy a snapshot. If source snapshot is attached, the new copy has the same source snapshot as a parent and is marked as not modified. If source snapshot is not attached, the behavior depends on child parameter. By default, child parameter is false and the new copy is created as a sibling of source snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snap/<id>/action/copy where <id> is the unique identifier of the snap instance. Or POST /api/instances/snap/name:<value>/action/copy where <value> is the name of the snap instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Copy operation

Argument	In/ out	Type	Required?	Description
copyName	in	String	Optional	Base name for the new snapshot copies.
numCopies	in	unsigned	Optional	Number of snapshot copies to make.

		Integer[32]		
copyStartNum	in	unsigned Integer[32]	Optional	Starting number for the group of copies. This number gets appended to the name specified in the copyName argument to form the name of the first snapshot copy. The system increments the number for each new snapshot.
child	in	Boolean	Optional	If true for an unattached snapshot, the new copy has the source snapshot as a parent. If false, the new copy is created as a sibling of the source snapshot. Setting this parameter to false for an attached snapshot causes an error.
copies	out	List<snap>	N/A	Snapshot copies, as defined by the snap resource type.

Restore operation

Restore the snapshot to the associated storage resource.

Before the restoration begins, the system creates a snapshot of the storage resource. You can use this snapshot to restore the storage resource to its previous state.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snap/<id>/action/restore where <id> is the unique identifier of the snap instance. Or POST /api/instances/snap/name:<value>/action/restore where <value> is the name of the snap instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Restore operation

Argument	In/ out	Type	Required?	Description
copyName	in	String	Optional	Name of the backup snapshot created before the Restore operation occurs.
backup	out	snap	N/A	Backup snapshot, as defined by the snap resource type.

Attach operation

Attach the snapshot so hosts can access it. Attaching a snapshot makes the snapshot accessible to configured hosts for restoring files and data.

The host must have access to protection data in order to access the snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snap/<id>/action/attach where <id> is the unique identifier of the snap instance. Or POST /api/instances/snap/name:<value>/action/attach where <value> is the name of the snap instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Attach operation

Argument	In/ out	Type	Required?	Description
copyName	in	String	Optional	Name of the snapshot copy created before the Attach operation occurs.
hostAccess	in	List<snapHostAccessParameters>	Optional	List of hosts with access levels each should have to the snapshot. Only read and write access levels are permitted as host settings. If specified - snapshot will be attached to dynamic Snapshot Mount Point.
force	in	Boolean	Optional	If specified, attach the snap regardless of whether this snap has dependent Thin Clones.
copy	out	snap	N/A	Snapshot copy created before the Attach operation occurs, as defined by the snap resource type, if copyName was specified.

Detach operation

Detach the snapshot so hosts can no longer access it.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snap/<id>/action/detach where <id> is the unique identifier of the snap instance. Or POST /api/instances/snap/name:<value>/action/detach where <value> is the name of the snap instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

snapSchedule

Information about snapshot schedules in the storage system.

Embedded resource types

snapScheduleRule

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the snapSchedule instance.
name	String	Snapshot schedule name.
isDefault	Boolean	Indicates whether the snapshot schedule is a default or user-created schedule. Values are: • true - Snapshot schedule is one of the default schedules. • false - Snapshot schedule is user-created.
modificationTime	DateTime	Date and time when the snapshot schedule was created or last modified.
version	ScheduleVersionEnum	Indicates the version of the snapshot schedule.
rules	List<snapScheduleRule>	Rules that apply to the snapshot schedule, as defined by the snapScheduleRule resource type.
storageResources	List<storageResource>	Storage resources associated with the snapshot schedule.
luns	List<lun>	LUNs associated with the snapshot schedule.
isSyncReplicated	Boolean	Indicates whether the snapshot schedule is synchronously replicated to the remote system. • true - Snapshot schedule is replicated. • false - Snapshot schedule is not replicated.

Attributes for snapScheduleRule

Information about snapshot schedule rules in the storage system.

Attribute	Type	Description
id	String	Unique identifier of the snapScheduleRule instance.
type	ScheduleTypeEnum	Type of snapshot schedule rule.
minute	unsigned Integer[16(minutes)] [0..59]	Minute frequency for the snapshot schedule rule.
hours	List<Integer>[16(hours)][0..23]	Hourly frequency for the snapshot schedule rule.
daysOfWeek	List<DayOfWeekEnum>	Days of the week for which the snapshot schedule rule applies.
daysOfMonth	List<Integer>[16(days)][1..31]	Days of the month for which the snapshot schedule rule applies.
interval	unsigned Integer[16(hours|days)] [1..31]	Number of days or hours between snaps, depending on the rule type.
isAutoDelete	Boolean	Indicates whether the system can automatically delete the snapshot based on pool automatic-deletion thresholds. Values are: • true - System can delete the snapshot based on pool automatic-deletion thresholds. • false - System cannot delete the snapshot based on pool automatic-deletion thresholds.
retentionTime	unsigned Integer[64(seconds)]	(Applies when the value of the isAutoDelete attribute is false.) Period of time in seconds for which to keep the snapshot.
accessType	FilesystemSnapAccessTypeEnum	For a file system or VMware NFS datastore snapshot schedule, indicates whether the snapshot created by the schedule has checkpoint or protocol type access

Query all members of the snapSchedule collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/snapSchedule/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the snapSchedule collection.

Query a specific snapSchedule instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/snapSchedule/<id> where <id> is the unique identifier of the snapSchedule instance to query. Or GET /api/instances/snapSchedule/name:<value> where <value> is the name of the snapSchedule instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific snapSchedule instance.

Create operation

Create a snapshot schedule.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/snapSchedule/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
name	in	String	Required	Name of new schedule
rules	in	List<snapScheduleRule>	Required	Rules that apply to the snapshot schedule, as defined by the snapScheduleRule resource type.
isSyncReplicated	in	Boolean	Optional	Indicates that all operations on the snapshot schedule will be synchronously replicated to the peer system.
id	out	snapSchedule	N/A	Unique identifier of the new snapSchedule instance.

Delete operation

Delete a snapshot schedule.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/snapSchedule/<id> where <id> is the unique identifier of the snapSchedule instance to delete. Or DELETE /api/instances/snapSchedule/name:<value> where <value> is the name of the snapSchedule instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a snapshot schedule.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snapSchedule/<id>/action/modify where <id> is the unique identifier of the snapSchedule instance. Or POST /api/instances/snapSchedule/name:<value>/action/modify where <value> is the name of the snapSchedule instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
addRules	in	List<snapScheduleRule>	Optional	Rules to add to the snapshot schedule, as defined by the snapScheduleRule instance. Pass the desired values for the additional rules instead of the unique identifiers of existing rules.
removeRuleIds	in	List<String>	Optional	Unique identifiers of the rules to remove from the snapshot schedule.

Quality Of Service

ioLimitPolicy

Set of I/O limit rules that you can apply to a storage resource. On GUI and CLI, ioLimitPolicy and ioLimitRule are combined for now since we only support one I/O limit rule per I/O limit policy.

Embedded resource types

ioLimitRuleSetting

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete

Attributes

Attribute	Type	Description

id	String	Unique identifier of the ioLimitPolicy instance.
name	String[..256]	I/O limit policy name.
description	String[..256]	I/O limit policy description.
ioType	IOLimitPolicyIOTypeEnum	IO limit policy type.
isShared	Boolean	Indicates whether the I/O limits defined in the I/O limit policy are shared among all assigned storage resources. Values are: • true - I/O limits are shared. The total I/O of the set of storage resources with this policy is limited. • false - (Default) I/O limits are not shared. The I/O limit applies to each storage resource individually.
isPaused	Boolean	Indicates whether I/O limit policy is paused. Values are: • true - I/O limit policy is paused. • false - (Default) I/O limit policy is not paused.
type	IOLimitPolicyTypeEnum	IO limit policy type.
ioLimitRules	List<ioLimitRule>	(DEPRECATED)The references of the rules associated with the I/O limit policy, as defined by the ioLimitRule resource type. Currently, only one rule is supported per policy.
ioLimitRuleSettings	List<ioLimitRuleSetting>	IO limit rules associated with the I/O limit policy, as defined by the ioLimitRuleSetting resource type. Currently, only one rule is supported per policy.
luns	List<lun>	LUNs to which the I/O limit policy applies, as defined by the LUN resource type.
snaps	List<snap>	Snaps to which the I/O limit policy applies, as defined by the snap resource type.
nasServers	List<nasServer>	nasServers to which the I/O limit policy applies, as defined by the nasServer resource type.
filesystems	List<filesystem>	filesystems to which the I/O limit policy applies, as defined by the filesystem resource type.
state	IOLimitPolicyStateEnum	IO limit policy state.

Attributes for ioLimitRuleSetting

Set of Quality of Service (QoS) rules included in the Qos policy.

Attribute	Type	Description
id	String	Unique identifier of the ioLimitRule instance.
name	String[..256]	I/O limit rule name.
description	String[..256]	I/O limit rule description.
maxIOPS	unsigned Integer[64(IOs/s)]	Read/write IOPS limit.
maxKBPS	unsigned Integer[64(KB/s)]	Read/write KB/s limit.
maxIOPSDensity	unsigned Integer[64(IOs/s/GB)]	Read/write density-based IOPS limit.
maxKBPSDensity	unsigned Integer[64(KB/s/GB)]	Read/write density-based KB/s limit.
burstRate	unsigned Integer[32(percentage)]	The percentage of read/write IOPS and/or KBPS over the limits a storage object is allowed to process during a spike in demand.
burstTime	DateTime[Interval]	How long a storage object is allowed to process burst traffic.
burstFrequency	DateTime[Interval]	How often a storage object is allowed to process burst traffic for the duration of burst time

Query all members of the ioLimitPolicy collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ioLimitPolicy/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ioLimitPolicy collection.

Query a specific ioLimitPolicy instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ioLimitPolicy/<id> where <id> is the unique identifier of the ioLimitPolicy instance to query. Or GET /api/instances/ioLimitPolicy/name:<value> where <value> is the name of the ioLimitPolicy instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ioLimitPolicy instance.

Create operation

Create a I/O limit policy.

Header	Accept: application/json Content-Type: application/json

Method and URI	POST /api/types/ioLimitPolicy/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..256]	Required	I/O limit policy name.
description	in	String[..256]	Optional	I/O limit policy description.
ioType	in	IOLimitPolicyIOTypeEnum	Optional	Indicates whether the I/O limit policy is for block or file storage resource
isShared	in	Boolean	Optional	Indicates whether the I/O limits defined in the I/O limit policy are shared among all assigned storage resources. Default to false
type	in	IOLimitPolicyTypeEnum	Optional	Indicates whether the I/O limit policy is absolute or density-based. Default to Absolute
ioLimitRules	in	List<ioLimitRuleSetting>	Required	I/O limit rules associated with the I/O limit policy, as defined by the ioLimitRuleSetting resource type. Only one ioLimitRule is supported at this time per policy.
luns	in	List<lun>	Optional	LUNs to which the I/O limit policy applies, as defined by the lun resource type.
snaps	in	List<snap>	Optional	Snaps to which the I/O limit policy applies, as defined by the snap resource type.
nasServers	in	List<nasServer>	Optional	NasServers to which the I/O limit policy applies, as defined by the nasServer resource type.
filesystems	in	List<filesystem>	Optional	Filesystems to which the I/O limit policy applies, as defined by the filesystem resource type.
id	out	ioLimitPolicy	N/A	Unique identifier of the new ioLimitPolicy instance.

Modify operation

Modify a I/O limit policy.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ioLimitPolicy/<id>/action/modify where <id> is the unique identifier of the ioLimitPolicy instance. Or POST /api/instances/ioLimitPolicy/name:<value>/action/modify where <value> is the name of the ioLimitPolicy instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..256]	Optional	I/O limit policy name.
description	in	String[..256]	Optional	I/O limit policy description.
type	in	IOLimitPolicyTypeEnum	Optional	Indicates whether the I/O limit policy is absolute or density-based.
isPaused	in	Boolean	Optional	Indicates whether the I/O limit policy is paused.
ioLimitRulesToModify	in	List<ioLimitRuleSetting>	Optional	

Delete operation

Delete a I/O limit policy. This will also delete the rules associated with the policy.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/ioLimitPolicy/<id> where <id> is the unique identifier of the ioLimitPolicy instance to delete. Or DELETE /api/instances/ioLimitPolicy/name:<value> where <value> is the name of the ioLimitPolicy instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description

force	in	Boolean	Optional	Indicates whether a user can delete an I/O limit while it is being used. If not specified, the default value is false. Values are: • true - Allow a user to delete the I/O limit. • false - Do not allow a user to delete the I/O limit.

ioLimitRule

(DEPRECATED)Conditions under which the storage system applies I/O limits. On GUI and CLI, ioLimitPolicy and ioLimitRule are combined for now since we only support one I/O limit rule per I/O limit policy.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ioLimitRule instance.
name	String[..256]	I/O limit rule name.
description	String[..256]	I/O limit rule description.
maxIOPS	unsigned Integer[64(IOs/s)]	Read/write IOPS limit.
maxKBPS	unsigned Integer[64(KB/s)]	Read/write KB/s limit.
maxIOPSDensity	unsigned Integer[64(IOs/s/GB)]	Read/write density-based IOPS limit.
maxKBPSDensity	unsigned Integer[64(KB/s/GB)]	Read/write density-based KB/s limit.
burstRate	unsigned Integer[32(percentage)]	The percentage of read/write IOPS and/or KBPS over the limits a storage object is allowed to process during a spike in demand.
burstTime	DateTime[Interval]	How long a storage object is allowed to process burst traffic.
burstFrequency	DateTime[Interval]	How often a storage object is allowed to process burst traffic for the duration of burst time
ioLimitpolicy	ioLimitPolicy	Information about the I/O limit policy to which the I/O limit rule is assigned, as defined by the ioLimitPolicy resource type.

Query all members of the ioLimitRule collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ioLimitRule/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ioLimitRule collection.

Query a specific ioLimitRule instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ioLimitRule/<id> where <id> is the unique identifier of the ioLimitRule instance to query. Or GET /api/instances/ioLimitRule/name:<value> where <value> is the name of the ioLimitRule instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ioLimitRule instance.

Modify operation

Modify an I/O limit rule.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ioLimitRule/<id>/action/modify where <id> is the unique identifier of the ioLimitRule instance. Or POST /api/instances/ioLimitRule/name:<value>/action/modify where <value> is the name of the ioLimitRule instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..256]	Optional	I/O limit rule name.
description	in	String[..256]	Optional	I/O limit rule description.

maxIOPS	in	unsigned Integer[64]	Optional	Absolute IOPS limit.
maxKBPS	in	unsigned Integer[64]	Optional	Absolute KB/s limit.

ioLimitSetting

Global I/O limit settings.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ioLimitSetting instance.
isPaused	Boolean	Indicates whether I/O limits are enabled on the storage resource. Values are: • true - I/O limits paused. • false - I/O limits resumed.

Query all members of the ioLimitSetting collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ioLimitSetting/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ioLimitSetting collection.

Query a specific ioLimitSetting instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ioLimitSetting/<id> where <id> is the unique identifier of the ioLimitSetting instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ioLimitSetting instance.

Modify operation

Modify I/O limit settings

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ioLimitSetting/<id>/action/modify where <id> is the unique identifier of the ioLimitSetting instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isPaused	in	Boolean	Required	Indicates whether I/O limits are paused for all storage resources. Values are: • True - I/O limits paused for all storage resources and attached snapshots. • False - I/O limits resumed for all storage resources and attached snapshots.

Servicing the system

configCaptureResult

Information about Configuration Capture results in the storage system.

Configuration Capture is a service feature which creates a snapshot of the current system configuration. It captures all of the necessary data for business intelligence analysis, helping diagnose issues.

Supported operations

Collection query , Instance query ,Refresh

Attributes

Attribute	Type	Description
id	String	Unique identifier of the configCaptureResult instance.
name	String	File name of the configCaptureResult instance.
creationTime	DateTime	Date and time when the configCaptureResult file was created.
size	unsigned Integer[64(bytes)]	

	Size of the configCaptureResult file.

Query all members of the configCaptureResult collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/configCaptureResult/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the configCaptureResult collection.

Query a specific configCaptureResult instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/configCaptureResult/<id> where <id> is the unique identifier of the configCaptureResult instance to query. Or GET /api/instances/configCaptureResult/name:<value> where <value> is the name of the configCaptureResult instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific configCaptureResult instance.

Refresh operation

Refresh the Configuration Capture results.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/configCaptureResult/action/refresh
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

coreDump

Information about core dumps currently available on the storage system.

Core dumps consist of the recorded state of the working memory which can server as useful debugging aids. These are available so that, if requested, you can download and send them to your service provider.

Supported operations

Collection query , Instance query ,Refresh ,Authenticate ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the core dump instance.
name	String	Name of the core dump instance.
creationTime	DateTime	Core dump creation time.
size	unsigned Integer[64(bytes)]	Estimated size of the dump tar file.

Query all members of the coreDump collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/coreDump/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the coreDump collection.

Query a specific coreDump instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/coreDump/<id> where <id> is the unique identifier of the coreDump instance to query. Or GET /api/instances/coreDump/name:<value> where <value> is the name of the coreDump instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific coreDump instance.

Refresh operation

Refresh will update the list of available core dumps. It is called automatically for Unisphere GUI core dump screen, but must be called explicitly before a GET in order to get the current dumps via REST.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/coreDump/action/refresh
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

Authenticate operation

Authenticate with service password. Service credential is needed for downloading and deleting a core dump. The authenticated status will last for 10 minutes.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/coreDump/action/authenticate
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the Authenticate operation

Argument	In/ out	Type	Required?	Description
password	in	String	Required	Service password.

Delete operation

Delete the core dump and the related files. Service credential needs to be provided before this operation.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/coreDump/<id> where <id> is the unique identifier of the coreDump instance to delete. Or DELETE /api/instances/coreDump/name:<value> where <value> is the name of the coreDump instance to delete.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

dataCollectionResult

Information about Data Collection results in the storage system.

Data Collection is a service feature used for gathering system logs, customer configurations, system statistics and runtime data from storage system.

Supported operations

Collection query , Instance query ,Refresh ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the dataCollectionResult instance.
name	String	File name of the dataCollectionResult instance.
creationTime	DateTime	Date and time when the dataCollectionResult file was created.
profile	DataCollectionProfileEnum	Profile of the dataCollectionResult file.
size	unsigned Integer[64(bytes)]	Size of the dataCollectionResult file.

Query all members of the dataCollectionResult collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/dataCollectionResult/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the dataCollectionResult collection.

Query a specific dataCollectionResult instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/dataCollectionResult/<id> where <id> is the unique identifier of the dataCollectionResult instance to query. Or

	GET /api/instances/dataCollectionResult/name:<value> where <value> is the name of the dataCollectionResult instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific dataCollectionResult instance.

Refresh operation

Refresh the Data Collection results.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/dataCollectionResult/action/refresh
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

Delete operation

Delete the Data Collection result.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/dataCollectionResult/<id> where <id> is the unique identifier of the dataCollectionResult instance to delete. Or DELETE /api/instances/dataCollectionResult/name:<value> where <value> is the name of the dataCollectionResult instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

esrsParam

Information about the EMC Secure Remote Support (ESRS) configuration

Unity Remote Support is enabled with the Dell's leading remote support platform: EMC Secure Remote Support (ESRS). ESRS is a remote monitoring and support feature that provides authorized personnel with Dell remote access capabilities to storage systems via a secure and encrypted tunnel. The secure tunnel that ESRS establishes between the storage system and systems on the Dell network can be used to transfer files out to the storage system or back to Dell.

ESRS provides the following features in providing an end-to-end remote support solution:

- Automation - IP based connection enables fast remote diagnosis and repair of potential problems before an impact to business operations is noticed.
- Authentication - Advanced security features such as AES 256-bit encryption and RSA digital certificates ensure data privacy.
- Authorization - Customizable policies that you control include the ability to allow or deny remote support sessions.
- Audit - Detailed audit capabilities enable compliance with regulatory and internal business requirements.

ESRS offers two remote support solutions:

- Integrated solution, which uses ESRS Virtual Edition (ESRS V3) technology integrated into the storage system to connect with Dell
- Centralized solution, which uses the ESRS Virtual Edition (ESRS V3) to connect with Dell

Setting up Remote Support requires:

- An installed Dell Support license
- Valid support credentials
- A configured DNS server

For information about ESRS components and setup, go to the support website.
Note that all proxy configuration for integrated support is now available from the supportProxy object. These properties proxyIsEnabled,proxyStatus,proxyAddress,proxyIsHTTP,proxyUserName are deprecated and will be removed in a future release.

Examples

Series operations need to perform to enable Integrated Remote Support

Step 1: Accept EULA. The EULA must be accepted before any other configurations.

```
POST /api/instances/esrsParam/0/action/modify
{
   "isEsrsVeEulaAccepted" : "true"
}
```

Step 2: Update contact infomation in systemInformation object. Dell will use this information to contact end user when errors detected.

```
POST /api/instances/systemInformation/0/action/modify
{
   "contactFirstName" : "Jill",
   "contactLastName" : "Valentine",
   "contactCompany" : "Umbrella Corporation",
   "contactEmail" : "jill.valentine@umbrella.com",
   "contactPhone" : "111-111-1111"
}
```

Step 3: Set proxy server if the user wants to configure Integrated Remote Support with a proxy server. This step can be skipped if user doesn't want to use proxy server.

```
POST /api/instances/supportProxy/0/action/modify
{
   "isEnabled" : "true",
   "address" : "10.105.221.123:1080",
   "protocol" : "1",
   "username" : "darthv",
   "password" : "password"
}
```

Step 4: Validate Network connectivity between Integrated Remote Support client and Dell servers.

```
POST /api/instances/esrsParam/0/action/checkNetwork
{
}
```

Following steps are try to get the available sites for the current system, select the correct one and set it into Integrated Remote Support client.
Step 5: Request for an access code. This access code will be used later to get the available sites.

```
POST /api/instances/esrsParam/0/action/requestAccessCode
{
}
```

Step 6: Validate the access code.

```
POST /api/instances/esrsParam/0/action/validateAccessCode
{
   "accessCode" : "243857"
}
```

Step 7: Set siteId. Select the correct site id from the returned sites in previous request.

```
POST /api/instances/esrsParam/0/action/modify
{
   "enabled" : "true",
   "isCentralized" : "false"
}
```

Now, Integration Remote Support is enabled.

Disabling Integrated Remote Support

If a proxy server or Policy Manager are enabled, they will automatically be disabled.

```
POST /api/instances/esrsParam/0/action/modify
{
   "enabled" : "false",
   "isCentralized" : "false"
}
```

Checking the Integrated Remote Support status

```
GET /api/types/esrsParam/instances?fields=enabled,isCentralized

   "content":
   {
      "isCentralized" : "false",
      "status" : 2
   }
```

Checking the Integrated Remote Support configuration

```
GET /api/types/esrsParam/instances?fields=enabled,isCentralized,status, statusDescription::@enum(status)

Sample response:

"content":
{
   "enabled" : "true",
   "isCentralized" : "false",
   "status" : "2"
   "statusDescription" : "connected"
}

The statusDescription attribute is a calculated attribute that translates the normalized status value into a user friendly string.
```

Enabling Centralized Remote Support

```
POST /api/instances/esrsParam/0/action/modify
{
   "enabled" : "true",
   "isCentralized" : "true",
   "esrsVeAddress" : "10.105.221.123"
}
```

Modifying the Centralized Remote Support appliance

This example disconnects the storage system from the current ESRS VE appliance and reconnects it to a new one.

```
POST /api/instances/esrsParam/0/action/modify
{
   "enabled" : "true",
   "isCentralized" : "true",
   "esrsVeAddress" : "myveserver.acme.com:2135"
}
```

Disabling Centralized Remote Support

```
POST /api/instances/esrsParam/0/action/modify
{
   "enabled" : "false"
   "isCentralized" : "true",
}
```

*

Switching between Integrated and Centralized Remote Support

This example assumes that Integrated Remote Support is enabled. It will be disabled before the Centralized Remote Support is enabled.

```
POST /api/instances/esrsParam/0/action/modify
{
```

```
    "enabled" : "true",
    "isCentralized" : "true",
    "esrsVeAddress" : "10.105.221.123"
}
```

Embedded resource types

site

Supported operations

Collection query , Instance query ,Modify ,SendTestAlert ,CheckESRSVEConnectivity

Attributes

Attribute	Type	Description
id	String	Unique identifier of the Remote Support instance. --eng This value is always 0, because at any given time there can only one remote support solution enabled.
enabled	Boolean	Indicates whether Remote Support is enabled Values are: • true - Remote Support is enabled. • false - Remote Support is disabled. See *isCentralized* to view the type of Remote Support.
isCentralized	Boolean	Indicates the type of Remote Support that is configured Values are: • true - Centralized Remote Support is configured • false - Integrated Remote Support is configured This attribute is not valid if *enabled* is *false*.
status	EsrsStatusEnum	Remote Support status
esrsVeAddress	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Primary Centralized ESRS gateway, SAE or SCG appliance.
secondaryEsrsVeAddress	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Secondary Centralized ESRS gateway, SAE or SCG appliance.

Attributes for site

Description of the physical address or site where Dell thinks this system is currently located.

Attribute	Type	Description
siteId	String	Unique identifier of the site instance.
siteName	String	Site name.
siteDescription	String	Site description.
address	String	The address of the site where the system is located.
state	String	The state of the site where the system is located.
country	String	The country of the site where the system is located.
countryName	String	The country name where the system is located.
city	String	The city of the site where the system is located.
isCurrentLocation	Boolean	True, when this is the site at which Dell believes the system is currently residing.

Query all members of the esrsParam collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/esrsParam/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the esrsParam collection.

Query a specific esrsParam instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/esrsParam/<id> where <id> is the unique identifier of the esrsParam instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific esrsParam instance.

Modify operation

Modify ESRS settings.

Enable, disable or change Remote Support options.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/esrsParam/<id>/action/modify where <id> is the unique identifier of the esrsParam instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
enabled	in	Boolean	Optional	Enable or disable Remote Support. Values are: • true - Enable Remote Support • false - Disable Remote Support
esrsVeAddress	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	Primary Centralized ESRS gateway, SAE or SCG appliance.
secondaryEsrsVeAddress	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	Secondary Centralized ESRS gateway, SAE or SCG appliance. If a port is not specified the following default port of 9443 will be used.
isCentralized	in	Boolean	Optional	Type of Remote Support Values are: • true - Centralized Remote Support • false - Integrated Remote Support
errorMsgParams	out	List<String>	N/A	

SendTestAlert operation

Send a test alert to Dell using the configured Remote Support option.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/esrsParam/<id>/action/sendTestAlert where <id> is the unique identifier of the esrsParam instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

CheckESRSVEConnectivity operation

Check the network connectivity from storage system to the Centralized ESRS gateway, SAE or SCG appliance.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/esrsParam/<id>/action/checkESRSVEConnectivity where <id> is the unique identifier of the esrsParam instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the CheckESRSVEConnectivity operation

Argument	In/ out	Type	Required?	Description
esrsVeAddress	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Required	Centralized gateway address. If a port is not specified the following default port of 9443 will be used.

serviceAction

Information about storage system service actions.

Collect Service Information (dataCollection): Collect information about the storage system and save it to a file. Your service provider can use the collected information to analyze the storage system.

Save Configuration (configCapture): Save details about the configuration settings on the storage system to a file. Your service provider can use this file to assist you with reconfiguring your system after a major system failure or a system reinitialization.

Restart Management Software (restartMGT): Restart the management software to resolve connection problems between the system and Unisphere.

Reinitialize (reinitialize): Reset the storage system to the original factory settings. Both SPs must be installed and operating normally be in Service Mode.

Change Service Password (changeServicePassword): Change the service password for accessing the Service System page.

Shut Down System (shutdownSystem): The system shut down and power cycle procedures will attempt to resolve problems with your storage system that could not be resolved by rebooting or reimaging the SP.

Disable SSH/Enable SSH (changeSSHStatus): Disable the Secure Shell (SSH) protocol to block SSH access to the system, or enable the Secure Shell (SSH) protocol to enable access to the system.

Enter Service Mode (enterServiceModeSPA, enterServiceModeSPB): Stop I/O on the SP so that the SP can enter service mode safely.

Reboot (rebootSPA, rebootSPB): Reboot the selected SP. Use this service action to attempt to resolve minor problems related to system software or SP hardware components.

Reimage (rebootSPA, rebootSPB): Reimage the selected SP. Reimaging analyzes the system software on the SP and attempts to correct any problems automatically.

Reset and Hold(resetAndHoldSPA, resetAndHoldSPB): Reset and hold the selected SP. Use this service task to attempt to reset and hold the SP, so that users can replace the faulty IoModule(s) on that SP.

Supported operations

Collection query , Instance query ,Execute

Attributes

Attribute	Type	Description
id	String	Unique identifier of the serviceAction instance.
scope	SvcScopeEnum	Current service action scope.
name	String	Localized service action name.
description	String	Localized service action description.
isApplicable	Boolean	Indicates whether the service action can be executed. Values are: • true - Service action can be executed. • false - Service action cannot be executed.
applyCondition	String	Localized description of the condition under which the service action is applicable.

Query all members of the serviceAction collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/serviceAction/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the serviceAction collection.

Query a specific serviceAction instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/serviceAction/<id> where <id> is the unique identifier of the serviceAction instance to query. Or GET /api/instances/serviceAction/name:<value> where <value> is the name of the serviceAction instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific serviceAction instance.

Execute operation

Execute the service action.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/serviceAction/<id>/action/execute where <id> is the unique identifier of the serviceAction instance. Or POST /api/instances/serviceAction/name:<value>/action/execute where <value> is the name of the serviceAction instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Execute operation

Argument	In/ out	Type	Required?	Description
includePrivateData	in	Boolean	Optional	Indicates whether the capture includes private data when performing the Save Configuration (configCapture) service action. Values are: • true - Include private data (like IP addresses).

				• false - (Default) Exclude private data

currentPassword	in	String	Optional	Current password of the service user.
				• In normal mode, this password is required for all the service actions except following ones:
				  • Collect Service Information (dataCollection)
				  • Save Configuration (configCapture)
				  • Restart Management Software (restartMGT)
				• In service mode, this password is required for the Change Service Password service (changeServicePassword) action.

newPassword	in	String	Optional	New password for the service user. Required for Change Service Password (changeServicePassword) action.
generateECOMDump	in	Boolean	Optional	Indicate whether generatate ECOM dump when restarting MGMT software.
generateRawJson	in	Boolean	Optional	Indicate whether generatate raw json when runing config capture.
dataCollectionProfile	in	DataCollectionProfileEnum	Optional	The profile used to collect service information.

serviceInfo

Service-related storage system information. You can use this information for servicing the storage system.

Embedded resource types

svcCRU, svcStorageProcessor

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the serviceInfo instance. Because serviceInfo is a singleton resource type, the value of this field is always 0.
productName	String	Product name, for example, Unity400. Usually, it's same as the system.model.
productSerialNumber	String	Product serial number. This has the same value as system.serialNumber.
systemUUID	String	(Applies to virtual deployments only.) Unique system identifier required to service the storage system.
isSSHEnabled	Boolean	Indicates whether Secure Shell (SSH) is enabled on the storage system. Values are: • true - SSH is enabled. • false - SSH is not enabled.
sps	List<svcStorageProcessor>	Storage processor information, as defined by the svcStorageProcessor resource type.

Attributes for svcCRU

Service-related information for the Customer Replaceable Units (CRUs) installed on the storage processors. You can use this information for servicing the CRUs.

Attribute	Type	Description
type	SvcCRUTypeEnum	CRU type
serialNumber	String	CRU serial number.
partNumber	String	CRU part number.

Attributes for svcStorageProcessor

Service-related information for the storage processors on the storage system. You can use this information for servicing the storage processors. There is always one svcStorageProcessor per SP in the system.

Attribute	Type	Description
scope	SvcScopeEnum	Scope of the object
state	SvcStorageProcessorStateEnum	Indicates which state the storage processor is in.
isPrimary	Boolean	Indicates whether the storage processor is the primary SP. The primary SP is the storage processor on which the management stack runs. Values are: • true - SP is the primary SP. • false - SP is not the primary SP.
softwareVersion	String	Software version of the storage processor.
fullSoftwareVersion	String	Full software version of the storage processor.
hostName	String	Host name of the storage processor. This host name corresponds to control path IP on this SP.
serviceModeReason	String	Service mode reason (Rescue Reason Code), is a hexadecimal-formatted code. If the storage processor is in service mode, this code indicates why the SP is in Service Mode. If the SP is in Normal Mode, the value of this attribute is null.
serviceModeReasonHint	String	Service mode reason hint (Rescue reason hint code), is a hexadecimal-formatted code. If the SP

		is in Service Mode, this code provides additional information as to why the SP is in Service Mode. If the SP is in Normal Mode, the value of this attribute is null.
serviceModeRecommendedAction	String	Localized recommended action in service mode. If the storage processor is in service mode, this message indicates the recommended action the user can take to get the storage processor out of service mode. If the SP is in Normal Mode, the value of this attribute is null.
status	String	Localized storage processor status message.
crus	List<svcCRU>	Customer Replaceable Units (CRUs) that are installed on the storage processor. Usually, there is at least one Solid State Drive (SSD) and one or more SLICs.

Query all members of the serviceInfo collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/serviceInfo/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the serviceInfo collection.

Query a specific serviceInfo instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/serviceInfo/<id> where <id> is the unique identifier of the serviceInfo instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific serviceInfo instance.

supportAsset

Information about the support assets on the main Unisphere Support page and its sub-pages.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the supportAsset instance.
name	String	Localized support asset name.
description	String	Localized support asset description.

Query all members of the supportAsset collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/supportAsset/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the supportAsset collection.

Query a specific supportAsset instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/supportAsset/<id> where <id> is the unique identifier of the supportAsset instance to query. Or GET /api/instances/supportAsset/name:<value> where <value> is the name of the supportAsset instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific supportAsset instance.

supportAssist

Information about the SupportAssist configuration

SupportAssist is a remote monitoring and support feature that provides authorized personnel with DELL remote access capabilities to storage systems via a secure and encrypted tunnel. The secure tunnel that SupportAssist establishes

between the storage system and systems on the DELL network can be used to transfer files (like upgrade image) out to the storage system or back to DELL.

Setting up SupportAssist requires:

- An installed DELL Supportlicense

For information about SupportAssist components and setup, go to the support website.

Examples

Operations need to perform to enable SupportAssist

Step 1: Accept EULA. The EULA must be accepted before or at the same time as any other configurations.

```
POST /api/instances/supportAssist/0/action/modify
{
   "isEULAAccepted" : "true"
}
```

Step 2: Initialize Connection [Optional]. If user didn't enable ESRS in old version, after upgrading to new version, the initialization operation must be performed before enabling Connection.

```
POST /api/instances/supportAssist/0/action/initialize
{
   "accessKey" : "23A5E582",
   "pin" : "1234"
}
```

Step 3: Enable Direct Connection.
Operations need to perform to enable Direct Connection.

```
POST /api/instances/supportAssist/0/action/modify
{
   "remoteServiceType" : "1",
   "allowRemoteAccess" : "false"
}
```

Also, Direct Connection could be enabled with one step (Except the scenario in step 3).

```
POST /api/instances/supportAssist/0/action/modify
{
   "isEULAAccepted" : "true",
   "remoteServiceType" : "1",
   "allowRemoteAccess" : "true"
}
```

Direct Connection has been enabled so far.

Operations need to perform to enable Gateway Connection
The user must specify at least one gateway Address. And isFollowSupportProxy must be set to false since gatway connection type doesn't support proxy any more. After setting the gateway successfully, Gateway Connection will be enabled.

```
POST /api/instances/supportAssist/0/action/modify
{
   "remoteServiceType" : "2",
   "allowRemoteAccess" : "true",
   "gatewayAddresses" : "["1.1.1.1:8080", "2.2.2.2"]",
   "isFollowSupportProxy" : "false"
}
```

Gateway Connection has been enabled so far.

Enabling RSC support

```
POST /api/instances/supportAssist/0/action/modify
{
   "isRSCEnabled" : "true"
}
```

Modify remote access when remote service type is not disabled

```
POST /api/instances/supportAssist/0/action/modify
{
   "allowRemoteAccess" : "true"
}
```

Disabling SupportAssist

```
POST /api/instances/supportAssist/0/action/modify
{
   "remoteServiceType" : "0"
}
```

Test callhome

```
POST /api/instances/supportAssist/0/action/testCallhome
```

Supported operations

Collection query , Instance query ,Modify ,Initialize ,CheckNetwork ,TestCallhome

Attributes

Attribute	Type	Description
id	String	Unique identifier of the SupportAssist instance. --eng This value is always 0, because at any given time there can only one SupportAssist instance enabled.
status	SupportAssistStatusEnum	SupportAssist connectivity status.
isRSCEnabled	Boolean	Indicates whether RSC (Remote Secure Credential) is enabled or not. RSC is a scheme to allow service people to access the storage system with remote secure credential. RSC should be enabled when it's necessary for service personnel to access the storage system with the remote secure credential. RSC can be disabled when it is no longer necessary for service personnel to access the storage system with the remote secure credential. Values are: • true - RSC is enabled. • false - RSC is disabled.
remoteServiceType	RemoteServiceTypeEnum	Remote Service Type.
isEULAAccepted	Boolean	Indicates whether the End User License Agreement (EULA) has been accepted. Values are: • true - The EULA has been accepted. • false - The EULA has not been accepted.
isInitialized	Boolean	Indicates whether Supportable is initialized. It represents whether SupportAssist service can be enabled or not. Values are: • true - The SupportAssist service can be enabled. • false - The SupportAssist enable operation will not be allowed.
gatewayAddresses	List<IPAddress> • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Before setting the gateway, users need to accept EULA. After setting gateway successfully, the SupportAssist type will change to Gateway Connection. The gateway IP addresses. • Supports IPv4 or Fully Qualified Domain Name (FQDN). • Required version: Secure Connect Gateway (SCG) 5.12 or higher.
isFollowSupportProxy	Boolean	Whether to use the proxy defined in supportProxy when supportProxy.isEnabled is true. Values are: • true - Use the proxy defined in supportProxy when supportProxy.isEnabled is true. • false - Do not use the proxy for SupportAssist connection.
allowRemoteAccess	Boolean	Indicates whether allow Remote Access. Values are: • true - Allow Remote Access. • false - Not allow Remote Access.

Query all members of the supportAssist collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/supportAssist/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the supportAssist collection.

Query a specific supportAssist instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/supportAssist/<id> where <id> is the unique identifier of the supportAssist instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific supportAssist instance.

Modify operation

Modify SupportAssist settings.

Enable, disable or change SupportAssist options.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/supportAssist/<id>/action/modify where <id> is the unique identifier of the supportAssist instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isEULAAccepted	in	Boolean	Optional	Indicate whether to accept the SupportAssist End User License Agreement (EULA). Any other configuration changes to SupportAssist should be performed after accepting the EULA. • true - To accept the SupportAssist EULA.
remoteServiceType	in	RemoteServiceTypeEnum	Optional	Remote Service type. Values are: • 0 - Remote service is disabled on the storage system. • 1 - Connect to remote service directly. • 2 - Connect to remote service through the gateway.
gatewayAddresses	in	List<IPAddress> • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	The gateway IP address for SupportAssist. Users need to accept EULA before performing gateway operation. • Supports IPv4 or Fully Qualified Domain Name (FQDN). • Required version: Secure Connect Gateway (SCG) 5.12 or higher.
isFollowSupportProxy	in	Boolean	Optional	Whether to use the proxy defined in supportProxy when supportProxy.isEnabled is true. It cannot be true when remoteServiceType is set to gateway since gateway connection doesn't support proxy any more. Values are: • true - Use the proxy defined in supportProxy when supportProxy.isEnabled is true. • false - Do not use the proxy for SupportAssist connection.
allowRemoteAccess	in	Boolean	Optional	Indicates whether allow Remote Access. Values are: • true - Allow Remote Access. • false - Not allow Remote Access.
isRSCEnabled	in	Boolean	Optional	Enable or disable RSC (Remote Secure Credential). RSC could only be enabled after enabling Direct Connection with configuration remote access. Values are: • true - Enable RSC. • false - Disable RSC.
errorMsgParams	out	List<String>	N/A	List of Dell backend servers that could not be reached.

Initialize operation

Initialize the SupportAssist.

If only accessKey and pin are passed in, initialize SupportAssist through direct connection. .
If accessKey and pin are passed in with gatewayAddresses, initialize SupportAssist through gateway.
Access Key can be generated from Product Support Page in Dell website. You can visit the page from Support->Product Portal->Unity Portal in Unisphere GUI.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/supportAssist/<id>/action/initialize where <id> is the unique identifier of the supportAssist instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Initialize operation

Argument	In/ out	Type	Required?	Description
accessKey	in	String	Required	It is a verification code generated by serial number. Values are: • An eight-bit ASCII string of numbers and letters. The value must match all of following regex expressions • ^[A-Za-z0-9]{8}$
pin	in	String	Required	It is an arbitrary four-digit number entered by the user. Values are: • A four-digit number. The value must match all of following regex expressions • ^[0-9]{4}$
gatewayAddresses	in	List<IPAddress> • IPv6 supported: false • Prefix-length supported: false • Port supported: true	Optional	Specify the list of gateway addresses to be used to initialize, the addresses won't be persisted to supportAssist after initialization. • Supports IPv4 or Fully Qualified Domain Name (FQDN). • Required version: Secure Connect Gateway (SCG) 5.12 or higher.

		• DNS name supported: true		

CheckNetwork operation

Check network connectivity.

Check network connectivity between Unity and Dell backend servers.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/supportAssist/<id>/action/checkNetwork where <id> is the unique identifier of the supportAssist instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the CheckNetwork operation

Argument	In/ out	Type	Required?	Description
remoteServiceType	in	RemoteServiceTypeEnum	Required	Specify the SupportAssist connectivity type.
allowRemoteAccess	in	Boolean	Required	Whether to allow remote access.
isFollowSupportProxy	in	Boolean	Required	Whether to use the proxy defined in supportProxy when supportProxy.isEnabled is true. It cannot be true when gatewayAddresses is specified since gateway connection doesn't support proxy any more.
gatewayAddresses	in	List<IPAddress> • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	Specify the list of gateway addresses to be checked when remoteServiceType is Gateway. If remoteServiceType is Direct, only run direct network check, this parameter will be ignored. • Supports IPv4 or Fully Qualified Domain Name (FQDN). • Required version: Secure Connect Gateway (SCG) 5.12 or higher.
errorMsgParams	out	List<String>	N/A	List of Dell backend servers that could not be reached.

TestCallhome operation

Test callhome.

Test callhome between Unity and Dell backend servers.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/supportAssist/<id>/action/testCallhome where <id> is the unique identifier of the supportAssist instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the TestCallhome operation

Argument	In/ out	Type	Required?	Description
errorMsgParams	out	List<String>	N/A	List of Dell backend servers that could not be reached.

supportProxy

Proxy Server settings.

A proxy server is a server that acts as an intermediary for requests from clients seeking resources from other servers.

The system uses the proxy server (if it's enabled) to access Dell web services such as authenticate support credential, get technical advisories, etc.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the support proxy instance. --eng This value is always 0, because at any given time there is only one proxy.
isEnabled	Boolean	Indicates whether the proxy server is enabled. Values are: • true - Uses proxy server • false - Does not use proxy server
protocol	ProxyProtocolEnum	Protocol used for communication with the proxy Server.
address	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true	Support proxy Server. If a port is not specified the following default ports will be used: • Protocol = http, Default port = 3128 • Protocol = socks, Default port = 1080

	• DNS name supported: true	
username	String	The user name for proxy server.

Query all members of the supportProxy collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/supportProxy/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the supportProxy collection.

Query a specific supportProxy instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/supportProxy/<id> where <id> is the unique identifier of the supportProxy instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific supportProxy instance.

Modify operation

Modify support proxy settings.
Enable, disable or change support proxy options.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/supportProxy/<id>/action/modify where <id> is the unique identifier of the supportProxy instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isEnabled	in	Boolean	Optional	Configure the use of a proxy server. Values are: • true - Uses a proxy server • false - Does not use a proxy server
protocol	in	ProxyProtocolEnum	Optional	Protocol used for communications with the proxy server. Valid values from 0 to 1 only.
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	Address of proxy server. If a port is not specified the following default ports will be used: • Protocol = http, Default port = 3128 • Protocol = socks, Default port = 1080
username	in	String[..64]	Optional	User account with permission to access the proxy server.
password	in	String[..64]	Optional	User account password for the proxy server.

supportService

(Applies if Dell Support is available.) Information about the support services associated with customers.

Supported operations

Collection query , Instance query ,Modify ,VerifySupportCredentials

Attributes

Attribute	Type	Description
id	String	Unique identifier of the supportService instance.
supportUsername	String	Username for logging into Dell Support.
supportCredentialStatus	SupportCredentialStatusEnum	Status of the support credentials.
isEMCServiced	Boolean	Indicates whether the customer has a valid Dell self-service support ecosystem license or service contract. Valid values are: • true - Customer has a valid Dell self-service support ecosystem license or service contract. • false - Customer does not have a valid self-service support ecosystem license or service contract.
isContractReportEnabled	Boolean	Indicates whether the storage system automatically updates its service contracts list once a week. Values are:

		• true - System automatically updates its service contracts list once a week. • false - System does not automatically update its service contracts list once a week.
isCloudManagementEnabled	Boolean	Indicates whether the customer has enabled management by the Dell APEX AIOps Observability product. Valid values are: • true - Customer has enabled APEX AIOps Observability. • false - Customer has not enabled APEX AIOps Observability.

Query all members of the supportService collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/supportService/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the supportService collection.

Query a specific supportService instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/supportService/<id> where <id> is the unique identifier of the supportService instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific supportService instance.

Modify operation

Modify the support services associated with a storage system user.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/supportService/<id>/action/modify where <id> is the unique identifier of the supportService instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
supportUsername	in	String	Optional	Username for logging into Dell Support.
supportPassword	in	String	Optional	Password for logging into Dell Support.
isContractReportEnabled	in	Boolean	Optional	
isCloudManagementEnabled	in	Boolean	Optional	Indicates whether APEX AIOps Observability is enabled or not.

VerifySupportCredentials operation

Verify the stored support username and password for logging into Dell Support.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/supportService/<id>/action/verifySupportCredentials where <id> is the unique identifier of the supportService instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

technicalAdvisory

Information about the Technical Advisories provided by Dell Support.

Supported operations

Collection query , Instance query ,Refresh

Attributes

Attribute	Type	Description
id	String	Unique identifier of the technicalAdvisory instance.
knowledgeBaseId	String	Knowledgebase number for the Technical Advisory.
description	String	Description of the Technical Advisory.
modificationTime	DateTime	Latest publication date for the Technical Advisory.

Query all members of the technicalAdvisory collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/technicalAdvisory/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the technicalAdvisory collection.

Query a specific technicalAdvisory instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/technicalAdvisory/<id> where <id> is the unique identifier of the technicalAdvisory instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific technicalAdvisory instance.

Refresh operation

Check for new Technical Advisories from Dell Online Support.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/technicalAdvisory/action/refresh
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

udoctorPackage

Information about the UDoctor package. It is used to apply a fix, workaround, or configuration change to the system.

Supported operations

Collection query , Instance query ,Install ,Delete ,Cancel

Attributes

Attribute	Type	Description
id	String	Unique identifier of the udoctorPackage instance.
name	String	File name of the udoctorPackage.
description	String	Description of the udoctorPackage.
scheduleTime	DateTime	Scheduled date and time to install the udoctorPackage, if set.
status	UDoctorPackageStatusEnum	Status of the udoctorPackage.
installTime	DateTime	Date and time when the udoctorPackage is actually installed.

Query all members of the udoctorPackage collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/udoctorPackage/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the udoctorPackage collection.

Query a specific udoctorPackage instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/udoctorPackage/<id> where <id> is the unique identifier of the udoctorPackage instance to query. Or GET /api/instances/udoctorPackage/name:<value> where <value> is the name of the udoctorPackage instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific udoctorPackage instance.

Install operation

Install the udoctorPackage.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/udoctorPackage/<id>/action/install where <id> is the unique identifier of the udoctorPackage instance. Or POST /api/instances/udoctorPackage/name:<value>/action/install where <value> is the name of the udoctorPackage instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Install operation

Argument	In/ out	Type	Required?	Description
scheduleTime	in	DateTime	Optional	Scheduled date and time to install the udoctorPackage. If not set, the package will be installed immediately.

Delete operation

Delete the udoctorPackage, and the package will not be able to be installed later.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/udoctorPackage/<id> where <id> is the unique identifier of the udoctorPackage instance to delete. Or DELETE /api/instances/udoctorPackage/name:<value> where <value> is the name of the udoctorPackage instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Cancel operation

If the package is scheduled for install, and the install has not yet begun, this cancels the scheduled install. The package may still be installed or scheduled for install again later.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/udoctorPackage/<id>/action/cancel where <id> is the unique identifier of the udoctorPackage instance. Or POST /api/instances/udoctorPackage/name:<value>/action/cancel where <value> is the name of the udoctorPackage instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Users and security

crl

Information about all Certificate Revocation Lists (CRLs) installed on the storage system. The CRL format is described in RFC 5280.

Embedded resource types

revokedCertificate

Supported operations

Collection query , Instance query ,ImportCRLByString ,Delete ,ExportCRLByString

Attributes

Attribute	Type	Description
id	String	Unique identifier of the crl instance.
service	ServiceTypeEnum	Service with which the CRL is associated.
scope	certificateScope	Scope of the CRL.
version	unsigned Integer[32]	CRL version.
crlNumber	String	CRL number. This is equivalent to a serial number for the CRL.
signatureAlgorithm	SignatureAlgoTypeEnum	CRL signature algorithm.
issuer	String	Name of the CRL issuer.
thisUpdate	DateTime	Date and time when the CRL was issued.
nextUpdate	DateTime	Date and time when the next CRL will be issued.
certificates	List<revokedCertificate>	List of revoked certificates.
deltaCRLIndicator	String	Delta CRL indicator. The value of this attribute is based on the

		delta CRL extension, which is a CRL number. This value can be blank.

Attributes for revokedCertificate

Settings for revoked certificates in the CRL.

This resource type is embedded in the crl resource type. The CRL and revoked certificate formats are described in RFC 5280.

Attribute	Type	Description
id	String	Unique identifier of the revokedCertificate instance.
serialNumber	String	Certificate serial number.
revocationDate	DateTime	Date and time when the certificate was revoked.
reasonCode	CRLReasonCodeEnum	Reason the certificate was revoked.

Query all members of the **crl** collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/crl/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the crl collection.

Query a specific **crl** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/crl/<id> where <id> is the unique identifier of the crl instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific crl instance.

ImportCRLByString operation

Import a CRL by string

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/crl/action/importCRLByString
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the ImportCRLByString operation

Argument	In/ out	Type	Required?	Description
crlString	in	String	Required	CRL string to be used to create crl instance. The CRL must be PEM-encoded.
service	in	ServiceTypeEnum	Required	Service with which the CRL is associated.
scope	in	certificateScope	Optional	Scope of the CRL.
id	out	crl	N/A	Unique identifier of the new crl instance.

Delete operation

Delete a CRL

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/crl/<id> where <id> is the unique identifier of the crl instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

ExportCRLByString operation

Export a CRL by string

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/crl/<id>/action/exportCRLByString where <id> is the unique identifier of the crl instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the ExportCRLByString operation

Argument	In/ out	Type	Required?	Description
crlString	out	String	N/A	CRL string for the PEM-encoded CRL instance.

loginSessionInfo

Information about a REST API login session.

Supported operations

Collection query , Instance query ,Logout

Attributes

Attribute	Type	Description
id	String	Unique identifier of the loginSessionInfo instance.
domain	String	Domain of the user logged into this session.
user	user	Information about the user logged into this session, as defined by the user resource type.
roles	List<role>	List of roles for the user logged into this session, as defined by the role resource type.
idleTimeout	unsigned Integer[32(seconds)]	Number of seconds after last use until this session expires.
isPasswordChangeRequired	Boolean	Indicates whether the password must be changed in order to use this session created for built-in admin account. Values are: • true - Password must be changed. • false - Password does not need to be changed. For information about changing the password for a local user, see the Help topic for the user resource type.

Query all members of the loginSessionInfo collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/loginSessionInfo/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the loginSessionInfo collection.

Query a specific loginSessionInfo instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/loginSessionInfo/<id> where <id> is the unique identifier of the loginSessionInfo instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific loginSessionInfo instance.

Logout operation

Log out of the session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/loginSessionInfo/action/logout
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the Logout operation

Argument	In/ out	Type	Required?	Description
localCleanupOnly	in	Boolean	Optional	Indicates whether to log out of all REST API sessions authenticated by the Ticket Granting Token (TGT) with which this session was established. Values are: • true - Log out of this session only. • false - Log out of all sessions.
logoutOK	out	String	N/A	Indicates successful logout

role

Information about the roles in the storage system. Each role identifies a level of authority for accessing and modifying the system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the role instance.
name	String	Name used to identify the role. Valid values are: • administrator - Administrator role. Can view status and performance information. Can also modify all storage system settings, including configure new storage hosts and manage local user, LDAP user, and LDAP group accounts. • storageadmin - Storage administrator role. Can view status and performance information and can modify most system settings, but cannot configure new storage hosts or manage local user, LDAP user, or LDAP group accounts. • vmadmin - VMware administrator role. Can establish a VASA connection from the vCenter to the storage system. • operator - Operator role. Can view system settings, status, and performance information, but cannot modify system settings. • securityadmin - Security administrator role. Can view and modify security settings; Can view system settings, status, and performance information, but cannot modify system settings.
description	String	Role description.

Query all members of the role collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/role/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the role collection.

Query a specific role instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/role/<id> where <id> is the unique identifier of the role instance to query. Or GET /api/instances/role/name:<value> where <value> is the name of the role instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific role instance.

roleMapping

Information about role mappings in the storage system.

Each role mapping associates a local user, LDAP user, or LDAP group with a role, granting that user or group administrative privileges on the system.

When you create a local user through the REST API, the appropriate role mapping between the new user and the specified role is created implicitly by the storage system. When you create an LDAP user or group through the REST API, you must explicitly specify a role mapping for that user or group by creating a new roleMapping resource.

For information about creating local users, see the Help topic for the user resource type.

Supported operations

Collection query , Instance query ,Create ,Delete ,DeleteAllInAuthority ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the roleMapping instance.
authorityName	String	Authority used to authorize the entity. Values are: • Local, for a local user. • LDAP server authority name, for an LDAP user or group.
roleName	String	Role name to associate with the entity specified by the entityName attribute.
entityName	String	Local user, LDAP user, or LDAP group name to associate with the role specified by the roleName attribute.
mappingType	RoleMappingTypeEnum	Indicates whether the role mapping is for a local user, LDAP user, or LDAP group.

Query all members of the roleMapping collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/roleMapping/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the roleMapping collection.

Query a specific roleMapping instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/roleMapping/<id> where <id> is the unique identifier of the roleMapping instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific roleMapping instance.

Create operation

Create a new role mapping for an LDAP user or LDAP group.

Note: The system automatically creates role mappings for local users when the users are created.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/roleMapping/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
id	out	roleMapping	N/A	Unique identifier for the new roleMapping instance.
authorityName	in	String	Required	Authority used to authorize the entity.
entityName	in	String	Required	LDAP user or LDAP group name to associate with the role specified by the roleName argument.
roleName	in	String	Required	Role name to associate with the entity specified by the entityName argument.
mappingType	in	RoleMappingTypeEnum	Required	Role mapping type.

Delete operation

Delete a role mapping instance for a local user, LDAP user, or LDAP group.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/roleMapping/<id> where <id> is the unique identifier of the roleMapping instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

DeleteAllInAuthority operation

Delete all role mappings that are authenticated by the specified authority.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/roleMapping/action/deleteAllInAuthority
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the DeleteAllInAuthority operation

Argument	In/ out	Type	Required?	Description
authorityName	in	String	Required	Authority for which to delete the associated role mappings.

Modify operation

Modify the role name in a role mapping instance associated with a local user, LDAP user, or LDAP group.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/roleMapping/<id>/action/modify where <id> is the unique identifier of the roleMapping instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
roleName	in		Optional	

		String		New role name to associate with the entity specified by the entityName argument.

securitySettings

All the system level security settings.
Use this resource to enable and disable system level security settings.
The settings include:

a) FIPS 140-2
Information about whether the system is working in Federal Information Processing Standard (FIPS) 140-2 mode.

The storage systems support FIPS 140-2 mode for the RSA BSAFE SSL modules on the storage pocessor that handle client management traffic. Management communication into and out of the system is encrypted using SSL. As a part of this process, the client and the Storage Management Server negotiate a cipher suite to use in the exchange. The use of FIPS 140-2 mode restricts the allowable set of cipher suites that can be selected in the negotiation to those that are sufficiently strong.

If FIPS 140-2 mode is enabled, you may find that some of your existing clients can no longer communicate with the management ports of the array if they do not support a cipher suite of acceptable strength.

b) SSO
Information about whether the system is participating in Single Sign On mode.

In Single Sign On (SSO) mode, Unisphere Central (UC) becomes the authentication server for multiple storage system, thus creating a shared authentication domain where cross-array operations can be performed without re-entering user credentials.

If SSO is enabled, the system will participate in Single Sign On mode, and authenticate against Unisphere Central previously configured on this array.

c) TLS Mode
Information about which TLS protocol versions the Storage Management Server allows for TLS communication.

Management communication into and out of the Storage Management Server is encrypted using TLS. As a part of this process, the client and the Storage Management Server negotiate a TLS protocol version to use. There are three options for TLS Mode: tls1_0, tls1_1 and tls1_2. Only tls1_2 is supported in the current version. TLS Mode tls1_2 means that the Storage Management Server only supports TLS communications using the TLSv1.2 protocol or later. TLSv1.0 and TLSv1.1 are not be considered valid protocols. See the Security Configuration Guide for information about backward compatibility.

NOTE: The modification of the supported TLS protocol versions for the NAS server is handled separately. Use the svc_nas service script to configure the supported TLS protocol versions for the NAS server.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the securitySettings instance. The value of this attribute is always 0, because securitySettings is a singleton resource type.
isFIPSEnabled	Boolean	Indicates whether the system is working in FIPS 140-2 mode. Values are: • true - System is working in FIPS 140-2 mode. • false - System is not working in FIPS 140-2 mode.
isSSOEnabled	Boolean	Indicates whether the system has SSO enabled or not. Values are: • true - System is participating in SSO • false - System is not participating in SSO
tlsMode	SecuritySettingsTLSModeEnum	Indicates the TLS mode.

Query all members of the securitySettings collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/securitySettings/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the securitySettings collection.

Query a specific securitySettings instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/securitySettings/<id> where <id> is the unique identifier of the securitySettings instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific securitySettings instance.

Modify operation

Modify the system security settings.
One setting should be modified at a time.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/securitySettings/<id>/action/modify where <id> is the unique identifier of the securitySettings instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isFIPSEnabled	in	Boolean	Optional	Switches the system in or out of FIPS 140-2 mode. Values are: • true - Switches the system to work in FIPS 140-2 mode.

				• false - Switches the system to no longer work in FIPS 140-2 mode. All system SPs will be rebooted automatically if the FIPS mode is changed for the setting to take effect.
isSSOEnabled	in	Boolean	Optional	Switches the system in or out of SSO mode. Values are: • true - Enables SSO mode on the system. • false - Disables SSO mode on the system.
tlsMode	in	SecuritySettingsTLSModeEnum	Optional	Indicates the minimum TLS version that is enabled. The Management Service will be automatically restarted for the setting to take effect.

user

Information about local users, including their roles, and how they are authenticated.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the user instance.
name	String	Name of the user.
role	role	User role as defined by the role resource type.

Query all members of the user collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/user/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the user collection.

Query a specific user instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/user/<id> where <id> is the unique identifier of the user instance to query. Or GET /api/instances/user/name:<value> where <value> is the name of the user instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific user instance.

Create operation

Create a local user. When you create a local user, the system automatically creates a roleMapping resource for that user, based on the value of the role attribute.

Use the roleMapping resource type to create authentication for LDAP users and LDAP groups, as described in the associated help topic.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/user/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
id	out	user	N/A	Unique identifier for the new user.
name	in	String	Required	User name.
role	in	String	Required	User role.
password	in	String	Required	Initial password for the user. The value must match all of following regex expressions • ^(?=.*\d)(?!.*[&'])(?!.*[\s])(?=.*[a-z])(?=.*[A-Z]).{8,64}$

Delete operation

Delete a local user. When you delete a local user, the system also deletes the roleMapping resource associated with the user.

Header	Accept: application/json Content-Type: application/json

Method and URI	DELETE /api/instances/user/<id> where <id> is the unique identifier of the user instance to delete. Or DELETE /api/instances/user/name:<value> where <value> is the name of the user instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Change the local user's password or/and role.

Use the roleMapping resource type to change the access privileges for LDAP users and LDAP groups, as described in the associated help topic.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/user/<id>/action/modify where <id> is the unique identifier of the user instance. Or POST /api/instances/user/name:<value>/action/modify where <value> is the name of the user instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
role	in	String	Optional	Role with which to associate the user.
password	in	String	Optional	User's new password. The value must match all of following regex expressions • ^(?=.*\d)(?!.*[&'])(?!.*[\s])(?=.*[a-z])(?=.*[A-Z]).{8,64}$
oldPassword	in	String	Optional	User's existing password.

x509Certificate

Information about the X.509 certificates installed on the storage system. The X.509 certificate format is described in RFC 5280.

Supported operations

Collection query , Instance query ,ImportCertificateByString ,Delete ,ExportCertificateByString

Attributes

Attribute	Type	Description
id	String	Unique identifier of the x509Certificate instance.
type	CertificateTypeEnum	Certificate type.
service	ServiceTypeEnum	Service with which the certificate is associated.
scope	certificateScope	Scope of the certificate.
isTrustAnchor	Boolean	Indicates whether the certificate is trusted as end-of-chain for peer certificate verification. This applies to certificates with a type of CA only. Values are: • true - Certificate is trusted. It is either permanent, or the expiration date has not yet passed. • false - Certificate is not trusted.
version	unsigned Integer[32]	Certificate version.
serialNumber	String	Certificate serial number.
signatureAlgorithm	SignatureAlgoTypeEnum	Certificate signature algorithm.
issuer	String	Name of the certificate issuer.
validFrom	DateTime	Date and time when the certificate became valid.
validTo	DateTime	Date and time when the certificate will expire.
subject	String	Certificate subject.
subjectAlternativeName	String	Certificate subject alternative name.
publicKeyAlgorithm	PublicKeyAlgoTypeEnum	Certificate public key algorithm.
keyLength	unsigned Integer[32(bits)]	Certificate key length.
thumbprintAlgorithm	ThumbprintAlgoTypeEnum	Certificate thumbprint algorithm.
thumbprint	String	Certificate thumbprint.
hasPrivateKey	Boolean	Indicates whether the certificate has an associated private key. Values are: • true - Certificate has an associated private key. • false - Certificate does not have an associated private key.

Query all members of the x509Certificate collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/x509Certificate/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the x509Certificate collection.

Query a specific x509Certificate instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/x509Certificate/<id> where <id> is the unique identifier of the x509Certificate instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific x509Certificate instance.

ImportCertificateByString operation

Import an X.509 certificate by string.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/x509Certificate/action/importCertificateByString
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the ImportCertificateByString operation

Argument	In/ out	Type	Required?	Description
certificateString	in	String	Required	Certificate string to import the certificate. The certificate string can be PEM-encoded, and can contain the encrypted private key string to associate with the certificate. Note: Line feeds in the PEM-encoded string must be replaced by \"\n\" characters.
type	in	CertificateTypeEnum	Required	Certificate type.
service	in	ServiceTypeEnum	Required	Service with which the certificate is associated.
scope	in	certificateScope	Optional	Scope of the certificate.
passphrase	in	String	Optional	Passphrase used to decrypt the private key. This argument is required if the string contains a private key.
id	out	x509Certificate	N/A	Unique identifier of the new x509Certificate instance.

Delete operation

Delete an X.509 certificate.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/x509Certificate/<id> where <id> is the unique identifier of the x509Certificate instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

ExportCertificateByString operation

Export an X.509 certificate by string.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/x509Certificate/<id>/action/exportCertificateByString where <id> is the unique identifier of the x509Certificate instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the ExportCertificateByString operation

Argument	In/ out	Type	Required?	Description
certificateString	out	String	N/A	Certificate string for the PEM-encoded certificate. Note: Line feeds in the PEM-encoded string will be replaced by \"\n\" characters.

Alphabetical list of all resources

aclUser

A user associated with a CIFS share level ACL.

Supported operations

Collection query , Instance query ,LookupSIDByDomainUser

Attributes

Attribute	Type	Description
id	String	Unique instance id.
sid	String	Windows user id.
domainName	String	Windows domain name.
userName	String	User name.

Query all members of the aclUser collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/aclUser/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the aclUser collection.

Query a specific aclUser instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/aclUser/<id> where <id> is the unique identifier of the aclUser instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific aclUser instance.

LookupSIDByDomainUser operation

get SID by domain name and user name

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/aclUser/action/lookupSIDByDomainUser
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the LookupSIDByDomainUser operation

Argument	In/ out	Type	Required?	Description
domainName	in	String	Required	Domain name.
userName	in	String	Required	User name.
sid	out	String	N/A	SID, if found.

alert

Information about alerts generated by the storage system.

Alerts are usually events that require attention from the system administrator. Most, although not all, alerts indicate that there is a problem with the storage system. For example, you might receive an alert telling you that a drive has faulted, or that the storage system is running out of space.

For information about configuring alerts, see the Help topics for the alertConfig and AlertConfigSNMPTarget resource types.

Some of the user-visible attributes in this object should be changed to eng-only.

Supported operations

Collection query , Instance query ,Modify ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the alert instance.
timestamp	DateTime	Date and time when the alert event occurred, in Greenwich Mean Time (GMT)
severity	SeverityEnum	Severity level of the alert.
component	resourceRef	System component that caused the alert. This field can be empty in cases where the alert is not specific to any component. For example, this field will be empty for log messages that become alerts without associated health state changes.

messageId	String	Message identifier for the alert in the message catalog. This identifier is used for localization purposes.
message	String	Localized alert message.
descriptionId	String	Description identifier for the alert in the message catalog. This identifier is used to identify a description of the alert condition.
description	String	Localized description of the alert condition.
resolutionId	String	Unique identifier of the help topic for the alert.
resolution	String	URI that points to a Help topic containing resolution information for the alert.
isAcknowledged	Boolean	Indicates whether the alert is acknowledged.
duplicateCount	unsigned Integer[32]	Indicates how many duplicate alerts occurred after this alert happened within predefined 3 minutes period, 0 if none; its own occurrence time is indicated by its timestamp.
state	AlertStateEnum	The state of the alert.

Query all members of the **alert** collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/alert/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the alert collection.

Query a specific **alert** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/alert/<id> where <id> is the unique identifier of the alert instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific alert instance.

Modify operation

Update the "ack" status or/and the state of the alert.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/alert/<id>/action/modify where <id> is the unique identifier of the alert instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isAcknowledged	in	Boolean	Optional	Whether alert is acknowledged.
state	in	AlertStateEnum	Optional	New state of the alert. The new state should be "Inactive" since the only valid transition supported is from "Active_Manual" to "Inactive".

Delete operation

Delete an alert.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/alert/<id> where <id> is the unique identifier of the alert instance to delete.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

alertConfig

Alert configuration information.
Note: SNMP trap destinations are defined by the alertConfigSNMPTarget resource type.

Supported operations

Collection query , Instance query ,Modify ,TestUCAlert ,TestEmailAlert ,TestUIAlert ,TestSNMPAlert

Attributes

Attribute	Type	Description

id	String	Unique identifier of the alertConfig instance. This value is always 0, because there is only one occurrence of this resource type.
locale	LocaleEnum	Language in which the system sends email alerts.
isThresholdAlertsEnabled	Boolean	Indicates whether pool space usage percent threshold alerts functionality is enabled, notice that this flag will be ignored and alerts will be sent always when it is thin provisioned and oversubscribed. Values are: • true - The pool space usage related alerts will be shown to the user when pool space usage percent reaches the threshold. • false - The pool space usage related alerts will not be shown to the user when pool space usage percent reaches the threshold.
emailFromAddress	String	The email from address which is used when sending alert emails.
minSNMPTrapNotificationSeverity	SeverityEnum	Minimum severity level for SNMP trap alerts.
callHomeSuppressionStartTime	DateTime	Date and time when the call home suppression was started. The start time is current system time when user set the suppressionEndTime from null to a valid time. This is available only when callHomeSuppressionEndTime is set.
callHomeSuppressionEndTime	DateTime	Date and time when the call home suppression will end. The total suppression window (the difference between suppressionStartTime and suppressionEndTime) should be more than 1 hour and less than 48 hours. If this value is not null then call home suppression is enabled, otherwise call home suppression is disabled.

Query all members of the alertConfig collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/alertConfig/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the alertConfig collection.

Query a specific alertConfig instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/alertConfig/<id> where <id> is the unique identifier of the alertConfig instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific alertConfig instance.

Modify operation

Modify the alert configuration settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/alertConfig/<id>/action/modify where <id> is the unique identifier of the alertConfig instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
alertLocale	in	LocaleEnum	Optional	Language in which the system sends email alerts.
isThresholdAlertsEnabled	in	Boolean	Optional	Whether pool space usage related alerts will be sent.
minSNMPTrapNotificationSeverity	in	SeverityEnum	Optional	Minimum severity level for SNMP trap alerts.
emailFromAddress	in	String	Optional	Email from address used when sending alert emails.
callHomeSuppressionEndTime	in	DateTime	Optional	The date and time when the call home suppression will end. The total suppression window (the difference between suppressionStartTime and suppressionEndTime) should be more than 1 hour and less than 48 hours. Set to null to diable the call home suppression.

TestUCAlert operation

Test Unisphere Central alert notification by sending a test alert to a Unisphere Central destination.

Header	Accept: application/json

	Content-Type: application/json
Method and URI	POST /api/instances/alertConfig/<id>/action/testUCAlert where <id> is the unique identifier of the alertConfig instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

TestEmailAlert operation

Test email alert notification by sending a test alert to all configured email destinations.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/alertConfig/<id>/action/testEmailAlert where <id> is the unique identifier of the alertConfig instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

TestUIAlert operation

Test GUI alert notification by sending a test alert to all open CEM GUIs.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/alertConfig/<id>/action/testUIAlert where <id> is the unique identifier of the alertConfig instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

TestSNMPAlert operation

Test SNMP trap notification by sending an alert to all configured SNMP trap destinations.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/alertConfig/<id>/action/testSNMPAlert where <id> is the unique identifier of the alertConfig instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

alertConfigSNMPTarget

Information about the Simple Network Management Protocol (SNMP) destinations used by alerts.
The system uses SNMP to transfer system alerts as traps to an SNMP destination host. Traps are asynchronous messages that notify the SNMP destination when system and user events occur.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the alertConfigSNMPTarget instance.
address	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Host address and port for the SNMP destination. The default UDP port number is 162.
version	SNMPVersionEnum	SNMP version used to send the traps or informs.
community	String	Community string used by SNMP v2c, not applicable for SNMP v3.
username	String	Username used to access the SNMP destination.
authProto	SNMPAuthProtocolEnum	Protocol used to authenticate access to the SNMP destination.
privacyProto	SNMPPrivacyProtocolEnum	Protocol used to enable privacy on the SNMP destination. The privacy protocol encrypts the SNMP packets.

Query all members of the alertConfigSNMPTarget collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/alertConfigSNMPTarget/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the alertConfigSNMPTarget collection.

Query a specific alertConfigSNMPTarget instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/alertConfigSNMPTarget/<id> where <id> is the unique identifier of the alertConfigSNMPTarget instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific alertConfigSNMPTarget instance.

Create operation

Create a new SNMP v3/v2c trap destination.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/alertConfigSNMPTarget/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
targetAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Required	Host address and port for the new SNMP destination. The default UDP port number is 162.
username	in	String	Optional	Username used to access the SNMP destination, v3 only.
authProtocol	in	SNMPAuthProtocolEnum	Optional	Protocol used to authenticate access to the new SNMP destination, v3 only.
authPassword	in	String	Optional	Password used to access the new SNMP destination, v3 only.
privProtocol	in	SNMPPrivacyProtocolEnum	Optional	Protocol used to enable privacy on the new SNMP destination. The privacy protocol encrypts the SNMP packets, v3 only.
privPassword	in	String	Optional	Privacy password for the privacy protocol, v3 only.
version	in	SNMPVersionEnum	Optional	SNMP version used to send the traps or informs.
community	in	String	Optional	Community string used by SNMP v2c, not applicable for SNMP v3.
id	out	alertConfigSNMPTarget	N/A	Unique identifier of the new alertConfigSNMPTarget instance.

Delete operation

Delete an SNMPv3 destination.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/alertConfigSNMPTarget/<id> where <id> is the unique identifier of the alertConfigSNMPTarget instance to delete.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

Modify operation

Modify an SNMP destination.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/alertConfigSNMPTarget/<id>/action/modify where <id> is the unique identifier of the alertConfigSNMPTarget instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
targetAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name	Optional	Host address and port for the new SNMP destination. The default UDP port number is 162.

		supported: true		
username	in	String	Optional	Username used to access the SNMP destination, v3 only.
authProtocol	in	SNMPAuthProtocolEnum	Optional	Protocol used to authenticate access to the new SNMP destination, v3 only.
authPassword	in	String	Optional	
privProtocol	in	SNMPPrivacyProtocolEnum	Optional	Protocol used to enable privacy on the new SNMP destination. The privacy protocol encrypts the SNMP packets, v3 only.
privPassword	in	String	Optional	Privacy password for the privacy protocol, v3 only.
community	in	String	Optional	Community string used by SNMP v2c, not applicable for SNMP v3.

alertEmailConfig

Alert email configuration information. Each email address will receive alerts that meet the criteria.

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the alert email configuration.
emailAddress	String	Destination email address.
minNotificationSeverity	SeverityEnum	Minimum severity level for alerts sent to this email address.

Query all members of the alertEmailConfig collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/alertEmailConfig/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the alertEmailConfig collection.

Query a specific alertEmailConfig instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/alertEmailConfig/<id> where <id> is the unique identifier of the alertEmailConfig instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific alertEmailConfig instance.

Create operation

Add an email to receive notifications based on severity.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/alertEmailConfig/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
emailAddress	in	String	Required	Email address to receive alert notifications of certain severity.
minNotificationSeverity	in	SeverityEnum	Optional	Minimum severity level for alerts sent to this email address. The default value is NOTICE.
id	out	alertEmailConfig	N/A	

Modify operation

Modify the alert email configuration settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/alertEmailConfig/<id>/action/modify where <id> is the unique identifier of the alertEmailConfig instance.
Request body arguments	See the arguments table below.

Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
emailAddress	in	String	Optional	Email to receive alert notifications.
minNotificationSeverity	in	SeverityEnum	Optional	Minimum severity level for email alerts.

Delete operation

Remove the alert email configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/alertEmailConfig/<id> where <id> is the unique identifier of the alertEmailConfig instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

archive

Performance archive files in the storage system.

Archive file contains performance data for a pre-defined set of metrics in the selected time range. Your service provider may request this file in order to analyze performance issues.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Archive id.
name	String	Archive file name.
startTime	DateTime	Archive start time.
endTime	DateTime	Archive end time.
size	unsigned Integer[64(bytes)]	Archive file size.

Query all members of the archive collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/archive/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the archive collection.

Query a specific archive instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/archive/<id> where <id> is the unique identifier of the archive instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific archive instance.

autodownloadSoftwareVersion

Information about software upgrade and disk firmware images auto-downloaded to the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the autodownloadSoftwareVersion instance.
version	String	Version of the autodownloaded software.
name	String	File name of the autodownloaded software.
type	AutodownloadSoftwareTypeEnum	Type of the autodownloaded software.

Query all members of the autodownloadSoftwareVersion collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/autodownloadSoftwareVersion/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the autodownloadSoftwareVersion collection.

Query a specific autodownloadSoftwareVersion instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/autodownloadSoftwareVersion/<id> where <id> is the unique identifier of the autodownloadSoftwareVersion instance to query. Or GET /api/instances/autodownloadSoftwareVersion/name:<value> where <value> is the name of the autodownloadSoftwareVersion instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific autodownloadSoftwareVersion instance.

basicSystemInfo

Provides unauthenticated access to system model, system name, software version, and API version information. This is a singleton resource type.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the basicSystemInfo instance.
model	String	Model name of this storage system. This value comes from the model attribute of the system resource.
name	String	Name of this storage system. This value comes from the name attribute of the system resource.
softwareVersion	String	Software version of this storage system. This value comes from the version attribute of the installedSoftwareVersion resource.
softwareFullVersion	String	Software full version of this storage system. This value comes from the fullversion attribute of the installedSoftwareVersion resource.
apiVersion	String	Latest version of the REST API that this storage system supports.
earliestApiVersion	String	Earliest version of the REST API that this storage system supports.

Query all members of the basicSystemInfo collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/basicSystemInfo/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the basicSystemInfo collection.

Query a specific basicSystemInfo instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/basicSystemInfo/<id> where <id> is the unique identifier of the basicSystemInfo instance to query. Or GET /api/instances/basicSystemInfo/name:<value> where <value> is the name of the basicSystemInfo instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific basicSystemInfo instance.

battery

(Applies to physical deployments only.) Information about batteries in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description

id	String	Unique identifier of the battery instance.
health	health	Health information for the battery, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the battery needs replacement. Values are: • true - Battery needs replacement. • false - Battery does not need replacement.
parent	resourceRef	Resource type and unique identifier of the battery's parent enclosure.
slotNumber	unsigned Integer[32]	Slot number where the battery is located in the parent enclosure.
name	String[1..32]	Battery name.
manufacturer	String	Manufacturer of the battery.
model	String	Manufacturer's model number for the battery.
firmwareVersion	String	Firmware version number for the battery.
emcPartNumber	String	EMC part number for the battery.
emcSerialNumber	String	EMC serial number for the battery.
vendorPartNumber	String	Vendor part number for the battery.
vendorSerialNumber	String	Vendor serial number for the battery.
parentStorageProcessor	storageProcessor	Parent Storage Processor of the battery.

Query all members of the battery collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/battery/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the battery collection.

Query a specific battery instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/battery/<id> where <id> is the unique identifier of the battery instance to query. Or GET /api/instances/battery/name:<value> where <value> is the name of the battery instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific battery instance.

candidateSoftwareVersion

Information about system software upgrades and language packs uploaded to the storage system and available to install.

Embedded resource types

nameValuePair

Supported operations

Collection query , Instance query ,Prepare

Attributes

Attribute	Type	Description
id	String	Unique identifier of the candidateSoftwareVersion instance.
version	String	Version of the candidate software.
fullVersion	String	Full Version of the candidate software.
revision	unsigned Integer[32]	Revision number of the candidate software.
releaseDate	DateTime	Release date of the candidate software.
type	UpgradeTypeEnum	Type of the candidate software.
rebootRequired	Boolean	Package requires reboot of bo5th SPs, one at a time, with services remaining available.
canPauseBeforeReboot	Boolean	Package can utilize the 'pause' feature allowing the user to choose their disruptive window.

Attributes for nameValuePair

List of name value pairs used to embed additional data in an object.

Attribute	Type	Description
name	String	Candidate description name.

value	String	Candidate description value.

Query all members of the candidateSoftwareVersion collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/candidateSoftwareVersion/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the candidateSoftwareVersion collection.

Query a specific candidateSoftwareVersion instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/candidateSoftwareVersion/<id> where <id> is the unique identifier of the candidateSoftwareVersion instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific candidateSoftwareVersion instance.

Prepare operation

Prepare the automated downloaded software image. Create a candidate version given a filename of the automated downloaded software image on the storage syttem.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/candidateSoftwareVersion/action/prepare
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Prepare operation

Argument	In/ out	Type	Required?	Description
filename	in	String	Required	Filename of the automated downloaded software image to change into candidate version.
id	out	candidateSoftwareVersion	N/A	

capabilityProfile

An object representing VASA 2.0 SPBM capability profile. Capability profiles can be queried, created, modified and deleted via the REST API. Capability profiles can then be queried via VASA 2.0 API by vSphere environment and leveraged for policy based provisioning of virtual volumes.

Embedded resource types

capabilityProfileRecommendation

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify ,Recommend

Attributes

Attribute	Type	Description
id	String	Unique identifier of the capability profile.
vmwareUUID	String[1..63]	Automatically generated unique identifier of the capability profile exposed via VASA 2.0 protocol. It will conform to RFC 3151 section 1.1.
name	String[1..63]	The name of the capability profile.
description	String[1..255]	Capability profile description.
pool	pool	The storage pool the capability profile is associated with.
driveTypes	List<DiskTierEnum>	Supported drive types for the capability profile.
fastCacheStates	List<FastCacheStateEnum>	Supported fast cache states for the capability profile.
raidTypes	List<RaidTypeEnum>	Supported RAID types for the capability profile.
spaceEfficiencies	List<SpaceEfficiencyEnum>	Supported space efficiency choices for the capability profile.
tieringPolicies	List<TieringPolicyEnum>	Supported tiering policies for the capability profile.
serviceLevels	List<ServiceLevelEnum>	Supported service level for the capability profile.
usageTags	List<String>[1..63]	Associated usage tags for the capability profile.
inUse	Boolean	Whether any virtual volumes have been created using this capability profile.
health	health	Health information for the capability profile, as defined by the health resource type.
virtualVolumes	List<virtualVolume>	The virtualVolumes associated with the capabilityProfile.

Attributes for capabilityProfileRecommendation

An entity representing a recommendation for a VASA 2.0 SPBM capability profile.

Attribute	Type	Description
driveTypes	List<DiskTierEnum>	List of drive types for individual capabilities.
fastCacheStates	List<FastCacheStateEnum>	List of fast cache states for individual capabilities.
raidTypes	List<RaidTypeEnum>	List of RAID types for individual capabilities.
spaceEfficiencies	List<SpaceEfficiencyEnum>	List of space efficiencies for individual capabilities.
tieringPolicies	List<TieringPolicyEnum>	List of tiering policies for individual capabilities.
serviceLevels	List<ServiceLevelEnum>	List of service levels for individual capabilities.

Query all members of the capabilityProfile collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/capabilityProfile/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the capabilityProfile collection.

Query a specific capabilityProfile instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/capabilityProfile/<id> where <id> is the unique identifier of the capabilityProfile instance to query. Or GET /api/instances/capabilityProfile/name:<value> where <value> is the name of the capabilityProfile instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific capabilityProfile instance.

Create operation

Create a new capability profile.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/capabilityProfile/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..63]	Required	The user-friendly name of the new capability profile.
description	in	String[0..255]	Optional	Description of the new capability profile.
pool	in	pool	Required	The pool with which the capability profile is associated.
usageTags	in	List<String>[1..63]	Optional	List of user defined usage tags for the new capability profile.
id	out	capabilityProfile	N/A	Reference to the created capability profile instance.

Delete operation

Delete a capability profile.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/capabilityProfile/<id> where <id> is the unique identifier of the capabilityProfile instance to delete. Or DELETE /api/instances/capabilityProfile/name:<value> where <value> is the name of the capabilityProfile instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a capability profile.

Header	Accept: application/json Content-Type: application/json
Method and URI	

	POST /api/instances/capabilityProfile/<id>/action/modify where <id> is the unique identifier of the capabilityProfile instance. Or POST /api/instances/capabilityProfile/name:<value>/action/modify where <value> is the name of the capabilityProfile instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..63]	Optional	New user-friendly name of the capability profile.
description	in	String[0..255]	Optional	New description of the capability profile.
usageTags	in	List<String>[1..63]	Optional	New list of user defined usage tags for the capability profile.

Recommend operation

Recommend the set of capabilities for a capability profile based on the specified pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/capabilityProfile/action/recommend
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the Recommend operation

Argument	In/ out	Type	Required?	Description
pool	in	pool	Required	Reference to the pool for which a capability profile recommendation is requested.
result	out	List<capabilityProfileRecommendation>	N/A	Result list of capability profile recommendations that specify the set of capabilities for the capability profile and associated constraints.

cifsServer

Information about SMB server of a NAS server. You can configure one SMB server per NAS server.

SMB, which stands for Server Message Block, is a protocol for sharing files and communications abstractions such as named pipes and mail slots between computers. Most usage of SMB involves computers running Microsoft Windows. Others vendors implementing SMB are Samba, MacOS.. SMB was also known as Common Internet File System (CIFS).

An SMB server is created each time Windows shares are enabled on the NAS server. An SMB server could be created as a standalone server or as a server that belongs to a Windows domain (Active Directory). In that case, DNS must be enabled on the NAS server. The credentials of an administrator of the domain are required to join that domain. An NTP server must be defined also, to prevent authentication errors caused by unsynchronized clocks.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the cifsServer instance.
name	String	User-specified name for the SMB server.
description	String	Description of the SMB server.
netbiosName	String	Computer Name of the SMB server in Windows network.
domain	String	Domain name where SMB server is registered in Active Directory, if applicable.
lastUsedOrganizationalUnit	String	Last used organizational unit of the SMB server in Active Directory, if applicable.
workgroup	String	(Applies to stand-alone SMB servers.) Windows network workgroup for the SMB server.
isStandalone	Boolean	Indicates whether the SMB server is standalone. Values are: • true - SMB server is standalone. • false - SMB server is joined to the Active Directory.
health	health	Health information for the SMB server, as defined by the health resource type.
nasServer	nasServer	NAS server that exposes file systems using the SMB server.
fileInterfaces	List<fileInterface>	Interfaces that use the SMB protocol to serve the NAS server's file systems.
smbcaSupported	Boolean	Indicates whether the SMB server supports continuous availability. Values are: • true - SMB server supports continuous availability. • false - SMB server does not support continuous availability.
smbMultiChannelSupported	Boolean	Indicates whether the SMB 3.0+ multichannel feature is supported. Values are:

		• true - SMB 3.0+ multichannel is supported. • false - SMB 3.0+ multichannel is not supported.
smbProtocolVersions	List<String>	Supported SMB protocols, such as 1.0, 2.0, 2.1, 3.0, and so on.

Query all members of the cifsServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/cifsServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the cifsServer collection.

Query a specific cifsServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/cifsServer/<id> where <id> is the unique identifier of the cifsServer instance to query. Or GET /api/instances/cifsServer/name:<value> where <value> is the name of the cifsServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific cifsServer instance.

Create operation

Create an SMB server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/cifsServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the NAS server which the SMB server belongs to.
netbiosName	in	String[1..15]	Optional	Computer name of the SMB server in Windows network.
name	in	String[1..63]	Optional	User friendly, descriptive name of SMB server.
description	in	String[0..63]	Optional	Description of the SMB server.
domain	in	String[1..155]	Optional	Domain name where SMB server is registered in Active Directory, if applicable.
organizationalUnit	in	String[1..383]	Optional	LDAP organizational unit of SMB server in Active Directory, if applicable.
domainUsername	in	String[1..1023]	Optional	Active Directory domain user name.
domainPassword	in	String[1..1023]	Optional	Active Directory domain password.
reuseComputerAccount	in	Boolean	Optional	Reuse existing SMB server account in the Active Directory.
workgroup	in	String[1..15]	Optional	Standalone SMB server workgroup.
localAdminPassword	in	String[8..40]	Optional	Standalone SMB server administrator password.
interfaces	in	List<fileInterface>	Optional	List of file IP interfaces that service CIFS protocol of SMB server.
id	out	cifsServer	N/A	Unique identifier of the new SMB server.

Delete operation

Delete an SMB server.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/cifsServer/<id> where <id> is the unique identifier of the cifsServer instance to delete. Or DELETE /api/instances/cifsServer/name:<value> where <value> is the name of the cifsServer instance to delete.
Request body arguments	See the arguments table below.

Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
skipUnjoin	in	Boolean	Optional	Keep SMB server account unjoined in Active Directory after deletion. Values are: • true - Keep SMB server account joined after deletion. • false - Try to unjoin SMB server account form Active Directory before deletion.
domainUsername	in	String[1..1023]	Optional	Username for unjoin.
domainPassword	in	String[1..1023]	Optional	Password for unjoin.

Modify operation

Modify an SMB server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/cifsServer/<id>/action/modify where <id> is the unique identifier of the cifsServer instance. Or POST /api/instances/cifsServer/name:<value>/action/modify where <value> is the name of the cifsServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
netbiosName	in	String[1..15]	Optional	Computer name of the SMB server in Windows network.
name	in	String[1..63]	Optional	User friendly, descriptive name of SMB server.
description	in	String[0..63]	Optional	Description of the SMB server.
domain	in	String[1..155]	Optional	Domain name where SMB server is registered in Active Directory, if applicable.
organizationalUnit	in	String[1..383]	Optional	LDAP organizational unit of SMB server in Active Directory, if applicable.
domainUsername	in	String[1..1023]	Optional	Active Directory domain user name.
domainPassword	in	String[1..1023]	Optional	Active Directory domain password.
skipUnjoin	in	Boolean	Optional	Skip unjoining the current SMB server account from Active Directory. Values are: • true - Skip unjoining the current SMB server account. • false - Unjoin the current SMB server account if needed.
currentUsername	in	String[1..1023]	Optional	Specify the user name of an Active Directory domain in order to unjoin the SMB server from it.
currentPassword	in	String[1..1023]	Optional	Specify the password of an Active Directory domain to unjoin the SMB server from it.
reuseComputerAccount	in	Boolean	Optional	Reuse existing SMB server account in the Active Directory.
workgroup	in	String[1..15]	Optional	Standalone SMB server workgroup.
localAdminPassword	in	String[8..40]	Optional	Standalone SMB server administrator password.
interfaces	in	List<fileInterface>	Optional	List of file IP interfaces that service CIFS protocol of SMB server.

cifsShare

Information about Common Internet File System (CIFS) shares in the storage system.

CIFS shares use the CIFS protocol to provide an access point for configured Windows hosts to access file system storage. The system uses Active Directory to authenticate user and user group access to the share.

Note: To manage CIFS shares for snaps, use the operations for this resource type. To manage CIFS shares for file systems, use the applicable operations for the storageResource resource type, as described in the help topic for that resource type.

Supported operations

Collection query , Instance query ,Create ,Delete ,GetACEs ,SetACEs ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the cifsShare instance.
type	CIFSTypeEnum	The type of CIFS Share.
filesystem	filesystem	(Applies to CIFS shares that are not snaps.) Parent

		file system associated with the CIFS share, as defined by the filesystem resource type. If the CIFS share is a snapshot, the value of this attribute is null.
snap	snap	(Applies to CIFS shares of snapshots.) Parent file system snap associated with the CIFS share, as defined by the snap resource type. If the CIFS share is not a snapshot, the value of this attribute is null.
isReadOnly	Boolean	Indicates whether the CIFS share is read-only. Values are: • true - CIFS share is read-only. • false - CIFS share is read-write.
name	String	CIFS share name.
path	String	Local path to a location within a file system. By default, the system creates a share to the root of the file system (top-most directory) at file system creation time. This path specifies the unique location of the file system on the storage system. CIFS shares allow you to create multiple network shares with the same local path. You can specify different host-side access controls for different users, while setting up network shares within the file system to access common content. If you want the CIFS network shares within the same file system to access different content, you must first create a share to the root of the file system. Then, you can connect from a Windows host, create additional directories from Windows, and create corresponding network shares using the REST API, Unisphere GUI, or Unisphere CLI.
exportPaths	List<String>	List of export paths which can be used to mount and access share. The list is a combination of above name with all the IP addresses of the SMB server.
description	String	User defined CIFS share description.
creationTime	DateTime	Date and time when the CIFS share was created.
modifiedTime	DateTime	Date and time when the CIFS share was last modified.
isContinuousAvailabilityEnabled	Boolean	Indicates whether continuous availability for Server Message Block (SMB) 3.0 is enabled for the CIFS share. Values are: • true - Continuous availability for SMB 3.0 is enabled for the CIFS share. • false - Continuous availability for SMB 3.0 is disabled for the CIFS share.
isEncryptionEnabled	Boolean	Indicates whether CIFS encryption for Server Message Block (SMB) 3.0 is enabled at the shared folder level. Values are: • true - CIFS encryption for SMB 3.0 is enabled. • false - CIFS encryption for SMB 3.0 is disabled.
isACEEnabled	Boolean	Indicates whether the CIFS share access-level permissions are enabled. Values are: • true - CIFS share access-level permissions are enabled. • false - CIFS share access-level permissions are disabled.
isABEEnabled	Boolean	Access-based Enumeration filters the list of available files and folders on a server to include only those, that the requesting user has access to. Values are: • true - Enumerating is enabled. • false - Enumerating is disabled.
isBranchCacheEnabled	Boolean	BranchCache optimization technology copies content from your main office or hosted cloud content servers and caches the content at branch office locations, allowing client computers at branch offices to access the content locally rather than over the WAN. Values are: • true - BranchCache is enabled. • false - BranchCache is disabled.
isDFSEnabled	Boolean	Distributed File System allows administrators to group shared folders located on different servers by transparently connection them to one or more DFS namespaces. DFS simplifies the process of moving data from one file server to another. Values are: • true - DFS is enabled. • false - DFS is disabled.
offlineAvailability	CifsShareOfflineAvailabilityEnum	Whether the system supports the Offline Files feature, which allows user to configure the CIFS client use files from the share even when not connected. Values are: • true - Offline Files feature is supported. • false - Offline Files feature is not supported.
umask	String	The default UNIX umask for new files created on the share. If not specified the umask defaults to 022.
defaultAccess	CifsShareDefaultAccessEnum	Default CIFS share access-level permissions.
exportOption	unsigned Integer[64]	Specifies the bitmask of various options of the CIFS share. Values are: • 0x0001 - hostString - if set, the access to the CIFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.
noAccessHosts	List<host>	Hosts with no access to the Cifs share or its snapshots, as defined by the host resource type.

noAccessHostsString	String	Hosts with no access to the Cifs share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readWriteHosts	List<host>	Hosts with read and write access to the Cifs share and its snapshots, as defined by the host resource type.
readWriteHostsString	String	Hosts with read-write access to the Cifs share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.

Query all members of the cifsShare collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/cifsShare/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the cifsShare collection.

Query a specific cifsShare instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/cifsShare/<id> where <id> is the unique identifier of the cifsShare instance to query. Or GET /api/instances/cifsShare/name:<value> where <value> is the name of the cifsShare instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific cifsShare instance.

Create operation

Create a CIFS share for a file system snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/cifsShare/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
snap	in	snap	Required	Parent file system associated with the CIFS share, as defined by the filesystemSnap resource type.
path	in	String[1..1023]	Required	Local path to a location within a file system. By default, the system creates a share to the root of the file system (top-most directory) at file system creation time. This path specifies the unique location of the file system on the storage system. CIFS shares allow you to create multiple network shares with the same local path. You can specify different host-side access controls for different users, while setting up network shares within the file system to access common content. If you want the CIFS network shares within the same file system to access different content, you must first create a share to the root of the file system. Then, you can connect from a Windows host, create additional directories from Windows, and create corresponding network shares using the REST API, Unisphere GUI, or Unisphere CLI.
name	in	String[1..80]	Required	CIFS share name.
description	in	String[..255]	Optional	CIFS share description.
isABEEnabled	in	Boolean	Optional	Specifies Access-based Enumeration state. Values are: • true - Enumerating is enabled.

				• false - Enumerating is disabled.
isBranchCacheEnabled	in	Boolean	Optional	Specifies BranchCache state for Server Message Block (SMB) 3.0 and later. Values are: • true - Branch Cache is enabled. • false - Branch Cache is disabled.
offlineAvailability	in	CifsShareOfflineAvailabilityEnum	Optional	Specifies Offline Availability state.
umask	in	String	Optional	Specifies the default UNIX umask for new files created on the share.
isReadOnly	in	Boolean	Optional	Indicates whether the CIFS share is read-only. Values are: • true - CIFS share is read-only. • false - CIFS share is read-write.
isContinuousAvailabilityEnabled	in	Boolean	Optional	Indicates whether continuous availability for Server Message Block (SMB) 3.0 is enabled for the CIFS share. Values are: • true - Continuous availability for SMB 3.0 is enabled for the CIFS share. • false - Continuous availability for SMB 3.0 is disabled for the CIFS share.
isEncryptionEnabled	in	Boolean	Optional	Indicates whether the CIFS share access-level permissions are enabled. Values are: • true - CIFS share access-level permissions are enabled. • false - CIFS share access-level permissions are disabled.
id	out	cifsShare	N/A	Unique identifier of the new cifsShare instance.
defaultAccess	in	CifsShareDefaultAccessEnum	Optional	Default CIFS share access-level permissions.
noAccessHosts	in	List<host>	Optional	Hosts with no access to the CIFS share or its snapshots, as defined by the host resource type.
readWriteHosts	in	List<host>	Optional	Hosts with read and write access to the CIFS share and its snapshots, as defined by the host resource type.
noAccessHostsString	in	String[..7000]	Optional	Hosts with no access to the CIFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readWriteHostsString	in	String[..7000]	Optional	Hosts with read-write access to the CIFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
exportOption	in	unsigned Integer[64][0..3]	Optional	Bitmask of various options of the CIFS share. Values are: • 0x0001 - hostString - if set, the access to the CIFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.

Delete operation

Delete a CIFS share for a file system snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/cifsShare/<id> where <id> is the unique identifier of the cifsShare instance to delete. Or DELETE /api/instances/cifsShare/name:<value> where <value> is the name of the cifsShare instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	

	No body content.

GetACEs operation

Get ACEs for the cifs share

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/cifsShare/<id>/action/getACEs where <id> is the unique identifier of the cifsShare instance. Or POST /api/instances/cifsShare/name:<value>/action/getACEs where <value> is the name of the cifsShare instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args)
Successful response body	JSON representation of the returned attributes.

Arguments for the GetACEs operation

Argument	In/ out	Type	Required?	Description
cifsShareACEs	out	List<cifsShareACE>	N/A	The output list of ACEs associated with the cifs share.

SetACEs operation

Set ACEs for the cifs share

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/cifsShare/<id>/action/setACEs where <id> is the unique identifier of the cifsShare instance. Or POST /api/instances/cifsShare/name:<value>/action/setACEs where <value> is the name of the cifsShare instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the SetACEs operation

Argument	In/ out	Type	Required?	Description
cifsShareACEs	in	List<cifsShareACE>	Optional	The input list of ACEs associated with the cifs share.

Modify operation

Modify a CIFS share for a file system snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/cifsShare/<id>/action/modify where <id> is the unique identifier of the cifsShare instance. Or POST /api/instances/cifsShare/name:<value>/action/modify where <value> is the name of the cifsShare instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
defaultAccess	in	CifsShareDefaultAccessEnum	Optional	Default Cifs share access-level permissions.
noAccessHosts	in	List<host>	Optional	Hosts with no access to the Cifs share or its snapshots, as defined by the host resource type.
readWriteHosts	in	List<host>	Optional	Hosts with read and write access to the Cifs share and its snapshots, as defined by the host resource type.
noAccessHostsString	in	String[..7000]	Optional	Hosts with no access to the Cifs share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readWriteHostsString	in	String[..7000]	Optional	Hosts with read-write access to the Cifs share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
exportOption	in		Optional	

		unsigned Integer[64][0..3]		Bitmask of various options of the CIFS share. Values are: • 0x0001 - hostString - if set, the access to the CIFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. To switch between the 2 modes, clear all existing host access first, or in the same request. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.
description	in	String[..255]	Optional	CIFS share description.
isABEEnabled	in	Boolean	Optional	Specifies Access-based Enumeration state. Values are: • true - Enumerating is enabled. • false - Enumerating is disabled.
isBranchCacheEnabled	in	Boolean	Optional	Specifies BranchCache state for Server Message Block (SMB) 3.0 and later. Values are: • true - Branch Cache is enabled. • false - Branch Cache is disabled.
offlineAvailability	in	CifsShareOfflineAvailabilityEnum	Optional	Specifies Offline Availability state.
umask	in	String	Optional	Specifies the default UNIX umask for new files created on the share.
isContinuousAvailabilityEnabled	in	Boolean	Optional	Indicates whether continuous availability for Server Message Block (SMB) 3.0 is enabled for the CIFS share. Values are: • true - Continuous availability for SMB 3.0 is enabled for the CIFS share. • false - Continuous availability for SMB 3.0 is disabled for the CIFS share.
isEncryptionEnabled	in	Boolean	Optional	Indicates whether SMB encryption for Server Message Block (SMB) 3.0 is enabled on the messages received and sent on the network. Values are: • true - SMB encryption for SMB 3.0 is enabled. • false - SMB encryption for SMB 3.0 is disabled.

configCaptureResult

Information about Configuration Capture results in the storage system.

Configuration Capture is a service feature which creates a snapshot of the current system configuration. It captures all of the necessary data for business intelligence analysis, helping diagnose issues.

Supported operations

Collection query , Instance query ,Refresh

Attributes

Attribute	Type	Description
id	String	Unique identifier of the configCaptureResult instance.
name	String	File name of the configCaptureResult instance.
creationTime	DateTime	Date and time when the configCaptureResult file was created.
size	unsigned Integer[64(bytes)]	Size of the configCaptureResult file.

Query all members of the configCaptureResult collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/configCaptureResult/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the configCaptureResult collection.

Query a specific configCaptureResult instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/configCaptureResult/<id>

	where <id> is the unique identifier of the configCaptureResult instance to query. Or GET /api/instances/configCaptureResult/name:<value> where <value> is the name of the configCaptureResult instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific configCaptureResult instance.

Refresh operation

Refresh the Configuration Capture results.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/configCaptureResult/action/refresh
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

coreDump

Information about core dumps currently available on the storage system.

Core dumps consist of the recorded state of the working memory which can server as useful debugging aids. These are available so that, if requested, you can download and send them to your service provider.

Supported operations

Collection query , Instance query ,Refresh ,Authenticate ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the core dump instance.
name	String	Name of the core dump instance.
creationTime	DateTime	Core dump creation time.
size	unsigned Integer[64(bytes)]	Estimated size of the dump tar file.

Query all members of the coreDump collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/coreDump/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the coreDump collection.

Query a specific coreDump instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/coreDump/<id> where <id> is the unique identifier of the coreDump instance to query. Or GET /api/instances/coreDump/name:<value> where <value> is the name of the coreDump instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific coreDump instance.

Refresh operation

Refresh will update the list of available core dumps. It is called automatically for Unisphere GUI core dump screen, but must be called explicitly before a GET in order to get the current dumps via REST.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/coreDump/action/refresh
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

Authenticate operation

Authenticate with service password. Service credential is needed for downloading and deleting a core dump. The authenticated status will last for 10 minutes.

Header	Accept: application/json Content-Type: application/json
Method and URI	

	POST /api/types/coreDump/action/authenticate
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the Authenticate operation

Argument	In/ out	Type	Required?	Description
password	in	String	Required	Service password.

Delete operation

Delete the core dump and the related files. Service credential needs to be provided before this operation.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/coreDump/<id> where <id> is the unique identifier of the coreDump instance to delete. Or DELETE /api/instances/coreDump/name:<value> where <value> is the name of the coreDump instance to delete.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

crl

Information about all Certificate Revocation Lists (CRLs) installed on the storage system. The CRL format is described in RFC 5280.

Embedded resource types

revokedCertificate

Supported operations

Collection query , Instance query ,ImportCRLByString ,Delete ,ExportCRLByString

Attributes

Attribute	Type	Description
id	String	Unique identifier of the crl instance.
service	ServiceTypeEnum	Service with which the CRL is associated.
scope	certificateScope	Scope of the CRL.
version	unsigned Integer[32]	CRL version.
crlNumber	String	CRL number. This is equivalent to a serial number for the CRL.
signatureAlgorithm	SignatureAlgoTypeEnum	CRL signature algorithm.
issuer	String	Name of the CRL issuer.
thisUpdate	DateTime	Date and time when the CRL was issued.
nextUpdate	DateTime	Date and time when the next CRL will be issued.
certificates	List<revokedCertificate>	List of revoked certificates.
deltaCRLIndicator	String	Delta CRL indicator. The value of this attribute is based on the delta CRL extension, which is a CRL number. This value can be blank.

Attributes for revokedCertificate

Settings for revoked certificates in the CRL.

This resource type is embedded in the crl resource type. The CRL and revoked certificate formats are described in RFC 5280.

Attribute	Type	Description
id	String	Unique identifier of the revokedCertificate instance.
serialNumber	String	Certificate serial number.
revocationDate	DateTime	Date and time when the certificate was revoked.
reasonCode	CRLReasonCodeEnum	Reason the certificate was revoked.

Query all members of the crl collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/crl/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the crl collection.

Query a specific crl instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/crl/<id> where <id> is the unique identifier of the crl instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific crl instance.

ImportCRLByString operation

Import a CRL by string

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/crl/action/importCRLByString
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the ImportCRLByString operation

Argument	In/ out	Type	Required?	Description
crlString	in	String	Required	CRL string to be used to create crl instance. The CRL must be PEM-encoded.
service	in	ServiceTypeEnum	Required	Service with which the CRL is associated.
scope	in	certificateScope	Optional	Scope of the CRL.
id	out	crl	N/A	Unique identifier of the new crl instance.

Delete operation

Delete a CRL

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/crl/<id> where <id> is the unique identifier of the crl instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

ExportCRLByString operation

Export a CRL by string

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/crl/<id>/action/exportCRLByString where <id> is the unique identifier of the crl instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the ExportCRLByString operation

Argument	In/ out	Type	Required?	Description
crlString	out	String	N/A	CRL string for the PEM-encoded CRL instance.

dae

Information about Disk Array Enclosure (DAE) components in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the dae instance.
health	health	Health information for the DAE, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the DAE needs replacement. Values are: • true - DAE needs replacement. • false - DAE does not need replacement.
parent	resourceRef	Resource type and unique identifier of the DAE's parent enclosure.
slotNumber	unsigned Integer[32]	The enclosure number or position where the DAE is located on the bus.

name	String[1..32]	DAE name.
manufacturer	String	Manufacturer of the DAE.
model	String	Manufacturer's model number for the DAE.
emcPartNumber	String	EMC part number for the DAE.
emcSerialNumber	String	EMC serial number for the DAE.
vendorPartNumber	String	Vendor part number for the DAE.
vendorSerialNumber	String	Vendor serial number for the DAE.
enclosureType	EnclosureTypeEnum	DAE enclosure type.
busId	unsigned Integer[32]	Identifier of the bus used by the DAE.
driveTypes	List<DiskTypeEnum>	Disk type of the disks in the DAE.
currentPower	unsigned Integer[32(watts)]	Current amount of power used by the DAE.
avgPower	unsigned Integer[32(watts)]	Average amount of power used by the DAE. The system uses a one hour window of 30-second samples to determine this value.
maxPower	unsigned Integer[32(watts)]	Maximum amount of power used by the DAE. The system uses a one hour window of 30-second samples to determine this value.
currentTemperature	unsigned Integer[32(degrees C)]	Current temperature of the DAE.
avgTemperature	unsigned Integer[32(degrees C)]	Average temperature of the DAE. The system uses a one hour window of 30-second samples to determine this value.
maxTemperature	unsigned Integer[32(degrees C)]	Maximum temperature of the DAE. The system uses a one hour window of 30-second samples to determine this value.
currentSpeed	unsigned Integer[64(bits/sec)]	Current speed of the DAE SAS disk connection.
maxSpeed	unsigned Integer[64(bits/sec)]	Maximum speed of the DAE SAS disk connection. The system uses a one hour window of 30-second samples to determine this value.
parentSystem	system	Parent system of the Disk Array Enclosure (DAE).

Query all members of the dae collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/dae/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the dae collection.

Query a specific dae instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/dae/<id> where <id> is the unique identifier of the dae instance to query. Or GET /api/instances/dae/name:<value> where <value> is the name of the dae instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific dae instance.

dataCollectionResult

Information about Data Collection results in the storage system.

Data Collection is a service feature used for gathering system logs, customer configurations, system statistics and runtime data from storage system.

Supported operations

Collection query , Instance query ,Refresh ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the dataCollectionResult instance.
name	String	File name of the dataCollectionResult instance.
creationTime	DateTime	Date and time when the dataCollectionResult file was created.
profile	DataCollectionProfileEnum	Profile of the dataCollectionResult file.
size	unsigned Integer[64(bytes)]	Size of the dataCollectionResult file.

Query all members of the dataCollectionResult collection

Header	Accept: application/json

	Content-Type: application/json
Method and URI	GET /api/types/dataCollectionResult/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the dataCollectionResult collection.

Query a specific dataCollectionResult instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/dataCollectionResult/<id> where <id> is the unique identifier of the dataCollectionResult instance to query. Or GET /api/instances/dataCollectionResult/name:<value> where <value> is the name of the dataCollectionResult instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific dataCollectionResult instance.

Refresh operation

Refresh the Data Collection results.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/dataCollectionResult/action/refresh
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

Delete operation

Delete the Data Collection result.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/dataCollectionResult/<id> where <id> is the unique identifier of the dataCollectionResult instance to delete. Or DELETE /api/instances/dataCollectionResult/name:<value> where <value> is the name of the dataCollectionResult instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

datastore

Represents a VMware Datastore that is discovered via vCenter or ESXi.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique instance id.
storageResource	storageResource	storageResource that hosts the datastore.
name	String	Friendly name of datastore displayed on vCenter.
format	DatastoreTypeEnum	Format of datastore.
host	host	The host that owns this datastore.
sizeTotal	unsigned Integer[64(bytes)]	Size of the datastore in bytes reported by vCenter. Could be different from size of the associated storage resource.
sizeUsed	unsigned Integer[64(bytes)]	Used size of the datastore (in bytes) as reported by vCenter. This may be different from the used size of the associated storage resource. For VMware VMFS datastores, this provides information about the actual hosted file system allocation size.
vmDisks	List<vmDisk>	The vmDisks associated with the datastore.
vms	List<vm>	The vms associated with the datastore.

Query all members of the datastore collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/datastore/instances
Request body arguments	None

Successful return status	200 OK
Successful response body	JSON representation of all members of the datastore collection.

Query a specific **datastore** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/datastore/<id> where <id> is the unique identifier of the datastore instance to query. Or GET /api/instances/datastore/name:<value> where <value> is the name of the datastore instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific datastore instance.

dhsmConnection

When doing cloud archiving, the Cloud Tiering Applicance (a.k.a CTA) is responsible for moving the local data to cloud. On the other direction, when we need to bring the data back to local, DHSM server will read the data back via a pipe so called dhsm connection. This class represents this dhsm connection @author wangt23

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete

Attributes

Attribute	Type	Description
id	String	Unique instance id.
mode	DhsmConnectionModeEnum	Mode of the connection.
readPolicy	RecallPolicyEnum	The read policy when Unity recall data from secondary storage. • full-recalls the whole file to Unity on read request before the data is returned. • passthrough-retrieves data without recalling the data to Unity • partial-recalls only the blocks required to satisfy the client read request. • none-specifies no override
secondaryUrl	String[1..1024]	Url of the secondary storage. If secondary storage is NFS or CIFS, this URL should point to them directly. If the secondary is cloud or Centera, this Url should point to CTA.
secondaryPort	unsigned Integer[16]	Port of the secondary storage server, only applicable when secondary url points to CTA.
localPort	unsigned Integer[16][1024]	Local port of the DHSM connections
secondaryUsername	String[1..1024]	Defines the username the storage array uses if HTTP digest authentication is required by the secondary storage.
timeout	unsigned Integer[32(seconds)]	Connection timeout when the connection is established to the secondary storage. If recall does not return within the timeout, the NAS server will try another DhsmConnection.
filesystem	filesystem	File system on which the connection is created.

Query all members of the **dhsmConnection** collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/dhsmConnection/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the dhsmConnection collection.

Query a specific **dhsmConnection** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/dhsmConnection/<id> where <id> is the unique identifier of the dhsmConnection instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific dhsmConnection instance.

Create operation

Create a new dhsm connection

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/dhsmConnection/instances
Request body arguments	See the arguments table below.

Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
secondaryUrl	in	String[1..1024]	Required	url of the secondary storage, if the secondary storage is Centera or Cloud, this url should point to the CTA The value must match all of following regex expressions • ^http://(([\w\-]+(\.[\w\-]+)*(/.+)+)|(\[(.+)\](/.+)+))
secondaryPort	in	unsigned Integer[16]	Optional	only valid when the secondary url points to CTA
localPort	in	unsigned Integer[16][1024]	Optional	local port of the DHSM connection.
readPolicy	in	RecallPolicyEnum	Optional	policy for recalling, can be full, passthrough, partial or none
secondaryUsername	in	String[1..1024]	Optional	defines the username the Unity uses if digest authentication is required by the secondary storage
secondaryPassword	in	String[1..1024]	Optional	defines the password the Unity uses if digest authentication is required by the secondary storage
timeout	in	unsigned Integer[32(seconds)]	Optional	timeout of this connection in seconds
filesystemId	in	String	Required	id of the file system for which the connection is created.
mode	in	DhsmConnectionModeEnum	Optional	mode of this connection, value could be enabled, disabled or recallOnly
id	out	dhsmConnection	N/A	connection instance that is created

Modify operation

Modify an existing dhsm connection

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/dhsmConnection/<id>/action/modify where <id> is the unique identifier of the dhsmConnection instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
mode	in	DhsmConnectionModeEnum	Optional	new mode of the connection.
secondaryServerName	in	String[1..1024]	Optional	The value must match all of following regex expressions • ^[\w\-]+(\.[\w\-]+)*
secondaryPort	in	unsigned Integer[16]	Optional	new port of the secondary storage
localPort	in	unsigned Integer[16][1024]	Optional	local port of the DHSM connection.
readPolicy	in	RecallPolicyEnum	Optional	new policy for recall.
secondaryUsername	in	String[1..1024]	Optional	new username of the secondary storage
secondaryPassword	in	String[1..1024]	Optional	new password of the secondary storage
timeout	in	unsigned Integer[32(seconds)]	Optional	new timeout value

Delete operation

Delete a dhsm connection

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/dhsmConnection/<id> where <id> is the unique identifier of the dhsmConnection instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
recallPolicyOnDelete	in	RecallPolicyOnDeleteEnum	Optional	Specifies the recall policy for any migrated file during the delete. • fail-(default) scans the file system for stub files that depend on the connection

				and fails on the first one. • no-deletes the connection without checking for stub files that depend on the connection • yes-migrates the files back to the Unity before the connection is removed.

dhsmServer

Information about the ASA/DHSM server of a NAS server. You can configure one ASA/DHSM server per NAS server.

ASA stands for Advanced Storage Access. ASA allows VMware administrators to manage appropriately configured host configurations by taking advantage of advanced file operations that optimize NFS storage utilization. Once ASA is enabled on the NAS server, Dell's VSI Unified Storage Management tool can be utilized for the following:

- Simplifying the process of creating NFS datastores,
- Compressing virtual machines in NFS datastores,
- Reducing the amount of storage consumed by virtual machines by using data reduction and Fast Clone technologies. The cloning functions include fast clones (thin copy/snaps) of Virtual Machine Disk (VMDF) files and full clones (full copy) of Virtual Machine Disk (VMDF) files.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the dhsmServer instance
nasServer	nasServer	NAS server that is configured with these DHSM settings.
username	String	User name for authentication to the DHSM/ASA server.
isHTTPSEnabled	Boolean	Require SSL (HTTPS) for DHSM requests to this DHSM server.

Query all members of the dhsmServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/dhsmServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the dhsmServer collection.

Query a specific dhsmServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/dhsmServer/<id> where <id> is the unique identifier of the dhsmServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific dhsmServer instance.

Create operation

Create a DHSM server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/dhsmServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the NAS server which the DHSM server belongs.
password	in	String[8..40]	Optional	The password for the DHSM server
isHTTPSEnabled	in	Boolean	Optional	Require SSL (HTTPS) for DHSM requests to this DHSM server. Values are: • true - HTTPS is required. • false - HTTPS is not allowed.
id	out	dhsmServer	N/A	Unique identifier of the new DHSM server.

Delete operation

Delete a DHSM server.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/dhsmServer/<id> where <id> is the unique identifier of the dhsmServer instance to delete.
Request body arguments	None

Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a DHSM server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/dhsmServer/<id>/action/modify where <id> is the unique identifier of the dhsmServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
password	in	String[8..40]	Optional	The password for the DHSM server.
isHTTPSEnabled	in	Boolean	Optional	Require SSL (HTTPS) for DHSM requests to this DHSM server. Values are: • true - HTTPS is required. • false - HTTPS is not allowed.

disk

Information about the drives's attributes in the storage system.

Supported operations

Collection query , Instance query ,Repurpose

Attributes

Attribute	Type	Description
id	String	Unique identifier of the drive instance.
health	health	Health information of the drive instance as defined by the health resource type.
needsReplacement	Boolean	Indicates whether drive replacement is needed. Values are: • true - Drive replacement is needed. • false - No drive replacement is needed.
parent	resourceRef	Resource type and unique identifier for the drive's parent enclosure.
slotNumber	unsigned Integer[32]	Slot where the drive is located in the parent enclosure.
estimatedEOL	DateTime[Interval]	Estimated remaining life of drive, based on past use. Applies only to flash drives.
busId	unsigned Integer[32]	Identifier of the bus used by the drive.
name	String[1..32]	Drive name. Modifiable for virtual drives only.
manufacturer	String	Drive manufacturer.
model	String	Manufacturer model number.
version	String	Manufacturer version number.
emcPartNumber	String	EMC part number.
emcSerialNumber	String	EMC serial number.
tierType	TierTypeEnum	Drive type.
diskGroup	diskGroup	Disk group is the group that the drive belongs to and as defined by the diskGroup resource type.
rpm	unsigned Integer[32(rpm)]	Revolutions Per Minute (RPMs).
isSED	Boolean	Indicates whether the drive is a Self-Encrypting Drive (SED). • true - Drive is a SED. • false - Drive is not a SED.
currentSpeed	unsigned Integer[64(bytes/sec)]	Current speed.
maxSpeed	unsigned Integer[64(bytes/sec)]	Maximum speed.
pool	pool	Pool that the drive belongs, as defined by the pool resource type.
isInUse	Boolean	Indicates whether the drive contains user-written data. Values are: • true - Drive contains user-written data. • false - Drive does not contain user-written data.
isFastCacheInUse	Boolean	(Applies if FAST Cache is supported on the system and the corresponding license is installed.) Indicates whether the drive is used by the FAST Cache. Values are: • true - Drive is used by the FAST Cache. • false - Drive is not used by the FAST Cache.
size	unsigned Integer[64(bytes)]	Usable capacity.
rawSize	unsigned Integer[64(bytes)]	Raw (unformatted) capacity.

vendorSize	unsigned Integer[64(bytes)]	Vendor capacity of the drive as written on the drive label.
wwn	String	World Wide Name (WWN) of the drive.
diskTechnology	DiskTechnologyEnum	Drive technology.
parentDae	dae	Parent Disk Array Enclosure (DAE) of the disk as defined by the dae resource type.
parentDpe	dpe	Parent Disk Processor Enclosure (DPE) of the drive, as defined by the dpe resource type.
bank	String	Bank where the drive is located in the parent enclosure.
bankSlotNumber	unsigned Integer[32]	Bank slot where the drive is located in the parent enclosure.
bankSlot	String	Combination of the bank and slot name where the drive is located in the parent enclosure.

Query all members of the disk collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/disk/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the disk collection.

Query a specific disk instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/disk/<id> where <id> is the unique identifier of the disk instance to query. Or GET /api/instances/disk/name:<value> where <value> is the name of the disk instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific disk instance.

Repurpose operation

This operation will allow a locked foreign drive to be used in the current storage array, all data on the drive will become unrecoverable.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/disk/<id>/action/repurpose where <id> is the unique identifier of the disk instance. Or POST /api/instances/disk/name:<value>/action/repurpose where <value> is the name of the disk instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Repurpose operation

Argument	In/ out	Type	Required?	Description
psid	in	String[..32]	Required	An alpha-numeric string that can be found on the physical label of the drive to repurpose.

diskGroup

Disk groups classify the drives in the system into groups with equivalent storage characteristics. These characteristics include drive type, capacity, and rotational speed.

The system uses disk groups for creating pools.

Embedded resource types

diskGroupSet

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the diskGroup instance.
name	String[1..32]	Disk group name.
emcPartNumber	String	EMC part number of the drives.
tierType	TierTypeEnum	Drive type.

diskTechnology	DiskTechnologyEnum	Drive technology of the drives in the disk group. There are two hard drive technologies: SAS and NL-SAS, and flash drive technologies are MLC (Multi-Level Cell) and TLC (Triple-Level Cell). MLC drives are referred to as SAS Flash 2 in this API and TLC are referred to as SAS Flash 3. SAS hard drives have greater performance, throughput and less latency than NL-SAS drives.
isFASTCacheAllowable	Boolean	Indicates whether or not drives from this diskGroup are valid to use for FASTCache. Values are: • true - Drives may be used in FASTCache. • false - Drives may not be used in FASTCache.
diskSize	unsigned Integer[64(bytes)]	The capacity of each drive.
advertisedSize	unsigned Integer[64(bytes)]	Capacity written on the label of the drives in the disk group.
rpm	unsigned Integer[32(rpm)]	For non-Flash drives, the rotational speed in revolutions per minute (RPM).
speed	unsigned Integer[64(GB/sec)]	Interface speed of the drives in the disk group.
totalDisks	unsigned Integer[32(disks)]	Total number of drives in the disk group.
minHotSpareCandidates	unsigned Integer[32(disks)]	Minimum number of hot spares required for traditional pools for the disk group. As a rule one Hot spare is required per 30 drives.
hotSparePolicyStatus	HotSparePolicyStatusEnum	Status of the hot spare policy for the disk group.
unconfiguredDisks	unsigned Integer[32(disks)]	The number of unconfigured drives in disk group. Determined by subtracting the number of drives in use by pools, FAST Cache and the number of drives reserved for pools that are in the process of being created or extended from the total number of drives. Hot spares are not included in the determination of this value.
configuredDynamicPoolDisks	unsigned Integer[32(disks)]	The number of configured drives used by dynamic pools.
configuredTraditionalPoolDisks	unsigned Integer[32(disks)]	The number of configured drives used by traditional pools.
traditionalUnconfiguredDrives	unsigned Integer[32(disks)]	The number of traditional unconfigured drive in this disk group.
traditionalTotalDrives	unsigned Integer[32(disks)]	The number of traditional total drives in this disk group.
configuredFastCacheDisks	unsigned Integer[32(disks)]	The number of configured drives used by FAST Cache.
disksPastEOL	unsigned Integer[32(disks)]	The number of drives past EOL (end of life).
disksWithEOLLess30Days	unsigned Integer[32(disks)]	The number of drives in disk group with EOL (end of life) less than 30 days.
disksWithEOLLess60Days	unsigned Integer[32(disks)]	The number of drives in disk group with EOL (end of life) less than 60 days.
disksWithEOLLess90Days	unsigned Integer[32(disks)]	The number of drives in disk group with EOL (end of life) less than 90 days.
disksWithEOLLess180Days	unsigned Integer[32(disks)]	The number of drives in disk group with EOL (end of life) less than 180 days.

Attributes for diskGroupSet

Set of disk groups

Attribute	Type	Description
diskGroups	List<diskGroup>	A list of disk groups compatible for use together in a dynamic pool RAID group. The minimum number of drives for a particular RAID type and stripe width can be met by any combination of drives from the groups in the list.
minimumDriveCount	unsigned Integer[32(disks)]	Minimum number of drives can be used to create or expand pool depending on the operation.
invalidDriveCounts	List<Integer>[32(disks)]	It is not eligible to create or expand dynamic pool with number of drives specified in the list even though the number meets minimumDriveCount.

Query all members of the diskGroup collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/diskGroup/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the diskGroup collection.

Query a specific diskGroup instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/diskGroup/<id> where <id> is the unique identifier of the diskGroup instance to query. Or GET /api/instances/diskGroup/name:<value> where <value> is the name of the diskGroup instance to query.
Request body arguments	None

~~Successful return status~~	~~200 OK~~
Successful response body	JSON representation of a specific diskGroup instance.

dnsServer

Domain Name System (DNS) settings.

A Domain Name System (DNS) is a hierarchical system responsible for converting domain names to their corresponding IP addresses. The system uses DNS services to resolve network names and IP addresses for the network services it needs (for example, for NTP and SMTP servers), and to obtain IP addresses for hosts addressed by network names rather than IP addresses.

During the initial system configuration process you must specify the network address of at least one DNS server for resolving hostnames to IP addresses. Later, you can add, delete, or change DNS server settings.

You can configure multiple DNS server domains to specify each domain and IP address of the DNS servers for the system to use. By default, the system uses the top entry in the list as the current DNS server. The remaining list provides a hierarchy of DNS servers to use if the first-choice server becomes unavailable. If the first DNS server in the list becomes unavailable, the system proceeds to the next DNS server in the list, and so on. You can also specify default DNS server addresses to indicate which addresses the system will use first.

DNS server addresses are grouped under DNS server domains. Each domain is identified by a domain identifier.

Important: You must configure at least one valid DNS server entry in the domain for the system. Deleting the last DNS server entry can disrupt network communication to the device, and potentially interrupt communication between the system and the hosts that use its storage resources.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the dnsServer instance. This is a singleton resource, so the id is always 0.
domain	String	Name of the DNS domain.
addresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Prioritized list of up to three IP addresses of name servers for the domain.
origin	DNSServerOriginEnum	Source of the DNS server addresses.

Query all members of the dnsServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/dnsServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the dnsServer collection.

Query a specific dnsServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/dnsServer/<id> where <id> is the unique identifier of the dnsServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific dnsServer instance.

Modify operation

Modify DNS server domain settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/dnsServer/<id>/action/modify where <id> is the unique identifier of the dnsServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
addresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	New list of IP addresses to replace the exsting address list for this DNS server.

dpe

Information about Disk Processor Enclosures (DPEs) in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the dpe instance.
health	health	Health information for the DPE, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the DPE needs replacement. Values are: • true - DPE needs replacement. • false - DPE does not need replacement.
parent	resourceRef	Resource type and unique identifier of the DPE's parent enclosure.
slotNumber	unsigned Integer[32]	The enclosure number or position where the DPE is located on the bus.
name	String[1..32]	DPE name.
manufacturer	String	Manufacturer of the DPE.
model	String	Manufacturer's model number for the DPE.
emcPartNumber	String	EMC part number for the DPE.
emcSerialNumber	String	EMC serial number for the DPE.
vendorPartNumber	String	Vendor part number for the DPE.
vendorSerialNumber	String	Vendor serial number for the DPE.
enclosureType	EnclosureTypeEnum	DPE enclosure type.
busId	unsigned Integer[32]	Identifier of the SAS bus used by the DPE.
driveTypes	List<DiskTypeEnum>	Disk type of the disks in the DPE.
currentPower	unsigned Integer[32(watts)]	Current amount of power used by the DPE.
avgPower	unsigned Integer[32(watts)]	Average amount of power used by the DPE. The system uses a one hour window of 30-second samples to determine this value.
maxPower	unsigned Integer[32(watts)]	Maximum amout of power used by the DPE. The system uses a one hour window of 30-second samples to determine this value.
currentTemperature	unsigned Integer[32(degrees C)]	Current temperature of the DPE.
avgTemperature	unsigned Integer[32(degrees C)]	Average temperature of the DPE. The system uses a one hour window of 30-second samples to determine this value.
maxTemperature	unsigned Integer[32(degrees C)]	Maximum temperature of the DPE. The system uses a one hour window of 30-second samples to determine this value.
currentSpeed	unsigned Integer[64(bits/sec)]	Current speed of the DPE SAS disk connection.
maxSpeed	unsigned Integer[64(bits/sec)]	Maximum speed of the DPE SAS disk connection. The system uses a one hour window of 30-second samples to determine this value.
parentSystem	system	Parent system of the Disk Processor Enclosure (DPE).

Query all members of the dpe collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/dpe/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the dpe collection.

Query a specific dpe instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/dpe/<id> where <id> is the unique identifier of the dpe instance to query. Or GET /api/instances/dpe/name:<value> where <value> is the name of the dpe instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific dpe instance.

encryption

Information about the data encryption of the storage system.

Supported operations

Collection query , Instance query ,RetrieveNonce ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the encryption instance.
encryptionMode	EncryptionModeEnum	Encryption mode of the array. At present only Controller Based Encryption (CBE) mode is supported.
encryptionStatus	EncryptionStatusEnum	Encryption status.
encryptionPercentage	Float	Percentage of storage (in-place data) encrypted on the array. The percentage value will range from 0.00 to 100. Once the encryption is activated on the array, encryption percentage will not dip as the new data is written because the new data will be encrypted on the fly.
keyManagerBackupKeyStatus	KeyManagerBackupKeysStatusEnum	Key store back up status.
kmipStatus	KmipStatusEnum	Key Management Interoperability Protocol (KMIP) compliant external key management feature status. Once enabled, this feature enables the storage system to interact with external key management servers that are KMIP compliant for key management associated with Data at Rest Encryption.

Query all members of the encryption collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/encryption/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the encryption collection.

Query a specific encryption instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/encryption/<id> where <id> is the unique identifier of the encryption instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific encryption instance.

RetrieveNonce operation

Retrieve the nonce integer which is required by modify/activate method.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/encryption/<id>/action/retrieveNonce where <id> is the unique identifier of the encryption instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the RetrieveNonce operation

Argument	In/ out	Type	Required?	Description
nonce	out	unsigned Integer[64]	N/A	Key Manager generated nonce integer with 1 minute expiration.

Modify operation

Modify the encryption.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/encryption/<id>/action/modify where <id> is the unique identifier of the encryption instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
kmipStatus	in	KmipStatusEnum	Optional	Enable/Disable KMIP server support.

esrsParam

Information about the EMC Secure Remote Support (ESRS) configuration

Unity Remote Support is enabled with the Dell's leading remote support platform: EMC Secure Remote Support (ESRS). ESRS is a remote monitoring and support feature that provides authorized personnel with Dell remote access

capabilities to storage systems via a secure and encrypted tunnel. The secure tunnel that ESRS establishes between the storage system and systems on the Dell network can be used to transfer files out to the storage system or back to Dell.

ESRS provides the following features in providing an end-to-end remote support solution:

- Automation - IP based connection enables fast remote diagnosis and repair of potential problems before an impact to business operations is noticed.
- Authentication - Advanced security features such as AES 256-bit encryption and RSA digital certificates ensure data privacy.
- Authorization - Customizable policies that you control include the ability to allow or deny remote support sessions.
- Audit - Detailed audit capabilities enable compliance with regulatory and internal business requirements.

ESRS offers two remote support solutions:

- Integrated solution, which uses ESRS Virtual Edition (ESRS V3) technology integrated into the storage system to connect with Dell
- Centralized solution, which uses the ESRS Virtual Edition (ESRS V3) to connect with Dell

Setting up Remote Support requires:

- An installed Dell Support license
- Valid support credentials
- A configured DNS server

For information about ESRS components and setup, go to the support website.
Note that all proxy configuration for integrated support is now available from the supportProxy object. These properties proxyIsEnabled,proxyStatus,proxyAddress,proxyIsHTTP,proxyUserName are deprecated and will be removed in a future release.

Examples

Series operations need to perform to enable Integrated Remote Support

Step 1: Accept EULA. The EULA must be accepted before any other configurations.

```
POST /api/instances/esrsParam/0/action/modify
{
   "isEsrsVeEulaAccepted" : "true"
}
```

Step 2: Update contact infomation in systemInformation object. Dell will use this information to contact end user when errors detected.

```
POST /api/instances/systemInformation/0/action/modify
{
   "contactFirstName" : "Jill",
   "contactLastName" : "Valentine",
   "contactCompany" : "Umbrella Corporation",
   "contactEmail" : "jill.valentine@umbrella.com",
   "contactPhone" : "111-111-1111"
}
```

Step 3: Set proxy server if the user wants to configure Integrated Remote Support with a proxy server. This step can be skipped if user doesn't want to use proxy server.

```
POST /api/instances/supportProxy/0/action/modify
{
   "isEnabled" : "true",
   "address" : "10.105.221.123:1080",
   "protocol" : "1",
   "username" : "darthv",
   "password" : "password"
}
```

Step 4: Validate Network connectivity between Integrated Remote Support client and Dell servers.

```
POST /api/instances/esrsParam/0/action/checkNetwork
{
}
```

Following steps are try to get the available sites for the current system, select the correct one and set it into Integrated Remote Support client.
Step 5: Request for an access code. This access code will be used later to get the available sites.

```
POST /api/instances/esrsParam/0/action/requestAccessCode
{
}
```

Step 6: Validate the access code.

```
POST /api/instances/esrsParam/0/action/validateAccessCode
{
   "accessCode" : "243857"
}
```

Step 7: Set siteId. Select the correct site id from the returned sites in previous request.

```
POST /api/instances/esrsParam/0/action/modify
{
   "enabled" : "true",
   "isCentralized" : "false"
}
```

Now, Integration Remote Support is enabled.

Disabling Integrated Remote Support

If a proxy server or Policy Manager are enabled, they will automatically be disabled.

```
POST /api/instances/esrsParam/0/action/modify
{
   "enabled" : "false",
   "isCentralized" : "false"
}
```

Checking the Integrated Remote Support status

```
GET /api/types/esrsParam/instances?fields=enabled,isCentralized

   "content":
   {
      "isCentralized" : "false",
      "status" : 2
   }
```

Checking the Integrated Remote Support configuration

```
GET /api/types/esrsParam/instances?fields=enabled,isCentralized,status, statusDescription::@enum(status)

Sample response:

"content":
{
   "enabled" : "true",
   "isCentralized" : "false",
   "status" : "2"
   "statusDescription" : "connected"
}

The statusDescription attribute is a calculated attribute that translates the normalized status value into a user friendly string.
```

Enabling Centralized Remote Support

```
POST /api/instances/esrsParam/0/action/modify
{
   "enabled" : "true",
   "isCentralized" : "true",
   "esrsVeAddress" : "10.105.221.123"
}
```

Modifying the Centralized Remote Support appliance

This example disconnects the storage system from the current ESRS VE appliance and reconnects it to a new one.

```
POST /api/instances/esrsParam/0/action/modify
{
   "enabled" : "true",
   "isCentralized" : "true",
   "esrsVeAddress" : "myveserver.acme.com:2135"
}
```

Disabling Centralized Remote Support

```
POST /api/instances/esrsParam/0/action/modify
{
   "enabled" : "false"
   "isCentralized" : "true",
}
```

*

Switching between Integrated and Centralized Remote Support

This example assumes that Integrated Remote Support is enabled. It will be disabled before the Centralized Remote Support is enabled.

```
POST /api/instances/esrsParam/0/action/modify
{
   "enabled" : "true",
   "isCentralized" : "true",
   "esrsVeAddress" : "10.105.221.123"
}
```

Embedded resource types

site

Supported operations

Collection query , Instance query ,Modify ,SendTestAlert ,CheckESRSVEConnectivity

Attributes

Attribute	Type	Description
id	String	Unique identifier of the Remote Support instance. --eng This value is always 0, because at any given time there can only one remote support solution enabled.
enabled	Boolean	Indicates whether Remote Support is enabled Values are: • true - Remote Support is enabled. • false - Remote Support is disabled. See *isCentralized* to view the type of Remote Support.
isCentralized	Boolean	Indicates the type of Remote Support that is configured Values are: • true - Centralized Remote Support is configured • false - Integrated Remote Support is configured This attribute is not valid if *enabled* is *false*.
status	EsrsStatusEnum	Remote Support status
esrsVeAddress	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Primary Centralized ESRS gateway, SAE or SCG appliance.
secondaryEsrsVeAddress	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Secondary Centralized ESRS gateway, SAE or SCG appliance.

Attributes for site

Description of the physical address or site where Dell thinks this system is currently located.

Attribute	Type	Description
siteId	String	Unique identifier of the site instance.
siteName	String	Site name.
siteDescription	String	Site description.
address	String	The address of the site where the system is located.
state	String	The state of the site where the system is located.
country	String	The country of the site where the system is located.
countryName	String	The country name where the system is located.
city	String	The city of the site where the system is located.
isCurrentLocation	Boolean	True, when this is the site at which Dell believes the system is currently residing.

Query all members of the esrsParam collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/esrsParam/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the esrsParam collection.

Query a specific esrsParam instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/esrsParam/<id> where <id> is the unique identifier of the esrsParam instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific esrsParam instance.

Modify operation

Modify ESRS settings.

Enable, disable or change Remote Support options.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/esrsParam/<id>/action/modify where <id> is the unique identifier of the esrsParam instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
enabled	in	Boolean	Optional	Enable or disable Remote Support. Values are: • true - Enable Remote Support • false - Disable Remote Support
esrsVeAddress	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	Primary Centralized ESRS gateway, SAE or SCG appliance.
secondaryEsrsVeAddress	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	Secondary Centralized ESRS gateway, SAE or SCG appliance. If a port is not specified the following default port of 9443 will be used.
isCentralized	in	Boolean	Optional	Type of Remote Support Values are: • true - Centralized Remote Support • false - Integrated Remote Support

errorMsgParams	out	List<String>	N/A	

SendTestAlert operation

Send a test alert to Dell using the configured Remote Support option.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/esrsParam/<id>/action/sendTestAlert where <id> is the unique identifier of the esrsParam instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

CheckESRSVEConnectivity operation

Check the network connectivity from storage system to the Centralized ESRS gateway, SAE or SCG appliance.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/esrsParam/<id>/action/checkESRSVEConnectivity where <id> is the unique identifier of the esrsParam instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the CheckESRSVEConnectivity operation

Argument	In/ out	Type	Required?	Description
esrsVeAddress	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Required	Centralized gateway address. If a port is not specified the following default port of 9443 will be used.

ethernetPort

Information about Ethernet ports in the storage system.

Supported operations

Collection query , Instance query ,Modify ,RecommendForAggregation

Attributes

Attribute	Type	Description
id	String	Unique identifier of the Ethernet port instance.
health	health	Health information for the Ethernet port, as defined by the health resource type.
storageProcessor	storageProcessor	SP on which the Ethernet port directly or indirectly resides, as defined by the storageProcessor resource type.
needsReplacement	Boolean	Indicates whether the Ethernet port needs replacement. Values are: • true - Ethernet port needs replacement. • false - Ethernet port does not need replacement.
name	String[1..32]	User-specified Ethernet port name.
portNumber	unsigned Integer[32]	Physical Ethernet port sequence number.
speed	EPSpeedValuesEnum	Current link speed of the Ethernet port.
mtu	unsigned Integer[32(bytes)]	Maximum Transmission Unit (MTU) packet size that the Ethernet port can transmit. The default is 1500 bytes per packet.
minMtu	unsigned Integer[32(bytes)]	Lower limit for Maximum Transmisson Unit (MTU) packet size that can be setup on the Ethernet port. The default is 1280 bytes per packet.
maxMtu	unsigned Integer[32(bytes)]	Upper limit for Maximum Transmisson Unit (MTU) packet size that can be setup on the Ethernet port. The default is 9216 bytes per packet.
connectorType	ConnectorTypeEnum	Physical connector type.
bond	Boolean	Indicates whether the Ethernet port is used in a link aggregation. Values are: • true - Ethernet port is used in a link aggregation. • false - Ethernet port is not used in a link aggregation.
isLinkUp	Boolean	Indicates whether the Ethernet port has link. (Applies if the Ethernet port is configured with a link.) Indicates whether the Ethernet port's link is up. Values are: • true - Link is up. • false - Link is down.
macAddress	String	MAC address of the Ethernet port.
isRSSCapable	Boolean	Indicates whether the Ethernet port supports Receive Side

		Scaling (RSS). Values are: • true - Ethernet port supports RSS. • false - Ethernet port does not support RSS.
isRDMACapable	Boolean	Indicates whether the Ethernet port supports Remote Direct Memory Access (RDMA). Values are: • true - Ethernet port supports RDMA. • false - Ethernet port does not support RDMA.
requestedSpeed	EPSpeedValuesEnum	Link speed requested by the user.
parentIOModule	ioModule	(Applies if the Ethernet port resides on an I/O module.) Parent I/O module of the Ethernet port, as defined by the ioModule resource type.
parentStorageProcessor	storageProcessor	(Applies if the Ethernet port resides directly on an SP.) Parent SP of the Ethernet port, as defined by the storageProcessor resource type.
supportedSpeeds	List<EPSpeedValuesEnum>	Available speed values.
requestedMtu	unsigned Integer[32(bytes)]	MTU size requested by the user.
supportedMtus	List<Integer>[32]	Available MTU sizes. **Deprecated:** This attribute is obsolete and will be removed in a future release.
parent	resourceRef	Resource type and identifier of the Ethernet port's parent enclosure, as defined by the resourceRef resource type.
sfpSupportedSpeeds	List<SFPSpeedValuesEnum>	SFP (the small form-factor pluggable) supported speeds of the Ethernet port.
sfpSupportedProtocols	List<SFPProtocolValuesEnum>	SFP (the small form-factor pluggable) supported protocols of the Ethernet port.

Query all members of the ethernetPort collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ethernetPort/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ethernetPort collection.

Query a specific ethernetPort instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ethernetPort/<id> where <id> is the unique identifier of the ethernetPort instance to query. Or GET /api/instances/ethernetPort/name:<value> where <value> is the name of the ethernetPort instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ethernetPort instance.

Modify operation

Modify the Ethernet port's Maximum Transmission Unit (MTU) size.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ethernetPort/<id>/action/modify where <id> is the unique identifier of the ethernetPort instance. Or POST /api/instances/ethernetPort/name:<value>/action/modify where <value> is the name of the ethernetPort instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
mtuSize	in	unsigned Integer[32(bytes)] [1280..9216]	Optional	MTU packet size that the Ethernet port can transmit, in bytes.
speed	in	EPSpeedValuesEnum	Optional	Requested data transmission speed for the Ethernet port. **Note:** The port will be link down temporarily during change of speed.

RecommendForAggregation operation

Recommend Ethernet ports to use for link aggregation.

Header	Accept: application/json Content-Type: application/json

Method and URI	POST /api/types/ethernetPort/action/recommendForAggregation
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the RecommendForAggregation operation

Argument	In/ out	Type	Required?	Description
ethernetPort	in	ethernetPort	Required	Ethernet port for which to recommend other ports for link aggregation.
recommendedPorts	out	List<ethernetPort>	N/A	Recommended ports, in order of preference.

event

Information about the events reported by the storage system.

The system monitors and reports on a variety of system events. It collects the events and writes them to the user log, which contains a record for each event.

The health and alert providers promote some events to be alerts, which are usually events that require attention from the system administrator. For information about alerts, see the Help topic for the alert resource type.

In the username attribute, is the value N/A or blank if a user did not cause the event or the account is unavailable?

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the event instance.
node	NodeEnum	Storage Processor that generated the event.
creationTime	DateTime	1. Date and time when the event was created.
severity	SeverityEnum	Severity of the event.
messageId	String	Identifier of the message, without arguments or localization.
arguments	List<String>	Arguments in the event message.
message	String	Localized description of the event's cause or effects.
username	String	If a user caused the event, and the user account still exists, the user associated with the event.
category	EventCategoryEnum	Event category.
source	String	System component that caused the event. This information is intended for service personnel.

Query all members of the event collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/event/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the event collection.

Query a specific event instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/event/<id> where <id> is the unique identifier of the event instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific event instance.

fan

(Applies to physical deployments only.) Information about the fans in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the fan instance.
health	health	Health information for the fan, as defined by the health resource type.
parent	resourceRef	Resource type and identifier of the fan's parent enclosure.

slotNumber	unsigned Integer[32]	Slot where the fan is located in the parent enclosure.
name	String[1..32]	Fan name.
emcPartNumber	String	EMC part number for the fan.
emcSerialNumber	String	EMC serial number for the fan.
manufacturer	String	Manufacturer of the fan.
model	String	Manufacturer's model number for the fan.
vendorPartNumber	String	Vendor part number for the fan.
vendorSerialNumber	String	Vendor serial number for the fan.
needsReplacement	Boolean	Indicates whether the fan needs replacement. Values are: • true - Fan needs replacement. • false - Fan does not need replacement.
parentDpe	dpe	Parent Disk Processor Enclosure (DPE) of the fan.
parentDae	dae	Parent Disk Array Enclosure (DAE) of the fan.
storageProcessor	storageProcessor	For fans within a DPE, the storage processor with which the fan is associated.

Query all members of the fan collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fan/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fan collection.

Query a specific fan instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fan/<id> where <id> is the unique identifier of the fan instance to query. Or GET /api/instances/fan/name:<value> where <value> is the name of the fan instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fan instance.

fastCache

Information about FAST Cache in the storage system. FAST Cache uses Flash drives to cache data in storage system to accelerate access to data. (Applies if FAST Cache is supported on the system and the corresponding license is installed.)

Embedded resource types

raidGroupCache

Supported operations

Collection query , Instance query ,Enable ,Modify ,Disable ,GetConfigurations

Attributes

Attribute	Type	Description
id	String	Unique identifier of the FAST Cache instance.
health	health	Health information for the FAST Cache, as defined by the health resource type.
sizeTotal	unsigned Integer[64(bytes)]	FAST Cache total size.
sizeFree	unsigned Integer[64(bytes)]	Size of logical cache available.
numberOfDisks	unsigned Integer[32(disks)]	Total number of drives in FAST Cache.
raidLevel	RaidTypeEnum	RAID type of the internal RAID Groups in FAST Cache.
raidGroups	List<raidGroupCache>	List of all FAST Cache RAID Groups.

Attributes for raidGroupCache

A set of drives in a RAID Group used by FAST Cache.

Attribute	Type	Description
id	String	Unique identifier of the RAID Group instance.
name	String[1..32]	RAID Group name.
diskGroup	diskGroup	diskGroup containing the raidGroup drives.
raidLevel	RaidTypeEnum	RAID level of the group.
raidModulus	RaidStripeWidthEnum	RAID stripe length.

parityDisks	unsigned Integer[16(disks)]	Number of parity drives in the group.
disks	List<disk>	List of drives in the group.

Query all members of the fastCache collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fastCache/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fastCache collection.

Query a specific fastCache instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fastCache/<id> where <id> is the unique identifier of the fastCache instance to query. Or GET /api/instances/fastCache/name:<value> where <value> is the name of the fastCache instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fastCache instance.

Enable operation

Create FAST Cache using specified disk group and number of drives and if specified, Enable FAST Cache on all existing pools.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fastCache/<id>/action/enable where <id> is the unique identifier of the fastCache instance. Or POST /api/instances/fastCache/name:<value>/action/enable where <value> is the name of the fastCache instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Enable operation

Argument	In/ out	Type	Required?	Description
diskgroup	in	diskGroup	Required	Disk group from which to take drives for FAST cache.
numberOfDisks	in	unsigned Integer[32]	Required	Number of drives.
enableOnAllPools	in	Boolean	Optional	Enable FAST Cache for all existing pools.

Modify operation

Modify the FAST cache, either by adding group(s) of drives or removing RAID groups.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fastCache/<id>/action/modify where <id> is the unique identifier of the fastCache instance. Or POST /api/instances/fastCache/name:<value>/action/modify where <value> is the name of the fastCache instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
addDiskGroups	in	List<diskGroup>	Optional	List of disk groups to add to the FAST Cache, as defined by the diskGroup resource type.
addDiskGroupNumDisks	in	List<Integer>[32]	Optional	List of the number of drives from each disk group to add to the FAST Cache.
removeRaidGroups	in	List<String>	Optional	List of raidGroupCache objects to remove from FAST Cache.

Disable operation

Disable FAST cache, freeing the drives for other use.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fastCache/<id>/action/disable where <id> is the unique identifier of the fastCache instance. Or POST /api/instances/fastCache/name:<value>/action/disable where <value> is the name of the fastCache instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

GetConfigurations operation

Get recommended FAST Cache drive configurations.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fastCache/<id>/action/getConfigurations where <id> is the unique identifier of the fastCache instance. Or POST /api/instances/fastCache/name:<value>/action/getConfigurations where <value> is the name of the fastCache instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the GetConfigurations operation

Argument	In/ out	Type	Required?	Description
configurations	out	List<storageTierConfiguration>	N/A	The list of recommended FAST Cache configuration, output parameter.

fastVP

System FAST VP settings. FAST VP allows performing automatic data relocation between tiers and rebalancing within a tier to improve storage performance. Currently there three types of relocations supported:

- Scheduled relocations
- Manual relocations
- Rebalancing

Scheduled relocations are started according the schedule defined in this resource. Individual pools can be included to or excluded from the scheduled relocation process.
Manual relocations can be performed on demand for each particular pool.
Rebalancing is performed automatically on a pool extend event.
The FAST VP object represents the status of scheduled relocation processes and allows to view or modify the scheduled relocation parameters. It also provides a means to pause or resume all the FAST VP relocation and rebalancing processes currently running on the system.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique instance id.
status	FastVPStatusEnum	FAST VP status. The possible values are "Active" or "Paused".
relocationRate	FastVPRelocationRateEnum	Relocation Rate to perform scheduled relocations.
isScheduleEnabled	Boolean	Indicates whether FAST VP scheduled relocations are enabled.
scheduleDays	List<DayOfWeekEnum>	Days of week to run scheduled relocations.
scheduleStartTime	DateTime[Interval]	Time of day to start scheduled relocation.
scheduleEndTime	DateTime[Interval]	Time of day at which scheduled relocation should end.
sizeMovingDown	unsigned Integer[64(bytes)]	Current estimate of the amount of data that the next scheduled relocation will move to a lower tier.
sizeMovingUp	unsigned Integer[64(bytes)]	Current estimate of the amount of data that the next scheduled relocation will move to a higher tier.
sizeMovingWithin	unsigned Integer[64(bytes)]	Current estimate of the amount of data that the next scheduled relocation will rebalance within a tier.
relocationDurationEstimate	DateTime[Interval]	Based on current amounts of data to move, this is the current estimate of how long a scheduled relocation would take.

Query all members of the fastVP collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fastVP/instances

Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fastVP collection.

Query a specific fastVP instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fastVP/<id> where <id> is the unique identifier of the fastVP instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fastVP instance.

Modify operation

Modify System FAST VP settings.
Please note, once Relocation Rate is changed, it will take certain time up to the next scheduled relocation to update estimated relocation time.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fastVP/<id>/action/modify where <id> is the unique identifier of the fastVP instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
relocationRate	in	FastVPRelocationRateEnum	Optional	Relocation rate.
isScheduleEnabled	in	Boolean	Optional	Enable system relocation schedule.
scheduleDays	in	List<DayOfWeekEnum>	Optional	List of days of the week on which to run scheduled relocations.
scheduleStartTime	in	DateTime[Interval - h+:mm:ss[.sss]]	Optional	Time of day to start scheduled relocations. Maximum resolution is in minutes. [The value of interval will be rounded down to minutes.]
scheduleEndTime	in	DateTime[Interval - h+:mm:ss[.sss]]	Optional	Time of day at which scheduled relocation should end. Maximum resolution is in minutes. [The value of interval will be rounded down to minutes.]
isPaused	in	Boolean	Optional	Pause/Resume data relocation.

fcPort

Fibre Channel (FC) front end port settings. Applies if the FC protocol is supported on the system and the corresponding license is installed.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the fcPort instance.
health	health	Health information for the FC port, as defined by the health resource type.
parent	resourceRef	Resource type and unique identifier of the FC port's enclosure, as defined by the resourceRef resource type.
slotNumber	unsigned Integer[32]	Physical location of the FC port.
wwn	String	World Wide Name (WWN) of the FC port.
availableSpeeds	List<FcSpeedEnum>	Available data transmission speed values for the FC port.
currentSpeed	FcSpeedEnum	Current data transmission speed of the FC port.
requestedSpeed	FcSpeedEnum	Data transmission speed requested by the user.
sfpSupportedSpeeds	List<SFPSpeedValuesEnum>	SFP (the small form-factor pluggable) supported speeds of the FC port.
sfpSupportedProtocols	List<SFPProtocolValuesEnum>	SFP (the small form-factor pluggable) supported protocols of the FC port.
connectorType	ConnectorTypeEnum	Physical connector type.
storageProcessor	storageProcessor	SP on which the FC port directly or indirectly resides, as defined by the storageProcessor resource type.
needsReplacement	Boolean	Indicates whether the FC port needs replacement. Values are: • true - FC port needs replacement. • false - FC port does not need replacement.
nPortId	unsigned Integer[32]	Port on the node host or storage device used with FC point-

		to-point or FC switched fabric topologies.
name	String	FC port name.
parentIOModule	ioModule	(Applies if the FC port resides on an I/O module.) Parent I/O module of the FC port, as defined by the ioModule resource type.
parentStorageProcessor	storageProcessor	(Applies if the FC port resides directly on an SP.) Parent SP of the FC port, as defined by the storageProcessor resource type.
portRepCapabilities	List<PortRepCapabilityEnum>	FC port replication capability.
sfpSupportedMode	SFPSupportedModeEnum	SFP (the small form-factor pluggable) supported mode of the FC port.

Query all members of the fcPort collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fcPort/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fcPort collection.

Query a specific fcPort instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fcPort/<id> where <id> is the unique identifier of the fcPort instance to query. Or GET /api/instances/fcPort/name:<value> where <value> is the name of the fcPort instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fcPort instance.

Modify operation

Set the FC port data transmission rate to the requested speed.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fcPort/<id>/action/modify where <id> is the unique identifier of the fcPort instance. Or POST /api/instances/fcPort/name:<value>/action/modify where <value> is the name of the fcPort instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
requestedSpeed	in	FcSpeedEnum	Required	Requested data transmission speed for the FC port. **Note:** The port will be link down temporarily during change of speed.

feature

Information about features on the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the feature instance.
name	String	Feature name.
state	FeatureStateEnum	State of the feature.
reason	FeatureReasonEnum	Reason for the feature to be in a state other than enabled. If state is enabled, reason is not applicable.
license	license	License that enables the feature, as defined by the license resource type. An empty value indicates that the feature is not license-based.

Query all members of the feature collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/feature/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the feature collection.

Query a specific feature instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/feature/<id> where <id> is the unique identifier of the feature instance to query. Or GET /api/instances/feature/name:<value> where <value> is the name of the feature instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific feature instance.

fileDNSServer

Domain Name System (DNS) settings object of NAS server. You can configure one DNS settings object per NAS server.
A Domain Name System (DNS) is a hierarchical system responsible for converting domain names to their corresponding IP addresses. NAS server's DNS settings should allow DNS resolution of all names within SMB server's domain in order for SMB protocol to operate normally within an Active Directory domain.

Embedded resource types

fileDNSServerSourceParameters

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the DNS object.
nasServer	nasServer	Associated NAS server instance that uses this DNS object. Only one DNS object per NAS server is supported.
addresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Prioritized list of one to three IPv4 and/or IPv6 addresses of DNS server(s) for the domain.
domain	String	Mandatory name of the DNS domain, where NAS Server does host names lookup when FQDN is not specified in the request.
replicationPolicy	ReplicationPolicyEnum	Replication policy of the DNS object.
sourceParameters	fileDNSServerSourceParameters	The DNS parameters of the source NAS server.

Attributes for fileDNSServerSourceParameters

For replication destination NAS servers, information about the corresponding source NAS server's DNS settings.

Attribute	Type	Description
addresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	List of IP addresses of DNS servers of the source NAS server

Query all members of the fileDNSServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileDNSServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileDNSServer collection.

Query a specific fileDNSServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileDNSServer/<id> where <id> is the unique identifier of the fileDNSServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileDNSServer instance.

Create operation

Add a new domain for the DNS server. Only one instance can be created per NAS server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fileDNSServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the NAS server which the DNS server belongs.
domain	in	String[1..255]	Required	DNS domain name.
addresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Required	Prioritized list of one to three IPv4 and/or IPv6 addresses of DNS server(s) for the domain.
id	out	fileDNSServer	N/A	The created fileDNSServer instance.

Delete operation

Delete a DNS domain.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/fileDNSServer/<id> where <id> is the unique identifier of the fileDNSServer instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a DNS domain.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fileDNSServer/<id>/action/modify where <id> is the unique identifier of the fileDNSServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
domain	in	String[1..255]	Optional	DNS domain name.
addresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	The list of DNS server IP addresses.
replicationPolicy	in	ReplicationPolicyEnum	Optional	Status of the LDAP list in the NAS server operating as a replication destination.

fileEventsPool

File Event Service pool is a pool of remote File Event Service servers (machines that run VEE and are capable to handle event notificatons from the NAS Server). NAS Server can have one or several (up to three) File Event Service pools. The File Event Service pool servers are responsible for: - maintaining a topology and state mapping of all consumer applications - delivering event type and associated event metadata through the publishing agent API

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	

		Unique identifier of the File Event Service Pool instance.
eventsPublisher	fileEventsPublisher	Associated File Event Service identifier.
name	String	Name assigned to the set of Windows servers where File Event Service software is installed.
servers	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Addresses of the File Event Service servers.
sourceServers	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	For replication destination NAS servers, the list of File Event Service servers from the corresponding source NAS server.
preEvents	List<FileEventTypesEnum>	The list of pre-events. The NAS server sends request event notification to CEPA server before such event occurs and processes the response.
postEvents	List<FileEventTypesEnum>	The list of post-evenets. The NAS server sends notification after such event occrus.
postErrorEvents	List<FileEventTypesEnum>	The list of post-error events. The NAS server sends notification if such event generates an error.
replicationPolicy	ReplicationPolicyEnum	Replication policy of the Events Pool.

Query all members of the fileEventsPool collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileEventsPool/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileEventsPool collection.

Query a specific fileEventsPool instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileEventsPool/<id> where <id> is the unique identifier of the fileEventsPool instance to query. Or GET /api/instances/fileEventsPool/name:<value> where <value> is the name of the fileEventsPool instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileEventsPool instance.

Create operation

Create a File Event Service Pool configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fileEventsPool/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
eventsPublisher	in	fileEventsPublisher	Required	Unique identifier of the File Event Service to which the File Event Service Pool belongs.
name	in	String[1..80]	Required	Name assigned to the set of Windows servers where File Event Service software is installed.
servers	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Required	Addresses of the File Event Service servers.
preEvents	in	List<FileEventTypesEnum>	Optional	Sends notification before selected events occurs. Default is empty list.
postEvents	in	List<FileEventTypesEnum>	Optional	Sends notification before selected events occurs. Default is empty list.
postErrorEvents	in	List<FileEventTypesEnum>	Optional	
id	out	fileEventsPool	N/A	

Delete operation

Delete a File Event Service Pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/fileEventsPool/<id> where <id> is the unique identifier of the fileEventsPool instance to delete. Or DELETE /api/instances/fileEventsPool/name:<value> where <value> is the name of the fileEventsPool instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a File Event Service Pool configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fileEventsPool/<id>/action/modify where <id> is the unique identifier of the fileEventsPool instance. Or POST /api/instances/fileEventsPool/name:<value>/action/modify where <value> is the name of the fileEventsPool instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..80]	Optional	Name assigned to the set of Windows servers where File Event Service software is installed.
servers	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	Addresses of the File Event Service servers.
preEvents	in	List<FileEventTypesEnum>	Optional	Sends notification before selected events occurs.
postEvents	in	List<FileEventTypesEnum>	Optional	Sends notification before selected events occurs.
postErrorEvents	in	List<FileEventTypesEnum>	Optional	
replicationPolicy	in	ReplicationPolicyEnum	Optional	

fileEventsPublisher

File Event Service is a mechanism whereby applications can register to receive event notification and context from sources such as VNX(e). File Event Service is a part of VNX Event Enabler Framework (VEE). VEE provides the working environment for the CAVA and CEPA (Common Event Publishing Agent) facilities. The event publishing agent delivers to the application both event notification and associated context in one message. Context may consist of file metadata or directory metadata needed to decide business policy. The CEPA sub-facilities include: - Auditing.A mechanism for delivering post-events to registered consumer applications in a synchronous manner. Events are delivered individually in real-time. - CQM.A mechanism for delivering pre-events to registered consumer applications in a synchronous manner. Events are delivered individually in real-time, allowing the consumer application to exercise business policy on the event. - VCAPS.A mechanism for delivering post-events in asynchronous mode. The delivery cadence is based on a time period or a number of events. - MessageExchange.A mechanism for delivering post-events in asynchronous mode, when needed, without consumer use of the CEPA API. Events are published from CEPA to the RabbitMQ CEE_Events exchange. A consumer application creates a queue for itself in the exchange from which it can retrieve events.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the File Event Service instance.
nasServer	nasServer	Associated NAS server identifier.
isEnabled	Boolean	State of File Event Servce is currently enabled.
health	health	Health information for the File Event Service, as defined by the health resource type.
heartbeat	DateTime[Interval]	Time interval to scan each CEPA server (in seconds) for online/offline status.
timeout	DateTime[Interval]	Timeout in ms while attempting to send event to a CEPA server to determine that is offline.
postEventPolicy	FileEventsPublisherFTLevelTypeEnum	The fault tolerance policy for handling post-events.
denyAccessWhenAllServersOffline	Boolean	Behaviour when the File Event Service server did not answer. Values are: • false - indicates that nothing changes with I/O in case of File Event Service

		server is offline. • true - indicates that all I/O is denied in case of File Event Service server is offline.
username	String	Name of a Windows user allowing Events Publishing to connect to CEPA servers. To ensure that a secure connection (via Microsoft RPC protocol) is used disable HTTP by setting isHttpEnabled to false.
isHttpEnabled	Boolean	Indicates whether connection to CEPA servers via HTTP is enabled. Default is true (enabled). When enabled, connection via HTTP is attempted first. If HTTP connection is disabled, or the connection fails, then connection through MSRPC is attempted if all CEPP server(s) are defined by FQDN. The SMB account of the NAS server in the AD comain is used to make the connection via MSRPC. Note that HTTP connections should only be used on secure networks, as it is neither SSL nor authenticated.
port	unsigned Integer[16]	When HTTP is used to connect to the CEPA server(s), the port number to use. Default port number is 12228.

Query all members of the fileEventsPublisher collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileEventsPublisher/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileEventsPublisher collection.

Query a specific fileEventsPublisher instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileEventsPublisher/<id> where <id> is the unique identifier of the fileEventsPublisher instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileEventsPublisher instance.

Modify operation

Modify a File Event Service configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fileEventsPublisher/<id>/action/modify where <id> is the unique identifier of the fileEventsPublisher instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isEnabled	in	Boolean	Optional	State of File Event Service is currently enabled.
username	in	String[..1023]	Optional	Name of a Windows user allowing Events Publishing to connect to CEPA servers.
password	in	String[..15]	Optional	Password of the Windows user defined by the username.
heartbeat	in	DateTime[Interval - h+:mm:ss[.sss]]	Optional	Time interval to scan each File Event Service server (in seconds) for online/offline status. The default is 10 seconds, the allowed range is 1-120 seconds. [The value of interval will be rounded down to seconds.]
timeout	in	DateTime[Interval - h+:mm:ss[.sss]]	Optional	Timeout in ms while attempting to send event to a CEPA server to determine that it is offline. The default is 1000 ms, the allowed range is 50-5000 ms.
port	in		Optional	

		unsigned Integer[16]		HTTP port number for the connectivity to CEPA server. Default is 12228.
denyAccessWhenAllServersOffline	in	Boolean	Optional	Specifies the behaviour when the File Event Service server did not answer. Value are: • false - indicates that nothing changes with I/O in case of File Event Service server is offline. • true - indicates that all I/O is denied in case of File Event Service server is offline.
postEventPolicy	in	FileEventsPublisherFTLevelTypeEnum	Optional	Fault tolerance level assigned. Default is 'Ignore'.
isHttpEnabled	in	Boolean	Optional	Indicates whether connection to CEPA servers via HTTP is enabled. Default is true.

fileInterface

Information about network interfaces in the storage system. These interfaces control access to Windows (CIFS) and UNIX/Linux (NFS) file storage.

Embedded resource types

fileInterfaceSourceParameters

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the fileInterface instance.
nasServer	nasServer	NAS server to which the network interface belongs, as defined by the nasServer resource type.
ipPort	ipPort	Physical port or link aggregation on the storage processor on which the network interface is running, as defined by the ethernetPort resource type.
health	health	Health of the network interface, as defined by the health resource type.
ipAddress	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IP address of the network interface.
ipProtocolVersion	IpProtocolVersionEnum	IP protocol version of the network interface.
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 netmask for the network interface, if it uses an IPv4 address.
v6PrefixLength	unsigned Integer[32][0..32]	IPv6 prefix length for the interface, if it uses an IPv6 address.
gateway	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 or IPv6 gateway address for the network interface.
vlanId	unsigned Integer[16][1..4094]	Virtual Local Area Network (VLAN) identifier for the interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 1 - 4094.
macAddress	String	MAC address of the Ethernet port used for the network interface.
name	String	Network interface name.
role	FileInterfaceRoleEnum	Role of the network interface.
isPreferred	Boolean	Indicates whether the network interface is a preferred interface for file-based storage. See documentation of preferredInterfaceSettings for details.
replicationPolicy	ReplicationPolicyEnum	Replication policy of the network interface.
sourceParameters	fileInterfaceSourceParameters	The network interface parameters of the source NAS server.
isDisabled	Boolean	Indicates whether the network interface is disabled.

Attributes for fileInterfaceSourceParameters

For an interface on a nasServers that is a replication destinations, this object contains the settings for corresponding interface on the source nasServer.

Attribute	Type	Description
ipAddress	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IP address of the network interface of the source NAS server
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 netmask for the network interface of the source NAS server.
v6PrefixLength	unsigned Integer[32]	IPv6 prefix length for the network interface of the source NAS server.
gateway	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 or IPv6 gateway address for the network interface of the source NAS server.
vlanId	unsigned Integer[32]	Virtual Local Area Network (VLAN) identifier for the network interface of the source NAS server.
ipPort	ipPort	Physical port or link aggregation of the network interface of the source NAS server.

Query all members of the fileInterface collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileInterface/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileInterface collection.

Query a specific fileInterface instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileInterface/<id> where <id> is the unique identifier of the fileInterface instance to query. Or GET /api/instances/fileInterface/name:<value> where <value> is the name of the fileInterface instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileInterface instance.

Create operation

Create a network interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fileInterface/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the NAS server to which the network interface belongs, as defined by the nasServer resource type.
ipPort	in	ipPort	Required	Physical port or link aggregation on the storage processor on which the interface is running, as defined by the ethernetPort resource type.
ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Required	IP address of the network interface.
netmask	in	IPAddress • IPv6 supported:	Optional	IPv4 netmask for the network interface, if it uses an IPv4 address.

		false • Prefix-length supported: false • Port supported: false • DNS name supported: false		
v6PrefixLength	in	unsigned Integer[32]	Optional	IPv6 prefix length for the interface, if it uses an IPv6 address.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 or IPv6 gateway address for the network interface.
vlanId	in	unsigned Integer[16] [1..4094]	Optional	Virtual Local Area Network (VLAN) identifier for the interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 1 - 4094.
isPreferred	in	Boolean	Optional	Sets the current IP interface as preferred for associated for file-based storage and unsets the previous one.
role	in	FileInterfaceRoleEnum	Optional	
id	out	fileInterface	N/A	Unique identifier of the new fileInterface instance.

Delete operation

Delete a network interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/fileInterface/<id> where <id> is the unique identifier of the fileInterface instance to delete. Or DELETE /api/instances/fileInterface/name:<value> where <value> is the name of the fileInterface instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a network interface configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fileInterface/<id>/action/modify where <id> is the unique identifier of the fileInterface instance. Or POST /api/instances/fileInterface/name:<value>/action/modify where <value> is the name of the fileInterface instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
ipPort	in	ipPort	Optional	Unique identifier of the physical port or link aggregation on the storage processor on which the network interface is running, as defined by the ethernetPort resource type.
ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Optional	IP address of the network interface.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 netmask for the network interface, if it uses an IPv4 address.
v6PrefixLength	in	unsigned Integer[32]	Optional	IPv6 prefix length for the interface, if it uses an IPv6 address.
gateway	in	IPAddress	Optional	IPv4 or IPv6 gateway address for the network interface. Empty string to unset.

		• IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false		
vlanId	in	unsigned Integer[16]	Optional	Virtual Local Area Network (VLAN) identifier for the network interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 1 - 4094. Empty string or null to unset.
isPreferred	in	Boolean	Optional	Sets the current IP interface as preferred for associated for file-based storage and unsets the previous one.
replicationPolicy	in	ReplicationPolicyEnum	Optional	

fileKerberosServer

Information about the Kerberos service used by the storage system for secure connections. You can configure one Kerberos settings object per NAS server.
Kerberos is a distributed authentication service designed to provide strong authentication with secret-key cryptography. It works on the basis of "tickets" that allow nodes communicating over a non-secure network to prove their identity in a secure manner. When configured to act as a secure NFS server, the NAS server uses the RPCSEC_GSS security framework and Kerberos authentication protocol to verify users and services. You can configure a secure NFS environment for a multiprotocol NAS server or one that supports Unix-only shares. In this environment, user access to NFS file systems is granted based on Kerberos principal names.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the Kerberos instance.
nasServer	nasServer	NAS server that is configured with these Kerberos settings.
realm	String	Kerberos Realm.
addresses	List<String>	Fully Qualified domain names of the Kerberos Key Distribution Center (KDC) servers.
portNumber	unsigned Integer[16]	KDC servers TCP port. Default: 88.

Query all members of the fileKerberosServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileKerberosServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileKerberosServer collection.

Query a specific fileKerberosServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileKerberosServer/<id> where <id> is the unique identifier of the fileKerberosServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileKerberosServer instance.

Create operation

Create a Kerberos configuration. The operation will fail if a Kerberos configuration already exists.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fileKerberosServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the NAS server to which the Kerberos service belongs.
realm	in	String[1..255]	Required	The Kerberos realm with which to authenticate.
addresses	in	List<String>	Required	DNS names for the Kerberos Key Distribution Center (KDC) servers.
portNumber	in	unsigned Integer[16]	Optional	KDC servers TCP port.
id	out	fileKerberosServer	N/A	The created fileKerberosServer instance.

Delete operation

Delete a Kerberos service configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/fileKerberosServer/<id> where <id> is the unique identifier of the fileKerberosServer instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify an Kerberos service configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fileKerberosServer/<id>/action/modify where <id> is the unique identifier of the fileKerberosServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
realm	in	String[1..255]	Optional	The Kerberos realm with which to authenticate.
addresses	in	List<String>	Optional	DNS names for the Kerberos Key Distribution Center (KDC) servers.
portNumber	in	unsigned Integer[16]	Optional	KDC servers TCP port.

fileLDAPServer

The LDAP settings object for the NAS Server. You can configure one LDAP settings object per NAS server.
The Lightweight Directory Access Protocol (LDAP) is an application protocol for querying and modifying directory services running on TCP/IP networks. LDAP provides central management for network authentication and authorization operations by helping to centralize user and group management across the network. NAS server can use LDAP as a Unix Directory Service to map users, retrieve netgroups, and build a Unix credential. When an initial LDAP configuration is applied, the system checks for the type of LDAP server. It can be an Active Directory schema, iPlanet schema, or an RFC 2307 schema.

Embedded resource types

fileLDAPServerSourceParameters

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ldapServer instance.
nasServer	nasServer	NAS server that is configured with these LDAP settings.
authority	String	Name of the LDAP authority. Base Distinguished Name (BDN) of the root of the LDAP directory tree. The system uses the DN to bind to the LDAP service and locate in the LDAP directory tree to begin a search for information. The base DN can be expressed as a fully-qualified domain name or in X.509 format by using the attribute dc=. For example, if the fully-qualified domain name is mycompany.com, the base DN is expressed as dc=mycompany,dc=com.
profileDN	String	For an iPlanet LDAP server, specifies the DN of the entry with the configuration profile.
serverAddresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	IP addresses of the associated LDAP servers.
portNumber	unsigned Integer[16]	The TCP/IP port used by the NAS server to connect to the LDAP servers. Default value for LDAP is 389 and LDAPS is 636.
authenticationType	AuthenticationTypeEnum	Type of authentication for the LDAP server.
protocol	LDAPProtocolEnum	Type of LDAP protocol.
verifyServerCertificate	Boolean	Indicates whether Certification Authority certificate is used to verify the LDAP server certificate for secure SSL connections. Values are: • true - verifies LDAP server's certificate. • false - doesn't verify LDAP server's certificate.
bindDN	String	Bind Distinguished Name (DN) to be used when binding.
isCifsAccountUsed	Boolean	Indicates whether CIFS authentication is used to authenticate to the LDAP server. Values are: • true - Indicates that the CIFS settings are used for Kerberos authentication. • false - Indicates that Kerberos uses its own settings.

principal	String	Specifies the principal name for Kerberos authentication.
realm	String	Specifies the realm name for Kerberos authentication.
schemeType	SchemeTypeEnum	LDAP server scheme type.
replicationPolicy	ReplicationPolicyEnum	Indicates the status of the LDAP servers addresses list in the NAS server operating as a replication destination. When a replicated LDAP servers list is created on the source NAS server, it is automatically synchronized to the destination.
sourceParameters	fileLDAPServerSourceParameters	For replication destination NAS servers, information about the corresponding source NAS server's LDAP settings.

Attributes for fileLDAPServerSourceParameters

For replication destination NAS servers, information about the corresponding source NAS server's LDAP settings.

Attribute	Type	Description
addresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	List of IP addresses of LDAP servers of the source NAS server

Query all members of the fileLDAPServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileLDAPServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileLDAPServer collection.

Query a specific fileLDAPServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileLDAPServer/<id> where <id> is the unique identifier of the fileLDAPServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileLDAPServer instance.

Create operation

Create an LDAP server configuration. The operation will fail if an LDAP server configuration already exists.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fileLDAPServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the NAS server to which the LDAP server belongs.
authenticationType	in	AuthenticationTypeEnum	Required	Authentication type for the LDAP server.
authority	in	String[1..127]	Required	The Distinguished Name (DN) of the root level in the directory tree.
serverAddresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	The IP addresses of the associated LDAP servers.
portNumber	in	unsigned Integer[16]	Optional	The TCP/IP port associated with the LDAP server.
protocol	in	LDAPProtocolEnum	Optional	Specifies the protocol to be used.
verifyServerCertificate	in	Boolean	Optional	Specify that uploaded Certification Authority (CA) certificates should be used to verify the certificates of LDAP servers for establishing secure SSL connections.
profileDN	in	String[..127]	Optional	For an iPlanet LDAP server, type the DN of the entry with the configuration profile.
bindDN	in	String[1..255]	Optional	The Distinguished Name (DN) to be used when binding to the server.

bindPassword	in	String[1..255]	Optional	the associated password to be used when binding to the server.
isCifsAccountUsed	in	Boolean	Optional	Specify whether you want to use CIFS authentication. For Kerberos authentication only. Values are: • true - Indicates that the CIFS settings are used for Kerberos authentication. • false - Indicates that Kerberos uses its own settings.
principal	in	String[1..255]	Optional	The principal name for Kerberos authentication.
realm	in	String[1..255]	Optional	The realm name for Kerberos authentication.
password	in	String[1..255]	Optional	The associated password for Kerberos authentication.
id	out	fileLDAPServer	N/A	The created fileLDAPServer instance.

Delete operation

Delete an LDAP server configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/fileLDAPServer/<id> where <id> is the unique identifier of the fileLDAPServer instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
isIgnoreWarnings	in	Boolean	Optional	Ignore any warnings the deletion process. Values are: • true - Ignore any warnings. • false(Default) - Any warnings will interrupt the deletion process.

Modify operation

Modify an LDAP server configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fileLDAPServer/<id>/action/modify where <id> is the unique identifier of the fileLDAPServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
authenticationType	in	AuthenticationTypeEnum	Optional	Authentication type for the LDAP server.
authority	in	String[1..127]	Optional	The Distinguished Name (DN) of the root level in the directory tree.
serverAddresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	The IP addresses of the associated LDAP servers.
portNumber	in	unsigned Integer[16]	Optional	The TCP/IP port associated with the LDAP server.
protocol	in	LDAPProtocolEnum	Optional	Specifies the protocol to be used.
verifyServerCertificate	in	Boolean	Optional	Specify that uploaded Certification Authority (CA) certificates should be used to verify the certificates of LDAP servers for establishing secure SSL connections.
profileDN	in	String[0..127]	Optional	For an iPlanet LDAP server, type the DN of the entry with the configuration profile.
bindDN	in	String[1..255]	Optional	The Distinguished Name (DN) to be used when binding to the server.
bindPassword	in	String[1..255]	Optional	the associated password to be used when binding to the server.
isCifsAccountUsed	in	Boolean	Optional	Specify whether you want to use CIFS authentication. For Kerberos authentication only. Values are: • true - Indicates that the CIFS settings are used for Kerberos authentication. • false - Indicates that Kerberos uses its own settings.

principal	in	String[1..255]	Optional	The principal name for Kerberos authentication.
realm	in	String[1..255]	Optional	The realm name for Kerberos authentication.
password	in	String[1..255]	Optional	The associated password for Kerberos authentication.
replicationPolicy	in	ReplicationPolicyEnum	Optional	Status of the LDAP list in the NAS server operating as a replication destination.
isIgnoreWarnings	in	Boolean	Optional	Ignore warnings will interrupt the modification process. Values are: • true - Ignore any warnings. • false(Default) - Ant warnings will interrupt the modification process.

fileNDMPServer

The NDMP server for the NAS Server. You can configure one NDMP server per NAS server.
The Network Data Management Protocol (NDMP) provides a standard for backing up file servers on a network. NDMP allows centralized applications to back up file servers that run on various platforms and platform versions. NDMP reduces network congestion by isolating control path traffic from data path traffic, which permits centrally managed and monitored local backup operations. Storage systems support NDMP v2-v4 over the network. Direct-attach NDMP is not supported. This means that the tape drives need to be connected to a media server, and the NAS server communicates with the media server over the network. NDMP has an advantage when using multiprotocol file systems because it backs up the Windows ACLs as well as the UNIX security information.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique instance id.
nasServer	nasServer	NAS server that is configured with these NDMP settings.
username	String	User name for accessing the NDMP server.

Query all members of the fileNDMPServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileNDMPServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileNDMPServer collection.

Query a specific fileNDMPServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileNDMPServer/<id> where <id> is the unique identifier of the fileNDMPServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileNDMPServer instance.

Create operation

Create an NDMP server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fileNDMPServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the associated NAS server.
password	in	String[8..40]	Optional	The password for the NDMP server.
id	out	fileNDMPServer	N/A	Unique identifier of the new NDMP server.

Delete operation

Delete an NDMP server.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/fileNDMPServer/<id> where <id> is the unique identifier of the fileNDMPServer instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)

Successful response body	No body content.

Modify operation

Modify an NDMP server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fileNDMPServer/<id>/action/modify where <id> is the unique identifier of the fileNDMPServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
password	in	String[8..40]	Optional	The password for the NDMP server.

fileNISServer

The NIS settings object for the NAS Server. You can configure one NIS settings object per NAS server.
The Network Information Service (NIS) consists of a directory service protocol for maintaining and distributing system configuration information, such as user and group information, hostnames etc.

Embedded resource types

fileNISServerSourceParameters

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the nisServer instance.
nasServer	nasServer	NAS server that is configured with these NIS settings.
addresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Prioritized list of one to ten NIS server IP addresses for the domain.
domain	String	Name of the NIS server domain.
replicationPolicy	ReplicationPolicyEnum	Indicates the status of the NIS servers addresses list in the NAS server operating as a replication destination. When a replicated NIS servers list is created on the source NAS server, it is automatically synchronized to the destination.
sourceParameters	fileNISServerSourceParameters	For replication destination NAS servers, information about the corresponding source NAS server's NIS settings.

Attributes for fileNISServerSourceParameters

For replication destination NAS servers, information about the corresponding source NAS server's NIS settings.

Attribute	Type	Description
addresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	List of IP addresses of NIS servers of the source NAS server

Query all members of the fileNISServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fileNISServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fileNISServer collection.

Query a specific fileNISServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fileNISServer/<id> where <id> is the unique identifier of the fileNISServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fileNISServer instance.

Create operation

Create an NIS server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fileNISServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	Unique identifier of the NAS server to which the LDAP server belongs.
domain	in	String[1..255]	Required	Domain name of the NIS server.
addresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Required	The IP addresses of the NIS servers to include in the domain.
id	out	fileNISServer	N/A	The created fileNISServer instance.

Delete operation

Delete an NIS server.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/fileNISServer/<id> where <id> is the unique identifier of the fileNISServer instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
isIgnoreWarnings	in	Boolean	Optional	Ignore any warnings the deletion process. Values are: • true - Ignore any warnings. • false(Default) - Any warnings will interrupt the deletion process.

Modify operation

Modify an NIS server settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/fileNISServer/<id>/action/modify where <id> is the unique identifier of the fileNISServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
domain	in	String[1..255]	Optional	Domain name of the NIS server.
addresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	Prioritized list of one to ten NIS server IP addresses for the domain.
replicationPolicy	in	ReplicationPolicyEnum	Optional	Status of the NIS list in the NAS server operating as a replication destination.
isIgnoreWarnings	in	Boolean	Optional	Ignore any warnings during the modification process. Values are: • true - Ignore any warnings. • false(Default) - Any warnings will interrupt the modification process.

filesystem

Information about the underlying file system associated with the file system and VMware NFS storage resources in the storage system.

Note: To manage file systems and VMware NFS datastores, use the applicable operations for the storageResource object, as described in the help topic for that resource type.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the file system.
health	health	Health information for the file system, as defined by the health resource type.
name	String	File system name unique to the NAS server.
description	String	File system description.
type	FilesystemTypeEnum	File system type.
sizeTotal	unsigned Integer[64(bytes)]	File system size that the system presents to the host or end user.
sizeUsed	unsigned Integer[64(bytes)]	Size of used space in the file system by the user files.
sizeAllocated	unsigned Integer[64(bytes)]	Size of pool space allocated for the file system: • For a thin-provisioned file system, this as a rule is less than the value of the sizeTotal attribute and slightly greater than or equal to the value of the sizeUsed attribute. • For a not thin-provisioned file system, this is approximately equal to the value of the attribute sizeTotal. This measurement does not include space reserved for snapshots.
sizePreallocated	unsigned Integer[64(bytes)]	Space reserved from the pool by the file system, for future needs to make writes more efficient. The pool may be able to reclaim some of this if space is running low.
sizeAllocatedTotal	unsigned Integer[64(bytes)]	Total pool space used in the pool for the file system. This include the allocated space and allocations for snaps and metadata.
minSizeAllocated	unsigned Integer[64(bytes)]	• For a thin-provisioned file system, this is the minimum allocated size to which the file system can be auto-shrunk. • This attribute does not apply for a thick-provisioned file system This measurement does not include space reserved for snapshots.
isReadOnly	Boolean	Indicates whether the file system is read-only. Values are: • true - File system is read-only. • false - File system is read-write.
isThinEnabled	Boolean	Indicates whether the file system is thin-provisioned. Values are: • true - File system is thin-provisioned. • false - File system is thick-provisoned.
isDataReductionEnabled	Boolean	True if data reduction is enabled, only applies when isThinEnabled is true.
dataReductionSizeSaved	unsigned Integer[64(bytes)]	Storage element saved space by data reduction, which includes savings from compression and deduplication.
dataReductionPercent	unsigned Integer[16(percent)]	Data reduction percentage is the percentage of the data that does not consume storage - the savings due to data reduction. For example, if 1 TB of data is stored in 250 GB, the data reduction percentage is 75%. 75% data reduction percentage is equivalent to a 4:1 data reduction ratio.
dataReductionRatio	Float	Data reduction ratio. The data reduction ratio is the ratio between the size of the data and the amount of storage actually consumed. For example, 1TB of data consuming 250GB would have a ration of 4:1. A 4:1 data reduction ratio is equivalent to a 75% data reduction percentage.
isAdvancedDedupEnabled	Boolean	True if data reduction is enabled, only applies when isThinEnabled is true.
storageResource	storageResource	Storage resource to which the file system belongs, as defined by the storageResource.
flrVersion	FLRVersionEnum	Indicates which File Level Retention (FLR) version is enabled on the file system. Values are: • 0 - FLR is OFF on the file system. • 1 - Enterprise is enabled on the file system. • 2 - Compliance is enabled on the file system.
isFlrProtected	Boolean	Indicates whether the file system is protected because it contains at least one protected file. Values are: • true - file system contains at least one protected file. • false - file system doesn't contain protected file.
flrSoftwareClock	DateTime	Indicates file level retention software clock value. It is file system clock used to track the retention date. It is initialized when an FLR-enabled file system is first mounted on a NAS Server.
flrProtectedMaxRetention	String	Indicates maximum date and time that has been set on any locked file in an FLR-enabled file system. It is a string with a DateTime value that can extend beyond DateTime limitation of no long than 2038 year. Searching and filtering will use string ordering rather than time ordering.
flrMinRetention	DateTime[Interval]	The shortest period for which files on an FLR-enabled

		file system can be locked and protected from deletion, the format is: h+:mm:ss[.sss].
flrDefaultRetention	DateTime[Interval]	The default retention period is used in an FLR-enabled file system when a file is locked and a retention period is not specified, the format is: h+:mm:ss[.sss]. The REST get value 40000 for this parameter means infinite days.
flrMaxRetention	DateTime[Interval]	The longest period for which files on an FLR-enabled file system can be locked and protected from deletion, the format is: h+:mm:ss[.sss]. The REST get value 40000 for this parameter means infinite days.
isFlrAutoLockEnabled	Boolean	Users can specify whether to automatically lock files in an FLR-enabled file system, as well as a policy interval for how long to wait after files are modified before the files are automatically locked. When enabled, auto-locked files are set with the default retention period value. This attribute indicates whether automatic lock is enabled on the file system. Values are: • true - automatic lock is enabled on the file system. • false - automatic lock is disabled on the file system.
isFlrAutoDeleteEnabled	Boolean	Users can specify whether to automatically delete locked files from an FLR-enabled file system once their retention periods have expired. This value indicates whether automatic delete is enabled on the file system. Values are: • true - automatic delete is enabled on the file system. • false - automatic delete is disabled on the file system.
flrAutoLockDelay	DateTime[Interval]	Indicates how long to wait after files are modified before the files are automatically locked. The default value is 1 hour.
errorThreshold	unsigned Integer[16][0..99]	When this used space percentage is exceeded, an error severity alert will be triggered on this filesystem. If the threshold value is set as 0, the alert is disabled. The default errorThreshold is 95. The value warningThreshold is between infoThreshold and errorThreshold.
warningThreshold	unsigned Integer[16][0..99]	When this used space percentage is exceeded, a warning severity alert will be triggered on this filesystem. If the threshold value is set as 0, the alert is disabled. The default warningThreshold is 75. The value warningThreshold is between infoThreshold and errorThreshold.
infoThreshold	unsigned Integer[16][0..99]	When this used space percentage is exceeded, an info severity alert will be triggered on this filesystem. If the threshold value is set as 0, the alert is disabled. The default infoThreshold is 0. The value warningThreshold is between infoThreshold and errorThreshold.
isCIFSSyncWritesEnabled	Boolean	(SMB (also known as CIFS) file systems) Indicates whether the synchronous writes option is enabled on the file system. Values are: • true - Synchronous writes option is enabled on the file system. • false - Synchronous writes option is disabled on the file system.
pool	pool	Storage pool in which file system is allocated, as defined by the pool object.
isCIFSOpLocksEnabled	Boolean	(SMB (also known as CIFS) file systems) Indicates whether opportunistic file locking is enabled on the file system. Values are: • true - Opportunistic file locking is enabled on the file system. • false - Opportunistic file locking is disabled on the file system.
nasServer	nasServer	NAS server that provides network connectivity to the file system from the hosts.
isCIFSNotifyOnWriteEnabled	Boolean	(SMB (also known as CIFS) file systems) Indicates whether notifications on file writes are enabled on the file system. Values are: • true - Notifications on file writes are enabled on the file system. • false - Notifications on file writes are disabled on the file system.
isCIFSNotifyOnAccessEnabled	Boolean	(SMB (also known as CIFS) file systems) Indicates whether notifications on file access are enabled on the file system. Values are: • true - Notifications on file access are enabled on the file system. • false - Notifications on file access are disabled on the file system.
cifsNotifyOnChangeDirDepth	unsigned Integer[32][1..512]	(SMB (also known as CIFS) file systems) Lowest directory level to which the enabled notifications apply, if any.
tieringPolicy	TieringPolicyEnum	(Applies if a FAST VP license is installed.) FAST VP tiering policy for the file system.
supportedProtocols	FSSupportedProtocolEnum	Protocols supported by the file system.
metadataSize	unsigned Integer[64(bytes)]	Size of file system metadata.
metadataSizeAllocated	unsigned Integer[64(bytes)]	Size of pool space allocated for file system metadata.
perTierSizeUsed	List<Integer>[64(bytes)]	Sizes of space allocations by the file system on the tiers of multi-tier storage pool. This list will have the same length as the tiers list on this file system's pool, and the entries will correspond to those tiers. Multi-tier storage pools can be created on a system with the FAST VP license installed.
snapsSize	unsigned Integer[64(bytes)]	Size of space used by file system snapshots.

snapsSizeAllocated	unsigned Integer[64(bytes)]	Size of pool space allocated for file system snapshots.
snapCount	unsigned Integer[32]	Number of file system snapshots.
isSMBCA	Boolean	Indicates whether or not SMB 3.0 is enabled. Values are: • true - SMB 3.0 is enabled. • false - SMB 3.0 is disabled.
accessPolicy	AccessPolicyEnum	Access policies which are supported by file system.
folderRenamePolicy	FSRenamePolicyEnum	Rename policies which are supported by file system. These policy choices control whether directory can be renamed from NFS or SMB clients if at least one file is opened in the directory or in one of its children directory.
lockingPolicy	FSLockingPolicyEnum	Locking policies which are supported by file system. These policy choices control whether the NFSv4 range locks must be honored. Because NFSv3 is advisory by design, this policy allows specifying whether the NFSv4 locking feature behaves like NFSv3 in order to be backward compatibilty with applications expecting an advisory locking scheme.
format	FSFormatEnum	File system format.
hostIOSize	HostIOSizeEnum	Typical write I/O size from the host to the file system.
poolFullPolicy	ResourcePoolFullPolicyEnum	File system behavior to follow when pool is full and a write to this filesystem is attempted.
fileEventSettings	fileEventSettings	Indicates whether File Event Service is enabled for some protocols on the filesystem.
ioLimitPolicy	ioLimitPolicy	IO limit policy that applies to the filesystem, as defined by the ioLimitPolicy resource type.
cifsShare	List<cifsShare>	The cifsShares associated with the filesystem.
nfsShare	List<nfsShare>	The nfsShares associated with the filesystem.

Query all members of the filesystem collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/filesystem/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the filesystem collection.

Query a specific filesystem instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/filesystem/<id> where <id> is the unique identifier of the filesystem instance to query. Or GET /api/instances/filesystem/name:<value> where <value> is the name of the filesystem instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific filesystem instance.

fsnPort

(Applies if link aggregation is supported.) In a GUI it is available on General Settings - 'Link aggregation & FSN' page.

Fail-Safe Network (FSN) is a high-availability feature that extends link failover into the network by providing a switch-level redundancy. An FSN appears as a single link with a single MAC address and potentially multiple IP addresses. An FSN can be built from Ethernet Ports and non-FSN link aggregations, or combination of them. Only one connection in an FSN is active at a time. Port with active connection is the Active Port. Unity always uses the primary connection, if available. Port with primary connection is the Primary Port. If the primary connection fails, Unity automatically switches to one of the standby connections. When the primary connection is available again, an FSN automatically switches back to the primary connection.

Note: If you want to include either Ethernet Ports or link aggregations in an FSN Port, configure them before creating an FSN.

Note: You can aggregate only Ethernet Ports and link aggregations with the same MTU size and not included in another FSN Port.

Note: You can not add an Ethernet Port to FSN if there are iSCSI portals on it.

The features of an FSN Port are as follows:

- FSN component devices do not have to be the same device type. A single FSN Port can include Fast Ethernet devices or link aggregations, or a combination of these types, all on the same Unity.
- There can be a maximum of four devices in a FSN.
- Only one component device of an FSN Port is active at a time.
- If all the connections in FSN Port fail, the link is down.

The Unisphere online Help provides more details on FSN configuring.

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete ,RecommendForInterface

Attributes

Attribute	Type	Description
id	String	Unique identifier of an fsnPort instance.
name	String	Name for an fsnPort. This name contains a name of parentStorageProcessor. For example, "SP A FSN Port 0 1".
shortName	String	Short name for an fsnPort. This name doesn't contains a name of parentStorageProcessor and it's short form of name of fsnPort

		object. For example, "FSN Port 0 1".
activePort	ipPort	Active Port of an fsnPort. Active Port is port with active connection. Read-only field.
primaryPort	ipPort	Primary Port of a fail-safe network connection. Only one port of an FSN is active at a time, and this Primary Port will be active whenever it is operating correctly. The Primary Port is required to create an fsnPort, and it will be the Primary Port for the lifetime of the fsnPort. The fsnPort's MAC address will be the same as the Primary Port's MAC address.
secondaryPorts	List<ipPort>	List of secondary ports (Ethernet Ports and / or Link Aggregations), one of which will be activated during any failure of the primary port.
mtuSize	unsigned Integer[32(bytes)]	Maximum transmission unit (MTU) packet size for the linked ports, in bytes.
minMtuSize	unsigned Integer[32(bytes)]	Minimum configurable limit on Maximum transmission unit (MTU) packet size for the linked ports, in bytes.
maxMtuSize	unsigned Integer[32(bytes)]	Maximum configurable limit on Maximum transmission unit (MTU) packet size for the linked ports, in bytes.
supportedMtus	List<Integer>[32(bytes)]	List of MTU sizes supported by an fsnPort. **Deprecated:** This attribute is obsolete and will be removed in a future release.
macAddress	String	MAC address of an fsnPort.
isLinkUp	Boolean	Indicates whether an fsnPort has a link.
health	health	Health information for an fsnPort, as defined by the health resource type.
storageProcessor	storageProcessor	SP on which the FSN Port resides, as defined by the storageProcessor resource type.

Query all members of the fsnPort collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/fsnPort/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the fsnPort collection.

Query a specific fsnPort instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/fsnPort/<id> where <id> is the unique identifier of the fsnPort instance to query. Or GET /api/instances/fsnPort/name:<value> where <value> is the name of the fsnPort instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific fsnPort instance.

Create operation

Create an fsnPort.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fsnPort/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
primaryPort	in	ipPort	Required	Primary Port to create an fsnPort. Primary Port will be active whenever an fsnPort is operating correctly.
secondaryPorts	in	List<ipPort>	Required	List of secondary ports (Ethernet Ports / Link Aggregations) to be aggregated.
mtuSize	in	unsigned Integer[32(bytes)] [1280..9216]	Optional	MTU size value for an fsnPort. If you want to support jumbo frames, use 9000 as the MTU size value. If not specified, MTU size of the Primary Port is used.
id	out	fsnPort	N/A	New fsnPort instance.
peerId	out	fsnPort	N/A	Peer fsnPort instance.

Modify operation

Modify an fsnPort.

Header	Accept: application/json

	Content-Type: application/json
Method and URI	POST /api/instances/fsnPort/<id>/action/modify where <id> is the unique identifier of the fsnPort instance. Or POST /api/instances/fsnPort/name:<value>/action/modify where <value> is the name of the fsnPort instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
mtuSize	in	unsigned Integer[32(bytes)] [1280..9216]	Optional	New MTU size value for an fsnPort. If you want to support jumbo frames, use 9000 as the MTU size value.
addPorts	in	List<ipPort>	Optional	List of IpPorts (Ethernet Ports / Link Aggregations) to add to an fsnPort.
removePorts	in	List<ipPort>	Optional	List of IpPorts (Ethernet Ports / Link Aggregations) to remove from an fsnPort. Primary Port can not be removed.

Delete operation

Delete an fsnPort. When fsnPort is deleted, all File Interfaces will be assigned to the Primary Port.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/fsnPort/<id> where <id> is the unique identifier of the fsnPort instance to delete. Or DELETE /api/instances/fsnPort/name:<value> where <value> is the name of the fsnPort instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

RecommendForInterface operation

Recommend appropriate fsnPorts for creation of network interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/fsnPort/action/recommendForInterface
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the RecommendForInterface operation

Argument	In/ out	Type	Required?	Description
storageProcessor	in	storageProcessor	Required	SP on which to recommend fsnPorts.
recommendations	out	List<fsnPort>	N/A	List of identifiers for the recommended fsnPorts.

ftpServer

Information about the File Transfer Protocol (FTP) and Secure File Transfer Protocol (SFTP) servers of a NAS server.

You can configure one FTP server and one SFTP server per NAS server. File Transfer Protocol (FTP) is a standard network protocol used to transfer files from one host to another host over a TCP-based network, such as the Internet. For secure transmission that encrypts the username, password, and content, FTP is secured with SSH (SFTP).

You can activate an FTP server and SFTP server independently on each NAS server. The FTP and SFTP clients are authenticated using credentials defined on a Unix name server (such as an NIS server or a LDAP server) or a Windows domain. Windows user names need to be entered using the 'username@domain' or 'domain\\username' formats. Each FTP and SFTP must have a home directory defined in the name server that must be accessible on the NAS server. FTP allows also clients to connect as anonymous users.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ftpServer instance.
nasServer	nasServer	NAS server that is configured with the FTP server.
isFtpEnabled	Boolean	Indicates whether the FTP server is enabled on the NAS server specified in the nasServer attribute. Values are: • true - FTP server is enabled on the specified NAS server. • false - FTP server is disabled on the specified NAS server.
isSftpEnabled	Boolean	Indicates whether the SFTP server is enabled on the NAS server specified in the nasServer attribute. Values are:

		• true - SFTP server is enabled on the specified NAS server. • false - SFTP server is disabled on the specified NAS server.
isCifsUserEnabled	Boolean	Indicates whether FTP and SFTP clients can be authenticated using a CIFS user name. These user names are defined in a Windows domain controller, and their formats are user@domain or domain\\user. Values are: • true - CIFS user names are accepted for authentication. • false - CIFS user names are not accepted for authentication.
isUnixUserEnabled	Boolean	Indicates whether FTP and SFTP clients can be authenticated using a Unix user name. Unix user names are defined in LDAP or NIS servers. Values are: • true - Unix user names are accepted for authentication. • false - Unix user names are not accepted for authentication.
isAnonymousUserEnabled	Boolean	Indicates whether FTP clients can be authenticated anonymously. Values are: • true - Anonymous user name is accepted. • false - Anonymous user name is not accepted.
isHomedirLimitEnabled	Boolean	Indicates whether an FTP or SFTP user's area is limited to his or her home directory.. For information about CIFS home directories, see *Using a VNXe3200 System with CIFS File Systems*, which is available on the Dell Online Support website. Values are: • true - An FTP or SFTP user can access his or her own home directory only. • false - FTP and SFTP users can access any NAS server directory, according to NAS server permissions.
defaultHomedir	String	(Applies when the value of isHomedirLimitEnabled is false.) Default directory of FTP and SFTP clients who have a home directory that is not defined or accessible. This parameter is an absolute path relative to the root of the NAS server.
welcomeMsg	String	Welcome message displayed on the console of FTP and SFTP clients before their authentication. The length of this message is limited to 511 bytes, and the length of each line is limited to 80 bytes.
motd	String	Message of the day displayed on the console of FTP clients after their authentication. The length of this message is limited to 511 bytes, and the length of each line is limited to 80 bytes.
isAuditEnabled	Boolean	Indicates whether the activity of FTP and SFTP clients is tracked in audit files. Values are: • true - FTP/SFTP activity is tracked. • false - FTP/SFTP activity is not tracked.
auditDir	String	(Applies when the value of isAuditEnabled is true.) Directory of FTP/SFTP audit files. This parameter is an absolute path relative to the root of the NAS server.
auditMaxSize	unsigned Integer[64(bytes)]	(Applies when the value of isAuditEnabled is true.) Maximum size of FTP/SFTP audit files.
hostsList	List<String>	Allowed or denied hosts, depending on the value of the isAllowHost attribute. A host is defined using its IP address. Subnets using CIDR notation are also supported. • If allowed hosts exist, only those hosts and no others can connect to the NAS server through FTP or SFTP. • If denied hosts exist, they always have access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to NAS server access through FTP or SFTP based on the host IP.
usersList	List<String>	Allowed or denied users, depending on the value of the isAllowUser attribute. • If allowed users exist, only those users and no others can connect to the NAS server through FTP or SFTP. • If denied users exist, they have always access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to the NAS server access through FTP or SFTP based on the user name.
groupsList	List<String>	Allowed or denied user groups, depending on the value of the isAllowGroup attribute. • If allowed groups exist, only users who are members of these groups and no others can connect to the NAS server through FTP or SFTP. • If denied groups exist, all users who are members of those groups have always access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to the NAS server access through FTP or SFTP based on the user group.
isAllowHost	Boolean	Indicates whether the hostsList attribute contains allowed or denied hosts. Values are: • true - hostsList contains allowed hosts. • false - hostsList contains denied hosts.
isAllowUser	Boolean	Indicates whether the usersList attribute contains allowed or denied users. Values are: • true - usersList contains allowed users. • false - usersList contains denied users.
isAllowGroup	Boolean	Indicates whether the groupsList attribute contains allowed or denied user groups. Values are: • true - groupsList contains allowed user groups. • false - groupsList contains denied user groups.

Query all members of the ftpServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	

	GET /api/types/ftpServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ftpServer collection.

Query a specific ftpServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ftpServer/<id> where <id> is the unique identifier of the ftpServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ftpServer instance.

Create operation

Create an ftpServer instance.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/ftpServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	NAS server associated with the FTP or SFTP server.
isFtpEnabled	in	Boolean	Optional	Indicates whether the FTP server is enabled on the NAS server specified in the nasServer attribute. Values are: • true - FTP server is enabled on the specified NAS server. • false - FTP server is disabled on the specified NAS server.
isSftpEnabled	in	Boolean	Optional	Indicates whether the SFTP server is enabled on the NAS server specified in the nasServer attribute. Values are: • true - SFTP server is enabled on the specified NAS server. • false - SFTP server is disabled on the specified NAS server.
isCifsUserEnabled	in	Boolean	Optional	Indicates whether FTP and SFTP clients can be authenticated using a CIFS user name. These user names are defined in a Windows domain controller, and their formats are user@domain or domain\\user. Values are: • true - CIFS user names are accepted for authentication. • false - CIFS user names are not accepted for authentication.
isUnixUserEnabled	in	Boolean	Optional	Indicates whether FTP and SFTP clients can be authenticated using a Unix user name. Unix user names are defined in LDAP or NIS servers. Values are: • true - Unix user names are accepted for authentication. • false - Unix user names are not accepted for authentication.
isAnonymousUserEnabled	in	Boolean	Optional	Indicates whether FTP clients can be authenticated anonymously. Values are: • true - Anonymous user name is accepted. • false - Anonymous user name is not accepted.
isHomedirLimitEnabled	in	Boolean	Optional	Indicates whether an FTP or SFTP user's area is limited to his or her home directory. Values are: • true - An FTP or SFTP user can access his or her own home directory only. • false - FTP and SFTP users can access any NAS server directory, according to NAS server permissions.
defaultHomedir	in	String[1..1023]	Optional	(Applies when the value of isHomedirLimitEnabled is false.) Default directory of FTP and SFTP clients who have a home directory that is not defined or accessible.
welcomeMsg	in	String[..511]	Optional	Welcome message displayed on the console of FTP and SFTP clients before their authentication.
motd	in	String[..511]	Optional	Message of the day displayed on the console of FTP clients after their authentication.
isAuditEnabled	in	Boolean	Optional	Indicates whether the activity of FTP and SFTP clients is tracked in audit files. Values are: • true - FTP/SFTP activity is tracked. • false - FTP/SFTP activity is not tracked.

auditDir	in	String[1..1023]	Optional	(Applies when the value of isAuditEnabled is true.) Directory of FTP/SFTP audit files. This parameter is an absolute path relative to the root of the NAS server.
auditMaxSize	in	unsigned Integer[64(bytes)] [8192..1073741824]	Optional	(Applies when the value of isAuditEnabled is true.) Maximum size of FTP/SFTP audit files.
hostsList	in	List<String>	Optional	Allowed or denied hosts, depending on the value of the isAllowHost attribute. A host is defined using its IP address. Subnets using CIDR notation are also supported. • If allowed hosts exist, only those hosts and no others can connect to the NAS server through FTP or SFTP. • If denied hosts exist, they always have access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to NAS server access through FTP or SFTP based on the host IP.
usersList	in	List<String>	Optional	Allowed or denied users, depending on the value of the isAllowUser attribute. • If allowed users exist, only those users and no others can connect to the NAS server through FTP or SFTP. • If denied users exist, they have always access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to the NAS server access through FTP or SFTP based on the user name.
groupsList	in	List<String>	Optional	Allowed or denied user groups, depending on the value of the isAllowGroup attribute. • If allowed groups exist, only users who are members of these groups and no others can connect to the NAS server through FTP or SFTP. • If denied groups exist, all users who are members of those groups have always access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to the NAS server access through FTP or SFTP based on the user group.
isAllowHost	in	Boolean	Optional	Indicates whether the hostList attribute contains allowed or denied hosts.
isAllowUser	in	Boolean	Optional	Indicates whether the usersList attribute contains allowed or denied users.
isAllowGroup	in	Boolean	Optional	Indicates whether the groupsList attribute contains allowed or denied user groups.
id	out	ftpServer	N/A	Unique identifier of the new ftpServer instance.

Delete operation

Delete an ftpServer instance.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/ftpServer/<id> where <id> is the unique identifier of the ftpServer instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
isIgnoreWarnings	in	Boolean	Optional	Ignore warnings related to the deletion process. Values are: • true - Ignore warnings. • false(Default) - Warnings will interrupt the deletion process.

Modify operation

Modify an ftpServer instance.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ftpServer/<id>/action/modify where <id> is the unique identifier of the ftpServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isFtpEnabled	in	Boolean	Optional	Indicates whether the FTP server is enabled. Values are: • true - FTP server is enabled. • false - FTP server is disabled.
isSftpEnabled	in	Boolean	Optional	Indicates whether the SFTP server is enabled.

				Values are: • true - SFTP server is enabled. • false - SFTP server is disabled.
isCifsUserEnabled	in	Boolean	Optional	Indicates whether FTP and SFTP clients can be authenticated using a CIFS user name. These user names are defined in a Windows domain controller and their formats are user@domain or domain\\user. Values are: • true - CIFS user names are accepted for authentication. • false - CIFS user names are not accepted for authentication.
isUnixUserEnabled	in	Boolean	Optional	Indicates whether FTP and SFTP clients can be authenticated using a Unix user name. Unix user names are defined in LDAP or NIS servers. Values are: • true - Unix user names are accepted for authentication. • false - Unix user names are not accepted for authentication.
isAnonymousUserEnabled	in	Boolean	Optional	Indicates whether FTP clients can be authenticated anonymously. Values are: • true - Anonymous user name is accepted. • false - Anonymous user name is not accepted.
isHomedirLimitEnabled	in	Boolean	Optional	Indicates whether an FTP or SFTP user's area is limited to his or her home directory. Values are: • true - An FTP or SFTP user can access his or her own home directory only. • false - FTP and SFTP users can access any NAS server directory, according to NAS server permissions.
defaultHomedir	in	String[1..1023]	Optional	(Applies when the value of isHomedirLimitEnabled is false.) Default directory of FTP and SFTP clients who have a home directory that is not defined or accessible.
welcomeMsg	in	String[..511]	Optional	Welcome message displayed on the console of FTP and SFTP clients before their authentication.
motd	in	String[..511]	Optional	Message of the day displayed on the console of FTP clients after their authentication.
isAuditEnabled	in	Boolean	Optional	Indicates whether the activity of FTP and SFTP clients is tracked in audit files. Values are: • true - FTP/SFTP activity is tracked. • false - FTP/SFTP activity is not tracked.
auditDir	in	String[1..1023]	Optional	(Applies when the value of isAuditEnabled is true.) Directory of FTP/SFTP audit files. This parameter is an absolute path relative to the root of the NAS server.
auditMaxSize	in	unsigned Integer[64(bytes)] [8192..1073741824]	Optional	(Applies when the value of isAuditEnabled is true.) Maximum size of FTP/SFTP audit files.
hostsList	in	List<String>	Optional	Allowed or denied hosts, depending on the value of the isAllowHost attribute. A host is defined using its IP address. Subnets using CIDR notation are also supported. • If allowed hosts exist, only those hosts and no others can connect to the NAS server through FTP or SFTP. • If denied hosts exist, they always have access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to NAS server access through FTP or SFTP based on the host IP.
usersList	in	List<String>	Optional	Allowed or denied users, depending on the value of the isAllowUser attribute. • If allowed users exist, only those users and no others can connect to the NAS server through FTP or SFTP. • If denied users exist, they have always access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to the NAS server access through FTP or SFTP based on the user name.
groupsList	in	List<String>	Optional	Allowed or denied user groups, depending on the value of the isAllowGroup attribute. • If allowed groups exist, only users who are members of these groups and no others can connect to the NAS server through FTP or SFTP. • If denied groups exist, all users who are members of those groups have always access denied to the NAS server through FTP or SFTP. • If the list is empty, there is no restriction to the NAS server access through FTP or SFTP based on the user group.
isAllowHost	in	Boolean	Optional	Indicates whether the hostList attribute contains allowed or denied hosts.
isAllowUser	in	Boolean	Optional	Indicates whether the usersList attribute contains allowed or denied users.
isAllowGroup	in	Boolean	Optional	Indicates whether the groupsList attribute contains allowed or denied user groups.
force	in	Boolean	Optional	Ignore warnings related to the modify process. Values are: • true - Ignore warnings.

				• false(Default) - Warnings will interrupt the modify process.

host

Information about host configuration on a storage system. A host's configuration is the logical connection through which the host or application can access storage resources.

Embedded resource types

hostLunModify

Supported operations

Collection query , Instance query ,Create ,Refresh ,Delete ,Modify ,ModifyHostLUNs

Attributes

Attribute	Type	Description
id	String	Unique identifier of the host instance.
health	health	Health information for the host, as defined by the health resource type.
name	String	Host name: • For an automatically-managed ESXi server through vCenter, this is the display name in the vCenter GUI. • For a manually-created host, this is the host name entered by the user.
description	String	Host description.
type	HostTypeEnum	Type of host configuration.
osType	String	Operating system running on the host.
hostUUID	String	(Applies to VCenter server and ESXi host configurations only.) Universal Unique Identifier (UUID) of the host.
hostPushedUUID	String	(Applies to VCenter server and ESXi host configurations only.) Pushed UUID of the host.
hostPolledUUID	String	(Applies to VCenter server and ESXi host configurations only.) Polled UUID of the host.
lastPollTime	DateTime	(Applies to hosts on ESXi servers only.) Indicates the date and time when the storage array received the host configuration data from the ESXi server.
autoManageType	HostManageEnum	Indicates how the host is managed.
registrationType	HostRegistrationTypeEnum	Indicates how initiators are registered to the host.
hostContainer	hostContainer	(Applies to VCenter server and ESXi host configurations only.) Identifier of the parent host container, as defined by the hostContainer resource type.
fcHostInitiators	List<hostInitiator>	Identifiers of the Fibre Channel initiators associated with the host, as defined by the hostInitiator resource type.
iscsiHostInitiators	List<hostInitiator>	Identifiers of the iSCSI initiators associated with the host, as defined by the hostInitiator resource type.
hostIPPorts	List<hostIPPort>	Identifiers of the network ports associated with the host, as defined by the hostIPPort resource type.
storageResources	List<storageResource>	Identifiers of the storage resources used by the host, as defined by the storageResource resource type.
hostLUNs	List<hostLUN>	(Applies to iSCSI and Fibre Channel host configurations only.) Identifiers of the LUNs accessible by the host, as defined by the hostLUN resource type.
isNfsv4Supported	Boolean	(Applies to VCenter server and ESXi host configurations only.) Flag indicating whether ESXi host supports NFSv4.
nfsUsername	String	(Applies to VCenter server and ESXi host configurations only.) NFS user authentication information configured on the ESXihost. The same username should be configured on the VMware NAS datastore to enable secure NFS access with Kerberos.
tenant	tenant	Information about the tenant to which the host is assigned.
hostGroup	hostGroup	Identifiers of the host group the host belongs to.
datastores	List<datastore>	The datastores associated with the host.
hostVVolDatastore	List<hostVVolDatastore>	The hostVVolDatastores associated with the host.
vms	List<vm>	The vms associated with the host.

Attributes for hostLunModify

Parameters used for modifying the HLU of a Host LUN.

This embedded class type is passed to the ModifyHostLUNs method of the host object.

Attribute	Type	Description
hostLUN	hostLUN	Reference to the hostLUN to be modified.
hlu	unsigned Integer[32]	New host LUN ID (HLU) to be assigned to the LUN.

Query all members of the host collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/host/instances
Request body arguments	None

~~Successful return status~~	~~200 OK~~
Successful response body	JSON representation of all members of the host collection.

Query a specific host instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/host/<id> where <id> is the unique identifier of the host instance to query. Or GET /api/instances/host/name:<value> where <value> is the name of the host instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific host instance.

Create operation

Create a host configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/host/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
type	in	HostTypeEnum	Required	Type of host configuration.
name	in	String[1..255]	Required	Host name. The value must match all of following regex expressions • ^(?!-)[^\x00-\x1F\x7F\x80-\x9F/\"\%]+$
description	in	String[..255]	Optional	Host description.
osType	in	String[..255]	Optional	Operating system running on the host.
tenant	in	tenant	Optional	Tenant with which the host is to be associated.
id	out	host	N/A	Unique identifier of the new host instance.

Refresh operation

(Applies to ESXi host configurations only.) Refresh the retrieval of host configuration information from the ESXi server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/host/<id>/action/refresh where <id> is the unique identifier of the host instance. Or POST /api/instances/host/name:<value>/action/refresh where <value> is the name of the host instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Refresh operation

Argument	In/ out	Type	Required?	Description
doRescan	in	Boolean	Required	Indicates whether to scan the associated hardware when refreshing the ESXi host configuration information. Values are: • true - Rescan associated hardware. This option adds time to the refresh process. • false - Do not rescan associated hardware.

Delete operation

Delete a host configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/host/<id> where <id> is the unique identifier of the host instance to delete. Or DELETE /api/instances/host/name:<value> where <value> is the name of the host instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)

Successful response body	No body content.

Modify operation

Modify a host configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/host/<id>/action/modify where <id> is the unique identifier of the host instance. Or POST /api/instances/host/name:<value>/action/modify where <value> is the name of the host instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..255]	Optional	(Applies to manually-created hosts only.) Host name. The value must match all of following regex expressions • ^(?!-)[^\x00-\x1F\x7F\x80-\x9F/\"\%]+$
description	in	String[..255]	Optional	Host description.
osType	in	String[..255]	Optional	(Applies to manually-created hosts only.) Operating system running on the host.

ModifyHostLUNs operation

Modify the Host LUN Identifier (HLU) of one or more LUNs accessible by the host. The method takes a list of hostLUNs, so that the HLUs of one or more LUNs can be changed at once, even if the old and new HLUs overlap.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/host/<id>/action/modifyHostLUNs where <id> is the unique identifier of the host instance. Or POST /api/instances/host/name:<value>/action/modifyHostLUNs where <value> is the name of the host instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyHostLUNs operation

Argument	In/ out	Type	Required?	Description
hostLunModifyList	in	List<hostLunModify>	Required	List of embedded hostLunModify objects. The embedded object has the required hostLUN details to be updated.

hostContainer

A vCenter or a stand alone ESXi container for managed VMs.
ESXi hosts that are discovered via vCenter are available as host objects.

Embedded resource types

potentialHost, vasaProviderParameters

Supported operations

Collection query , Instance query ,Create ,Discover ,Recommend ,Refresh ,RefreshAll ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique instance id.
lastPollTime	DateTime	Last time rescan was performed.
port	unsigned Integer[32]	Port number.
name	String	Alias.
type	HostContainerTypeEnum	Type of this host container.
address	String	Can be IPv4, IPv6 and host name.
description	String[0..128]	Description.
productName	String	Name of the host container.
productVersion	String	Version of the host container.
health	health	Health information.
hosts	List<host>	Vector of ids of embedded potential hosts.

vasaProviderState	VasaProviderStateEnum	Indicates storage system's VASA vendor provider state on the vCenter.

Attributes for potentialHost

This class is used to hold discovered hosts of a vCenter or ESXi Host.

Attribute	Type	Description
name	String	Display name of the discovered ESXi server
serverName	String	DNS name of ESXi server
description	String	Description of ESXi server
osName	String	OS name of ESXi server
osVersion	String	OS version of ESXi server
uuid	String	Vendor unique identifier of ESXi server
kernelIPs	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Kernel IPs of ESXi server
mgmtIPs	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Management IPs of ESXi server
fcInitiators	List<String>	Fibre channel initiators of ESXi server
iscsiInitiators	List<String>	Iscsi initiators of ESXi server
matchedConditions	List<HostContainerPotentialHostMatchConditionEnum>	How the discovered ESXi hosts match the existing hosts already known to the array
matchedHosts	List<host>	Existing hosts that match the discovered vCenter/ESXi Host
matchedPotentialHostsConditions	List<HostContainerPotentialHostMatchConditionEnum>	How the potential ESXi hosts conflict among themseleves
matchedPotentialHosts	List<String>	The names of the other potential hosts that match this potential host in any way
importOption	HostContainerPotentialHostImportOptionEnum	How ESXi server can be imported

Attributes for vasaProviderParameters

An object represents parameters for VASA provider registration.

Attribute	Type	Description
localUsername	String	Username of the local user account which will be used by vSphere to register VASA provider.
localPassword	String	Password of the local user account which will be used by vSphere to register VASA provider.

Query all members of the hostContainer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostContainer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostContainer collection.

Query a specific hostContainer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostContainer/<id> where <id> is the unique identifier of the hostContainer instance to query. Or GET /api/instances/hostContainer/name:<value> where <value> is the name of the hostContainer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostContainer instance.

Create operation

Create host container.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/hostContainer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
serviceType	in	HostContainerTypeEnum	Required	The type of the host container.
targetName	in	String	Required	Unique name of target returned from discovery.
targetAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Required	ipv4, ipv6 or host name of the vCenter or standalone ESXi server.
username	in	String	Required	Username to connect to the host container.
password	in	String	Required	Pwd to connect to the host container.
description	in	String	Optional	Brief description.
vasaProviderParameters	in	vasaProviderParameters	Optional	VASA provider parameters. If specified, storage system's VASA provider will be registered on vSphere.
potentialHosts	in	List<potentialHost>	Optional	A list of embedded potential host objects to be imported with the host container creation.
id	out	hostContainer	N/A	Uis host container reference.

Discover operation

Discover the esx servers that can be managed by vc to present to the user as candidates for importing.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/hostContainer/<id>/action/discover where <id> is the unique identifier of the hostContainer instance. Or POST /api/instances/hostContainer/name:<value>/action/discover where <value> is the name of the hostContainer instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args)
Successful response body	JSON representation of the returned attributes.

Arguments for the Discover operation

Argument	In/ out	Type	Required?	Description
potentialHosts	out	List<potentialHost>	N/A	A list of host candidates that can be imported.

Recommend operation

Get a list of candidate hosts that can be imported for a VC or an ESXi server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/hostContainer/action/recommend
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args)
Successful response body	JSON representation of the returned attributes.

Arguments for the Recommend operation

Argument	In/ out	Type	Required?	Description
type	out	HostContainerTypeEnum	N/A	The type of the VC/ESXi server.
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Required	The IP address of the VC or ESXi server.
username	in	String	Required	The user name to access VC/ESXi server.

password	in	String	Required	The password to connect to VC or ESXi server.
containerName	out	String	N/A	The name of VC or ESXi server.
containerVersion	out	String	N/A	The software version of VC or ESXi server.
vasaProviderState	out	VasaProviderStateEnum	N/A	Indicates storage system's VASA vendor provider state on the vCenter.
potentialHosts	out	List<potentialHost>	N/A	The list of candidate hosts that can be imported.

Refresh operation

Refresh all the hosts managed by the host container.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/hostContainer/<id>/action/refresh where <id> is the unique identifier of the hostContainer instance. Or POST /api/instances/hostContainer/name:<value>/action/refresh where <value> is the name of the hostContainer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Refresh operation

Argument	In/ out	Type	Required?	Description
doRescan	in	Boolean	Required	Whether a full rescan is requested.

RefreshAll operation

Refresh all known vCenters and ESXi servers.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/hostContainer/action/refreshAll
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the RefreshAll operation

Argument	In/ out	Type	Required?	Description
doRescan	in	Boolean	Required	Whether a full rescan is requested.

Delete operation

Delete a host container.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/hostContainer/<id> where <id> is the unique identifier of the hostContainer instance to delete. Or DELETE /api/instances/hostContainer/name:<value> where <value> is the name of the hostContainer instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify an existing host container.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/hostContainer/<id>/action/modify where <id> is the unique identifier of the hostContainer instance. Or POST /api/instances/hostContainer/name:<value>/action/modify where <value> is the name of the hostContainer instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Modify operation

Argument	In/	Type	Required?	Description

targetAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	The new address of the host container.
description	in	String	Optional	The new description of the host container.
username	in	String	Optional	The new user name to access the host container.
password	in	String	Optional	The new password to access the host container.
vasaProviderParameters	in	vasaProviderParameters	Optional	VASA provider parameters. If specified, storage system's VASA provider will be registered on vSphere.
potentialHosts	in	List<potentialHost>	Optional	A list of new candidate hosts that will be associated with this host container.
newHosts	out	List<host>	N/A	A list of newly imported hosts.

hostGroup

Information about host group on a storage system. A host group contains a set of hosts for quicker attaching/detaching LUNs and customizing Host LUN IDs. It supports attaching all hosts in host group to LUNs by adding LUNs to host group; detaching all hosts in host group from LUNs by removing LUNs from host group; adding hosts to host group to attach to the LUNs in host group; customizing Host LUN IDs.

Embedded resource types

hostGroupHostModify, hostGroupHostParam, hostGroupLunModify, hostGroupLunParam, hostGroupVmwareLunModify, hostGroupVmwareLunParam

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify ,ModifyLuns ,ModifyVmwareLuns

Attributes

Attribute	Type	Description
id	String	Unique identifier of the host group instance.
name	String	Name of the host group.
description	String	Host group description.
type	HostGroupTypeEnum	Host group type.
hosts	List<host>	Hosts associated with this host group.
hostGroupLUNs	List<hostGroupLUN>	Identifiers of the LUNs accessible by the host group, as defined by the hostGroupLUN resource type.
hostGroupVmwareLUNs	List<hostGroupVmwareLUN>	Identifiers of the VMware VMFS datastores accessible by the host group, as defined by the hostGroupVmwareLUNs resource type.
health	health	Health information for the host group, as defined by the health resource type.

Attributes for hostGroupHostModify

The mapping relationship between lun/VMware VMFS datastore and hlu id on a host.

This embedded object is embedded in the hostGroupLunParam/hostGroupVmwareLunParam embedded type.

Attribute	Type	Description
host	host	Reference to the host to grant production access to the LUN.
hlu	unsigned Integer[16]	Optional host LUN Identifier (HLU) for the host storage. If not specified, and the host does not have production access for the LUN/VMware VMFS datastore, and corresponding hostGroupLUN has no defaultHlu, then system will generate a host LUN ID for it.

Attributes for hostGroupHostParam

Information about the luns/VMware VMFS datastore accessed by the host.

This embedded object is passed to the modify method of hostGroup.

Attribute	Type	Description
host	host	Reference to the host to be added to host group or the host in host group to be updated.
accessMergeType	HostGroupAccessMergeTypeEnum	An optional HostGroupAccessMergeTypeEnum to specify how the host access is going to be updated when the host is added/modified in host group. If not specified, it is by default MergeFromHostGroup when used in addHostGroupHostParams in hostGroup.modify method, and by default Customized when used in modifyHostGroupHostParams in hostGroup.modify method.
hostGroupLunModifys	List<hostGroupLunModify>	An optional list of embedded hostGroupLunModify object, only valid when accessMergeType property is Customized. The embedded object specifies the LUN for the host to grant production access, and host LUN IDs to be updated for the host. The host access to the LUNs that not in this list will keep unchanged.
hostGroupVmwareLunModifys	List<hostGroupVmwareLunModify>	An optional list of embedded hostGroupVmwareLunModify object, only valid when accessMergeType property is Customized. The embedded object specifies the VMware VMFS datastore for the host to grant production access, and host LUN IDs to be updated for the host.

Attributes for hostGroupLunModify

The mapping relationship between lun and hlu id on a host.

This embedded object is embedded in the hostGroupHostParam embedded type.

Attribute	Type	Description
lun	lun	Reference to the lun that the host will grant production access to it.
hlu	unsigned Integer[16]	Optional host LUN Identifier (HLU) for the host storage. If not specified, and the host does not have production access for the LUN, and corresponding hostGroupLUN has no defaultHlu, then system will generate a host LUN ID for it.

Attributes for hostGroupLunParam

Information about the hosts access the lun.

This embedded object is passed to the create and modifyLuns method of hostGroup.

- It is not allowed to specify host that is not in the host group in hostGroupHostModifys property.
- If the hlu property is not specified and this embedded object is used in addHostGroupLunParams parameter of hostGroup.modifyLuns, or hostGroupLunParams parameter of hostGroup.create:
  - If the hostGroupHostModifys property is absent or it is an empty list, the LUN specified by lun property will be modified to be accessible by all hosts in the host group.
  - For the hosts that is in the host group, but not appear in the hostGroupHostModifys property, the LUN will be modified to be accessible by these hosts.
  - For the hosts that is in the host group and listed in the hostGroupHostModifys property, the LUN will be updated according to these embedded hostGroupHostModify objects.
- If the hlu property is not specified and this embedded object is used in modifyHostGroupLunParams parameter of hostGroup.modifyLuns:
  - If the hostGroupHostModifys property is absent or it is an empty list, the LUN specified by lun property will keep unchanged.
  - For the hosts that is in the host group, but not appear in the hostGroupHostModifys property, the host access to the LUN will keep unchanged.
  - For the hosts that is in the host group and listed in the hostGroupHostModifys property, the LUN will be updated according to these embedded hostGroupHostModify objects.

Attribute	Type	Description
lun	lun	Reference to the lun to be added to the host group or the lun that the host access for it to be updated.
hlu	unsigned Integer[16]	An optional host LUN ID to be set to all hosts in the host group. If specified, then all hosts in the host group will grant production access for this LUN with this host LUN ID, and the hostGroupHostModifys property will be ignored.
hostGroupHostModifys	List<hostGroupHostModify>	An optional list of embedded hostGroupHostModify object to customize host LUN ID for each host. It is not allowed to specify host that is not in the host group.

Attributes for hostGroupVmwareLunModify

The mapping relationship between VMware VMFS datastore and hlu id on a host.

This embedded object is embedded in the hostGroupHostParam embedded type.

Attribute	Type	Description
storageResource	storageResource	Reference to the VMware VMFS datastore that the host will grant production access to it.
hlu	unsigned Integer[16]	Optional host lun Identifier (HLU) for the host storage. If not specified, and the host does not have production access for the VMware VMFS datastore, and corresponding hostGroupVmwareLun has no defaultHlu, then system will generate a host lun ID for it.

Attributes for hostGroupVmwareLunParam

Information about the hosts access the VMware VMFS datastore.

This embedded object is passed to the create and modifyVmwareLuns method of hostGroup.

- It is not allowed to specify host that is not in the host group in hostGroupHostModifys property.
- If the hlu property is not specified and this embedded object is used in addHostGroupVmwareLunParams parameter of hostGroup.modifyVmwareLuns, or hostGroupVmwareLunParams parameter of hostGroup.create:
  - If the hostGroupHostModifys property is absent or it is an empty list, the VMware VMFS datastore specified by storageResource property will be modified to be accessible by all hosts in the host group.
  - For the hosts that is in the host group, but not appear in the hostGroupHostModifys property, the VMware VMFS datastore will be modified to be accessible by these hosts.
  - For the hosts that is in the host group and listed in the hostGroupHostModifys property, the VMware VMFS datastore will be updated according to these embedded hostGroupHostModify objects.
- If the hlu property is not specified and this embedded object is used in modifyHostGroupVmwareLunParams parameter of hostGroup.modifyVmwareLuns:
  - If the hostGroupHostModifys property is absent or it is an empty list, the VMware VMFS datastore specified by storageResource property will keep unchanged.
  - For the hosts that is in the host group, but not appear in the hostGroupHostModifys property, the host access to the VMware VMFS datastore will keep unchanged.
  - For the hosts that is in the host group and listed in the hostGroupHostModifys property, the VMware VMFS datastore will be updated according to these embedded hostGroupHostModify objects.

Attribute	Type	Description
storageResource	storageResource	Reference to the VMware VMFS datastore to be added to the host group or the VMware VMFS datastore that the host access for it to be updated.
hlu	unsigned Integer[16]	An optional host LUN ID to be set to all hosts in the host group. If specified, then all hosts in the host group will grant production access for this VMware VMFS datastore with this host LUN ID, and the hostGroupHostModifys property will be ignored.
hostGroupHostModifys	List<hostGroupHostModify>	An optional list of embedded hostGroupHostModify object to customize host LUN ID for each host. It is not allowed to specify host that is not in the host group.

Query all members of the hostGroup collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostGroup/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostGroup collection.

Query a specific hostGroup instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostGroup/<id>

	where <id> is the unique identifier of the hostGroup instance to query. Or GET /api/instances/hostGroup/name:<value> where <value> is the name of the hostGroup instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostGroup instance.

Create operation

Create a host group.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/hostGroup/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..255]	Required	Host group name. The value must match all of following regex expressions • ^(?!-)[^\x00-\x1F\x7F\x80-\x9F/\"\%]+$
description	in	String[..255]	Optional	Host group description.
type	in	HostGroupTypeEnum	Optional	Host gorup type. Default value is General.
hosts	in	List<host>	Required	List of hosts to be added to the host group.
hostGroupLunParams	in	List<hostGroupLunParam>	Optional	List of embedded hostGroupLunParam objects. The embedded object specifies the LUN to be added to the host group and optional host LUN ID.
hostGroupVmwareLunParams	in	List<hostGroupVmwareLunParam>	Optional	List of embedded hostGroupVmwareLunParam objects. The embedded object specifies the VMware VMFS datastore to be added to the host group and optional host LUN ID.
id	out	hostGroup	N/A	Unique identifier of the new host group instance.

Delete operation

Delete a host group. All hosts in this host group will be removed from this host group, but these hosts will not be deleted and they will keep their current access to LUNs.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/hostGroup/<id> where <id> is the unique identifier of the hostGroup instance to delete. Or DELETE /api/instances/hostGroup/name:<value> where <value> is the name of the hostGroup instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a host group.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/hostGroup/<id>/action/modify where <id> is the unique identifier of the hostGroup instance. Or POST /api/instances/hostGroup/name:<value>/action/modify where <value> is the name of the hostGroup instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/	Type	Required?	Description

	out			
name	in	String[1..255]	Optional	Host group name. The value must match all of following regex expressions • ^(?!-)[^\x00-\x1F\x7F\x80-\x9F/\"%]+$
description	in	String[..255]	Optional	Host group description.
addHostGroupHostParams	in	List<hostGroupHostParam>	Optional	List of embedded hostGroupHostParam objects. The embedded object specifies host to be added to the host group and its access to LUNs and optional host LUN IDs for these LUNs.
modifyHostGroupHostParams	in	List<hostGroupHostParam>	Optional	List of embedded hostGroupHostParam objects. The embedded object specifies host to be modified with its access to LUNs and optional host LUN IDs for these LUNs.
removeHosts	in	List<host>	Optional	Hosts to be removed from this host group. After removed the hosts from host group, the hosts will keep their current access to LUNs.

ModifyLuns operation

Modify the luns in the host group.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/hostGroup/<id>/action/modifyLuns where <id> is the unique identifier of the hostGroup instance. Or POST /api/instances/hostGroup/name:<value>/action/modifyLuns where <value> is the name of the hostGroup instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyLuns operation

Argument	**In/ out**	**Type**	**Required?**	**Description**
addHostGroupLunParams	in	List<hostGroupLunParam>	Optional	List of embedded hostGroupLunParam objects. The embedded object specifies the LUN to be added to the host group and and optional host LUN ID.
modifyHostGroupLunParams	in	List<hostGroupLunParam>	Optional	List of embedded hostGroupLunParam objects. The embedded object specifies the LUN to be modified in the host group and optional host LUN ID.
removeLuns	in	List<lun>	Optional	Luns to be removed from this host group. After removed the LUNs from host group, all hosts in this host group will have no production access to the removed LUNs. The LUNs are not deleted from the storage system when it is removed from host group.

ModifyVmwareLuns operation

Modify the VMware VMFS datastores in the host group.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/hostGroup/<id>/action/modifyVmwareLuns where <id> is the unique identifier of the hostGroup instance. Or POST /api/instances/hostGroup/name:<value>/action/modifyVmwareLuns where <value> is the name of the hostGroup instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyVmwareLuns operation

Argument	**In/ out**	**Type**	**Required?**	**Description**
addHostGroupVmwareLunParams	in	List<hostGroupVmwareLunParam>	Optional	List of embedded hostGroupVmwareLunParam objects. The embedded object specifies the VMware VMFS datastore to be added to the host group and and optional host LUN ID.
modifyHostGroupVmwareLunParams	in	List<hostGroupVmwareLunParam>	Optional	List of embedded hostGroupVmwareLunParam objects. The embedded object specifies the VMware VMFS datastore to be modified in the host group

				and optional host LUN ID.
removeVmwareLuns	in	List<storageResource>	Optional	VMware VMFS datastores to be removed from this host group. After removed the VMware VMFS datastores from host group, all hosts in this host group will have no production access to the removed VMware VMFS datastores. The VMware VMFS datastores are not deleted from the storage system when it is removed from host group.

hostGroupLUN

Information about the LUNs to which a host group has access.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the hostGroupLUN instance.
hostGroup	hostGroup	Information about the host group that has access to the LUN, as defined by the host resource type.
hostCountForLunAccess	unsigned Integer[32]	Number of hosts that have access to the LUN.
hostCountForNoLunAccess	unsigned Integer[32]	Number of hosts that have no access to the LUN.
lun	lun	LUN, as defined by the lun resource type.
defaultHlu	unsigned Integer[16]	The default Host LUN ID to be assigned to host when a host that has no access to this LUN is added to the host group.

Query all members of the hostGroupLUN collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostGroupLUN/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostGroupLUN collection.

Query a specific hostGroupLUN instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostGroupLUN/<id> where <id> is the unique identifier of the hostGroupLUN instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostGroupLUN instance.

hostGroupVmwareLUN

Information about the VMware VMFS datastores to which a host group has access.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the hostGroupVmwareLUN instance.
hostGroup	hostGroup	Information about the host group that has access to the VMware VMFS datastore, as defined by the host resource type.
hostCountForVmwareLunAccess	unsigned Integer[32]	Number of hosts that have access to the VMware VMFS datastore.
hostCountForNoVmwareLunAccess	unsigned Integer[32]	Number of hosts that have no access to the VMware VMFS datastore.
storageResource	storageResource	VMware VMFS datastore, as defined by the storageResource type.
defaultHlu	unsigned Integer[16]	The default Host LUN ID to be assigned to host when a host that has no access to this VMware VMFS datastore is added to the host group.

Query all members of the hostGroupVmwareLUN collection

Header	Accept: application/json Content-Type: application/json
Method and URI	

	GET /api/types/hostGroupVmwareLUN/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostGroupVmwareLUN collection.

Query a specific hostGroupVmwareLUN instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostGroupVmwareLUN/<id> where <id> is the unique identifier of the hostGroupVmwareLUN instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostGroupVmwareLUN instance.

hostIPPort

Information about the host's IP settings.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the hostIPPort instance.
name	String	Port name.
type	HostPortTypeEnum	IP address type.
address	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	IP address or network name of the port.
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	(Applies to IPV4 only.) Subnet mask for the IP address, if any.
v6PrefixLength	unsigned Integer[32]	(Applies to IPV6 only.) Subnet mask length.
isIgnored	Boolean	(Applies to NFS access only.) Indicates whether the port should be ignored when storage access is granted to the host. Values are: • true - Ignore the port when granting storage access to the host. • false - Include the port when granting storage access to the host.
host	host	Identifier of the associated host, as defined by the host resource type.

Query all members of the hostIPPort collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostIPPort/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostIPPort collection.

Query a specific hostIPPort instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostIPPort/<id> where <id> is the unique identifier of the hostIPPort instance to query. Or GET /api/instances/hostIPPort/name:<value> where <value> is the name of the hostIPPort instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostIPPort instance.

Create operation

Create a host IP port.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/hostIPPort/instances

Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
host	in	host	Required	Identifier of the associated host.
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: true	Required	IP address, network name, or netgroup name of the port.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	Subnet mask for the IP address, if any.
v6PrefixLength	in	unsigned Integer[32(bits)] [0..128]	Optional	Prefix length for the IP (IPv6) address, if any. Not applicable to IPv4.
isIgnored	in	Boolean	Optional	Indicates whether the port should be ignored when storage access is granted to the host. Values are: • true - Ignore the port when granting storage access to the host. • false - Include the port when granting storage access to the host.
id	out	hostIPPort	N/A	New IP port instance, as defined by the hostIPPort resource type.

Delete operation

Delete a host IP port.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/hostIPPort/<id> where <id> is the unique identifier of the hostIPPort instance to delete. Or DELETE /api/instances/hostIPPort/name:<value> where <value> is the name of the hostIPPort instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a host IP port.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/hostIPPort/<id>/action/modify where <id> is the unique identifier of the hostIPPort instance. Or POST /api/instances/hostIPPort/name:<value>/action/modify where <value> is the name of the hostIPPort instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	IP address, network name, or netgroup name of the port.

netmask	in	String	Optional	Subnet mask for the IP address, if any.
v6PrefixLength	in	unsigned Integer[32(bits)] [0..128]	Optional	Prefix length for the IP (IPv6) address, if any. Not applicable to IPv4.
isIgnored	in	Boolean	Optional	Indicates whether the port should be ignored when storage access is granted to the host. Values are: • true - Ignore the port when granting storage access to the host. • false - Include the port when granting storage access to the host.

hostInitiator

Information about host initiators in the storage system.

After you create a host configuration for controlling host access to storage on the system, you need to create a host initiator for each host configuration that accesses iSCSI or Fibre Channel (FC) storage. The initiator connects the host to the target iSCSI or FC node on the system.

Initiator-based registration allows you to register the initiator to a host without having to manage individual paths. By default, when an initiator is registered to a host, all of its paths, including those specified after the registration takes place, are automatically granted access to any storage provisioned for the host.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the hostInitiator instance.
health	health	Health information for the host initiator, as defined by the health resource type.
type	HostInitiatorTypeEnum	Host initiator type.
initiatorId	String	Host initiator name: • For an iSCSI initiator, this is the iSCSI Qualified Name (IQN). • For an FC initiator, this is the Worldwide Name (WWN).
parentHost	host	Information about the host to which the host initiator is assigned, as defined by the host resource type.
isIgnored	Boolean	Indicates whether the host initiator should be included when storage access is granted to the host. Values are: • true - Do not include the host initiator when storage is granted to the associated host. • false - Include the host initiator when storage is granted to the associated host.
nodeWWN	String[..128]	(Applies to FC initiators only.) Node Worldwide Name (WWN) of the initiator.
portWWN	String[..128]	(Applies to FC initiators only.) Port Worldwide Name (WWN) of the initiator.
chapUserName	String	(Applies to iSCSI initiators only.) CHAP user name. By default, this is the host initiator's iSCSI Qualified Name (IQN).
isChapSecretEnabled	Boolean	(Applies to iSCSI initiators only.) Indicates whether CHAP authentication is enabled for the host initiator. Values are: • true - CHAP authentication is enabled. • false - CHAP authentication is disabled.
paths	List<hostInitiatorPath>	Host initiator paths, as defined by the hostInitiatorPath resource type.
iscsiType	HostInitiatorIscsiTypeEnum	(Applies to iSCSI initiators only.) iSCSI initiator type.
isBound	Boolean	(Applies to iSCSI initiators only.) Indicates whether the iSCSI initiator is bound to an IP address. This is only applicable to hardware-dependent adapter devices. Values are: • true - iSCSI initiator is bound to an IP address. • false - iSCSI initiator is not bound to an IP address.
initiatorSourceType	HostInitiatorSourceTypeEnum	Initiator source type.
failoverMode	HostInitiatorFailoverModeEnum	Fail-over mode.
isLunZEnabled	Boolean	If lunZ is enabled.
isArraySerialNumber	Boolean	If true, array serial number, otherwise LUN serial number will be used for Unit Serial Number in Vital Product Data Page 0x80 in SCSI-3 interface.
onAllowList	Boolean	If true, the initiator in on the allow list, Otherwise not on the allow list.
onWhiteList	Boolean	If true, the initiator in on the white list, Otherwise not on the white list. **Deprecated:** This attribute is obsolete and will be removed in a future release. Please use onAllowList instead

Query all members of the hostInitiator collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostInitiator/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostInitiator collection.

Query a specific hostInitiator instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostInitiator/<id> where <id> is the unique identifier of the hostInitiator instance to query. Or GET /api/instances/hostInitiator/name:<value> where <value> is the name of the hostInitiator instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostInitiator instance.

Create operation

Create a host initiator.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/hostInitiator/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
host	in	host	Required	Host to which to assign the host initiator, as defined by the host resource type.
initiatorType	in	HostInitiatorTypeEnum	Required	Host initiator type. FC initiators can be created only if the FC protocol is supported on the system and the corresponding license is installed.
initiatorWWNorIqn	in	String	Required	One of the following: • For an iSCSI initiator, the iSCSi Qualified Name (IQN). • For a FC initiator, the Worldwide Name (WWN).
chapUser	in	String	Optional	(Applies to iSCSI initiators only.) CHAP user name. By default, this is the initiator's iSCSI Qualified Name (IQN).
chapSecret	in	String	Optional	(Applies to iSCSI initiators only.) CHAP secret to use to authenticate iSCSI sessions.
chapSecretType	in	CHAPSecretTypeEnum	Optional	(Applies to iSCSI initiators only.) CHAP secret encoding type.
isIgnored	in	Boolean	Optional	Specifies whether to include the host initiator when storage access is granted to the host. Values are: • true - Include the host initiator when storage is granted to the associated host. • false -Do not include the host initiator when storage is granted to the associated host. By default, it is false.
initiatorSourceType	in	HostInitiatorSourceTypeEnum	Optional	Initiator source type. By default, it is Open_Native.
failoverMode	in	HostInitiatorFailoverModeEnum	Optional	Initiator failover mode. By default, it is ALUA_Mode.
isLunZEnabled	in	Boolean	Optional	Specifies if LunZ is enabled. Values are: • true - LunZ is enabled. • false -LunZ is not enabled. By default, it is true.
isArraySerialNumber	in	Boolean	Optional	Specifies if the Unit Serial Number is Array or LUN. Values are: • Array - The Unit Serial Number is Array. • LUN - The Unit Serial Number is LUN. By default, it is Array.
id	out	hostInitiator	N/A	Unique identifier for the new hostInitiator instance.

Delete operation

Delete a host initiator and all of its paths from the host. This removes host access from the initiator to the system. To reuse the initiator, you must use modify method to associate it a host.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/hostInitiator/<id> where <id> is the unique identifier of the hostInitiator instance to delete. Or DELETE /api/instances/hostInitiator/name:<value> where <value> is the name of the hostInitiator instance to delete.
Request body arguments	See the arguments table below.

Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
force	in	Boolean	Optional	Specifies whether to force deletion of this host initiator. If the initiator is stale but the associated host still has lun access, the delete of the initiator will fail, as will deletes of the accessible luns. The force flag will allow the initiator delete to proceed. Ensure that the host is not using the initiator before using the force flag.

Modify operation

Modify host initiator settings. Once an initiator is associated to a host, access to storage devices can be granted to that host through the paths defined on the initiator.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/hostInitiator/<id>/action/modify where <id> is the unique identifier of the hostInitiator instance. Or POST /api/instances/hostInitiator/name:<value>/action/modify where <value> is the name of the hostInitiator instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isIgnored	in	Boolean	Optional	Indicates whether the initiator should be included when storage access is granted to the host. Values are: • true - Include the initiator when storage is granted to the associated host. • false -Do not include the initiator when storage is granted to the associated host.
chapUser	in	String	Optional	(Applies to SCSI initiators only.) CHAP user name. By default, this is the initiator's iSCSI Qualified Name (IQN).
chapSecret	in	String	Optional	(Applies to iSCSI initiators only.) Chap secret used to authenticate iSCSI sessions.
chapSecretType	in	CHAPSecretTypeEnum	Optional	(Applies to iSCSI initiators only.) Chap secret encoding type.
initiatorSourceType	in	HostInitiatorSourceTypeEnum	Optional	Initiator source type.
failoverMode	in	HostInitiatorFailoverModeEnum	Optional	Initiator failover mode.
isLunZEnabled	in	Boolean	Optional	Specifies if LunZ is enabled. Values are: • true - LunZ is enabled. • false -LunZ is not enabled.
isArraySerialNumber	in	Boolean	Optional	Specifies if the Unit Serial Number is Array or LUN. Values are: • Array - The Unit Serial Number is Array. • LUN - The Unit Serial Number is LUN.
host	in	host	Optional	
addToAllowList	in	Boolean	Optional	
addToWhiteList	in	Boolean	Optional	**Deprecated:** This parameter is obsolete and will be removed in a future release. Please use addToAllowList instead

hostInitiatorPath

Information about host initiator paths in the storage system. Each initiator can be associated with multiple initiator paths.

Supported operations

Collection query , Instance query ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the hostInitiatorPath instance.
registrationType	HostInitiatorPathTypeEnum	Indicates how the initiator in the path was registered to the host.
isLoggedIn	Boolean	Indicates whether the host initiator is logged into the storage system. Values are: • true - Host initiator is logged into the storage system. • false - Host initiator is not logged into the storage system.
hostPushName	String	

		(Applies when the value of the registrationType attribute is set to ESXAuto.) Name of the host that is automatically associated with the initiator path through host push.
sessionIds	List<String>	(Applies to iSCSI paths only.) Session identifiers in the host initiator path.
initiator	hostInitiator	Host initiator associated with the host initiator path, as defined by the hostInitiator resource type.
fcPort	fcPort	(Applies to Fibre Channel paths only.) Target Fibre Channel port, as defined by the fcPort resource type.
iscsiPortal	iscsiPortal	(Applies to iSCSI paths only.) iSCSI portal, as defined by the iscsiPortal resource type.

Query all members of the hostInitiatorPath collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostInitiatorPath/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostInitiatorPath collection.

Query a specific hostInitiatorPath instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostInitiatorPath/<id> where <id> is the unique identifier of the hostInitiatorPath instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostInitiatorPath instance.

Delete operation

Delete a host initiator path. This interface works for stale initiator path only. Normally, a host initiator path will disappear automatically if it is logged out from thehost or cable disconnected. But in some cases such as an FC host which is auto created, the initiator path may stay in logged out state when cable disconnected.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/hostInitiatorPath/<id> where <id> is the unique identifier of the hostInitiatorPath instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

hostLUN

Information about the LUNs and LUN snapshots to which a host has access.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the hostLUN instance.
host	host	Information about the host that has access to the LUN or LUN snapshot, as defined by the host resource type.
type	HostLUNTypeEnum	Indicates whether this instance of the hostLUN resource type represents a LUN or LUN snapshot.
hlu	unsigned Integer[16]	Host LUN Identifier (HLU) for the host storage group.
lun	lun	(Applies to LUNs only.) LUN, as defined by the lun resource type.
snap	snap	(Applies to LUN snapshots only.) LUN snapshot, as defined by the lunSnap resource type.
isReadOnly	Boolean	Indicates whether the host access to the LUN or LUN snapshot is read-only. Values are: • true - Host access is read-only. • false - Host access is read-write.
isDefaultSnap	Boolean	(Applies to LUN snapshots only.) Indicates whether this instance of the hostLUN resource type represents a default snapshot. • true - instance represents HLU for default snapshot. • false - instance does not represent HLU for default snapshot

Query all members of the hostLUN collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostLUN/instances
Request body arguments	None

Successful return status	200 OK
Successful response body	JSON representation of all members of the hostLUN collection.

Query a specific **hostLUN** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostLUN/<id> where <id> is the unique identifier of the hostLUN instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostLUN instance.

hostVVolDatastore

Information about the VVolDatastore to which a host has access.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the hostVVolDatastore instance.
storageResource	storageResource	Information about the VVol Datastore, as defined by the storageResource type.
host	host	Information about the host that has access to the VVol Datastore, as defined by the host resource type.

Query all members of the **hostVVolDatastore** collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/hostVVolDatastore/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the hostVVolDatastore collection.

Query a specific **hostVVolDatastore** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/hostVVolDatastore/<id> where <id> is the unique identifier of the hostVVolDatastore instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific hostVVolDatastore instance.

importSession

Information about import sessions.

Embedded resource types

elementImport, filesystemImportParameters, importSyncProgress, interfacePortPair

Supported operations

Collection query , Instance query ,CreateBlockImport ,CreateVDMImport ,Modify ,Pause ,Resume ,Cutover ,Commit ,Cancel

Attributes

Attribute	Type	Description
id	String	Unique identifier of the importSession instance.
name	String	User-specified import session name.
state	ImportStateEnum	Import state of the import session.
isCutover	Boolean	'True' indicates that the import session has done cutover, 'False' indicates that the import session has not done cutover.
health	health	Health information for the import session, as defined by the health resource type.
remoteSystem	remoteSystem	Source system of the import session.
type	ImportTypeEnum	Session type of the import session.
resourceType	RemoteObjectTypeEnum	Source resource type of the import session.
srcResource	resourceInfo	Source resource in the import session.
targetResource	resourceInfo	Local target resource of the import session.
elementImports	List<elementImport>	Information about the import of each member lun in the

		group.
throttle	Boolean	'True' indicates session is throttled (throttle value 8 for the session on the VNX system) and 'False' indicates session is not throttled (throttle value 10 for the session on the VNX system).
percentProgress	unsigned Integer[16]	Overall import session progress details.
vdmInfo	vdmInfo	The source VDM information object.
hosts	List<host>	List of Hosts that will be granted access to import destination resources after cutover.
remainingDataSize	unsigned Integer[64(bytes)]	Size of data remaining to sync.
cutoverThreshold	unsigned Integer[16(percent)]	Cutover ready after this percent of data is imported.
remainingDataPercent	unsigned Integer[16]	Percentage of data remaining to sync.
estimatedCutoverWindow	signed Integer[64(minutes)]	Estimated remaining data sync time in minutes.

Attributes for elementImport

Member element import details in an import session.

Attribute	Type	Description
srcElement	resourceInfo	Source element of the element import
targetElement	resourceInfo	Target element of the element import
health	health	Health information for the import element, as defined by the health resource type.
syncProgress	importSyncProgress	Import sync progress details.
state	ImportStateEnum	State of element import.
targetImportIf	replicationInterface	Target replication interface for nas import data transfer between source system and target system.

Attributes for filesystemImportParameters

Settings to import a file system.

Attribute	Type	Description
sourceFilesystemId	String	Source file system id.
targetPool	pool	Target pool.
importAsVMwareDatastore	Boolean	Indicates whether to import this file system as VMware datastore. Values are: • true - Import this file system as VMware datastore, which results in vmwarefs storage resource type. • false - Do not import this file system as VMware datastore, which results in filesystem storage resource type.
isDataReductionEnabled	Boolean	Indicates whether to enable data reduction on the target file system. Values are: • true - Enable data reduction(default) • false - Disable data reduction
isAdvancedDedupEnabled	Boolean	Indicates whether advanced dedup should be enabled on the target file system. Values are: • true - Enable advanced dedup on the target file system. • false - Do not enable advanced dedup on the target file system.
targetAccessPolicy	AccessPolicyEnum	Target access policy.

Attributes for importSyncProgress

This embedded type represents the sync progress details for each iteration of synchronization.

Attribute	Type	Description
syncStage	ImportStageEnum	Import synchronization stage.
iteration	unsigned Integer[32]	Sync iteration number.
percentProgress	unsigned Integer[32]	Sync percent progress.

Attributes for interfacePortPair

List of source system client interface and target system port pairs used to create a VDM import.

Attribute	Type	Description
sourceInterfaceName	String	Source interface name of the interface port pair.
targetPort	ipPort	Target port of the interface port pair.
targetVlanId	unsigned Integer[16][0..4094]	Target VLAN ID of the interface port pair.

Query all members of the importSession collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/importSession/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the importSession collection.

Query a specific importSession instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/importSession/<id> where <id> is the unique identifier of the importSession instance to query. Or GET /api/instances/importSession/name:<value> where <value> is the name of the importSession instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific importSession instance.

CreateBlockImport operation

Create a block import session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/importSession/action/createBlockImport
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateBlockImport operation

Argument	In/ out	Type	Required?	Description
remoteSystem	in	remoteSystem	Required	Source system from which the import is being configured.
srcResource	in	resourceInfo	Required	Unique identifier of the source resource.
dstResourceConfig	in	resourceConfig	Required	This the user chosen config for destination resource provisioning.
dstResourceElementConfigs	in	List<resourceConfig>	Optional	This is the user chosen config for each of the member element of the destination resource.
importAsVMwareDatastore	in	Boolean	Optional	Specify if the target resource should be VMware Datastore. Default is 'false' and not application to consistency groups, only standalone luns
throttle	in	Boolean	Optional	Throttle for session. 'True' (Default): Session throttled. 'False': Session not throttled.
hosts	in	List<host>	Optional	List of hosts that will be granted access to import session destination resources.
cutoverThreshold	in	unsigned Integer[16(percent)] [1..99]	Optional	Cutover threshold. Default value: 5
name	in	String	Optional	Name of the import session.
id	out	importSession	N/A	Unique identifier of the import session.

CreateVDMImport operation

Create a NAS server import.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/importSession/action/createVDMImport
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateVDMImport operation

Argument	In/ out	Type	Required?	Description
remoteSystem	in	remoteSystem	Required	Source system from which the import is being configured.
srcResource	in	resourceInfo	Required	Source resource for which the import is being configured.
targetResPool	in	pool	Required	Target pool on which the target resources will be created.
targetImportIf	in	replicationInterface	Optional	Target replication interface for import data transfer between source system and target system.
defaultProductionPort	in	ipPort	Required	Target port on which the target client interfaces will be created by default.
fsImportParams	in	List<filesystemImportParameters>	Optional	List of filesystem import parameters.
productionIfPortPairs	in	List<interfacePortPair>	Optional	List of source system interface and target system port pairs.

name	in	String	Optional	Name of the import Session.
cifsUsername	in	String[1..1023]	Optional	User name for authentication to CIFS server on the source VDM.
cifsPassword	in	String[1..1023]	Optional	Password for authentication to CIFS server on the source VDM.
unixDirectoryService	in	ImportUnixDirectoryServiceEnum	Optional	Target unix directory service.
dhsmUsername	in	String[1..1023]	Optional	User name for authentication to DHSM server on the source Data Mover.
dhsmPassword	in	String[1..1023]	Optional	Password for authentication to DHSM server on the source Data Mover.
skipServerParamCheck	in	Boolean	Optional	Whether to skip server parameters check. Import session creation compares server parameters between VNX and Unity. When import session creation fails with a "Server parameter error", this option allows the creation to proceed. The default value is false. Values are: • true - Skip server parameter check. • false - Do not skip server parameter check.
id	out	importSession	N/A	Unique identifier of the import Session.
errorMsgParams	out	List<String>	N/A	Error message parameter value if returned error message needs parameter filled in it.

Modify operation

Modify an import session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/importSession/<id>/action/modify where <id> is the unique identifier of the importSession instance. Or POST /api/instances/importSession/name:<value>/action/modify where <value> is the name of the importSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
throttle	in	Boolean	Optional	Throttle for session. 'True': Session throttled. 'False': Session not throttled.
name	in	String	Optional	Name of the import session.
cutoverThreshold	in	unsigned Integer[8(percent)] [1..99]	Optional	Cutover threshold
srcLocalCifsAdminUsername	in	String[1..1023]	Optional	User name for authentication to CIFS server on the source VDM.
srcLocalCifsAdminPasswd	in	String[1..1023]	Optional	Password for authentication to CIFS server on the source VDM.

Pause operation

Pause an import session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/importSession/<id>/action/pause where <id> is the unique identifier of the importSession instance. Or POST /api/instances/importSession/name:<value>/action/pause where <value> is the name of the importSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Resume operation

Resume an import session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/importSession/<id>/action/resume where <id> is the unique identifier of the importSession instance.

	Or POST /api/instances/importSession/name:<value>/action/resume where <value> is the name of the importSession instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Cutover operation

Cutover an import session. For block import this switches the production over as well as commit the session. For file import this just switches the production over to destination site.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/importSession/<id>/action/cutover where <id> is the unique identifier of the importSession instance. Or POST /api/instances/importSession/name:<value>/action/cutover where <value> is the name of the importSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Cutover operation

Argument	In/ out	Type	Required?	Description
cifsServerInfo	in	cifsServerInfo	Optional	New CIFS server object to be created at the source VDM.
domainUsername	in	String[1..1023]	Optional	Active Directory domain user name.
domainPassword	in	String[1..1023]	Optional	Active Directory domain password.
organizationalUnit	in	String	Optional	Active Directory OU tree. If there are more than 1 OU,then they have to be given as ou=firstOU:ou=secondOU:ou=yythirdOU and so on.

Commit operation

Commit an import session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/importSession/<id>/action/commit where <id> is the unique identifier of the importSession instance. Or POST /api/instances/importSession/name:<value>/action/commit where <value> is the name of the importSession instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Cancel operation

Cancel an import session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/importSession/<id>/action/cancel where <id> is the unique identifier of the importSession instance. Or POST /api/instances/importSession/name:<value>/action/cancel where <value> is the name of the importSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Cancel operation

Argument	In/ out	Type	Required?	Description
domainUsername	in	String[1..1023]	Optional	Active Directory domain user name.
domainPassword	in	String[1..1023]	Optional	Active Directory domain password.
organizationalUnit	in	String	Optional	Active Directory OU tree. If there are more than 1 OU,then they have to be given as ou=firstOU:ou=secondOU:ou=yythirdOU and so on.

installedSoftwareVersion

Information about installed system software and language packs in the VNXe system.

Embedded resource types

firmwarePackage, installedSoftwareVersionLanguage, installedSoftwareVersionPackages

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the installedSoftwareVersion instance.
version	String	Version of the installed software.
revision	unsigned Integer[32]	Revision number of the installed software.
releaseDate	DateTime	Release date of the installed software.
fullVersion	String	Full Version of the installed software.
languages	List<installedSoftwareVersionLanguage>	List of language pack information included in this release.
hotFixes	List<String>	List of installed hotfixes for the installed software instance.
packageVersions	List<installedSoftwareVersionPackages>	List of relevant package names and the version number of the package.
driveFirmware	List<firmwarePackage>	The drive firmware package is part of the installed software bundle which is used to upgrade disk firmware after software upgrade is completed

Attributes for firmwarePackage

The drive firmware package is part of OE bundle List the detail of the drive firmware package

Attribute	Type	Description
name	String	Name of drive firmware package.
version	String	Version of drive firmware package.
releaseDate	DateTime	Release date of drive firmware package.
upgradableDriveCount	unsigned Integer[16(disks)]	The number of upgradable drives in the array.
estimatedTime	unsigned Integer[16(minutes)]	Time estimation to upgrade drive firmware in minutes.
isNewerVersion	Boolean	Indicates whether the drive firmware package is newer than the installed one.

Attributes for installedSoftwareVersionLanguage

List the language pack information (name, version) installed in the release

Attribute	Type	Description
name	String	Name of the installed software language.
version	String	Version of the installed software language.

Attributes for installedSoftwareVersionPackages

List of relevant package information (name, version) installed in the release

Attribute	Type	Description
name	String	Name of the installed software package.
version	String	Version of the installed software package.

Query all members of the installedSoftwareVersion collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/installedSoftwareVersion/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the installedSoftwareVersion collection.

Query a specific installedSoftwareVersion instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/installedSoftwareVersion/<id> where <id> is the unique identifier of the installedSoftwareVersion instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific installedSoftwareVersion instance.

ioLimitPolicy

Set of I/O limit rules that you can apply to a storage resource. On GUI and CLI, ioLimitPolicy and ioLimitRule are combined for now since we only support one I/O limit rule per I/O limit policy.

Embedded resource types

ioLimitRuleSetting

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ioLimitPolicy instance.
name	String[..256]	I/O limit policy name.
description	String[..256]	I/O limit policy description.
ioType	IOLimitPolicyIOTypeEnum	IO limit policy type.
isShared	Boolean	Indicates whether the I/O limits defined in the I/O limit policy are shared among all assigned storage resources. Values are: • true - I/O limits are shared. The total I/O of the set of storage resources with this policy is limited. • false - (Default) I/O limits are not shared. The I/O limit applies to each storage resource individually.
isPaused	Boolean	Indicates whether I/O limit policy is paused. Values are: • true - I/O limit policy is paused. • false - (Default) I/O limit policy is not paused.
type	IOLimitPolicyTypeEnum	IO limit policy type.
ioLimitRules	List<ioLimitRule>	(DEPRECATED)The references of the rules associated with the I/O limit policy, as defined by the ioLimitRule resource type. Currently, only one rule is supported per policy.
ioLimitRuleSettings	List<ioLimitRuleSetting>	IO limit rules associated with the I/O limit policy, as defined by the ioLimitRuleSetting resource type. Currently, only one rule is supported per policy.
luns	List<lun>	LUNs to which the I/O limit policy applies, as defined by the LUN resource type.
snaps	List<snap>	Snaps to which the I/O limit policy applies, as defined by the snap resource type.
nasServers	List<nasServer>	nasServers to which the I/O limit policy applies, as defined by the nasServer resource type.
filesystems	List<filesystem>	filesystems to which the I/O limit policy applies, as defined by the filesystem resource type.
state	IOLimitPolicyStateEnum	IO limit policy state.

Attributes for ioLimitRuleSetting

Set of Quality of Service (QoS) rules included in the Qos policy.

Attribute	Type	Description
id	String	Unique identifier of the ioLimitRule instance.
name	String[..256]	I/O limit rule name.
description	String[..256]	I/O limit rule description.
maxIOPS	unsigned Integer[64(IOs/s)]	Read/write IOPS limit.
maxKBPS	unsigned Integer[64(KB/s)]	Read/write KB/s limit.
maxIOPSDensity	unsigned Integer[64(IOs/s/GB)]	Read/write density-based IOPS limit.
maxKBPSDensity	unsigned Integer[64(KB/s/GB)]	Read/write density-based KB/s limit.
burstRate	unsigned Integer[32(percentage)]	The percentage of read/write IOPS and/or KBPS over the limits a storage object is allowed to process during a spike in demand.
burstTime	DateTime[Interval]	How long a storage object is allowed to process burst traffic.
burstFrequency	DateTime[Interval]	How often a storage object is allowed to process burst traffic for the duration of burst time

Query all members of the ioLimitPolicy collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ioLimitPolicy/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ioLimitPolicy collection.

Query a specific ioLimitPolicy instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ioLimitPolicy/<id> where <id> is the unique identifier of the ioLimitPolicy instance to query. Or GET /api/instances/ioLimitPolicy/name:<value> where <value> is the name of the ioLimitPolicy instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ioLimitPolicy instance.

Create operation

Create a I/O limit policy.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/ioLimitPolicy/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..256]	Required	I/O limit policy name.
description	in	String[..256]	Optional	I/O limit policy description.
ioType	in	IOLimitPolicyIOTypeEnum	Optional	Indicates whether the I/O limit policy is for block or file storage resource
isShared	in	Boolean	Optional	Indicates whether the I/O limits defined in the I/O limit policy are shared among all assigned storage resources. Default to false
type	in	IOLimitPolicyTypeEnum	Optional	Indicates whether the I/O limit policy is absolute or density-based. Default to Absolute
ioLimitRules	in	List<ioLimitRuleSetting>	Required	I/O limit rules associated with the I/O limit policy, as defined by the ioLimitRuleSetting resource type. Only one ioLimitRule is supported at this time per policy.
luns	in	List<lun>	Optional	LUNs to which the I/O limit policy applies, as defined by the lun resource type.
snaps	in	List<snap>	Optional	Snaps to which the I/O limit policy applies, as defined by the snap resource type.
nasServers	in	List<nasServer>	Optional	NasServers to which the I/O limit policy applies, as defined by the nasServer resource type.
filesystems	in	List<filesystem>	Optional	Filesystems to which the I/O limit policy applies, as defined by the filesystem resource type.
id	out	ioLimitPolicy	N/A	Unique identifier of the new ioLimitPolicy instance.

Modify operation

Modify a I/O limit policy.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ioLimitPolicy/<id>/action/modify where <id> is the unique identifier of the ioLimitPolicy instance. Or POST /api/instances/ioLimitPolicy/name:<value>/action/modify where <value> is the name of the ioLimitPolicy instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..256]	Optional	I/O limit policy name.
description	in	String[..256]	Optional	I/O limit policy description.
type	in	IOLimitPolicyTypeEnum	Optional	Indicates whether the I/O limit policy is absolute or density-based.
isPaused	in	Boolean	Optional	Indicates whether the I/O limit policy is paused.
ioLimitRulesToModify	in	List<ioLimitRuleSetting>	Optional	

Delete operation

Delete a I/O limit policy. This will also delete the rules associated with the policy.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/ioLimitPolicy/<id> where <id> is the unique identifier of the ioLimitPolicy instance to delete. Or DELETE /api/instances/ioLimitPolicy/name:<value> where <value> is the name of the ioLimitPolicy instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
force	in	Boolean	Optional	Indicates whether a user can delete an I/O limit while it is being used. If not specified, the default value is false. Values are: • true - Allow a user to delete the I/O limit. • false - Do not allow a user to delete the I/O limit.

ioLimitRule

(DEPRECATED)Conditions under which the storage system applies I/O limits. On GUI and CLI, ioLimitPolicy and ioLimitRule are combined for now since we only support one I/O limit rule per I/O limit policy.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ioLimitRule instance.
name	String[..256]	I/O limit rule name.
description	String[..256]	I/O limit rule description.
maxIOPS	unsigned Integer[64(IOs/s)]	Read/write IOPS limit.
maxKBPS	unsigned Integer[64(KB/s)]	Read/write KB/s limit.
maxIOPSDensity	unsigned Integer[64(IOs/s/GB)]	Read/write density-based IOPS limit.
maxKBPSDensity	unsigned Integer[64(KB/s/GB)]	Read/write density-based KB/s limit.
burstRate	unsigned Integer[32(percentage)]	The percentage of read/write IOPS and/or KBPS over the limits a storage object is allowed to process during a spike in demand.
burstTime	DateTime[Interval]	How long a storage object is allowed to process burst traffic.
burstFrequency	DateTime[Interval]	How often a storage object is allowed to process burst traffic for the duration of burst time
ioLimitpolicy	ioLimitPolicy	Information about the I/O limit policy to which the I/O limit rule is assigned, as defined by the ioLimitPolicy resource type.

Query all members of the ioLimitRule collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ioLimitRule/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ioLimitRule collection.

Query a specific ioLimitRule instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ioLimitRule/<id> where <id> is the unique identifier of the ioLimitRule instance to query. Or GET /api/instances/ioLimitRule/name:<value> where <value> is the name of the ioLimitRule instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ioLimitRule instance.

Modify operation

Modify an I/O limit rule.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ioLimitRule/<id>/action/modify where <id> is the unique identifier of the ioLimitRule instance. Or POST /api/instances/ioLimitRule/name:<value>/action/modify where <value> is the name of the ioLimitRule instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description

name	in	String[1..256]	Optional	I/O limit rule name.
description	in	String[..256]	Optional	I/O limit rule description.
maxIOPS	in	unsigned Integer[64]	Optional	Absolute IOPS limit.
maxKBPS	in	unsigned Integer[64]	Optional	Absolute KB/s limit.

ioLimitSetting

Global I/O limit settings.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ioLimitSetting instance.
isPaused	Boolean	Indicates whether I/O limits are enabled on the storage resource. Values are: • true - I/O limits paused. • false - I/O limits resumed.

Query all members of the ioLimitSetting collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ioLimitSetting/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ioLimitSetting collection.

Query a specific ioLimitSetting instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ioLimitSetting/<id> where <id> is the unique identifier of the ioLimitSetting instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ioLimitSetting instance.

Modify operation

Modify I/O limit settings

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ioLimitSetting/<id>/action/modify where <id> is the unique identifier of the ioLimitSetting instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isPaused	in	Boolean	Required	Indicates whether I/O limits are paused for all storage resources. Values are: • True - I/O limits paused for all storage resources and attached snapshots. • False - I/O limits resumed for all storage resources and attached snapshots.

ioModule

(Applies to physical deployments only.) Information about I/O module SLICs (small I/O cards) in the storage system. I/O modules provide connectivity between SPs and Disk-Array Enclosures (DAEs).

Supported operations

Collection query , Instance query ,CommitIOPorts

Attributes

Attribute	Type	Description
id	String	Unique identifier of the I/O module instance.
health	health	Health information for the I/O module, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the I/O module needs replacement. Values are: • true - I/O module needs replacement.

		• false - I/O module does not need replacement.
parent	resourceRef	Resource type and unique identifier for the I/O module's parent enclosure.
slotNumber	unsigned Integer[32]	Slot where the I/O module is located in the parent enclosure.
name	String[1..32]	I/O module name.
manufacturer	String	Manufacturer of the I/O module.
model	String	Manufacturer's model number for the I/O module.
emcPartNumber	String	EMC part number for the I/O module.
emcSerialNumber	String	EMC serial number for the I/O module.
vendorPartNumber	String	Vendor part number for the I/O module.
vendorSerialNumber	String	Vendor serial number for the I/O module.
systemName	String	Name of the storage system associated with the I/O module.
parentStorageProcessor	storageProcessor	Parent Storage Processor of the IO Module.

Query all members of the ioModule collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ioModule/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ioModule collection.

Query a specific ioModule instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ioModule/<id> where <id> is the unique identifier of the ioModule instance to query. Or GET /api/instances/ioModule/name:<value> where <value> is the name of the ioModule instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ioModule instance.

CommitIOPorts operation

Commit IO Ports

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/ioModule/action/commitIOPorts
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

ipInterface

Information about network interfaces in the storage system.

Network interfaces enable and control access between the system, network, and configured hosts.

Supported operations

Collection query , Instance query ,Ping ,Traceroute

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ipInterface instance.
ipPort	ipPort	Physical port or link aggregation on the storage processor on which the interface is running, as defined by the ethernetPort resource type.
ipProtocolVersion	IpProtocolVersionEnum	IP protocol version (IPv4 or IPv6).
ipAddress	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 or IPv6 address for the interface.
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false	IPv4 netmask for the interface, if the interface uses an IPv4 address.

	• Port supported: false • DNS name supported: false	
v6PrefixLength	unsigned Integer[32(bits)][0..128]	IPv6 prefix length for the interface, if the interface uses an IPv6 address.
gateway	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Gateway IP address.
vlanId	unsigned Integer[16][1..4094]	Virtual Local Area Network (VLAN) identifier for the interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 1 - 4094.
type	IpInterfaceTypeEnum	Type of the ip interface.

Query all members of the ipInterface collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ipInterface/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ipInterface collection.

Query a specific ipInterface instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ipInterface/<id> where <id> is the unique identifier of the ipInterface instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ipInterface instance.

Ping operation

Ping Destination from IP Interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ipInterface/<id>/action/ping where <id> is the unique identifier of the ipInterface instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the Ping operation

Argument	In/ out	Type	Required?	Description
destination	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Required	IP address or Domain Name of the destination.
result	out	pingResult	N/A	Result of ping command.

Traceroute operation

Traceroute Destination from IP Interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ipInterface/<id>/action/traceroute where <id> is the unique identifier of the ipInterface instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the Traceroute operation

Argument	In/ out	Type	Required?	Description
destination	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false	Required	IP address or Domain Name of the destination.

		• DNS name supported: true		
result	out	List<tracerouteResult>	N/A	Result of traceroute command.

ipPort

IP Port information.
ipPort is a base class for linkAggregation, ethernetPort and fsnPort.

Supported operations

Collection query , Instance query ,RecommendForInterface

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ipPort instance.
name	String	IP Port name.
shortName	String	Short name of the IP Port.
macAddress	String	MAC address of the ipPort.
isLinkUp	Boolean	Indicates whether the ipPort has link.
isEnslaved	Boolean	Indicates whether the ipPort is a port included in link aggregation or fsnPort. **Deprecated:** This attribute is obsolete and will be removed in a future release. Please use ipPort.isAggregated instead
isAggregated	Boolean	Indicates whether the ipPort is a port included in link aggregation or fsnPort.
storageProcessor	storageProcessor	Parent Storage Processor of the ipPort.

Query all members of the ipPort collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ipPort/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ipPort collection.

Query a specific ipPort instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ipPort/<id> where <id> is the unique identifier of the ipPort instance to query. Or GET /api/instances/ipPort/name:<value> where <value> is the name of the ipPort instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ipPort instance.

RecommendForInterface operation

Recommend ipPorts on the specified SP to create the network interfaces on.

This is a static method which applies to the ipPort resource type instead of specific ipPort resource instances.

The most suitable ipPort is placed on top of the returned list.
It is chosen according to its I/O Module number, link status, aggregation state, and the amount of interfaces on it.
The rest of ports is sorted sequentially by I/O Module number, aggregation state and name.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/ipPort/action/recommendForInterface
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the RecommendForInterface operation

Argument	In/ out	Type	Required?	Description
storageProcessor	in	storageProcessor	Required	Storage processor for which to recommend ipPorts.
usage	in	IPRecommendUsageEnum	Optional	ISCSI for iscsiPortals, File for fileIntefaces and replicationInterfaces. If not specified, only ipPorts that represent the non-aggregated Ethernet ports are returned.
recommendedPorts	out	List<ipPort>	N/A	List of recommended ports.

iscsiNode

Information about the iSCSI nodes in the storage system. An iSCSI node represents a single iSCSI initiator or target.
iSCSI nodes are created automatically on every non-aggregated Ethernet port except of ports used for management access.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the iscsiNode instance.
name	String	iSCSI node name.
ethernetPort	ethernetPort	Ethernet port associated with the iSCSI Node. (Each Ethernet port can be associated with one iSCSI node.)
alias	String	Descriptive name of the iSCSI node. This name does not have to be unique.

Query all members of the iscsiNode collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/iscsiNode/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the iscsiNode collection.

Query a specific iscsiNode instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/iscsiNode/<id> where <id> is the unique identifier of the iscsiNode instance to query. Or GET /api/instances/iscsiNode/name:<value> where <value> is the name of the iscsiNode instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific iscsiNode instance.

Modify operation

Modify iSCSI node settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/iscsiNode/<id>/action/modify where <id> is the unique identifier of the iscsiNode instance. Or POST /api/instances/iscsiNode/name:<value>/action/modify where <value> is the name of the iscsiNode instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
alias	in	String	Optional	Descriptive name of the iSCSI node. This name does not have to be unique.

iscsiPortal

Information about the iSCSI portals in the storage system.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the iscsiPortal instance.
ethernetPort	ethernetPort	Ethernet port used by the iSCSI portal.
iscsiNode	iscsiNode	iSCSI node used by the iSCSI portal.
ipAddress	IPAddress • IPv6 supported: true	IP address of the iSCSI portal.

	• Prefix-length supported: false • Port supported: false • DNS name supported: false	
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 netmask for the network interface, if it uses an IPv4 address.
v6PrefixLength	unsigned Integer[32(bits)][0..128]	IPv6 prefix length for the interface, if it uses an IPv6 address.
gateway	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 or IPv6 gateway address for the network interface.
vlanId	unsigned Integer[16][1..4094]	Virtual Local Area Network (VLAN) identifier for the interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 1 - 4094.
ipProtocolVersion	IpProtocolVersionEnum	Indicates whether the iSCSI portal is over IPv4 or IPv6.

Query all members of the iscsiPortal collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/iscsiPortal/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the iscsiPortal collection.

Query a specific iscsiPortal instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/iscsiPortal/<id> where <id> is the unique identifier of the iscsiPortal instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific iscsiPortal instance.

Create operation

Create an iSCSI network portal.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/iscsiPortal/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
ethernetPort	in	ethernetPort	Required	Ethernet port used by the iSCSI portal.
ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Required	IP address of the iSCSI portal.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 netmask for the network interface, if it uses an IPv4 address.

v6PrefixLength	in	unsigned Integer[32(bits)] [0..128]	Optional	IPv6 prefix length for the iSCSI portal, if it uses an IPv6 address.
vlanId	in	unsigned Integer[16] [1..4094]	Optional	Ethernet virtual LAN identifier used for tagging iSCSI portal outgoing packets and for filtering iSCSI portal incoming packets. Values are 1 - 4094.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	Gateway of the iSCSI portal.
id	out	iscsiPortal	N/A	New iscsiPortal instance.

Delete operation

Delete an iSCSI network portal.

iSCSI network portal can not be deleted if there are active iSCSI sessions over it.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/iscsiPortal/<id> where <id> is the unique identifier of the iscsiPortal instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify an iSCSI network portal.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/iscsiPortal/<id>/action/modify where <id> is the unique identifier of the iscsiPortal instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Optional	IP address of the iSCSI portal.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 netmask for the network interface, if it uses an IPv4 address.
v6PrefixLength	in	unsigned Integer[32(bits)] [0..128]	Optional	IPv6 prefix length for the interface, if it uses an IPv6 address.
vlanId	in	unsigned Integer[16]	Optional	Ethernet virtual LAN identifier used for tagging iSCSI portal outgoing packets and for filtering iSCSI portal incoming packets. Values are 1 - 4094. Empty string or null to unset.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false	Optional	Gateway of the iSCSI portal. Empty string to unset.

		• DNS name supported: false		

iscsiSettings

Global ISCSI settings.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique instance identifier. This is a singleton resource, so the id is always 0.
isForwardCHAPRequired	Boolean	If True, the iSCSI storage requires checking of the initiator. Forward CHAP secret, which is set for each initiator, otherwise the iSCSI storage does not require Forward CHAP.
reverseCHAPUserName	String	Reverse CHAP user name, empty string indicates that chap is not set yet.
forwardGlobalCHAPUserName	String	Forward global CHAP user name, empty string indicates that chap is not set yet.
iSNSServer	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	iSNS server IP address, if configured.

Query all members of the iscsiSettings collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/iscsiSettings/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the iscsiSettings collection.

Query a specific iscsiSettings instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/iscsiSettings/<id> where <id> is the unique identifier of the iscsiSettings instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific iscsiSettings instance.

Modify operation

Modify ISCSI settings.

For ASCII secret type, the secret must be 12 to 16 characters long and accepts any ASCII character.
For Binary secret type, the secret is 24 to 32 characters long and accepts all hexadecimal characters.
Username must be alphanumeric.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/iscsiSettings/<id>/action/modify where <id> is the unique identifier of the iscsiSettings instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
reverseCHAPUsername	in	String	Optional	Reverse CHAP user name. Put empty string to disable reverse CHAP.
reverseCHAPSecret	in	String	Optional	Reverse CHAP secret. Ignored if reverseCHAPUsername is empty.
reverseCHAPSecretType	in	CHAPSecretTypeEnum	Optional	Reverse CHAP secret type.
isForwardCHAPRequired	in	Boolean	Optional	True if CHAP auth is required for initiators.
forwardGlobalCHAPUsername	in	String	Optional	Global CHAP user name. Put empty string to disable global CHAP.
forwardGlobalCHAPSecret	in	String	Optional	Global CHAP secret. Ignored if forwardGlobalCHAPUsername is empty.

forwardGlobalCHAPSecretType	in	CHAPSecretTypeEnum	Optional	Global CHAP secret type.
iSNSServer	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	iSNS server IP address. Empty string to unset.

job

Information about the jobs in the storage system.

A job represents one management request, it consists of a series of tasks.
A job could also contain a series of primitive REST API POST requests, each of which maps to a task in the job. Such job is known as \"batch request job\".
Client can query the job instance to track its progress, results, and details of each task.

When a job is failed, the system might leave behind unneeded resources that consume space. You can manually delete any resources that were created for the failed job.

Embedded resource types

affectedResource, jobTask, jobTaskRequest

Supported operations

Collection query , Instance query ,Create ,Cancel ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the job instance.
description	String	Job description.
state	JobStateEnum	Current state of the job.
stateChangeTime	DateTime	Date and time of the last state change for the job.
submitTime	DateTime	Date and time when the job was submitted.
startTime	DateTime	Date and time when the job started.
endTime	DateTime	Date and time when the job ended.
elapsedTime	DateTime[Interval]	Amount of time for which the job has been running.
estRemainTime	DateTime[Interval]	Estimated time remaining until the job completes.
progressPct	unsigned Integer[16(Percent)] [0..100]	Approximate percentage of the job that has completed.
tasks	List<jobTask>	Set of tasks within the job, as defined by the jobTask object.
parametersOut	String	Output parameters and their values of what the job is calling.
messageOut	message	Status messages for job
isJobCancelable	Boolean	Is job cancelable
isJobCancelled	Boolean	Is job cancelled
clientData	String	User-specified data for the job, provided by the client in the clientData request parameter.
affectedResource	affectedResource	Primary resource affected by this job.

Attributes for affectedResource

affectedResource is a resource entity affected by a job instance.

Attribute	Type	Description
resource	String	The resource name of the referenced instance (for GUI navigation).
id	String	The id of the referenced instance.
name	String	The name of the reference instance, if applicable.

Attributes for jobTask

An embedded task within a job. A job consists a series of tasks. In case of batch request job, each jobTask maps to a primitive REST API POST request.

For information about jobs, see the Help topic for the job resource type.

Attribute	Type	Description
name	String	Task name.
description	String	Description of the task.
object	String	Object name of corresponding primitive REST API request if this jobTask belongs to a batch request job.
action	String	Name of associated request action if this jobTask belongs to a batch request job.
state	JobTaskStateEnum	Current state of the job task.
messages	List<message>	Message(s) for this task.
steps	List<jobTask>	Task steps for this task.
parametersIn	String	Request body of associated request action. This is nearly the same as a primitive REST API POST request body except that it could use \"@.\" notation, which implies using the output value of a previous step as input value.

parametersOut	String	Output parameters and their values of what the associated request action is calling if this jobTask belongs to a batch request job.
submitTime	DateTime	Date and time when the jobTask was submitted if this jobTask belongs to a batch request job.
startTime	DateTime	Date and time when the jobTask started if this jobTask belongs to a batch request job.
affectedResource	affectedResource	Primary resource affected by this task.

Attributes for jobTaskRequest

The batch job consists of a group of primitive REST API POST requests. Each is considered to be a task of the job. This object is to represent such primitive request.

For information about jobs, see the Help topic for the job resource type.

Attribute	Type	Description
name	String	Name of the task. Should be unique within a batch request job.
description	String	Description of the task. UTF-8 character message is acceptable.
submitTime	DateTime	Date and time when the jobTask was submitted.
startTime	DateTime	Date and time when the jobTask started.
object	String	Object name of corresponding primitive REST API request.
action	String	Name of associated request action.
parametersIn	baseRequest	Request body of associated request action. This is nearly the same as a primitive REST API POST request body except that it could use \"@.\" notation, which implies using the output value of a previous step as input value.
dependencies	List<String>	jobTaskRequest name list. Current REST request will not be posted until the requests in the list are finished.

Query all members of the job collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/job/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the job collection.

Query a specific job instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/job/<id> where <id> is the unique identifier of the job instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific job instance.

Create operation

Create a job that consists of one or more tasks, each maps to a primitive REST API POST request action. The task will map to jobTaskRequest which contains all needed elements for a single REST API action. This job creation action serves as a batch request that supports grouping, executing and tracking one or more REST API actions in a single request.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/job/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
description	in	String	Required	Description of the created job.
tasks	in	List<jobTaskRequest>	Required	A list of jobTaskRequest instances, each of which maps to a primitive REST API POST request action.
isSerialized	in	Boolean	Optional	Indicate that serializes the tasks in specified order.
majorStepIndex	in	unsigned Integer[32]	Optional	Index of a step which is the major task force of a batch job. Affected resource of this step will be promoted to the batch job instance. Index starts from 1.
id	out	job	N/A	Instance of created job.

Cancel operation

Cancel a job.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/job/<id>/action/cancel where <id> is the unique identifier of the job instance.

Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

Delete operation

Delete a completed or failed job. Deleting a job does not revert the action that was completed.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/job/<id> where <id> is the unique identifier of the job instance to delete.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

kmipServer

Information about the Key Management Interoperability Protocol (kmip) server configuration of the storage system. You can configure one KMIP server which can be a cluster configuration. The KMIP server configuration is needed to enable external key management on the system and the system should either be encrypted or encryption capable in order to add a KMIP server.

The Key Management Interoperability Protocol (KMIP) is a communication protocol that defines message formats for the manipulation of cryptographic keys on a key management server.

After you configure the KMIP server, you can enable key management on the system. Ignition key of the system is managed by the KMIP server and a valid configuration is necessary to boot the system once enabled.

Embedded resource types

kmipServerStatus

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify ,Verify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the KMIP server instance.
addresses	List<IPAddress> • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: true	List of FQDN addresses that correspond to the kmip servers. The system uses the addresses in the order in which they are listed.
port	unsigned Integer[16]	Port number for establishing a connection to a KMIP server.
timeout	unsigned Integer[32(seconds)]	Timeout for establishing a connection to a KMIP server. If the system does not receive a reply from the KMIP server before the specified timeout, it stops sending requests.
username	String	Username for accessing the KMIP server.
members	List<kmipServerStatus>	List of FQDN addresses and corresponding statuses of the KMIP server within a cluster.

Attributes for kmipServerStatus

Address and corresponding status of the KMIP Server.

Attribute	Type	Description
address	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: true	Individual KMIP server FQDN address.
status	KmipServerStatusEnum	Status of the KMIP Server.

Query all members of the kmipServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/kmipServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the kmipServer collection.

Query a specific kmipServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/kmipServer/<id> where <id> is the unique identifier of the kmipServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific kmipServer instance.

Create operation

Add a KMIP server cluster.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/kmipServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
addresses	in	List<IPAddress> • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: true	Required	List of KMIP server FQDN. The FQDN addresses will be obtained using DNS lookup (requires DNS to be configured).
port	in	unsigned Integer[16]	Required	KMIP server port number. Default value is 5696.
timeout	in	unsigned Integer[32]	Required	Timeout for establishing a connection to a KMIP server, in seconds. Maximum value is 30 seconds.
username	in	String[..64]	Required	Username for accessing the KMIP server.
password	in	String	Required	Password for accessing the KMIP server.
id	out	kmipServer	N/A	

Delete operation

Delete a KMIP server cluster.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/kmipServer/<id> where <id> is the unique identifier of the kmipServer instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify the KMIP server configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/kmipServer/<id>/action/modify where <id> is the unique identifier of the kmipServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
addresses	in	List<IPAddress> • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	List of KMIP server FQDN. The FQDN addresses will be obtained using DNS lookup (requires DNS to be configured).
port	in	unsigned Integer[16]	Optional	KMIP server port number.
timeout	in	unsigned Integer[32]	Optional	Timeout for establishing a connection to a KMIP server, in seconds. Maximum value is 30 seconds.
username	in	String[..64]	Optional	Username for accessing the KMIP server.
password	in	String	Optional	Password for accessing the KMIP server.

Verify operation

Verify the connection to KMIP server and update the status of individual servers. The overall status of the KMIP server configuration is also updated by verify. Note that the method simply updates the status property of the kmip server and returns success or failure based on the status.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/kmipServer/<id>/action/verify where <id> is the unique identifier of the kmipServer instance.

Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

lcc

(Applies to physical deployments only.) Information about Link Control Cards (LCCs) in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the LCC instance.
health	health	Health information for the LCC, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the LCC needs replacement. Values are: • true - LCC needs replacement. • false - LCC does not need replacement.
parent	resourceRef	Resource type and unique identifier of the LCC's parent enclosure.
slotNumber	unsigned Integer[32]	Slot number where the LCC is located in the parent enclosure.
name	String[1..32]	LCC name.
manufacturer	String	Manufacturer of the LCC.
model	String	Manufacturer's model number for the LCC.
sasExpanderVersions	List<String>	Revision numbers of the LCC firmware.
emcPartNumber	String	EMC part number for the LCC.
emcSerialNumber	String	EMC serial number for the LCC.
vendorPartNumber	String	Vendor part number for the LCC.
vendorSerialNumber	String	Vendor serial number for the LCC.
currentSpeed	unsigned Integer[64(bits/sec)]	Current LCC speed.
maxSpeed	unsigned Integer[64(bits/sec)]	Maximum LCC speed.
parentDae	dae	Parent Disk Array Enclosure (DAE) of the LCC.

Query all members of the lcc collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/lcc/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the lcc collection.

Query a specific lcc instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/lcc/<id> where <id> is the unique identifier of the lcc instance to query. Or GET /api/instances/lcc/name:<value> where <value> is the name of the lcc instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific lcc instance.

ldapServer

Information about the Lightweight Directory Access Protocol (LDAP) server used by the storage system as an authentication authority for administrative users. You can configure one LDAP server. The system uses the LDAP settings for facilitating access control to Unisphere and the Unisphere CLI, but not for facilitating access control to storage resources.

LDAP is an application protocol for querying and modifying directory services running on TCP/IP networks. LDAP provides central management for network authentication and authorization operations by helping to centralize user and group management across the network. Integrating the system into an existing LDAP environment provides a way to control user and user group access to the system through Unisphere or the Unisphere CLI.

After you configure LDAP settings for the system, you can manage users and user groups within the context of an established LDAP directory structure. For example, you can assign access permissions to the Unisphere CLI that are based on existing users and groups.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify ,Verify ,RefreshAddressesFromDNS

Attributes

Attribute	Type	Description

id	String	Unique identifier of the ldapServer instance.
authority	String	Name of the LDAP authority.
autoDiscover	Boolean	When true, the LDAP server addresses are obtained using DNS lookup on the LDAP authority (requires DNS to be configured).
serverAddresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	List of IP addresses of the LDAP server.
port	unsigned Integer[16]	Port to connect to the LDAP server.
bindDN	String	Bind Distinguished Name (DN) of the user to be used when binding; that is, authenticating and setting up the connection to the LDAP Server. For example: Administrator@mycompany.com or cn=Administrator,cn=Users,dc=mycompany,dc=com
protocol	LDAPProtocolEnum	Protocol used to connect to the LDAP server.
userSearchPath	String	Path used to search for users on the directory server. For example: ou=People,dc=lss,dc=dell,dc=com
groupSearchPath	String	Path used to search for groups on the directory server. For example: uid=name,ou=people,dc=domaincomponent or dc=domain component
userIdAttribute	String	Name of the LDAP attribute whose value indicates the user ID. Default value is uid.
groupNameAttribute	String	Name of the LDAP attribute whose value indicates the group name. Default value is cn.
userObjectClass	String	LDAP object class for users. Default value is user. In Active Directory, groups and users are stored in the same directory path, and are in a class called group.
groupObjectClass	String	LDAP object class for groups. Default value is group. In Active Directory, groups and users are stored in the same directory path and are in a class called group.
groupMemberAttribute	String	Name of the LDAP attribute whose value contains the names of group members within a group. Default value is member.
timeout	unsigned Integer[32(msec)]	Timeout for establishing a connection to an LDAP server. If the system does not receive a reply from the LDAP server before the specified timeout, it stops sending requests. Default value is 30000 (30 seconds).

Query all members of the ldapServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ldapServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ldapServer collection.

Query a specific ldapServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ldapServer/<id> where <id> is the unique identifier of the ldapServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ldapServer instance.

Create operation

Create an LDAP server configuration. The operation will fail if an LDAP server configuration already exists.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/ldapServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
id	out	ldapServer	N/A	Unique identifier of the new LDAP server configuration.
authority	in	String	Required	Name of the LDAP authority to construct the LDAP server configuration.
protocol	in	LDAPProtocolEnum	Optional	Protocol used to connect to the LDAP server.
autoDiscover	in	Boolean	Optional	Default is true if no server addresses are specified. When set as true, the LDAP server addresses are obtained using DNS lookup on the LDAP authority (requires DNS to be configured).
serverAddresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	List of IP addresses or FQDN hostnames of the LDAP server. If not specified, the address will be obtained using DNS lookup on the LDAP authority (requires DNS to be configured).
port	in	unsigned Integer[16]	Optional	Port number to connect to the LDAP server. Cannot be used when specifying a port via (deprecated) serverAddress.
bindDN	in	String	Required	Distinguished Name (DN) of the user to be used when binding; that is, authenticating and setting up the connection to the LDAP Server. For example: Administrator@mycompany.com or cn=Administrator,cn=Users,dc=mycompany,dc=com
bindPassword	in	String	Required	Password to use when binding a new LDAP session.
userSearchPath	in	String	Required	Path used to search for users on the directory server. For example: ou=People,dc=lss,dc=dell,dc=com
groupSearchPath	in	String	Required	Path used to search for groups on the directory server. For example: uid=name,ou=people,dc=domaincomponent or dc=domain component
userIdAttribute	in	String	Optional	Name of the LDAP attribute whose value indicates the user ID. Default value is sAmAccountName.
groupNameAttribute	in	String	Optional	Name of the LDAP attribute whose value indicates the group name. Default value is cn.
userObjectClass	in	String	Optional	LDAP object class for users. Default value is user. In Active Directory, groups and users are stored in the same directory path, and are in a class called group.
groupObjectClass	in	String	Optional	LDAP object class for groups. Default value is group. In Active Directory, groups and users are stored in the same directory path, and are in a class called group.
groupMemberAttribute	in	String	Optional	Name of the LDAP attribute whose value contains the names of group members within a group. Default value is member.
certificateFilePath	in	String	Optional	Path to the server certificate file on the system. This is required for one way server authentication. This argument is required if the value of the protocol argument is ldaps.
timeout	in	unsigned Integer[32(msec)]	Optional	Timeout for establishing a connection to an LDAP server. If the system does not receive a reply from the LDAP server after the specified timeout, it stops sending requests. Default value 30000 (30 seconds).

Delete operation

Delete an LDAP server configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/ldapServer/<id> where <id> is the unique identifier of the ldapServer instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify an LDAP server configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ldapServer/<id>/action/modify where <id> is the unique identifier of the ldapServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
protocol	in	LDAPProtocolEnum	Optional	Protocol used to connect to the LDAP server.
autoDiscover	in	Boolean	Optional	When true, the LDAP server addresses are obtained using DNS lookup on the LDAP authority (requires DNS to be configured).
serverAddresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	List of IP addresses or FQDN hostnames of the LDAP server.
port	in	unsigned Integer[16]	Optional	Port number to connect to the LDAP server. Cannot be used when specifying a port via (deprecated) serverAddress.
bindDN	in	String	Optional	Distinguished Name (DN) of the user to be used when binding; that is, authenticating and setting up the connection to the LDAP Server. For example: Administrator@mycompany.com or cn=Administrator,cn=Users,dc=mycompany,dc=com
bindPassword	in	String	Optional	Password to use when binding a new LDAP session.
userSearchPath	in	String	Optional	Path used to search for users on the directory server. For example: ou=People,dc=lss,dc=dell,dc=com
groupSearchPath	in	String	Optional	Path used to search for groups on the directory server. For example: uid=name,ou=people,dc=domaincomponent or dc=domain component
userIdAttribute	in	String	Optional	Name of the LDAP attribute whose value indicates the user ID. Default value is uid.
groupNameAttribute	in	String	Optional	Name of the LDAP attribute whose value indicates the group name. Default value is cn.
userObjectClass	in	String	Optional	LDAP object class for users. Default value is user. In Active Directory, groups and users are stored in the same directory path, and are in a class called group.
groupObjectClass	in	String	Optional	LDAP object class for groups. Default value is group. In Active Directory, groups and users are stored in the same directory path, and are in a class called group.
groupMemberAttribute	in	String	Optional	Name of the LDAP attribute whose value contains the names of group members within a group. Default value is member.
certificateFilePath	in	String	Optional	Path to the server certificate file on the system.This is required for one way server authentication.
timeout	in	unsigned Integer[32(msec)]	Optional	Timeout for establishing a connection to an LDAP server. If the system does not receive a reply from the LDAP server after the specified timeout, it stops sending requests. Default value is 30000 (30 seconds).

Verify operation

Verify connectivity to the LDAP server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ldapServer/<id>/action/verify

	where <id> is the unique identifier of the ldapServer instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

RefreshAddressesFromDNS operation

If auto discover is enabled, refresh the list of server addresses using DNS for the specified LDAP configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ldapServer/<id>/action/refreshAddressesFromDNS where <id> is the unique identifier of the ldapServer instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

license

Information about licenses on the storage system.

Embedded resource types

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the license instance.
name	String	License name.
isInstalled	Boolean	Indicates whether the license is installed or not.
version	String	License version.
isValid	Boolean	Indicates whether the license is currently valid. Values are: • true - License is valid. It is either permanent, or the expiration date has not yet passed. • false - License is invalid.
issued	DateTime	Date and time when the license became available.
expires	DateTime	Date and time when the license will expire.
isPermanent	Boolean	Indicates whether the license is permanent. Values are: • true - License is permanent. • false - License is temporary.
feature	feature	Name of the feature that the license enables.

Query all members of the license collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/license/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the license collection.

Query a specific license instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/license/<id> where <id> is the unique identifier of the license instance to query. Or GET /api/instances/license/name:<value> where <value> is the name of the license instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific license instance.

linkAggregation

(Applies if link aggregation is supported.) Ethernet port link aggregation settings.

Link aggregation lets you link Ethernet ports (for example, port 0 and port 1) on a Storage Processor (SP) to a single logical port, and therefore lets you use up to four Ethernet ports on the SP. If your system has two SPs, and you link two physical ports, the same ports on both SPs are linked for redundancy. For example, if you link port 0 to port 1, the system creates one link aggregation for these ports on SPA and another link aggregation on SPB.

Note: You can aggregate only Ethernet ports belonging to the same I/O module or on-board Ethernet ports. Aggregation of ports from different I/O modules is not allowed.

Note: You can aggregate only Ethernet ports with the same MTU size.

Note: You can not add an Ethernet port to aggregation if there are iSCSI portals on it.

Link aggregation provides the following advantages:

- Increases overall throughput, since two physical ports are linked into one logical port.
- Provides basic load balancing across linked ports, since the network traffic is distributed across multiple physical ports.
- Provides redundant ports so that if one port in a linked pair fails, the system does not lose connectivity.

Note: With link aggregation, both linked ports must be connected to the same switch, and the switch must be configured to use the link aggregation that uses the Link Aggregation Control Protocol (LACP). The documentation that came with your switch should provide more information about using LACP.

The Unisphere online Help provides more details on cabling the SPs to the Disk-Array Enclosures (DAEs).

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete ,RecommendForAggregation ,RecommendForInterface

Attributes

Attribute	Type	Description
id	String	Unique identifier of the linkAggregation instance.
name	String	Link aggregation name.
shortName	String	Short name for the link aggregation.
masterPort	ethernetPort	Master port of the link aggregation. **Deprecated:** This attribute is obsolete and will be removed in a future release. Please use linkAggregation.primaryPort instead
primaryPort	ethernetPort	Primary port of the link aggregation.
ports	List<ethernetPort>	List of aggregated Ethernet ports, including the primary port.
mtuSize	unsigned Integer[32(bytes)]	Maximum transmission unit (MTU) packet size for the linked ports, in bytes.
minMtuSize	unsigned Integer[32(bytes)]	Minimum configurable limit on Maximum transmission unit (MTU) packet size for the linked ports, in bytes.
maxMtuSize	unsigned Integer[32(bytes)]	Maximum configurable limit on Maximum transmission unit (MTU) packet size for the linked ports, in bytes.
supportedMtus	List<Integer>[32(bytes)]	List of MTU sizes supported by the link aggregation. **Deprecated:** This attribute is obsolete and will be removed in a future release.
macAddress	String	MAC address of the link aggregation.
isLinkUp	Boolean	Indicates whether the link aggregation has link.
health	health	Health information for the link aggregation, as defined by the health resource type.
isIncludedInFSN	Boolean	Indicates whether the link aggregation was included in an FSN (fsnPort).
storageProcessor	storageProcessor	SP on which the link aggregation resides, as defined by the storageProcessor resource type.

Query all members of the linkAggregation collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/linkAggregation/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the linkAggregation collection.

Query a specific linkAggregation instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/linkAggregation/<id> where <id> is the unique identifier of the linkAggregation instance to query. Or GET /api/instances/linkAggregation/name:<value> where <value> is the name of the linkAggregation instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific linkAggregation instance.

Create operation

Create a link aggregation.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/linkAggregation/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description

ports	in	List<ethernetPort>	Required	List of Ethernet ports to be aggregated. The first port in the list becomes the primary port.
mtuSize	in	unsigned Integer[32(bytes)] [1280..9216]	Optional	MTU size value for the link aggregation. If you want to support jumbo frames, use 9000 as the MTU size value. **If not specified, MTU size of the primary port is used.**
id	out	linkAggregation	N/A	New linkAggregation instance.
peerId	out	linkAggregation	N/A	Peer linkAggregation instance.

Modify operation

Modify a link aggregation.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/linkAggregation/<id>/action/modify where <id> is the unique identifier of the linkAggregation instance. Or POST /api/instances/linkAggregation/name:<value>/action/modify where <value> is the name of the linkAggregation instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
mtuSize	in	unsigned Integer[32(bytes)] [1280..9216]	Optional	New MTU size value for the link aggregation. If you want to support jumbo frames, use 9000 as the MTU size value.
addPorts	in	List<ethernetPort>	Optional	List of Ethernet ports to add to the link aggregation.
removePorts	in	List<ethernetPort>	Optional	List of Ethernet ports to remove from the link aggregation. Primary port can not be removed.

Delete operation

Delete a link aggregation.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/linkAggregation/<id> where <id> is the unique identifier of the linkAggregation instance to delete. Or DELETE /api/instances/linkAggregation/name:<value> where <value> is the name of the linkAggregation instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

RecommendForAggregation operation

Recommend appropriate link aggregations for an Ethernet port.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/linkAggregation/action/recommendForAggregation
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the RecommendForAggregation operation

Argument	In/ out	Type	Required?	Description
ethernetPort	in	ethernetPort	Required	Ethernet port on which to recommend link aggregations.
recommendedPorts	out	List<linkAggregation>	N/A	List of identifiers for the recommended link aggregations.

RecommendForInterface operation

Recommend appropriate link aggregations for creation of network interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/linkAggregation/action/recommendForInterface
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the RecommendForInterface operation

Argument	In/ out	Type	Required?	Description
storageProcessor	in	storageProcessor	Required	SP on which to recommend link aggregations.
recommendations	out	List<linkAggregation>	N/A	List of identifiers for the recommended link aggregations.

loginSessionInfo

Information about a REST API login session.

Supported operations

Collection query , Instance query ,Logout

Attributes

Attribute	Type	Description
id	String	Unique identifier of the loginSessionInfo instance.
domain	String	Domain of the user logged into this session.
user	user	Information about the user logged into this session, as defined by the user resource type.
roles	List<role>	List of roles for the user logged into this session, as defined by the role resource type.
idleTimeout	unsigned Integer[32(seconds)]	Number of seconds after last use until this session expires.
isPasswordChangeRequired	Boolean	Indicates whether the password must be changed in order to use this session created for built-in admin account. Values are: • true - Password must be changed. • false - Password does not need to be changed. For information about changing the password for a local user, see the Help topic for the user resource type.

Query all members of the loginSessionInfo collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/loginSessionInfo/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the loginSessionInfo collection.

Query a specific loginSessionInfo instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/loginSessionInfo/<id> where <id> is the unique identifier of the loginSessionInfo instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific loginSessionInfo instance.

Logout operation

Log out of the session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/loginSessionInfo/action/logout
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the Logout operation

Argument	In/ out	Type	Required?	Description
localCleanupOnly	in	Boolean	Optional	Indicates whether to log out of all REST API sessions authenticated by the Ticket Granting Token (TGT) with which this session was established. Values are: • true - Log out of this session only. • false - Log out of all sessions.
logoutOK	out	String	N/A	Indicates successful logout

lun

A LUN (block storage) type storage resource, which may be a LUN in a consistency group, a standalone LUN, or a VMWare VMFS LUN. Management of LUNs is performed via the storageResource object.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the LUN.
health	health	Health information for the LUN, as defined by the health resource type.
name	String[1..63]	Name of the LUN.
description	String[0..170]	Description of the LUN.
type	LUNTypeEnum	Type of the LUN.
sizeTotal	unsigned Integer[64(bytes)]	LUN size that the system presents to the host or end user.
sizeUsed	unsigned Integer[64(bytes)]	Used size is not applicable to LUN and this value is not set.
sizeAllocated	unsigned Integer[64(bytes)]	Size of space actually allocated in the pool for the LUN: • For thin-provisioned LUNs this as a rule is less than the sizeTotal attribute until the LUN is not fully populated with user data. • For not thin-provisioned LUNs this is approximately equal to the sizeTotal.
sizePreallocated	unsigned Integer[64(bytes)]	Space reserved from the pool by the LUN, for future needs to make writes more efficient. The pool may be able to reclaim some of this if space is running low.
sizeAllocatedTotal	unsigned Integer[64(bytes)]	Total pool space used in the pool for the LUN.
dataReductionSizeSaved	unsigned Integer[64(bytes)]	Storage element saved space by data reduction, which includes savings from compression, deduplication and advanced deduplication.
dataReductionPercent	unsigned Integer[16(percent)]	Data reduction percentage is the percentage of the data that does not consume storage - the savings due to data reduction. For example, if 1 TB of data is stored in 250 GB, the data reduction percentage is 75%. 75% data reduction percentage is equivalent to a 4:1 data reduction ratio.
dataReductionRatio	Float	Data reduction ratio. The data reduction ratio is the ratio between the size of the data and the amount of storage actually consumed. For example, 1TB of data consuming 250GB would have a ration of 4:1. A 4:1 data reduction ratio is equivalent to a 75% data reduction percentage.
perTierSizeUsed	List<Integer>[64(bytes)]	Sizes of space allocations by the LUN on the tiers of multi-tier storage pool. This list will have the same length as the tiers list on this LUN's pool, and the entries will correspond to those tiers. Multi-tier storage pools can be created on a system with the FAST VP license installed.
isThinEnabled	Boolean	Indicates whether thin provisioning is enabled. • true - The LUN is thin provisioned. • false - The LUN is not thin provisioned.
isDataReductionEnabled	Boolean	True if data reduction is enabled.
isAdvancedDedupEnabled	Boolean	Indicates whether to enable advanced deduplication for the LUN. It can only be enabled on the all flash high end platforms and only when the data reduction is enabled. If data reduction is disable, this is disabled automatically. Deduplicated data will remain as is even after advanced deduplication is disabled. Values are: • true - Advanced deduplication is enabled on this LUN. • false - Advanced deduplication is disabled on this LUN.
storageResource	storageResource	The storage resource with which LUN is associated.
pool	pool	The pool in which the LUN is allocated.
wwn	String	The world wide name of the LUN.
tieringPolicy	TieringPolicyEnum	(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP tiering policy for the LUN.
defaultNode	NodeEnum	The storage processor that is the default owner of this LUN.
isReplicationDestination	Boolean	Indicates whether the LUN is a replication destination. Valid values are: • true - LUN is a replication destination. • false - LUN is not a replication destination.
currentNode	NodeEnum	The storage processor that is the current owner of this LUN.
snapSchedule	snapSchedule	Snapshot schedule for the LUN, as defined by the snapSchedule. This value is not set if the LUN is not associated with a snapshot schedule.
isSnapSchedulePaused	Boolean	(Applies if the LUN has an associated snap schedule.) Indicates whether the snapshot schedule for the LUN is paused. Valid values are: • true - Snapshot schedule for the LUN is paused. • false - Snapshot schedule for the LUN is active.
ioLimitPolicy	ioLimitPolicy	I/O limit policy that applies to the LUN, as defined by the ioLimitPolicy resource type.
metadataSize	unsigned Integer[64(bytes)]	Size of the LUN metadata.
metadataSizeAllocated	unsigned Integer[64(bytes)]	Size of pool space allocated for the LUN's metadata.
snapWwn	String	World Wide Name of the Snap Mount Point.
snapsSize	unsigned Integer[64(bytes)]	Size of the LUN snapshots.
	unsigned Integer[64(bytes)]	

snapsSizeAllocated		Size of pool space allocated for snapshots of the LUN.
hostAccess	List<blockHostAccess>	Host access permissions for the LUN.
snapCount	unsigned Integer[32]	Number of direct snapshots of the LUN.
isThinClone	Boolean	Indicates whether LUN is a thin clone on not. • true - The LUN is a thin clone. • false - The LUN is not a thin clone.
familyBaseLun	lun	For a Thin Clone of a Standalone LUN/ LUN in a Consistency group, the unique identifier of the Base Source LUN. For a Base LUN, its unique identifier.
parentSnap	snap	For a Thin Clone of a Standalone LUN/LUN in a Consistency group, the unique identifier of the source Snapshot. Applies only for Thin Clones.
originalParentLun	lun	The Parent Lun. Applies only for Thin Clones.
familySnapCount	unsigned Integer[32]	Total number of snapshots created in the LUN Family, including all derivative snapshot objects. This attribute is not applicable for a Thin Clone
familyCloneCount	unsigned Integer[32]	Total number of thin clones created in the LUN Family, including all derivative thin clones objects. This attribute is not applicable for a Thin Clone
nonBaseSizeAllocated	unsigned Integer[64(bytes)]	Total amount of pool space used by LUN snapshots and thin clones. This attribute is not applicable for a Thin Clone
familySizeAllocatedTotal	unsigned Integer[64(bytes)]	Total amount of pool space reserved for the LUN. It is sum of sizeAllocated, nonBaseSizeAllocated and metadataSizeAllocated. This attribute is not applicable for a Thin Clone
nonBaseSize	unsigned Integer[64(bytes)]	Thin Clones and Snapshots subscribed space for the LUN. This attribute is not applicable for a Thin Clone
migrationState	DCMigrationStateEnum	Migration state for Destination PowerStore Orchestration.
hostGroupLUNs	List<hostGroupLUN>	The hostGroupLUNs associated with the lun.
moveSession	moveSession	The moveSession associated with the lun.

Query all members of the lun collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/lun/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the lun collection.

Query a specific lun instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/lun/<id> where <id> is the unique identifier of the lun instance to query. Or GET /api/instances/lun/name:<value> where <value> is the name of the lun instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific lun instance.

memoryModule

(Applies to physical deployments only.) Information about memory modules in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the memory module instance.
health	health	Health information for the memory module, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the memory module needs replacement Values are: • true - Memory module needs replacement. • false - Memory module does not need replacement.
parent	resourceRef	Resource type and unique identifier of the memory module's parent enclosure.
slotNumber	unsigned Integer[32]	Slot number where the memory module is located in the parent enclosure.
name	String[1..32]	Memory module name.
manufacturer	String	Manufacturer of the memory module.
model	String	Manufacturer's model number for the memory module.

firmwareVersion	String	Firmware version number for the memory module.
size	unsigned Integer[32(GigaBytes)]	Memory size.
emcPartNumber	String	EMC part number for the memory module.
emcSerialNumber	String	EMC serial number for the memory module.
vendorPartNumber	String	Vendor part number for the memory module.
vendorSerialNumber	String	Vendor serial number for the memory module.
parentStorageProcessor	storageProcessor	Parent storage processor of the memory module.
isInserted	Boolean	Indicates whether the memory module is inserted: • true - Memory module is inserted. • false - Memory module is not inserted.

Query all members of the memoryModule collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/memoryModule/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the memoryModule collection.

Query a specific memoryModule instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/memoryModule/<id> where <id> is the unique identifier of the memoryModule instance to query. Or GET /api/instances/memoryModule/name:<value> where <value> is the name of the memoryModule instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific memoryModule instance.

metric

One of the following:

- Performance measurements for the Unity system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	unsigned Integer[32]	Unique identifier for the metric instance.
name	String	Display name of the metric.
path	String	Stat paths for the historical and real-time metrics. A stat path identifies a metric's location in the stats namespace. There are two types of stat paths: • stat paths for historical metrics • Stat paths for real-time metrics **stat paths for historical metrics** Use the following URI pattern to retrieve stat paths for all historical metrics: /api/types/metric/instances?compact=true&filter=isHistoricalAvailable eq true **Stat path for real-time metrics** Use the following URI pattern to retrieve stat paths for all real-time metrics: /api/types/metric/instances?compact=true&filter=isRealtimeAvailable eq true For both historical and real-time quey, the following URI pattern can be used to retrieve stat paths for a group of metrics. In this pattern, %25 is an encoded value for a percent sign (%). /api/types/metric/instances?compact=true&filter=path lk *metric-path*.%25 where *metric-path* is one of the stat paths listed below: • sp.*.blockCache - Counters for cache metrics • sp*.cifs - CIFS protocol statistics • sp.*.fibreChannel - Fibre Channel statistics • sp.*.fs - File system statistics • sp.*.ftp - FTP protocol statistics • sp.*.http - HTTP protocol statistics • sp.*.iscsi - iSCSI protocol statistics • sp.*.memory - Memory statistics • sp.*.ndmp - NDMP protocal statistics • sp.*.cpu - CPU statistics • sp.*.net - Network interface and protocol statistics

		• sp.*.nfs - NFS protocol statistics • sp.*.ntp - NTP statistics • sp.*.physical - Physical device statistics • sp.*.replication - Replication statistics • sp.*.rpc - RPC statistics • sp.*.ssh - SSH statistics • sp.*.store - Storage hardware interface statistics • sp.*.storage - Storage statistics • sp.*.vhdx - Microsoft Hyper-V virtual disks statistics • sp.*.virusChecker - Virus checker statistics For example, to retrieve a list of available network performance metrics, you can use the following GET collection request: https://*ip-address*/api/types/metric/instances?compact=true&filter=path lk sp.*.net.%25
type	unsigned Integer[32]	Type of metric. Values are: • 2 - 32 bits counter • 3 - 64 bits counter • 4 - rate • 5 - fact • 6 - text • 7 - 32 bits virtual counter • 8 - 64 bits virtual counter
description	String	Short description of the metric.
isHistoricalAvailable	Boolean	Indicates whether the metric is available for historical collection: • true - Metric is supported for historical collection. • false - Metric is not supported for historical collection.
isRealtimeAvailable	Boolean	Indicates whether the metric is supported for real-time collection: • true - Metric is supported for real-time collection. • false - Metric is not supported for real-time collection.
unitDisplayString	String	Localized text used to describe the metric unit.

Query all members of the metric collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/metric/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the metric collection.

Query a specific metric instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/metric/<id> where <id> is the unique identifier of the metric instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific metric instance.

metricCollection

Information about each metrics collection in the VNXe or Unisphere Central system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the metricCollection resource type.
interval	unsigned Integer[32]	Interval associated with the metrics collection.
oldest	DateTime	Date and time on which the oldest available metric data in the collection was collected.
retention	unsigned Integer[32(days)]	Number of days for which the metric data in the collection will be retained.

Query all members of the metricCollection collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/metricCollection/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the metricCollection collection.

Query a specific metricCollection instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/metricCollection/<id> where <id> is the unique identifier of the metricCollection instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific metricCollection instance.

metricQueryResult

A set of values for one or more metrics for a given period of time. Each metricQueryResult resource is associated with a metricRealTimeQuery resource (VNXe or Unisphere Central) or metricHistoricalQuery resource (Unisphere Central only).

After you create a query, the results are available as a set of metricQueryResult resources, where the queryId attribute of each metricQueryResult resource matches the id attribute of the associated metricRealTimeQuery or metricHistoricalQuery resource.

You can optionally delete the metricRealTimeQuery resource when it is no longer needed, or it will be deleted automatically when the expiration reached. This API requires a ?filter= URL parameter that filters on a valid queryId.

An example of a valid filter:
https://IP/api/types/metricQueryResult/instances?filter=queryId EQ 1

Embedded resource types

statValue

Supported operations

Collection query

Attributes

Attribute	Type	Description
queryId	unsigned Integer[32]	Identifier of the metricQueryResult instance. This value matches the id attribute of the associated metricRealTimeQuery or metricHistoricalQuery resource.
path	String	Path that corresponds to one of the metric paths specified in the associated metricHistoricalQuery or metricRealTimeQuery resource.
timestamp	DateTime	Date and time when the metrics sample was taken.
values	statValue	Metric values corresponding to the set of metrics listed in the associated query.

Attributes for statValue

A statValue object contains one real-time sample of a single metric. Its JSON representation is the following: statValue {} { values } values pair pair , values pair string : value value float statValue The string in a pair is the ID of an object. The value is the metric value for that object.

Attribute	Type	Description

Query all members of the metricQueryResult collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/metricQueryResult/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the metricQueryResult collection.

metricRealTimeQuery

Represents a query to obtain real-time information for one or more metrics, including a specified sampling frequency.

After you create this query, the results are available as a set of metricQueryResult resources, where the queryId attribute of each metricQueryResult resource matches the id attribute of the associated metricRealTimeQuery resource (VNXe and Unisphere Central) or metricHistoricalQuery resource (Unisphere Central only).

You can optionally delete the metricRealTimeQuery resource when it is no longer needed, or the resource will be deleted automatically when expiration is reached.

Note: The metricRealTimeQuery resource does not support the filtering of response data.

To query real-time information for one or more metrics, please follow below steps:
1, Run POST /api/types/metricRealTimeQuery/instances to create a real-time query.
2, Run GET /api/types/metricQueryResult/instances to get a real-time sample of metrics you queried.

An example to query real-time information of CPU busy and idle ticks:
1, POST api/types/metricRealTimeQuery/instances

```
{
   "paths": ["sp.*.cpu.summary.busyTicks" ,"sp.*.cpu.summary.idleTicks"],
   "interval": 5
}
```

The response will be like the one below,

```
{
  "base": "https://10.108.126.67/api/instances/metricRealTimeQuery",
  "updated": "2017-03-07T05:58:44.669Z",
  "links": [
    {
    "rel": "self",
    "href": "/37"
    }
  ],
  "content": {
     "id": 37, =====> this id will be used in the second step
     "paths": [
       "sp.*.cpu.summary.busyTicks",
       "sp.*.cpu.summary.idleTicks"
     ],
     "interval": 5,
     "maximumSamples": -1,
     "expiration": "2017-03-07T05:59:30.000Z"
  }
}
```

2, GET /api/types/metricQueryResult/instances?filter=queryId eq 37
Please note that the queryId here returned in the response of the first POST request.

The response will be like the one below,

```
{
```

```
    "base": "https://10.108.126.67/api/types/metricQueryResult/instances?filter=queryId eq 37&per_page=2000",
    "updated": "2017-03-07T05:58:54.040Z",
    "links": [
      {
        "rel": "self",
        "href": "&page=1"
      }
    ],
    "entries": [
      {
        "base": "https://10.108.126.67/api/instances/metricQueryResult",
        "updated": "2017-03-07T05:58:54.040Z",
        "links": [
          {
          "rel": "self",
          "href": "/37"
          }
        ],
        "content": {
          "queryId": 37,
          "path": "sp.*.cpu.summary.busyTicks",
          "timestamp": "2017-03-07T05:58:50.000Z",
          "values": {
            "spa": "3675787",
            "spb": "1520850"
          }
        }
      },
      {
        "base": "https://10.108.126.67/api/instances/metricQueryResult",
        "updated": "2017-03-07T05:58:54.040Z",
        "links": [
          {
          "rel": "self",
          "href": "/37"
          }
        ],
        "content": {
          "queryId": 37,
          "path": "sp.*.cpu.summary.idleTicks",
          "timestamp": "2017-03-07T05:58:50.000Z",
          "values": {
            "spa": "31280263",
            "spb": "34352275"
          }
        }
      }
    ]
  }
```


The metricRealTimeQuery resource will be deleted automatically when expiration is reached, or you can manually delete it by running DELETE /api/instances/metricRealTimeQuery/<id>.
1, To delete the query just created in the first step, run DELETE /api/instances/metricRealTimeQuery/37

@docstatus Reviewed

Supported operations

Collection query , Instance query ,Create ,Delete

Attributes

Attribute	Type	Description
id	unsigned Integer[32]	Unique identifier of the metricRealTimeQuery instance.
paths	List<String>	Metric stat paths associated with the query. To learn how to obtain stat paths for real-time metrics, see the description of the path attribute for the metric resource type.
interval	unsigned Integer[32(seconds)] [5..300]	Sampling frequency for the query, in seconds.
expiration	DateTime	Date and time when the query will expire. Once the expiration date/time has been reached, the query will automatically be deleted, along with the corresponding results. This is strictly calculated by the server, and cannot be specified by the client. If the user doesn't retrieve a query result through MetricQueryResult for 10 consecutive sample periods, the session will be deleted. This value shows the time(10 periods after the last query) at which the session will be deleted if no queries are received.

Query all members of the metricRealTimeQuery collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/metricRealTimeQuery/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the metricRealTimeQuery collection.

Query a specific metricRealTimeQuery instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/metricRealTimeQuery/<id> where <id> is the unique identifier of the metricRealTimeQuery instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific metricRealTimeQuery instance.

Create operation

Create a new metrics real-time query.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/metricRealTimeQuery/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
paths	in	List<String>	Required	Metric stat paths associated with the query. To learn how to obtain metric stat paths, see the description for the path attribute for the metric resource type.
interval	in	unsigned Integer[32]	Required	Sampling frequency for the query.
id	out	metricRealTimeQuery	N/A	New metricRealTimeQuery instance.

Delete operation

Delete the specified metricRealTimeQuery instance. All associated metricQueryResult resources will also be deleted.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/metricRealTimeQuery/<id> where <id> is the unique identifier of the metricRealTimeQuery instance to delete.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

metricService

Information about the metrics service configuration. There is only one occurrence of this resource type.

Embedded resource types

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	unsigned Integer[32]	Unique identifier of the metricService instance to modify. The value of this attribute is always 0, since it is a singleton resource type.
isHistoricalEnabled	Boolean	Indicates whether historical metrics collection is enabled: • true - Historical metrics collection is enabled. • false - Historical metrics collection is disabled.

Query all members of the metricService collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/metricService/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the metricService collection.

Query a specific metricService instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/metricService/<id> where <id> is the unique identifier of the metricService instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific metricService instance.

Modify operation

Enable or disable historical collection for metrics.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/metricService/action/modify
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isHistoricalEnabled	in	Boolean	Required	Indicates whether historical metrics collection should be enabled: • true - Enable historical metrics collection. • false - Disable historical metrics collection.

metricValue

Historical values for requested metrics.

Note: The maximum number of returned instances per page is 5 for the metricValue resource type. For more information about paging, see the *Unisphere Management REST API Programmer's Guide.*
Unlike other REST GETs, this API requires a ?filter= URL parameter that filters on at least path. It must be filtered to one or more paths
An example of a valid filter(s) :
https://IP/api/types/metricValue/instances?filter=path EQ "sp.*.physical.disk.*.responseTime"

Embedded resource types

floatOrValueMap

Supported operations

Collection query

Attributes

Attribute	Type	Description
path	String	Stat path for the metric. A stat path identifies the metric's location in the stats namespace.
timestamp	DateTime	Date and time when the metrics data was collected.
interval	unsigned Integer[32(seconds)]	Time interval of the requested sample.
values	Map<String, floatOrValueMap>	Mapping of each returned element, such as LUN1 or LUN2, to its associated floating point value or its further mapping of elements to values.

Attributes for floatOrValueMap

A single floating point value that corresponds to the element in the metric or another mapping of a string to floatOrValueMap. This mapping allows for a hierarchical structure of values mapped to the metrics in the metric object.

Attribute	Type	Description

Query all members of the metricValue collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/metricValue/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the metricValue collection.

mgmtInterface

Information about management interfaces in the storage system.

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the mgmtInterface instance.
configMode	InterfaceConfigModeEnum	Configuration mode.
ethernetPort	ethernetPort	Ethernet port on the storage processor on which the interface is running.
protocolVersion	IpProtocolVersionEnum	IP protocol version (IPv4 or IPv6).
ipAddress	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 or IPv6 address for the interface.
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 netmask for the interface, if the interface uses an IPv4 address.
v6PrefixLength	unsigned Integer[32(bits)][0..128]	IPv6 prefix length for the interface, if the interface uses an IPv6 address.
gateway	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Gateway IP address.

Query all members of the mgmtInterface collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/mgmtInterface/instances

Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the mgmtInterface collection.

Query a specific mgmtInterface instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/mgmtInterface/<id> where <id> is the unique identifier of the mgmtInterface instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific mgmtInterface instance.

Create operation

Create a new network interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/mgmtInterface/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Required	IPv4 or IPv6 address for the interface.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 netmask for the interface, if the interface uses an IPv4 address.
v6PrefixLength	in	unsigned Integer[32(bits)] [0..128]	Optional	Prefix length in bits for IPv6 address.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Required	IPv4 or IPv6 gateway address for the interface.
id	out	mgmtInterface	N/A	Unique identifier of the new interface instance.

Modify operation

Modify settings for an interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/mgmtInterface/<id>/action/modify where <id> is the unique identifier of the mgmtInterface instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Optional	IPv4 or IPv6 gateway address for the interface.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false	Optional	IPv4 netmask for the interface, if the interface uses an IPv4 IP address.

		• DNS name supported: false		
v6PrefixLength	in	unsigned Integer[32(bits)] [0..128]	Optional	Prefix length in bits for v6 addresses.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 or IPv6 gateway address for the interface.

Delete operation

Delete an interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/mgmtInterface/<id> where <id> is the unique identifier of the mgmtInterface instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

mgmtInterfaceSettings

Global settings for mgmtInterfaces.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique instance identifier. This is a singleton resource, so the id is always 0.
v4ConfigMode	InterfaceConfigModeEnum	IPv4 configuration mode.
v6ConfigMode	InterfaceConfigModeEnum	IPv6 configuration mode.

Query all members of the mgmtInterfaceSettings collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/mgmtInterfaceSettings/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the mgmtInterfaceSettings collection.

Query a specific mgmtInterfaceSettings instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/mgmtInterfaceSettings/<id> where <id> is the unique identifier of the mgmtInterfaceSettings instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific mgmtInterfaceSettings instance.

Modify operation

Modify mgmt interface settings.

It is not allowed to set both IPv4 and IPv6 to Disabled at the same time, in any sequence.
It is not allowed to set both IPv4 and IPv6 to Auto in one request.
IPv4 or IPv6 may be set to Auto only if the other class IP address already exists, either set as a static IP address or obtained in Auto mode.
The Static can be set only implicitly by creating the mgmtInterface object.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/mgmtInterfaceSettings/<id>/action/modify where <id> is the unique identifier of the mgmtInterfaceSettings instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
v4ConfigMode	in	InterfaceConfigModeEnum	Optional	New v4 config mode.
v6ConfigMode	in	InterfaceConfigModeEnum	Optional	New v6 config mode.

moveSession

Information about movesession.

A customer environment is often ever-changing, and as a result the ability to deliver business continuity and flexibility is paramount. The new local LUN migration feature address this concern, by adding the ability to move LUNs and Consistency Groups between Pools on a system. Local LUN migration can be used to rebalance storage resources across Pools when customer activity changes and an individual Pool's usage becomes oversaturated. Another use case for local LUN migration is to provide LUNs with a destination when a Pool is to be decommissioned. By leveraging Unity's Transparent Data Transfer (TDX) engine, host access remains fully online during the migration session.

Supported operations

Collection query , Instance query ,Create ,Delete ,Cancel ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the session.
sourceStorageResource	storageResource	Storage resource to be moved.
sourceMemberLun	lun	The LUN being moved when the corresponding storageResource isn't specific enough, i.e. a Consistency Group member LUN or LUN VMFS Datastore.
destinationPool	pool	Destination pool for the move.
health	health	The health of the session.
progressPct	unsigned Integer[32(percent)]	The progress of the session expressed as a percentage.
currentTransferRate	unsigned Integer[32(Mb/sec)]	The current transfer rate of the session in MB/sec.
avgTransferRate	unsigned Integer[32(Mb/sec)]	The average transfer rate of the session in MB/sec.
estTimeRemaining	DateTime[Interval]	The estimated time remaining based on the current transfer rate.
state	MoveSessionStateEnum	The current state of the session. The session state represents the lifecycle of a session.
status	MoveSessionStatusEnum	The current session status of the TDX session.
priority	MoveSessionPriorityEnum	The priority of this storageResource move relative to other moves.

Query all members of the moveSession collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/moveSession/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the moveSession collection.

Query a specific moveSession instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/moveSession/<id> where <id> is the unique identifier of the moveSession instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific moveSession instance.

Create operation

Create a session to move a storageResource to a new location.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/moveSession/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
sourceStorageResource	in	storageResource	Required	A reference to the source storage resource for the operation.
sourceMemberLun	in	lun	Optional	A reference to the specific lun to move if the storageResource isn't specific enough, i.e. CG member LUN or LUN VMFS Datastore.
destinationPool	in	pool	Required	A reference to the pool that is the target of the operation.
isDestThin	in	Boolean	Optional	Whether or not the destination will be created on sparse storage.
isDataReductionApplied	in	Boolean	Optional	Whether or not the destination will be created with data Reduction enabled.

isAdvancedDedupApplied	in	Boolean	Optional	Whether or not the destination will be created with advance deduplication enabled.
priority	in	MoveSessionPriorityEnum	Optional	The initial priority value for the session.
id	out	moveSession	N/A	The unique id for the session.

Delete operation

Delete a previously created moveSession.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/moveSession/<id> where <id> is the unique identifier of the moveSession instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Cancel operation

Cancel a queued or running moveSession.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/moveSession/<id>/action/cancel where <id> is the unique identifier of the moveSession instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Alter options of a currently running moveSession.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/moveSession/<id>/action/modify where <id> is the unique identifier of the moveSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
priority	in	MoveSessionPriorityEnum	Optional	The storageResource move priority.

nasServer

Information about the NAS server in the storage system.

NAS Servers are software components used to transfer data and provide the connection ports for hosts to access file-level storage resources. NAS servers are independent from each other.

NAS Servers access data on available drives making it available to network hosts via specific protocols (NFS/SMB/FTP/SFTP). Storage system supports NAS Servers for managing file-level storage resources, such as VMware NFS datastores or file systems.
Before you can provision a file-level storage resource, a NAS Server must be created with the necessary sharing protocols enabled. When NAS Servers are created, you can specify the storage pool and owning SP - either SPA or SPB.
In the storage systems, NAS Servers can leverage the Link Aggregation functionality to create a highly available environment. Once a link aggregated port group is available, you create or modify NAS Server network interfaces to leverage the available port group. Because NAS Servers are accessible through only one SP at a time, they will fail over to the other SP when there is an SP failure event.

Supported operations

Collection query , Instance query ,Create ,Delete ,GenerateUserMappingsReport ,UpdateUserMappings ,RefreshConfiguration ,Modify ,Ping ,Traceroute

Attributes

Attribute	Type	Description
id	String	Unique identifier of the nasServer instance.
name	String	User-specified name of the NAS server.
health	health	Health information for the NAS server, as defined by the health resource type.
homeSP	storageProcessor	Storage Processor on which the NAS Server is intended to run.
currentSP	storageProcessor	Storage Processor on which the NAS server is currently running.
pool	pool	Storage pool that stores the NAS server's configuration metadata, as defined by the pool resource type.
sizeAllocated	unsigned Integer[64(bytes)]	Amount of storage pool space used for NAS server configuration.
tenant	tenant	Tenant to which the NAS Server belongs.

isReplicationEnabled	Boolean	Indicates whether a replication session is enabled for the NAS server. The NAS server can't be deleted while replication session is enabled. Values are: • true - Replication session is enabled. • false - Replication session is disabled.
isReplicationDestination	Boolean	Indicates whether the NAS server is a replication destination. Values are: • true - NAS server is a replication destination. • false - NAS server is a not a replication destination.
isBackupOnly	Boolean	Indicates whether the NAS server is used as backup only. Only a replication destination can be set as backup. Values are: • true - NAS server acts as backup only. • false - Normal NAS server.
isMigrationDestination	Boolean	Indicates whether the NAS server is a migration destination. It can't be modified by client. Values are: • true - NAS server is a migration destination. • false - NAS server is a not a migration destination.
replicationType	ReplicationTypeEnum	Replication type.
syncReplicationType	ReplicationTypeEnum	Sync Replication type.
defaultUnixUser	String	Default Unix user name to use for an unmapped Windows user. This value only applies when the value of allowUnmappedUser is true.
defaultWindowsUser	String	Default Windows user name to use for an unmapped Unix user. This value only applies when the value of allowUnmappedUser is true.
currentUnixDirectoryService	NasServerUnixDirectoryServiceEnum	Unix Directory Service used to look up users and hosts.
isMultiProtocolEnabled	Boolean	Indicates whether multiprotocol sharing mode is enabled. This mode enables simultaneous file access for Windows and Unix users. Values are: • true - Multiprotocol sharing mode is enabled. • false - Multiprotocol sharing mode is disabled.
isWindowsToUnixUsernameMappingEnabled	Boolean	Indicates whether a Unix to/from Windows user name mapping is enabled. Values are: • true - Unix to/from Windows user name mapping is enabled. • false - Unix to/from Windows user name mapping is disabled.
allowUnmappedUser	Boolean	Indicates whether an unmappped user can access the NAS server as a default user. Values are: • true - Allow access for unmapped users. • false - Disallow access for unmapped users.
isPacketReflectEnabled	Boolean	Indicates whether the reflection of outbound (reply) packets through the same interface that inbound (request) packets entered is enabled. Values are: • true - (Default) Packet Reflect is enabled. • false - Packet Reflect is disabled.
fileSpaceUsed	unsigned Integer[64(bytes)]	File systems' space used.
dataReductionSizeSaved	unsigned Integer[64(bytes)]	Storage element saved space by data reduction, which includes savings from compression, deduplication and advanced deduplication.
dataReductionPercent	unsigned Integer[16(percent)]	Data reduction percentage is the percentage of the data that does not consume storage - the savings due to data reduction. For example, if 1 TB of data is stored in 250 GB, the data reduction percentage is 75%. 75% data reduction percentage is equivalent to a 4:1 data reduction ratio.
dataReductionRatio	Float	Data reduction ratio. The data reduction ratio is the ratio between the size of the data and the amount of storage actually consumed. For example, 1TB of data consuming 250GB would have a ration of 4:1. A 4:1 data reduction ratio is equivalent to a 75% data reduction percentage.
ioLimitPolicy	ioLimitPolicy	IO limit policy that applies to the nasServer, as defined by the ioLimitPolicy resource type.
cifsServer	List<cifsServer>	The cifsServers associated with the

		nasServer.
eventPublisher	fileEventsPublisher	The fileEventsPublisher associated with the nasServer.
fileDNSServer	fileDNSServer	The fileDNSServer associated with the nasServer.
fileInterface	List<fileInterface>	The fileInterfaces associated with the nasServer.
filesystems	List<filesystem>	The filesystems associated with the nasServer.
nfsServer	nfsServer	The nfsServer associated with the nasServer.
preferredInterfaceSettings	preferredInterfaceSettings	The preferredInterfaceSettings associated with the nasServer.
virusChecker	virusChecker	The virusChecker associated with the nasServer.

Query all members of the nasServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/nasServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the nasServer collection.

Query a specific nasServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/nasServer/<id> where <id> is the unique identifier of the nasServer instance to query. Or GET /api/instances/nasServer/name:<value> where <value> is the name of the nasServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific nasServer instance.

Create operation

Create a NAS server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/nasServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..255]	Required	Name for the NAS server.
homeSP	in	storageProcessor	Required	Storage processor on which the NAS server will run.
pool	in	pool	Required	A Storage pool that stores NAS server configuration information.
tenant	in	tenant	Optional	A Tenant to which the NAS server will belong.
isReplicationDestination	in	Boolean	Optional	Indicates whether the NAS server is a replication destination. Values are: • true - Replication destination NAS server. • false - Normal NAS server.
isBackupOnly	in	Boolean	Optional	Indicates whether the NAS server is used as backup only. Values are: • true - NAS server acts as backup only. • false - Normal NAS server.
currentUnixDirectoryService	in	NasServerUnixDirectoryServiceEnum	Optional	Directory Service used for quering identity information for Unix (such as UIDs, GIDs, net groups).
isMultiProtocolEnabled	in	Boolean	Optional	Indicates whether multiprotocol sharing mode is enabled. Values are: • true - Enable multiprotocol sharing.

				• false - Disable multiprotocol sharing.
allowUnmappedUser	in	Boolean	Optional	Use this flag to mandatorily disable access in case of any user mapping failure. Values are: • true - Enable access in case of any user mapping failure. • false - Disable access in case of any user mapping failure.
defaultUnixUser	in	String[0..63]	Optional	Default Unix user name used for granting access in case of Windows to Unix user mapping failure. When empty, access in such case is denied.
defaultWindowsUser	in	String[0..1023]	Optional	Default Windows user name used for granting access in case of Unix to Windows user mapping failure. When empty, access in such case is denied.
isPacketReflectEnabled	in	Boolean	Optional	
ioLimitParameters	in	ioLimitParameters	Optional	The IO limit policy that is applied to this nasServer.
id	out	nasServer	N/A	Unique identifier of the new nasServer instance.

Delete operation

Delete a nasServer instance. This deletes the nasServer and its associated resources. Pre-requirements: Before deleting a NAS server, ensure that there are no file systems or VMware datastores associated with it. Otherwise an error will be returned.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/nasServer/<id> where <id> is the unique identifier of the nasServer instance to delete. Or DELETE /api/instances/nasServer/name:<value> where <value> is the name of the nasServer instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
skipDomainUnjoin	in	Boolean	Optional	Indicates whether to keep the associated SMB servers joined to the Active Directory when the NAS server is deleted. Values are: • true - Keep the associated SMB servers joined to the Active Directory when the NAS server is deleted. • false - (Default) Try to unjoin the associated SMB servers from the Active Directory before deleting the NAS server. •
domainUsername	in	String[1..1023]	Optional	Adminstrator login used to unjoin the associated SMB servers from the Active Directory (AD) domain before deleting the NAS server. This parameter is required when the skipDomainUnjoin parameter is false or not set, and the NAS server has SMB servers joined to an AD domain.
domainPassword	in	String[1..1023]	Optional	Administrator password used to unjoin the associated SMB servers from the Active Directory (AD) domain before deleting the NAS server. This parameter is required when the skipDomainUnjoin parameter is false or not set, and the NAS server has SMB servers joined to an AD domain.

GenerateUserMappingsReport operation

Generate a user mapping report. This report lists unmapped users and users whose Windows to/from Unix mappings have changed.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/nasServer/<id>/action/generateUserMappingsReport where <id> is the unique identifier of the nasServer instance. Or POST /api/instances/nasServer/name:<value>/action/generateUserMappingsReport where <value> is the name of the nasServer instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

UpdateUserMappings operation

Fix the user mappings for all file systems associated with the NAS server. This process updates file ownership on the NAS server's file systems to reflect changes to users' SIDs.

Header	Accept: application/json Content-Type: application/json

Method and URI	POST /api/instances/nasServer/<id>/action/updateUserMappings where <id> is the unique identifier of the nasServer instance. Or POST /api/instances/nasServer/name:<value>/action/updateUserMappings where <value> is the name of the nasServer instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

RefreshConfiguration operation

Refresh the configuration of the NAS server. This process refreshes the configuration of the NAS server when it is the destination of a synchronous replication session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/nasServer/<id>/action/refreshConfiguration where <id> is the unique identifier of the nasServer instance. Or POST /api/instances/nasServer/name:<value>/action/refreshConfiguration where <value> is the name of the nasServer instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify NAS server settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/nasServer/<id>/action/modify where <id> is the unique identifier of the nasServer instance. Or POST /api/instances/nasServer/name:<value>/action/modify where <value> is the name of the nasServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..255]	Optional	Specify a new NAS server name.
homeSP	in	storageProcessor	Optional	Specify the SP on which the VDM is to run.
isReplicationDestination	in	Boolean	Optional	Specify whether the NAS server is a replication destination. Values are: • true - Replication destination NAS server. • false - Normal NAS server.
isBackupOnly	in	Boolean	Optional	Specify whether the NAS server is used as backup only. Values are: • true - NAS server acts as backup only. • false - Normal NAS server.
currentUnixDirectoryService	in	NasServerUnixDirectoryServiceEnum	Optional	Directory Service used for quering identity information for UNIX (such as UIDs, GIDs, net groups).
isMultiProtocolEnabled	in	Boolean	Optional	Indicates whether multiprotocol sharing mode is enabled. Values are: • true - Enable multiprotocol sharing. • false - Disable

				multiprotocol sharing.
allowUnmappedUser	in	Boolean	Optional	Use this flag to mandatory disable access in case of any user mapping failure. Values are: • true - Enable access in case of any user mapping failure. • false - Disable access in case of any user mapping failure.
defaultUnixUser	in	String[0..63]	Optional	Default Unix user name used for granting access in case of Windows to Unix user mapping failure. When empty, access in such case is denied.
defaultWindowsUser	in	String[0..1023]	Optional	Default Windows user name used for granting access in case of Unix to Windows user mapping failure. When empty, access in such case is denied.
enableWindowsToUnixUsernameMapping	in	Boolean	Optional	Indicates whether a Unix to/from Windows user name mapping is enabled. Values are: • true - Unix to/from Windows user name mapping is enabled. • false - Unix to/from Windows user name mapping is disabled.
isPacketReflectEnabled	in	Boolean	Optional	
isIgnoreWarnings	in	Boolean	Optional	Ignore warnings related to the operation. Values are: • true - Ignore warnings. • false(Default) - Warnings will interrupt the operation.
ioLimitParameters	in	ioLimitParameters	Optional	The IO limit policy that is applied to this nasServer.

Ping operation

Ping Destination from NAS server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/nasServer/<id>/action/ping where <id> is the unique identifier of the nasServer instance. Or POST /api/instances/nasServer/name:<value>/action/ping where <value> is the name of the nasServer instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the Ping operation

Argument	In/ out	Type	Required?	Description
destination	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Required	IP address or Domain Name of the destination.
result	out	pingResult	N/A	Result of ping command.

Traceroute operation

Traceroute Destination from NAS server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/nasServer/<id>/action/traceroute where <id> is the unique identifier of the nasServer instance. Or POST /api/instances/nasServer/name:<value>/action/traceroute where <value> is the name of the nasServer instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the Traceroute operation

Argument	In/ out	Type	Required?	Description
destination	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Required	IP address or Domain Name of the destination.
result	out	List<tracerouteResult>	N/A	Result of traceroute command.

nfsServer

Information about the Network File System (NFS) servers used by the storage system. You can configure one NFS server per NAS server. At least one NFS share must be created before an NFS client can connect to the storage system resources. NFS servers support the NFSv3 and NFSv4 protocols. The default protocol is NFSv3.

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the nfsServer instance.
hostName	String	Host name of the NFS server. An administrator should ensure that NFS clients can resolve NAS Server IP addresses using this name. You can configure this hostname and its production IP address(es) inside hosts file on the Unix client machine; or (recommended) add those records into your DNS. NOTE: normally when the NFS hostname matches with an AD-joined SMB/CIFS Server Computer Name all production interfaces and the hostname are already registered within Microsoft DNS service.
nasServer	nasServer	NAS server associated with the NFS server.
fileInterfaces	List<fileInterface>	Interfaces that use the NFS protocol to serve the NAS server's file systems.
nfsv3Enabled	Boolean	Indicates whether NFSv3 is enabled on the NAS server specified in the nasServer attribute. When enabled - NFS shares can be accessed with NFSv3 protocol. When disabled - NFS shares cannot be accessed with NFSv3 protocol. Values are: • true - NFSv3 is enabled on the specified NAS server. • false - NFSv3 is disabled on the specified NAS server.
nfsv4Enabled	Boolean	Indicates whether NFSv4 is enabled on the NAS server specified in the nasServer attribute. When enabled - NFS shares can be accessed with NFSv4 protocol. When disabled - NFS shares cannot be accessed with NFSv4 protocol. Values are: • true - NFSv4 is enabled on the specified NAS server. • false - NFSv4 is disabled on the specified NAS server.
isSecureEnabled	Boolean	Indicates whether secure NFS is enabled on the NFS server. Values are: • true - Secure NFS is enabled. • false - Secure NFS is disabled.
kdcType	KdcTypeEnum	Type of Kerberos Domain Controller used for secure NFS service.
servicePrincipalName	String	The Service Principal Name (SPN) for the NFS Server. This name is updated automatically when the NFS server configuration changes.
isExtendedCredentialsEnabled	Boolean	Indicates whether the NFS server supports more than 16 Unix groups in a Unix credential. Values are: • true - NFS server supports more than 16 Unix groups in a Unix credential. The NFS Server will send additional request to Unix Directory service to identify Unix groups. • false - NFS server does not support more than 16 Unix groups in a Unix credential. **Note:** The NFS server builds its own Unix credential when it supports more than 16 groups. This process can slow performance.
credentialsCacheTTL	DateTime[Interval]	Sets the Time-To-Live expiration stamp for a Windows entry in the credentials cache. When failed mapping entries expire, the system retries mapping the UID to the SID.

Query all members of the nfsServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/nfsServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the nfsServer collection.

Query a specific nfsServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/nfsServer/<id> where <id> is the unique identifier of the nfsServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific nfsServer instance.

Create operation

Create an nfsServer instance.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/nfsServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	NAS server associated with the NFS server.
hostName	in	String[1..255]	Optional	Host name of the NFS server. If host name is not specified then SMB server name or NAS server name will be used to auto generate the host name.
nfsv3Enabled	in	Boolean	Optional	Indicates whether the NFSv3 is enabled on the NAS server specified in the nasServer attribute. When enabled - NFS shares can be accessed with NFSv3 protocol. When disabled - NFS shares cannot be accessed with NFSv3 protocol. Values are: • true(Default) - NFSv3 is enabled on the specified NAS server. • false - NFSv3 is disabled on the specified NAS server.
nfsv4Enabled	in	Boolean	Optional	Indicates whether the NFSv4 is enabled on the NAS server specified in the nasServer attribute. When enabled - NFS shares can be accessed with NFSv4 protocol. When disabled - NFS shares cannot be accessed with NFSv4 protocol. Values are: • true - NFsv4 is enabled on the specified NAS server. • false(Default) - NFSv4 is disabled on the specified NAS server.
isSecureEnabled	in	Boolean	Optional	Indicates whether the secure NFS is enabled. Values are: • true - Secure NFS is enabled. • false(Default) - Secure NFS is disabled.
kdcType	in	KdcTypeEnum	Optional	Type of Kerberos Domain Controller used for secure NFS service.
kdcUsername	in	String	Optional	Kerberos Domain Controller administrator's name.
kdcPassword	in	String	Optional	Kerberos Domain Controller administrator's password.
isExtendedCredentialsEnabled	in	Boolean	Optional	Support for more than 16 Unix groups. Values are: • true - NFS server supports more than 16 unix groups in a Unix credential. • false(Default) - NFS server doesn't support more than 16 unix groups in a Unix credential.
credentialsCacheTTL	in	DateTime[Interval - h+:mm:ss[.sss]]	Optional	Credential cache refresh timeout. Resolution is in minutes. Default value is 15 minutes. [The value of interval will be rounded down to minutes.]
id	out	nfsServer	N/A	Unique identifier of the new nfsServer instance.

Modify operation

Modify an nfsServer instance.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/nfsServer/<id>/action/modify where <id> is the unique identifier of the nfsServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
hostName	in	String[1..255]	Optional	Host name of the NFS server.
nfsv3Enabled	in	Boolean	Optional	Indicates whether the NFSv3 protocol is enabled on the NAS server specified in the nasServer attribute. When enabled - NFS shares can be accessed with NFSv3 protocol. When disabled - NFS shares cannot be accessed with NFSv3 protocol. Values are: • true - NFsv3 is enabled on the specified NAS server. • false - NFSv3 is disabled on the specified NAS server.
nfsv4Enabled	in	Boolean	Optional	Indicates whether the NFSv4 protocol is enabled on the NAS server specified in the nasServer attribute. When enabled - NFS shares can be accessed with NFSv4 protocol. When disabled - NFS shares cannot be accessed with NFSv4 protocol. Values are: • true - NFsv4 is enabled on the specified NAS server. • false - NFSv4 is disabled on the specified NAS server.
isSecureEnabled	in	Boolean	Optional	Indicates whether the secure NFS is enabled. Values are: • true - secure NFS is enabled. • false - secure NFS is disabled. If kdcType was set to Windows and skipUnjoin is not set to true then kdcUsername/kdcPassword are required.
kdcType	in	KdcTypeEnum	Optional	Type of Kerberos Domain Controller used for secure NFS service. When KDC type is changed to Windows then kdcUsername/kdcPassword are required. When KDC type is changed to Custom from Windows and skipUnjoin is not set to true then kdcUsername/kdcPassword are required.
skipUnjoin	in	Boolean	Optional	Keep Service Principal Name (SPN) in Kerberos Domain Controller. Values are: • true - Do not remove the SPN from Kerberos Domain Controller. kdcUsername/kdcPassword are ignored. • false(Default) - Remove the SPN from Kerberos Domain Controller when it's needed. When disabling secure NFS or changing KDC type to Custom then kdcUsername/kdcPassword must be specified.
kdcUsername	in	String	Optional	Kerberos Domain Controller administrator's name to add/remove the SPN.
kdcPassword	in	String	Optional	Kerberos Domain Controller administrator's password to add/remove the SPN.
isExtendedCredentialsEnabled	in	Boolean	Optional	Support for more than 16 Unix groups. Values are: • true - NFS server supports more than 16 unix groups in a Unix credential. • false(Default) - NFS server doesn't support more than 16 unix groups in a Unix credential.
credentialsCacheTTL	in	DateTime[Interval - h+:mm:ss[.sss]]	Optional	Credential cache refresh timeout. Resolution is in minutes. Default value is 15 minutes. [The value of interval will be rounded down to minutes.]

Delete operation

Delete an nfsServer instance.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/nfsServer/<id> where <id> is the unique identifier of the nfsServer instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
skipUnjoin	in	Boolean	Optional	Keep Service Principal Name (SPN) in Kerberos Domain Controller.

				Values are: • true - Do not remove the SPN from Kerberos Domain Controller. kdcUsername/kdcPassword are ignored. • false(Default) - Remove the SPN from Kerberos Domain Controller when it's needed. If secure NFS is enabled and KDC type is Windows then kdcUsername/kdcPassword must be specified.
kdcUsername	in	String	Optional	Kerberos Domain Controller administrator's name to remove the SPN.
kdcPassword	in	String	Optional	Kerberos Domain Controller administrator's password to remove the SPN.

nfsShare

Information about Network File System (NFS) shares in the storage system.

NFS shares use the NFS protocol to provide an access point for configured Linux/Unix hosts or IP subnets to access shared folder storage. NFS network shares are associated with an NFS shared folder.

Note: To manage NFS shares for snapshots, use the operations for this resource type. To manage NFS shares for file systems and VMware NFS datastores, use the applicable operations for the storageResource resource type, as described in the help topic for that resource type.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the nfsShare instance.
type	NFSTypeEnum	Type of the NFS Share.
role	NFSShareRoleEnum	Role of the NFS share.
filesystem	filesystem	(Applies to NFS shares that are not on snapshots.) Parent file system associated with the NFS share, as defined by the filesystem resource type.
snap	snap	(Applies to NFS shares on snapshots.) Parent file system snapshot associated with the NFS share, as defined by the snap resource type.
name	String	NFS share name.
path	String	Local path to a location within the file system. With NFS, each share must have a unique local path. By default, the system creates a share to the root of the file system (top-most directory) at file system creation time. This path specifies the unique location of the file system on the storage system. Before you can create additional shares within an NFS shared folder, you must create directories within it from a Linux/Unix host that is connected to the file system. After a directory has been created from a mounted host, you can create a corresponding share and set access permissions accordingly.
exportPaths	List<String>	Export paths that can be used to mount and access share. The list is a combination of above name with all IP addresses fo the NFS server.
description	String	User defined NFS share description.
isReadOnly	Boolean	Indicates whether the NFS share is read-only. Values are: • true - NFS share is read-only. • false - NFS share is read-write.
creationTime	DateTime	Date and time when the NFS share was created.
modificationTime	DateTime	Date and time when the NFS share was modified.
defaultAccess	NFSShareDefaultAccessEnum	Default NFS share access-level permissions.
minSecurity	NFSShareSecurityEnum	Minimal security level that must be provided by a client to mount the NFS share.
nfsOwnerUsername	String	(Applies to NFS shares of VMware NFS storage resources.) Default owner of the NFS share associated with the datastore. Required if secure NFS enabled. For NFSv3 or NFSv4 without Kerberos, the default owner is root.
noAccessHosts	List<host>	Hosts with no access to the NFS share or its snapshots, as defined by the host resource type.
readOnlyHosts	List<host>	Hosts with read-only access to the NFS share and its snapshots, as defined by the host resource type.
readWriteHosts	List<host>	Hosts with read and write access to the NFS share and its snapshots, as defined by the host resource type.
readOnlyRootAccessHosts	List<host>	Hosts with read-only root access to the NFS share and its snapshots, as defined by the host resource type.
rootAccessHosts	List<host>	Hosts with root access to the NFS share and its snapshots, as defined by the host resource type.
noAccessHostsString	String	Hosts with no access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readOnlyHostsString	String	Hosts with read-only access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readWriteHostsString	String	Hosts with read-write access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readOnlyRootHostsString	String	Hosts with read-only root access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.

readWriteRootHostsString	String	Hosts with read-write root access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
anonymousUID	unsigned Integer[32]	Specifies the user ID of the anonymous account.
anonymousGID	unsigned Integer[32]	Specifies the group ID of the anonymous account.
exportOption	unsigned Integer[64]	Specifies the bitmask of various options of the NFS share. Values are: • 0x0001 - hostString - if set, the access to the NFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.
hostCount	unsigned Integer[64]	The total number of hosts associated with the nfsShare. If hostString is set in exportOption, the hosts will be calculated based on noAccessHostsString, readOnlyHostsString, readWriteHostsString, readOnlyRootHostsString, readWriteRootHostsString. Otherwise, the hosts will be calculated based on noAccessHosts, readOnlyHosts, readWriteHosts, readOnlyRootAccessHosts, rootAccessHosts.

Query all members of the nfsShare collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/nfsShare/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the nfsShare collection.

Query a specific nfsShare instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/nfsShare/<id> where <id> is the unique identifier of the nfsShare instance to query. Or GET /api/instances/nfsShare/name:<value> where <value> is the name of the nfsShare instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific nfsShare instance.

Create operation

Create an NFS share for a snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/nfsShare/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
snap	in	snap	Required	Parent file system associated with the NFS share, as defined by the filesystemSnap resource type.
path	in	String[..1023]	Required	Local path to a location within the file system. With NFS, each share must have a unique local path. By default, the system creates a share to the root of the file system (top-most directory) at file system creation time. This path specifies the unique location of the file system on the storage system. Before you can create additional shares within an NFS shared folder, you must create directories within it from a Linux/UNIX host that is connected to the file system. After a directory has been created from a mounted host, you can create a corresponding share and set access permissions accordingly.
name	in	String[1..255]	Required	NFS share name.
description	in	String[..255]	Optional	NFS share description.
isReadOnly	in	Boolean	Optional	Indicates whether the NFS share is read-only. Values are: • true - NFS share is read-only. • false - NFS share is read-write.

defaultAccess	in	NFSShareDefaultAccessEnum	Optional	Default NFS share access-level permissions.
minSecurity	in	NFSShareSecurityEnum	Optional	Minimal security level that must be provided by a client to mount the NFS share.
noAccessHosts	in	List<host>	Optional	Hosts with no access to the NFS share or its snapshots, as defined by the host resource type.
readOnlyHosts	in	List<host>	Optional	Hosts with read-only access to the NFS share and its snapshots, as defined by the host resource type.
readWriteHosts	in	List<host>	Optional	Hosts with read and write access to the NFS share and its snapshots, as defined by the host resource type.
readOnlyRootAccessHosts	in	List<host>	Optional	Hosts with read-only root access to the NFS share and its snapshots, as defined by the host resource type.
rootAccessHosts	in	List<host>	Optional	Hosts with read-write root access to the NFS share and its snapshots, as defined by the host resource type.
noAccessHostsString	in	String[..7000]	Optional	Hosts with no access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readOnlyHostsString	in	String[..7000]	Optional	Hosts with read-only access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readWriteHostsString	in	String[..7000]	Optional	Hosts with read-write access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readOnlyRootHostsString	in	String[..7000]	Optional	Hosts with read-only root access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readWriteRootHostsString	in	String[..7000]	Optional	Hosts with read-write root access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
anonymousUID	in	unsigned Integer[32]	Optional	user ID of the anonymous account.
anonymousGID	in	unsigned Integer[32]	Optional	group ID of the anonymous account.
exportOption	in	unsigned Integer[64][0..3]	Optional	Bitmask of various options of the NFS share. Values are: • 0x0001 - hostString - if set, the access to the NFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.
id	out	nfsShare	N/A	Unique identifier of the new NFS share.

Delete operation

Delete an NFS share for a snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/nfsShare/<id> where <id> is the unique identifier of the nfsShare instance to delete. Or DELETE /api/instances/nfsShare/name:<value> where <value> is the name of the nfsShare instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify an NFS share for a snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/nfsShare/<id>/action/modify where <id> is the unique identifier of the nfsShare instance. Or POST /api/instances/nfsShare/name:<value>/action/modify where <value> is the name of the nfsShare instance.
Request body arguments	See the arguments table below.

Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
description	in	String[..255]	Optional	NFS share description.
defaultAccess	in	NFSShareDefaultAccessEnum	Optional	Default NFS share access-level permissions.
minSecurity	in	NFSShareSecurityEnum	Optional	Minimal security level that must be provided by a client to mount the NFS share.
noAccessHosts	in	List<host>	Optional	Hosts with no access to the NFS share or its snapshots, as defined by the host resource type. Replaces the existing no-access hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
readOnlyHosts	in	List<host>	Optional	Hosts with read-only access to the NFS share and its snapshots, as defined by the host resource type. Replaces the existing read-only hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
readWriteHosts	in	List<host>	Optional	Hosts with read and write access to the NFS share and its snapshots, as defined by the host resource type. Replaces the existing read-write root hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
readOnlyRootAccessHosts	in	List<host>	Optional	Hosts with read-only root access to the NFS share and its snapshots, as defined by the host resource type. Replaces the existing read-only root hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
rootAccessHosts	in	List<host>	Optional	Hosts with read-write root access to the NFS share and its snapshots, as defined by the host resource type. Replaces the existing read-write root hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
addNoAccessHosts	in	List<host>	Optional	Hosts to be added with no access to the NFS share or its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to no-access list.
addReadOnlyHosts	in	List<host>	Optional	Hosts to be added with read-only access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-only list.
addReadWriteHosts	in	List<host>	Optional	Hosts to be added with read and write access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-write list.
addReadOnlyRootAccessHosts	in	List<host>	Optional	Hosts to be added with read-only root access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-only root list.
addRootAccessHosts	in	List<host>	Optional	Hosts to be added with read-write root access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-write root list.
removeHosts	in		Optional	

		List<host>		Hosts to be restored with default access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list should already be in one of the access lists. It removes the host from existing list.
noAccessHostsString	in	String[..7000]	Optional	Hosts with no access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing no access hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
readOnlyHostsString	in	String[..7000]	Optional	Hosts with read-only access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-only hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
readWriteHostsString	in	String[..7000]	Optional	Hosts with read-write access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-write hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
readOnlyRootHostsString	in	String[..7000]	Optional	Hosts with read-only root access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-only root hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
readWriteRootHostsString	in	String[..7000]	Optional	Hosts with read-write root access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-write root hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
addNoAccessHostsString	in	String[..7000]	Optional	Hosts to be added with no access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to no-access list.
addReadOnlyHostsString	in	String[..7000]	Optional	Hosts to be added with read-only access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to read-only list.
addReadWriteHostsString	in	String[..7000]	Optional	Hosts to be added with read-write access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to read-write list.
addReadOnlyRootHostsString	in	String[..7000]	Optional	Hosts to be added with read-only root access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to read-only root list.
addReadWriteRootHostsString	in	String[..7000]	Optional	Hosts to be added with read-write root access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. May not be used with replacement HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then

				removeHostsString is applied first. Any specified host already with other access will be moved to read-write root list.
removeHostsString	in	String[..7000]	Optional	Hosts to be restored with default access to the NFS share and its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list should already be in one of the access lists. It removes the host from existing list.
anonymousUID	in	unsigned Integer[32]	Optional	user ID of the anonymous account.
anonymousGID	in	unsigned Integer[32]	Optional	group ID of the anonymous account.
exportOption	in	unsigned Integer[64][0..3]	Optional	Bitmask of various options of the NFS share. Values are: • 0x0001 - hostString - if set, the access to the NFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. To switch between the 2 modes, clear all existing host access first, or in the same request. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.

ntpServer

Network Time Protocol (NTP) server settings.

The system relies on NTP as a standard for synchronizing the system clock with other nodes on the network. NTP provides a way of synchronizing clocks of distributed systems within approximately one millisecond of each other. A Windows Active Directory domain controller can operate as a time server if the Windows Time Service is running on it.

Some applications will not operate correctly if the clock on the system is not synchronized with the clock on connected hosts. Configure the system and any connected hosts to use the same time server. Doing so does the following:

- Minimizes the chance that synchronization issues will arise between the system and connected hosts.
- Reduces the difficulty of reconciling timestamps used for log information in the different systems.

Note: When using a NAS server for CIFS network shares, the system cannot access an Active Directory domain unless the system is synchronized within five minutes of the Active Directory controller for the domain where the network shares reside.

You can configure a total of four NTP server addresses for the system. All NTP server addresses are grouped into a single NTP server record.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ntpServer instance.
addresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	List of NTP server IP addresses.

Query all members of the ntpServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ntpServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ntpServer collection.

Query a specific ntpServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ntpServer/<id> where <id> is the unique identifier of the ntpServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ntpServer instance.

Modify operation

Modify an NTP server.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/ntpServer/<id>/action/modify where <id> is the unique identifier of the ntpServer instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
addresses	in	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	List of NTP server IP addresses.
rebootPrivilege	in	RebootPrivilegeEnum	Required	Indicates whether a system reboot of the NTP server is required for setting the system time.
timeShift	out	DateTime[Interval - h+:mm:ss[.sss]]	N/A	Time difference between the system time and the new NTP server time. This value appears only if it exceeds the defined limit of 1000 seconds. If you see this value, you cannot apply the new time settings without rebooting the system.

pool

Information about pools in the storage system.

Creating pools using Quick Start mode

You can use Quick Start mode to create system recommended pools based on the type and availability of drives in the system. In Quick Start mode, the system recommends separate pools for different drive types and uses default RAID configurations for the drives. A pool configured in Quick Start mode has only one tier.

Quick Start mode is available when both of these conditions are met:

- No pools exist on the system.
- The system is not licensed for FAST VP or FAST Cache.

To create pools using Quick Start mode, follow these steps:

1. Run POST api/types/pool/action/recommendAutoConfiguration.

   The response body contains a set of poolSetting instances.

2. For each poolSetting instance returned in Step 1, run POST /api/types/pool/instances with the following arguments, using values obtained from the poolSetting instance:
   - addRaidGroupParameters : [{dskGroup : poolSetting.storageConfiguration.possibleStorageConfigurations.diskGroup,
   - numDisks : poolSetting.storageConfiguration.possibleStorageConfigurations.raidGroupConfigurations.diskCount,
   - raidType : poolSetting.storageConfiguration.raidType,
   - stripeWidth : poolSetting.storageConfiguration.possibleStorageConfigurations.raidGroupConfigurations.stripeWidths},...]

Pool creation examples:
Simple pool with one RAID5 4+1:
POST /api/types/pool/instances
{"name" : "PerformancePool",
"addRaidGroupParameters" : [
{"dskGroup" : {"id" : dg_15},
"numDisks" : 6,
"raidType" : 1,
"stripeWidth" : 5}
]
}

Pool with raid group RAID10 1+1:
{"name" : "SysDefPool00",
"description" : "The pool is created with RAID10(1+1)",
"addRaidGroupParameters" : [
{"dskGroup" : {"id" : "dg_16"},
"numDisks" : 5,
"raidType" : 7,
"stripeWidth" : 2}
]
}

Embedded resource types

poolConfiguration, poolFASTVP, poolRaidStripeWidthInfo, poolTier

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify ,RecommendAutoConfiguration ,StartRelocation ,StopRelocation ,GetStorageTierConfiguration ,GetStorageTierConfigurationsForDynamicPool

Attributes

Attribute	Type	Description
id	String	Unique identifier of the pool instance.
health	health	Health information for the pool, as defined by the health resource type.
name	String[1..85]	Pool name, unique in the storage system.
description	String[0..170]	Pool description.
raidType	RaidTypeEnum	RAID type with which the pool is configured. A value of Mixed indicates that the pool consists of multiple RAID types.
sizeFree	unsigned Integer[64(bytes)]	Size of free space available in the pool.
sizeTotal	unsigned Integer[64(bytes)]	The total size of space from the pool, which will be the sum of sizeFree, sizeUsed and sizePreallocated space.
sizeUsed	unsigned Integer[64(bytes)]	Space allocated from the pool by storage resources, used for storing data. This will be the sum of the sizeAllocated values of each storage resource in the pool.
sizePreallocated	unsigned Integer[64(bytes)]	Space reserved form the pool by storage resources, for future needs to make writes more efficient. The pool may be able to reclaim some of this if space is running low. This will be the sum of the sizePreallocated values of each storage resource in the pool.
dataReductionSizeSaved	unsigned Integer[64(bytes)]	Amount of space saved for the pool by data reduction (includes savings from compression, deduplication and advanced deduplication).

dataReductionPercent	unsigned Integer[16(percent)]	Data reduction percentage is the percentage of the data that does not consume storage - the savings due to data reduction. For example, if 1 TB of data is stored in 250 GB, the data reduction percentage is 75%. 75% data reduction percentage is equivalent to a 4:1 data reduction ratio.
dataReductionRatio	Float	Data reduction ratio. The data reduction ratio is the ratio between the size of the data and the amount of storage actually consumed. For example, 1TB of data consuming 250GB would have a ration of 4:1. A 4:1 data reduction ratio is equivalent to a 75% data reduction percentage.
flashPercentage	unsigned Integer[16(percent)]	Pool flash tier percentage
sizeSubscribed	unsigned Integer[64(bytes)]	Size of space requested by the storage resources allocated in the pool for possible future allocations. If this value is greater than the total size of the pool, the pool is considered oversubscribed.
alertThreshold	unsigned Integer[32(percent)] [50..84]	Threshold at which the system generates notifications about the size of free space in the pool, specified as a percentage. This threshold is based on the percentage of allocated storage in the pool compared to the total pool size.
hasDataReductionEnabledLuns	Boolean	(Applies if Data Reduction is supported on the system and the corresponding license is installed.) Indicates whether the pool has any Lun that has data reduction ever turned on; Values are: • true - Lun(s) in this pool have had or currently have data reduction enabled. • false - No lun(s) in this pool have ever had data reduction enabled.
hasDataReductionEnabledFs	Boolean	(Applies if Data Reduction is supported on the system and the corresponding license is installed.) Indicates whether the pool has any File System that has data reduction ever turned on; Values are. • true - File system(s) in this pool have had or currently have data reduction enabled. • false - No file system(s) in this pool have ever had data reduction enabled.
isFASTCacheEnabled	Boolean	(Applies if FAST Cache is supported on the system and the corresponding license is installed.) Indicates whether the FAST Cache is enabled for the pool. Values are: • true - FAST Cache is enabled for the pool. • false - FAST Cache is disabled for the pool. FAST Cache is created from Flash SAS drives and applied only to RAID groups created of SAS and NL-SAS hard drives. If the pool is populated by purely Flash drives the FAST Cache is not enabled.
tiers	List<poolTier>	Tiers in the pool, as defined by the poolTier resource type.
creationTime	DateTime	Date and time when the pool was created.
isEmpty	Boolean	Indicates whether the pool is unused; that is, whether it has no storage resources provisioned from it. Values are: • true - Pool is unused. • false - Pool is used..
poolFastVP	poolFASTVP	(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP information for the pool, as defined by the poolFastVP resource type. Pool is not eligible to be a multi-tier pool until FAST VP license installed.
isHarvestEnabled	Boolean	Indicates whether the automatic deletion of snapshots through pool space harvesting is enabled for the pool. See properties poolSpaceHarvestHighThreshold and poolSpaceHarvestLowThreshold. Values are: • true - Automatic deletion of snapshots through pool harvesting is enabled for the pool. • false - Automatic deletion of snapshots through pool harvesting is disabled for the pool.
harvestState	UsageHarvestStateEnum	Current state of pool space harvesting.
isSnapHarvestEnabled	Boolean	Indicates whether the automatic deletion of snapshots through snapshot harvesting is enabled for the pool. See properties snapSpaceHarvestHighThreshold and snapSpaceHarvestLowThreshold. Values are: • true - Automatic deletion of snapshots through snapshot harvesting is enabled for the pool. • false - Automatic deletion of snapshots through snapshot harvesting is disabled for the pool.
poolSpaceHarvestHighThreshold	Float	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space high threshold at which the system automatically starts to delete snapshot objects in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used in the pool by all types of objects compared to the total pool size. When the percentage of used space reaches this threshold, the system starts to automatically delete snapshot objects in the pool, until a low threshold (see poolSpaceHarvestLowThreshold) is reached.
poolSpaceHarvestLowThreshold	Float	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space low threshold under which the system stops automatically deleting snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used in the pool by all types of objects compared to the total pool size. When the percentage of used space in the pool falls below this threshold, the system stops the automatic deletion of snapshot objects in the pool, until a high threshold (see

		poolSpaceHarvestHighThreshold) is reached again.
snapSpaceHarvestHighThreshold	Float	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and pool.) Space used by snapshot objects high threshold at which the system automatically starts to delete snapshot objects in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used in the pool by snapshot objects only compared to the total pool size. When the percentage of space used by snapshots reaches this threshold, the system automatically starts to delete snapshots in the pool, until a low threshold (see snapSpaceHarvestLowThreshold) is reached. Note that if Base LUN has Thin Clones its snapshot space doesn't affect this threshold.
snapSpaceHarvestLowThreshold	Float	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and pool.) Space used by snapshot objects low threshold under which the system automatically stops deleting snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used in the pool by snapshots only compared to the total pool size. When the percentage of pool space used by snapshot objects falls below this threshold, the system automatically stops deletion of snapshots in the pool, until a high threshold (see snapSpaceHarvestHighThreshold) is reached again. Note that if Base LUN has Thin Clones its snapshot space doesn't affect this threshold.
metadataSizeSubscribed	unsigned Integer[64(bytes)]	Size of pool space subscribed for metadata.
snapSizeSubscribed	unsigned Integer[64(bytes)]	Size of pool space subscribed for snapshots.
nonBaseSizeSubscribed	unsigned Integer[64(bytes)]	Size of pool space subscribed for thin clones and snapshots
metadataSizeUsed	unsigned Integer[64(bytes)]	Size of pool space used by metadata.
snapSizeUsed	unsigned Integer[64(bytes)]	Size of pool space used by snapshots.
nonBaseSizeUsed	unsigned Integer[64(bytes)]	Size of pool space used for thin clones and snapshots
rebalanceProgress	unsigned Integer[16(percent)]	(Applies if FAST VP is supported on the system and the corresponding license is installed.) Percent of work completed for data rebalancing.
type	StoragePoolTypeEnum	Indicates type of this pool. Values are: • Dynamic - It is dynamic pool. • Traditional - It is traditional pool.
isAllFlash	Boolean	Indicates whether this pool contains only Flash drives. Values are: • true - It is an all Flash pool. • false - This pool contains drives other than Flash drives.

Attributes for poolConfiguration

System-recommended pool configuration settings. Instances of this resource type contain the output of the pool resource type's RecommendAutoConfiguration operation.

Attribute	Type	Description
name	String	Pool name.
description	String	Pool description.
storageConfiguration	storageTierConfiguration	Recommended configuration of the storage tier in the recommended pool, as defined by the storageCapabilityEstimation resource type.
alertThreshold	unsigned Integer[32(percent)]	Threshold at which the system will generate notifications about the amount of space remaining in the pool, specified as a percentage with 1% granularity. This threshold is based on the percentage of allocated storage in the pool compared to the total pool size.
poolSpaceHarvestHighThreshold	Float	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space high threshold at which the system will automatically delete snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of used space in the pool compared to the total pool size. When the percentage of used space reaches this threshold, the system automatically deletes snapshots in the pool, until a low threshold is reached.
poolSpaceHarvestLowThreshold	Float	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space low threshold under which the system will stop automatically deleting snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of used pool space compared to the total pool size. When the percentage of used space in the pool falls below this threshold, the system stops the automatic deletion of snapshots in the pool, until a high threshold is reached.
snapSpaceHarvestHighThreshold	Float	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and the pool.) Snapshot used space high threshold at which the system will automatically delete snapshots in the pool, specified as a percentage with .01% granularity.

		This threshold is based on the percentage of space used by pool snapshots compared to the total pool size. When the percentage of space used by snapshots reaches this threshold, the system automatically deletes snapshots in the pool, until a low threshold is reached.
snapSpaceHarvestLowThreshold	Float	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and the pool.) Snapshot used space low threshold under which the system will stop automatically delete snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used by pool snapshots compared to the total pool size. When the percentage of space used by pool snapshots falls below this threshold, the system stops the automatic deletion of snapshots in the pool, until a high threshold is reached.
isFastCacheEnabled	Boolean	(Applies if a FAST Cache license is installed on the system.) Indicates whether the pool will be used in the FAST Cache. Values are: • true - FAST Cache will be enabled for this pool. • false - FAST Cache will be disabled for this pool.
isFASTVpScheduleEnabled	Boolean	(Applies if a FAST VP license is installed on the storage system.) Indicates whether to enable scheduled data relocations for the pool. Values are: • true - Enable scheduled data relocations for the pool. • false - Disable scheduled data relocations for the pool.
isDiskTechnologyMixed	Boolean	Indicates whether the pool contains drives with different drive technologies, such as FLASH, SAS and NL-SAS. Values are: • true - Pool contains drives with different drive technologies. • false - Pool does not contain drives with different drive technologies.
maxSizeLimit	unsigned Integer[64(bytes)]	Maximum pool capacity recommended for the storage system.
maxDiskNumberLimit	unsigned Integer[32]	Maximum number of drives recommended for the storage system.
isMaxSizeLimitExceeded	Boolean	Indicates whether the total size of all recommended pools exceeds that allowed by the storage system. Values are: • true - Total size of all recommended pools exceeds that allowed by the storage system. • false - Total size of all recommended pools does not exceed that alllowed by the storage system.
isMaxDiskNumberLimitExceeded	Boolean	Indicates whether the total number of drives in the recommended pools exceeds that allowed by the storage system. Values are: • true - Total size of all recommended pools exceeds that allowed by the storage system. • false - Total size of all recommended pools does not exceed that alllowed by the storage system.
isRPMMixed	Boolean	Indicates whether the pool contains drives with different rotational speeds. Values are: • true - Pool contains drives with different rotational speeds. • false - Pool does not contain drives with different rotational speeds.

Attributes for poolFASTVP

(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP settings for the pool associated with this embedded type.

Attribute	Type	Description
status	FastVPStatusEnum	Data relocation status.
relocationRate	FastVPRelocationRateEnum	Data relocation rate.
isScheduleEnabled	Boolean	Indicates if scheduled data relocations are enabled: • true - Scheduled data relocations are enabled. • false - Scheduled data relocations are disabled.
relocationDurationEstimate	DateTime[Interval]	Estimated time required for the data relocation.
sizeMovingDown	unsigned Integer[64(bytes)]	Size of data to move to a lower tier. This value is 0 for a single tier pool.
sizeMovingUp	unsigned Integer[64(bytes)]	Size of data to move to higher tier. This value is 0 for a single tier pool.
sizeMovingWithin	unsigned Integer[64(bytes)]	Size of data to move within a tier.
percentComplete	unsigned Integer[16]	Percent of data relocated so far in the relocation process.
type	PoolDataRelocationTypeEnum	Data relocation type.
dataRelocated	unsigned Integer[64(bytes)]	Size of data relocated. For a completed data relocation, this is the total size of data relocated since the last data relocation session.
lastStartTime	DateTime	Time of day to start scheduled data relocations.
lastEndTime	DateTime	Time of day at which scheduled data relocations should end.

Attributes for poolRaidStripeWidthInfo

(Applies to dynamic pools only) Information about the stripe width info in the pool.

Attribute	Type	Description

rpm	unsigned Integer[32(rpm)]	Revolutions Per Minute (RPMs).
stripeWidth	RaidStripeWidthEnum	RAID stripe width of the drives in the raid stripe info.
driveTechnology	DiskTechnologyEnum	Drive technology in the raid stripe info.
driveCount	unsigned Integer[32]	The number of physical drives in the raid stripe info.
parityDrives	unsigned Integer[32]	The number of parity drives in the raid stripe info.

Attributes for poolTier

Information about the tiers in the pool.

Attribute	Type	Description
tierType	TierTypeEnum	Tier type.
stripeWidth	RaidStripeWidthEnum	RAID stripe width of the drives in the tier.
raidType	RaidTypeEnum	RAID type of the drives in the tier.
sizeTotal	unsigned Integer[64(bytes)]	Total size of space in the tier.
sizeUsed	unsigned Integer[64(bytes)]	Size of used space in the tier.
sizeFree	unsigned Integer[64(bytes)]	Size of free space in the tier.
sizeMovingDown	unsigned Integer[64(bytes)]	Size of data scheduled to be moved to a lower tier. This value is 0 for a single-tier pool.
sizeMovingUp	unsigned Integer[64(bytes)]	Amount of data scheduled to be moved to a higher tier. This value is 0 for a single tier pool.
sizeMovingWithin	unsigned Integer[64(bytes)]	Amount of data to be rebalanced within the tier.
name	String	Name of the pool.
poolUnits	List<poolUnit>	List of Pool Units, i.e. raidGroup and virtualDisk objects, in the tier.
diskCount	unsigned Integer[32]	The number of physical drives in the tier.
spareDriveCount	unsigned Integer[32]	The drive number of hot spare space for dynamic pool.
raidStripeWidthInfo	List<poolRaidStripeWidthInfo>	(Applies to dynamic pools only and the corresponding license is installed.) Raid Stripe Width Info in the pool, as defined by the poolRaidStripeWidthInfo resource type.

Query all members of the pool collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/pool/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the pool collection.

Query a specific pool instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/pool/<id> where <id> is the unique identifier of the pool instance to query. Or GET /api/instances/pool/name:<value> where <value> is the name of the pool instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific pool instance.

Create operation

Create a new pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/pool/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..85]	Required	Pool name.
description	in	String[0..170]	Optional	Pool description.
addRaidGroupParameters	in	List<raidGroupParameters>	Optional	Parameters to add RAID groups to the pool (disk group, number of drives, RAID level,

				stripe length: see object raidGroupParameters). To create a pool with drives of different type (SAS Flash, SAS, NL-SAS) FAST VP license is required.
addPoolUnitParameters	in	List<poolUnitParameters>	Optional	Pool capacity units (now Virtual Disks only, see virtualDisk object) with associated parameters to add to the pool without RAID protection.
alertThreshold	in	unsigned Integer[32(percent)][50..84]	Optional	Threshold at which the system will generate alerts about the free space in the pool, specified as a percentage. This threshold is based on the percentage of allocated storage in the pool compared to the total pool size.
poolSpaceHarvestHighThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space high threshold at which the system will automatically starts to delete snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used in the pool by all types of objects compared to the total pool size. When the percentage of used space reaches this threshold, the system automatically starts to delete snapshots in the pool, until a low threshold is reached.
poolSpaceHarvestLowThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space low threshold under which the system will automatically stop deletion of snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space in the pool used by all types of obejcts compared to the total pool size. When the percentage of used space in the pool falls below this threshold, the system stops the automatic deletion of snapshots in the pool, until a high threshold is reached again.
snapSpaceHarvestHighThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and pool.) Snapshot used space high threshold at which the system automatically starts to delete snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of pool space used by snapshot objects only compared with the total pool size. When the percentage of space used by snapshots reaches this threshold, the system automatically starts to delete snapshots in the pool, until a low threshold is reached.
snapSpaceHarvestLowThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and the pool.) Snapshot used space low threshold below which the system will stop automatically deleting snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used by snapshot objects only as compared to the total pool size. When the percentage of space used by snapshots falls below this threshold, the system stops automatically deleting snapshots in the pool, until a high threshold is reached again.
isHarvestEnabled	in	Boolean	Optional	Indicates whether to enable pool space harvesting (the automatic deletion of snapshots based on pool space usage) for the pool. Values are: • true - Enable pool harvesting for the pool. • false - Disable pool harvesting for the pool.
isSnapHarvestEnabled	in	Boolean	Optional	Indicates whether to enable snapshot harvesting (the automatic deletion of snapshots based on snapshot space

				usage) for the pool. Values are: • true - Enable snapshot harvesting for the pool. • false - Disable snapshot harvesting for the pool.
isFASTCacheEnabled	in	Boolean	Optional	(Applies if a FAST Cache license is installed on the system.) Indicates whether to enable the FAST Cache for the pool. Values are: • true - FAST Cache will be enabled for this pool. • false - FAST Cache will be disabled for this pool. Only RAID groups created of SAS and NL-SAS hard drives are eligible for FAST Cache. If the pool is populated by only Flash drives this option is not allowed.
isFASTVpScheduleEnabled	in	Boolean	Optional	(Applies when a FAST VP license is installed on the system.) Indicates whether to enable scheduled data relocations for the pool. Values are: • true - Enable scheduled data relocations for the pool. • false - Disable scheduled data relocations for the pool.
type	in	StoragePoolTypeEnum	Optional	Indicates whether to create traditional pool or dynamic pool. • traditional - Create traditional pool. • dynamic - Create dynamic pool. (default)
id	out	pool	N/A	Output parameter for the created pool id. The pool object with this id may not exist at the moment of this method complete because this method only launches background process called Job which is actually creating the pool.

Delete operation

Delete a pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/pool/<id> where <id> is the unique identifier of the pool instance to delete. Or DELETE /api/instances/pool/name:<value> where <value> is the name of the pool instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modifies the existing pool: allows to expand pool capacity and/or modify different parameters of the pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/pool/<id>/action/modify where <id> is the unique identifier of the pool instance. Or POST /api/instances/pool/name:<value>/action/modify where <value> is the name of the pool instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..85]	Optional	Pool new name.
description	in	String[0..170]	Optional	Pool new description.
addRaidGroupParameters	in	List<raidGroupParameters>	Optional	Parameters to add RAID groups to the pool (disk group, number of drives, RAID level, stripe length). If the expansion of the single-tier pool makes it multi-tier pool then FAST VP license is required to be installed on the system.
addPoolUnitParameters	in	List<poolUnitParameters>	Optional	Pool capacity units (now Virtual Disks only) with associated parameters to add to the pool without RAID protection.

alertThreshold	in	unsigned Integer[32(percent)][50..84]	Optional	
poolSpaceHarvestHighThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space high threshold at which the system will automatically starts to delete snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used in the pool by all types of objects compared to the total pool size. When the percentage of used space reaches this threshold, the system automatically starts to delete snapshots in the pool, until a low threshold is reached.
poolSpaceHarvestLowThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on pool space usage is enabled for the system and pool.) Pool used space low threshold under which the system will automatically stop deletion of snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space in the pool used by all types of obejcts compared to the total pool size. When the percentage of used space in the pool falls below this threshold, the system stops the automatic deletion of snapshots in the pool, until a high threshold is reached again.
snapSpaceHarvestHighThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and pool.) Snapshot used space high threshold at which the system automatically starts to delete snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of pool space used by snapshot objects only compared with the total pool size. When the percentage of space used by snapshots reaches this threshold, the system automatically starts to delete snapshots in the pool, until a low threshold is reached.
snapSpaceHarvestLowThreshold	in	Float[32]	Optional	(Applies when the automatic deletion of snapshots based on snapshot space usage is enabled for the system and the pool.) Snapshot used space low threshold below which the system will stop automatically deleting snapshots in the pool, specified as a percentage with .01% granularity. This threshold is based on the percentage of space used by snapshot objects only as compared to the total pool size. When the percentage of space used by snapshots falls below this threshold, the system stops automatically deleting snapshots in the pool, until a high threshold is reached again.
isHarvestEnabled	in	Boolean	Optional	Indicates whether to enable pool space harvesting (the automatic deletion of snapshots based on pool space usage) for the pool. Values are: • true - Enable pool harvesting for the pool. • false - Disable pool harvesting for the pool.
isSnapHarvestEnabled	in	Boolean	Optional	Indicates whether to enable snapshot harvesting (the automatic deletion of snapshots based on snapshot space usage) for the pool. Values are: • true - Enable snapshot harvesting for the pool. • false - Disable snapshot harvesting for the pool.
isFASTCacheEnabled	in	Boolean	Optional	(Applies if a FAST Cache license is installed on the system.) Indicates whether to enable the FAST Cache for the pool. Values are:
isFASTVpScheduleEnabled	in	Boolean	Optional	(Applies when a FAST VP license is installed on the system.) Indicates whether to enable scheduled data relocations for the pool. Values are:

				• true - Enable scheduled data relocations for the pool. • false - Disable scheduled data relocations for the pool.

RecommendAutoConfiguration operation

Recommend a list of pool configurations for the storage system.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/pool/action/recommendAutoConfiguration
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the RecommendAutoConfiguration operation

Argument	In/ out	Type	Required?	Description
poolConfigurations	out	List<poolConfiguration>	N/A	The list of recommended pool configurations, as defined by the poolSetting type.

StartRelocation operation

(Applies if FAST VP is supported on the system and the corresponding license is installed.) Initiate data relocation on the pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/pool/<id>/action/startRelocation where <id> is the unique identifier of the pool instance. Or POST /api/instances/pool/name:<value>/action/startRelocation where <value> is the name of the pool instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the StartRelocation operation

Argument	In/ out	Type	Required?	Description
endTime	in	DateTime[Interval - h+:mm:ss[.sss]]	Optional	Date and time at which to stop the data relocation operation. [The value of interval will be rounded down to minutes.]
relocationRate	in	FastVPRelocationRateEnum	Optional	Data relocation rate.

StopRelocation operation

(Applies if FAST VP is supported on the system and the corresponding license is installed.) Stop data relocation on the pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/pool/<id>/action/stopRelocation where <id> is the unique identifier of the pool instance. Or POST /api/instances/pool/name:<value>/action/stopRelocation where <value> is the name of the pool instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

GetStorageTierConfiguration operation

Return all possible RAID configurations for the specified tier type, RAID type, stripe width, for a specific pool. Applied to traditional pools only.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/pool/<id>/action/getStorageTierConfiguration where <id> is the unique identifier of the pool instance. Or POST /api/instances/pool/name:<value>/action/getStorageTierConfiguration where <value> is the name of the pool instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the GetStorageTierConfiguration operation

Argument	In/ out	Type	Required?	Description
tierType	in	TierTypeEnum	Required	Type of the tier.
raidType	in	RaidTypeEnum	Required	Preferred RAID type (RAID level) for the storage tier.
stripeWidth	in	RaidStripeWidthEnum	Required	Preferred RAID stripe width (RAID modulus) for the tier.
storageConfiguration	out	storageTierConfiguration	N/A	All possible configurations for the tier, as defined by the storageTierConfiguration embedded object.

GetStorageTierConfigurationsForDynamicPool operation

Return all possible RAID configurations for the parameters which specify tier type, RAID type, stripe width, for a specific pool. Applied to dynamic pools only.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/pool/<id>/action/getStorageTierConfigurationsForDynamicPool where <id> is the unique identifier of the pool instance. Or POST /api/instances/pool/name:<value>/action/getStorageTierConfigurationsForDynamicPool where <value> is the name of the pool instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the GetStorageTierConfigurationsForDynamicPool operation

Argument	In/ out	Type	Required?	Description
storageTierParameters	in	List<storageTierConfigurationParameters>	Required	List of sepcified pamameters.
storageTierConfigurations	out	List<storageTierConfiguration>	N/A	All possible configurations for the list of specified parameters, as defined by the storageTierConfiguration embedded object.

poolConsumer

poolConsumer class is representation of single object that consumes storage inside pools. There are two types of pool consumers: storage resources and NAS servers. NAS servers and storage resource except Consistency groups are always wholly allocated in one and only one storage pool. Consistency group can be allocated in more than one storage pool in case if the LUNs belonging to the group allocated in the different pools. The NAS servers consume space in the pool of constant size which is not changed once NAS server created.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique ID of object.

Query all members of the poolConsumer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/poolConsumer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the poolConsumer collection.

Query a specific poolConsumer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/poolConsumer/<id> where <id> is the unique identifier of the poolConsumer instance to query. Or GET /api/instances/poolConsumer/name:<value> where <value> is the name of the poolConsumer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific poolConsumer instance.

poolConsumerAllocation

poolConsumerAllocation class represents size of pool's space allocated by the consumer (storageResources or nasServers) inside the pool. Most of consumers are always wholly allocated in one and only one storage pool. The only

exception is consistencyGroup storage resource that can contain different LUNs that reside in different pools.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique ID of poolConsumerAllocation object.
pool	pool	Storage pool reference.
consumer	poolConsumer	The object allocated in the storage pool.
consumerType	PoolConsumerTypeEnum	Type of pool consumer object.
sizeAllocatedTotal	unsigned Integer[64(bytes)]	Total space allocated in the storage pool for the consumer object.
sizePreallocated	unsigned Integer[64(bytes)]	Space reserved from the pool by the consumer object, for future needs to make writes more efficient. The pool may be able to reclaim some of this if space is running low.
snapsSizeAllocated	unsigned Integer[64(bytes)]	Space allocated in the storage pool for snapshots of the consumer object.
nonBaseSizeAllocated	unsigned Integer[64(bytes)]	Storage element used non-base capacity

Query all members of the poolConsumerAllocation collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/poolConsumerAllocation/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the poolConsumerAllocation collection.

Query a specific poolConsumerAllocation instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/poolConsumerAllocation/<id> where <id> is the unique identifier of the poolConsumerAllocation instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific poolConsumerAllocation instance.

poolUnit

Pool units contribute space toward pool capacity. Currently, pool units are either external virtual disks (see virtualDisk object), or internal raid groups (see disk and raidGroup objects).

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the pool unit instance.
type	PoolUnitTypeEnum	Type of Pool Unit is either RAID group or external virtual disk.
health	health	Health information for the pool unit, as defined by the health resource type.
name	String[1..32]	Name of the pool unit instance.
description	String[0..128]	Pool Unit description.
wwn	String	World Wide Name (WWN) of the Pool Unit.
sizeTotal	unsigned Integer[64(bytes)]	Total usable size of the Pool Unit
tierType	TierTypeEnum	Pool Unit Tier type.
pool	pool	The pool that is using this pool unit. A RAID group pool unit always belongs to a pool, but virtual disk pool units may exist prior to pool membership.

Query all members of the poolUnit collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/poolUnit/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the poolUnit collection.

Query a specific poolUnit instance

Header	Accept: application/json

	Content-Type: application/json
Method and URI	GET /api/instances/poolUnit/<id> where <id> is the unique identifier of the poolUnit instance to query. Or GET /api/instances/poolUnit/name:<value> where <value> is the name of the poolUnit instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific poolUnit instance.

powerSupply

(Applies to physical deployments only.) Information about power supplies in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the powerSupply instance.
health	health	Health information for the power supply, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the power supply needs replacement. Values are: • true - Power supply needs replacement. • false - Power supply does not need replacement.
parent	resourceRef	Resource type and unique identifier for the power supply's parent enclosure.
slotNumber	unsigned Integer[32]	Slot number where the power supply is located in the parent enclosure.
name	String[1..32]	Power supply name.
manufacturer	String	Manufacturer of the power supply.
model	String	Manufacturer's model number for the power supply.
firmwareVersion	String	Firmware version number for the power supply.
emcSerialNumber	String	EMC serial number for the power supply.
vendorPartNumber	String	Vendor part number for the power supply.
vendorSerialNumber	String	Vendor serial number for the power supply.
emcPartNumber	String	EMC part number for the power supply.
parentDae	dae	Parent Disk Array Enclosures (DAE) of the power supply.
parentDpe	dpe	Parent Disk Processor Enclosure (DPE) of the power supply.
inputType	PowerSupplyInputTypeEnum	Input type of the power supply.
storageProcessor	storageProcessor	Storage Processor that the power supply is associated to.

Query all members of the powerSupply collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/powerSupply/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the powerSupply collection.

Query a specific powerSupply instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/powerSupply/<id> where <id> is the unique identifier of the powerSupply instance to query. Or GET /api/instances/powerSupply/name:<value> where <value> is the name of the powerSupply instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific powerSupply instance.

preferredInterfaceSettings

The preferred interface of NAS server is an interface from which all the non-local outbound connections of this NAS server are initiated. The non-local connections are those which hosts can be accessed from this NAS server interfaces only via some router (gateway).

The preferred interfaces for IPv4 and IPv6 are independent from each other. During the replication, the production interfaces could be activated and deactivated automatically, so the separate preferred interface settings are required for production and backup & DR testing interfaces. For each NAS server, the following preferred interface settings exist:

1. Production interfaces, IPv4.
2. Production interfaces, IPv6.
3. Backup & DR testing interfaces, IPv4.
4. Backup & DR testing interfaces, IPv6.

Each of these settings could be set to the explicit interface. If it isn't set, corresponding interface will be selected automatically.

The acting preferred interfaces, one for IPv4 and one for IPv6, are selected among active interfaces by the following rules, ordered by priority (highest first):

1. Manually selected interfaces have priority over automatically selected ones.
2. Production interfaces have priority over backup and DR testing ones.
3. The interface with the default gateway has priority over one not having one.
4. From the otherwise equal priority interfaces, one with the most routes has the priority.
5. From the otherwise equal priority interfaces, one with the minimal value of IP address (Sic!) has the priority.

Note: During the replication, on the destination side, only Backup & DR testing interfaces could be active.

For the automatic selection, the interface re-selected each time any of this NAS interfaces or routes are changed. If the interface has been explicitly selected as preferred and then deleted, this type/class group setting (e.g. "Production/IPv6") gets reset to automatic selection.

During the replication, on the destination side, only the production interfaces settings could be overridden. It is controlled by the single flag both for IPv4 and IPv6 interfaces. Note that this flag is independent from the "override" flag of the interface itself. If an interface is explicitly selected as preferred and then overridden, the interface is kept preferred.

The acting preferred interfaces are marked by the corresponding property value, fileInterface.isPreferred == true. To get the list of the acting preferred interfaces of a NAS server, iterate its interface list checking the isPreferred property.

Embedded resource types

preferredInterfaceSourceParameters

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the Preferred Interface Settings object.
nasServer	nasServer	Identifier of the file server instance that uses this Preferred Interface Settings object. Only one Preferred Interface Settings object per file server is supported.
productionIpV4	fileInterface	Requested IPv4 production preferred interface
productionIpV6	fileInterface	Requested IPv6 production preferred interface
backupIpV4	fileInterface	Requested IPv4 backup preferred interface
backupIpV6	fileInterface	Requested IPv6 backup preferred interface
sourceParameters	preferredInterfaceSourceParameters	Requested production preferred interfaces of the source NAS server. On the destination side of the active replication session: • The replicated IPv4 and IPv6 production interface settings are returned in the sourceParameters.productionIpV4 and sourceParameters.productionIpV6 fields. • Regardless of the replicationPolicy settings, this property returns the replicated settings. Without the active replication session or on the source side of such session: • Property is not populated.
replicationPolicy	ReplicationPolicyEnum	Acting replication policy of the production preferred interfaces. On the destination side of the active replication session: • "Replicated" means that the settings for the production IPv4 and IPv6 preferred interface settings are replicated from the source side. • "Overridden" means that the settings for the production IPv4 and IPv6 preferred interface settings are overridden on the destination side. Without the active replication session or on the source side of such session: • Property is not populated.

Attributes for preferredInterfaceSourceParameters

Information about preferred interface settings of the source NAS server.

Attribute	Type	Description
productionIpV4	fileInterface	Requested IPv4 production preferred interface of the source NAS server
productionIpV6	fileInterface	Requested IPv6 production preferred interface of the source NAS server

Query all members of the preferredInterfaceSettings collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/preferredInterfaceSettings/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the preferredInterfaceSettings collection.

Query a specific preferredInterfaceSettings instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/preferredInterfaceSettings/<id> where <id> is the unique identifier of the preferredInterfaceSettings instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific preferredInterfaceSettings instance.

Modify operation

Modify Preferred Interface Settings.

To set a type/class group to automatic selection, unset the corresponding parameter.

On the destination side of the active replication session:

- To override the production preferred interface settings, set any of the production settings to any value, including the same it has now.
- Setting the replicationPolicy to "Overridden" makes the production preferred interface settings overridden w/o changing their current values.
- To reset the overridden settings to the replicated state, set the replicationPolicy to "Replicated".

Without the active replication session or on the source side of such session:

- Setting the replicationPolicy to any value results in error.

The full logics of these settings is described in the class description above.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/preferredInterfaceSettings/<id>/action/modify where <id> is the unique identifier of the preferredInterfaceSettings instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
productionIpV4	in	fileInterface	Optional	Requested IPv4 production preferred interfaces. Empty string or null to unset.
productionIpV6	in	fileInterface	Optional	Requested IPv6 production preferred interfaces. Empty string or null to unset.
backupIpV4	in	fileInterface	Optional	Requested IPv4 backup preferred interfaces. Empty string or null to unset.
backupIpV6	in	fileInterface	Optional	Requested IPv6 backup preferred interfaces. Empty string or null to unset.
replicationPolicy	in	ReplicationPolicyEnum	Optional	Replication policy of the production preferred interfaces.

quotaConfig

A quotaConfig instance represents the quota configuration of either a tree quota or a filesystem.

Supported operations

Collection query , Instance query ,Modify ,UpdateTreeQuotas ,UpdateUserQuotas

Attributes

Attribute	Type	Description
id	String	Unique identifier.
filesystem	filesystem	Associated file system.
treeQuota	treeQuota	Associated tree quota. Only available for quota configuration of a tree quota.
quotaPolicy	QuotaPolicyEnum	Quota policy.
isUserQuotaEnabled	Boolean	Whether user quota is enabled. Values are: • true - start tracking usages for all users on a file system or a quota tree, and user quota limits would be enforced. • false - stop tracking usages for all users on a file system or a quota tree, and user quota limits will not be enforced.
isAccessDenyEnabled	Boolean	Whether access will be denied when the limit is exceeded. Values are: • true - Attempts to allocate additional storage will fail with out of space error, when the quota hard limit is exceeded or the soft limit is exceeded and the grace period is expired. • false - Attempts to allocate additional storage will not fail because of quota limits.
gracePeriod	unsigned Integer[64(seconds)]	Grace period of soft limits.
defaultHardLimit	unsigned Integer[64(bytes)]	Default hard limit of user quotas and tree quotas.
defaultSoftLimit	unsigned Integer[64(bytes)]	Default soft limit of user quotas and tree quotas.
lastUpdateTimeOfTreeQuotas	DateTime	When tree quotas within a file system were last successfully updated. The value is null if it is a quotaConfig instance of a quota tree.
lastUpdateTimeOfUserQuotas	DateTime	When user quotas within a file system or a quota tree were last successfully updated.

Query all members of the quotaConfig collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/quotaConfig/instances
Request body arguments	None

Successful return status	200 OK
Successful response body	JSON representation of all members of the quotaConfig collection.

Query a specific quotaConfig instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/quotaConfig/<id> where <id> is the unique identifier of the quotaConfig instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific quotaConfig instance.

Modify operation

Modify a quota configuration of either a file system or a quota tree.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/quotaConfig/<id>/action/modify where <id> is the unique identifier of the quotaConfig instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
quotaPolicy	in	QuotaPolicyEnum	Optional	Quota policy. Per fs configuration. The quota policy of a quota tree is derived from the file system. Can not be used with isUserQuotaEnabled in the same request.
isUserQuotaEnabled	in	Boolean	Optional	Whether user quotas are enabled. Can not be used with quotaPolicy in the same request.
deleteUserQuotasWithDisable	in	Boolean	Optional	Whether to delete user quotas when disabling user quotas (isUserQuotaEnabled=true).
isAccessDenyEnabled	in	Boolean	Optional	Whether access will be denied when the limit is exceeded.
gracePeriod	in	unsigned Integer[64(seconds)]	Optional	Grace period of soft limits.
defaultHardLimit	in	unsigned Integer[64(bytes)]	Optional	Default hard limit of user quotas and tree quotas.
defaultSoftLimit	in	unsigned Integer[64(bytes)]	Optional	Default soft limit of user quotas and tree quotas.

UpdateTreeQuotas operation

Update all tree quota objects within a file system.
The method is only available for the quotaConfig instance relating to the file system.
Most properties in the treeQuota object are kept up to date, however two properties relating to statistic data (remainingGracePeriod and sizeUsed) are updated only per 24 hours by default. The method will manually update treeQuota objects including their statistic properties in a file system immediately.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/quotaConfig/<id>/action/updateTreeQuotas where <id> is the unique identifier of the quotaConfig instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

UpdateUserQuotas operation

Update all user quota objects within a file system or a quota tree.
Most properties in the userQuota object are kept up to date, however two properties relating to statistic data (remainingGracePeriod and sizeUsed) are updated only per 24 hours by default. The method will manually update userQuota objects including their statistic properties in a file system or a quota tree immediately.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/quotaConfig/<id>/action/updateUserQuotas where <id> is the unique identifier of the quotaConfig instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the UpdateUserQuotas operation

Argument	In/ out	Type	Required?	Description
isUpdateNames	in	Boolean	Optional	Indicates whether to refresh user name in user quota report. Usually user name doesn't change often. And user name will be refreshed once 24 hours automatically.

raidGroup

RAID group objects in the pool and FAST Cache. RAID group is subclass of poolUnit type.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the RAID Group object.
type	PoolUnitTypeEnum	Type of pool unit. This will always be raid group.
health	health	Health information for the RAID group, as defined by the health resource type.
name	String[1..32]	RAID Group name.
description	String[0..128]	RAID Group description.
wwn	String	World Wide Name (WWN) of the RAID Group.
sizeTotal	unsigned Integer[64(bytes)]	User capacity of the RAID Group.
tierType	TierTypeEnum	RAID group tier type.
pool	pool	Pool to which the RAID group adds its capacity.
diskGroup	diskGroup	Disk group that contains the drives of RAID group. Applies to traditional pools only.
diskGroups	List<diskGroup>	List of disk groups to which the RAID group's drives belong.
raidType	RaidTypeEnum	RAID level (or RAID type) of the RAID group.
stripeWidth	RaidStripeWidthEnum	Stripe width (or RAID modulus) of the RAID group.
parityDisks	unsigned Integer[16(disks)]	Number of parity drives in the RAID group.
disks	List<disk>	Drives in the RAID group. For dynamic pool, a drive can be in multiple raid groups in the same pool.

Query all members of the raidGroup collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/raidGroup/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the raidGroup collection.

Query a specific raidGroup instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/raidGroup/<id> where <id> is the unique identifier of the raidGroup instance to query. Or GET /api/instances/raidGroup/name:<value> where <value> is the name of the raidGroup instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific raidGroup instance.

remoteInterface

All local and remote replication interfaces from all remote system connection configurations.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique global identifier of the remoteInterface instance. This is combination of system serial number and the instance id as is from the remote system.
remoteId	String	Unique identifier of the remoteInterface instance as is from remote system.
name	String	User-specified remote interface name.
address	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false	IP address of the remote interface.

	• DNS name supported: false	
remoteSystem	remoteSystem	Unique identifier of the remote system, as defined by the remoteSystem resource type.
node	NodeEnum	SP or node owning this interface.
capability	ReplicationCapabilityEnum	This property indicates the capability of the interface for replication sessions Values are: • 0 - interface is capable of participating in SYNC replication sessions • 1 - interface is capable of participating in ASYNC replication sessions • 2 - interface is capable of participating in both SYNC and ASYNC replication sessions

Query all members of the remoteInterface collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/remoteInterface/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the remoteInterface collection.

Query a specific remoteInterface instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/remoteInterface/<id> where <id> is the unique identifier of the remoteInterface instance to query. Or GET /api/instances/remoteInterface/name:<value> where <value> is the name of the remoteInterface instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific remoteInterface instance.

remoteSyslog

Configuration information for storage system remote logging.

When you configure remote logging, you must specify the network address of a host that will receive the log data. The remote host must be accessible from the storage system, and security for the log information must be provided through network access controls or the system security at the remote host.

By default, the storage system transfers log information on port 514 using the UDP protocol.

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete ,VerifyConnection

Attributes

Attribute	Type	Description
id	String	Unique identifier of the remoteSyslog instance.
address	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	IP address of the host where the storage system stores the remote log information. By default, the storage system stores log information on port 514.
protocol	IpProtocolTypeEnum	Protocol used to transfer messages to the remote log. Default protocol is UDP.
facility	RemoteSyslogFacilityTypeEnum	Type of information to record in the remote system log. It is recommended that you specify 1 (User-level-Messages) for this value.
category	RemoteSyslogCategoryEnum	Category of information to record in the remote system log.
enabled	Boolean	Indicates whether the logging to the remote log is enabled. Values are: • true - Logging to the remote log is enabled. • false - Logging to the remote log is disabled.
severity	SeverityEnum	The least severity level of information to record in the remoteSyslog accepts. Default severity is DEBUG.

Query all members of the remoteSyslog collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/remoteSyslog/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the remoteSyslog collection.

Query a specific remoteSyslog instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/remoteSyslog/<id> where <id> is the unique identifier of the remoteSyslog instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific remoteSyslog instance.

Create operation

Create remote log settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/remoteSyslog/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
enabled	in	Boolean	Optional	Indicates whether logging to the remote log is enabled, default value is true. Values are: • true - Logging to the remote log is enabled. • false - Logging to the remote log is disabled.
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Required	IP address of the host where the storage system stores the remote log information. By default, the storage system transfers log information on port 514.
protocol	in	IpProtocolTypeEnum	Optional	Protocol used to transfer messages to the remote log. The default protocol is UDP.
facility	in	RemoteSyslogFacilityTypeEnum	Optional	Type of information to record in the remote system log. It is recommended that you specify 1 (User-level-Messages) for this value.
category	in	RemoteSyslogCategoryEnum	Optional	Category of information to record in the remote system log.
locale	in	LocaleEnum	Optional	Language used to record log messages in the remote log, default locale is en_US.
severity	in	SeverityEnum	Optional	The least severity level to record log messages in the remote log.
id	out	remoteSyslog	N/A	Unique identifier of the new remoteSyslog instance.

Modify operation

Modify remote log settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/remoteSyslog/<id>/action/modify where <id> is the unique identifier of the remoteSyslog instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
enabled	in	Boolean	Optional	Indicates whether logging to the remote log is enabled. Values are: • true - Logging to the remote log is enabled. • false - Logging to the remote log is disabled.
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	IP address of the host where the storage system stores the remote log information. By default, the storage system transfers log information on port 514.
protocol	in	IpProtocolTypeEnum	Optional	Protocol used to transfer messages to the remote log. The default protocol is UDP.
facility	in	RemoteSyslogFacilityTypeEnum	Optional	Type of information to record in the remote system log. It is recommended that you specify 1 (User-level-Messages) for this value.
category	in	RemoteSyslogCategoryEnum	Optional	Category of information to record in the remote

				system log.
locale	in	LocaleEnum	Optional	Language used to record log messages in the remote log.
severity	in	SeverityEnum	Optional	The least severity level to record log messages in the remote log.

Delete operation

Delete a remote log setting

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/remoteSyslog/<id> where <id> is the unique identifier of the remoteSyslog instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

VerifyConnection operation

Verify the connection between Unity and the remote system log server of TCP or TLS type.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/remoteSyslog/<id>/action/verifyConnection where <id> is the unique identifier of the remoteSyslog instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

remoteSystem

Information about remote storage systems that connect to the system to which you are logged in. The system uses the configuration to access and communicate with the remote system. For example, to use remote replication, create a configuration that specifies the remote system to use as the destination for the replication session.

Embedded resource types

remoteSystemBandwidthSchedule

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete ,Verify ,FailoverAllNasReplicationSessions ,PauseReplicationSessions ,ResumeReplicationSessions

Attributes

Attribute	Type	Description
id	String	Unique identifier of the remoteSystem instance.
name	String	System name as reported by system.name on remote system.
model	String	Model name of the remote system.
serialNumber	String	Serial number of the remote system.
health	health	Health information for the remote system, as defined by the health resource type.
managementAddress	String	Management IP address of the remote system.
altManagementAddressList	List<String>	Alternate management IP addresses of the remote system.
connectionType	ReplicationCapabilityEnum	Type of the replication connection to the remote system.
syncFcPorts	List<String>	Fibre channel ports used for synchronous replication.
username	String	Username for accessing the remote system.
localSPAInterfaces	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	SPA replication interface IP addresses of local system used in remote system connection configuration.
localSPBInterfaces	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	SPB replication interface IP addresses of local system used in remote system connection configuration.
remoteSPAInterfaces	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	SPA replication interface IP addresses of remote system used in remote system connection configuration.
remoteSPBInterfaces	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	SPB replication interface IP addresses of remote system used in remote system connection configuration.
bandwidthSchedules	List<remoteSystemBandwidthSchedule>	A list of bandwidth schedules configured for asynchronous replications on this remote system.

		The first matched (by comparing current time with the days of the week plus the hours of the day of the bandwidth schedule) bandwidth schedule's bandwidth takes effect in that all synchronous replication sessions on this remote system as source role with active data transfer due to either RPO or manual sync would evenly share the bandwidth.
currentBandwidth	unsigned Integer[32][0..524288000]	Current bandwidth calculated based on the configured bandwidth schedules and the schedule time zone for asynchronous replications on this remote system. Value is in KB/s and ranges from 0 to 524288000. No value means that the asynchronous replications on this remote system with source role will not be throttled.

Attributes for remoteSystemBandwidthSchedule

Information about remote system bandwidth schedule. This object specifies the maximum bandwidth that would be evenly shared by all asynchronous replications on a remote system with source role and having active data transfer due to either RPO or manual sync between the from hour and the to hour on the days of week. Please note the maximum bandwidth is a limit that all replication data transfer total speed should not exceed, the actual replication data transfer speed is up to physical network.

Attribute	Type	Description
fromHour	unsigned Integer[16(hours)][0..23]	Starting hour ranging from 0 to 23 indicating when this bandwidth schedule applies. fromHour value should be smaller than toHour value. fromHour will be based on the schedule time zone configured for snap schedules and asynchronous replication bandwidth schedules.
toHour	unsigned Integer[16(hours)][1..24]	Ending hour ranging from 1 to 24 indicating when this bandwidth schedule applies. toHour value should be bigger than fromHour value. toHour will be based on the schedule time zone configured for snap schedules and asynchronous replication bandwidth schedules.
daysOfWeek	List<DayOfWeekEnum>	Days of the week indicating when this bandwidth schedule applies.
bandwidth	unsigned Integer[32] [0..524288000]	Maximum bandwidth value in KB/s ranging from 0 to 524288000. If not specified, available bandwidth up to physical network bandwidth will be used.

Query all members of the remoteSystem collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/remoteSystem/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the remoteSystem collection.

Query a specific remoteSystem instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/remoteSystem/<id> where <id> is the unique identifier of the remoteSystem instance to query. Or GET /api/instances/remoteSystem/name:<value> where <value> is the name of the remoteSystem instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific remoteSystem instance.

Create operation

Configure a remote system

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/remoteSystem/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
managementAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Required	Management IP address of the remote system.
localUsername	in	String[..64]	Optional	Local administrative username used for reverse direction communications from the remote system.
localPassword	in	String	Optional	Local administrative password used for reverse direction communications from the remote system.
remoteUsername	in	String[..64]	Optional	Remote username used to access the remote system.

remotePassword	in	String	Optional	Remote password used to access the remote system.
connectionType	in	ReplicationCapabilityEnum	Optional	Replication connection type to the remote system.
bandwidthSchedules	in	List<remoteSystemBandwidthSchedule>	Optional	A list of bandwidth schedules configured for asynchronous replications on this remote system. The first matched (by comparing current time with the days of the week plus the hours of the day of the bandwidth schedule) bandwidth schedule's bandwidth takes effect in that all asynchronous replication sessions on this remote system as source role with active data transfer due to either RPO or manual sync would evenly share the bandwidth.
id	out	remoteSystem	N/A	Unique identifier for the new remoteSystem instance.

Modify operation

Modify the remote system configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/remoteSystem/<id>/action/modify where <id> is the unique identifier of the remoteSystem instance. Or POST /api/instances/remoteSystem/name:<value>/action/modify where <value> is the name of the remoteSystem instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
managementAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	Management IP address of the remote system.
username	in	String[..64]	Optional	Username for accessing the remote system.
password	in	String	Optional	Password for accessing the remote system.
connectionType	in	ReplicationCapabilityEnum	Optional	Connection type to the remote system.
bandwidthSchedules	in	List<remoteSystemBandwidthSchedule>	Optional	A list of bandwidth schedules configured for asynchronous replications on this remote system. The first matched (by comparing current time with the days of the week plus the hours of the day of the bandwidth schedule) bandwidth schedule's bandwidth takes effect in that all asynchronous replication sessions on this remote system as source role with active data transfer due to either RPO or manual sync would evenly share the bandwidth.

Delete operation

Delete the remote system configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/remoteSystem/<id> where <id> is the unique identifier of the remoteSystem instance to delete. Or DELETE /api/instances/remoteSystem/name:<value> where <value> is the name of the remoteSystem instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Verify operation

Verify and update the remote system settings

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/remoteSystem/<id>/action/verify

	where <id> is the unique identifier of the remoteSystem instance. Or POST /api/instances/remoteSystem/name:<value>/action/verify where <value> is the name of the remoteSystem instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Verify operation

Argument	In/ out	Type	Required?	Description
connectionType	in	ReplicationCapabilityEnum	Optional	Connection type to the remote system.

FailoverAllNasReplicationSessions operation

Fail over all NAS servers and their file systems replication sessions which replicate from the selected remote system to the local system.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/remoteSystem/<id>/action/failoverAllNasReplicationSessions where <id> is the unique identifier of the remoteSystem instance. Or POST /api/instances/remoteSystem/name: <value>/action/failoverAllNasReplicationSessions where <value> is the name of the remoteSystem instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the FailoverAllNasReplicationSessions operation

Argument	In/ out	Type	Required?	Description
force	in	Boolean	Optional	Skip pre-checks on replication sessions of a NAS server when a replication failover is issued. Values are: • true - Skip pre-checks. • false - Do not skip pre-checks.

PauseReplicationSessions operation

Pause replication sessions which replicate from the local system to the selected remote system, and from the selected remote system to the local system.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/remoteSystem/<id>/action/pauseReplicationSessions where <id> is the unique identifier of the remoteSystem instance. Or POST /api/instances/remoteSystem/name:<value>/action/pauseReplicationSessions where <value> is the name of the remoteSystem instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the PauseReplicationSessions operation

Argument	In/ out	Type	Required?	Description
sessionType	in	ReplicationCapabilityEnum	Optional	Specify the type of replication sessions to pause - sync, async, or both. If not specified, the connection type of the remote system is used by default.

ResumeReplicationSessions operation

Resume replication sessions which replicate from the local system to the selected remote system, and from the selected remote system to the local system. For each asynchronous replication session and File synchronous session, 'allowFullCopy' option is used. If more resume options are needed, resume the individual replication session instead.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/remoteSystem/<id>/action/resumeReplicationSessions where <id> is the unique identifier of the remoteSystem instance. Or POST /api/instances/remoteSystem/name:<value>/action/resumeReplicationSessions where <value> is the name of the remoteSystem instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ResumeReplicationSessions operation

Argument	In/	Type	Required?	Description

	out			
sessionType	in	ReplicationCapabilityEnum	Optional	Specify the type of replication sessions to resume - sync, async, or both. If not specified, the connection type of the remote system is used by default.

replicationInterface

Information about replication interfaces in the storage system. These interfaces are used in remote replication connections and sessions for replication data transfer.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the replicationInterface instance.
ipPort	ipPort	Physical port or link aggregation on the storage processor on which the replication interface is running, as defined by the ipPort resource type.
health	health	Health of the replication interface, as defined by the health resource type.
ipAddress	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IP address of the replication interface.
ipProtocolVersion	IpProtocolVersionEnum	IP protocol version of the replication interface.
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 netmask for the replication interface, if it uses an IPv4 address.
v6PrefixLength	unsigned Integer[32][0..32]	IPv6 prefix length for the replication interface, if it uses an IPv6 address.
gateway	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 or IPv6 gateway address for the replication interface.
vlanId	unsigned Integer[16][4094..0]	Virtual Local Area Network (VLAN) identifier for the replication interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 0 - 4094. The default is 0, which means that the packets to accept do not have VLAN tags.
macAddress	String	MAC address of the virtual Ethernet port used for the replication interface. A physical Ethernet port has a different MAC address.
name	String	Replication interface name.

Query all members of the replicationInterface collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/replicationInterface/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the replicationInterface collection.

Query a specific replicationInterface instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/replicationInterface/<id> where <id> is the unique identifier of the replicationInterface instance to query. Or GET /api/instances/replicationInterface/name:<value> where <value> is the name of the replicationInterface instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific replicationInterface instance.

Create operation

Create a replication interface.

Header	Accept: application/json Content-Type: application/json

Method and URI	POST /api/types/replicationInterface/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
sp	in	storageProcessor	Required	Storage processor on which the replication interface is running.
ipPort	in	ipPort	Required	Physical port or link aggregation on the storage processor on which the interface is running, as defined by the ethernetPort resource type.
ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Required	IP address of the replication interface.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 netmask for the replication interface, if it uses an IPv4 address.
v6PrefixLength	in	unsigned Integer[32]	Optional	IPv6 prefix length for the interface, if it uses an IPv6 address.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 or IPv6 gateway address for the replication interface.
vlanId	in	unsigned Integer[16] [0..4094]	Optional	Virtual Local Area Network (VLAN) identifier for the interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 0 - 4094. The default is 0, which means the packets to accept do not have VLAN tags.
id	out	replicationInterface	N/A	Unique identifier of the new replicationInterface instance.

Delete operation

Delete a replication interface.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/replicationInterface/<id> where <id> is the unique identifier of the replicationInterface instance to delete. Or DELETE /api/instances/replicationInterface/name:<value> where <value> is the name of the replicationInterface instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a replication interface configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationInterface/<id>/action/modify where <id> is the unique identifier of the replicationInterface instance. Or POST /api/instances/replicationInterface/name:<value>/action/modify where <value> is the name of the replicationInterface instance.

Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
ipPort	in	ipPort	Optional	Unique identifier of the physical port or link aggregation on the storage processor on which the replication interface is running, as defined by the ipPort resource type.
ipAddress	in	IPAddress • IPv6 supported: true • Prefix-length supported: true • Port supported: false • DNS name supported: false	Optional	IP address of the replication interface.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 netmask for the replication interface, if it uses an IPv4 address.
v6PrefixLength	in	unsigned Integer[32]	Optional	IPv6 prefix length for the replication interface, if it uses an IPv6 address.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IPv4 or IPv6 gateway address for the replication interface.
vlanId	in	unsigned Integer[16]	Optional	Virtual Local Area Network (VLAN) identifier for the replication interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 0 - 4094. The default is 0, which means that the packets to accept do not have VLAN tags.

replicationSession

Information about replication sessions.

Replication is a process in which storage data is duplicated either locally or to a remote network device. Replication produces a read-only, point-in-time copy of source data and periodically updates the copy, keeping it consistent with the source data. Replication provides an enhanced level of redundancy in case the main storage backup system fails. As a result, the:

- Downtime associated cost of a system failure is minimized.
- Recovery process from a natural or human-caused disaster is facilitated.

A replication session establishes an end-to-end path for a replication operation between a source and a destination. The replication source and destination may be local or remote. The session establishes the path that the data follows as it moves from source to destination.

Embedded resource types

commonBaseSnap, snapReplicationPolicy

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete ,Precheck ,Resume ,Pause ,Sync ,Failover ,Failback ,Preserve_async

Attributes

Attribute	Type	Description
id	String	Unique identifier of the replicationSession instance.
name	String	User-specified replication session name.
replicationResourceType	ReplicationEndpointResourceTypeEnum	Replication resource type of replication session endpoints.
status	ReplicationOpStatusEnum	Replication status of the replication session.
health	health	Health information for the replication session, as defined by the health resource type.
maxTimeOutOfSync	signed Integer[32(minutes)][-1]	Maximum time to wait before the system syncs the source and destination resources. Value of -1 specifies that automatic sync is

		not performed.
srcStatus	ReplicationSessionStatusEnum	Status of the source end of the session.
networkStatus	ReplicationSessionNetworkStatusEnum	Status of the network connection used by the replication session.
dstStatus	ReplicationSessionStatusEnum	Status of the destination end of the replication session.
lastSyncTime	DateTime	Date and time of the last replication synchronization.
syncState	ReplicationSessionSyncStateEnum	Synchronization state between source and destination resource of the replication session.
remoteSystem	remoteSystem	The remote system to which this replication session is connected, as defined by the remoteSystem resource type.
localRole	ReplicationSessionReplicationRoleEnum	Role of the local system in the replication session.
srcResourceId	String	Identifier of the source resource in the replication session.
srcSPAInterface	remoteInterface	SP A interface used on the source system for the replication, if the replication session is a remote session.
srcSPBInterface	remoteInterface	SP B interface used on the source system for the replication, if the replication session is a remote session.
dstResourceId	String	Identifier of the destination resource.
dstSPAInterface	remoteInterface	SP A interface used on the destination system for the replication, if the replication session is a remote session.
dstSPBInterface	remoteInterface	SP B interface used on the destination system for the replication, if the replication session is a remote session.
members	List<lunMemberReplication>	Information about the replication of each member lun in the group.
syncProgress	unsigned Integer[16(Percent)][0..100]	Synchronization completion percentage between source and destination resources of the replication session.
currentTransferEstRemainTime	unsigned Integer[64(minutes)]	Estimated time left for the replication synchronization to complete.
hourlySnapReplicationPolicy	snapReplicationPolicy	Hourly snap replication policy.
dailySnapReplicationPolicy	snapReplicationPolicy	Daily snap replication policy.

Attributes for commonBaseSnap

Attribute	Type	Description
replicationSessionId	String	
srcCommonBaseSnap	String	
dstCommonBaseSnap	String	

Attributes for snapReplicationPolicy

Describes or specifies the policy for replicating either hourly or daily scheduled snaps of the source storageResource.

Attribute	Type	Description
isReplicatingSnaps	Boolean	Is replicating scheduled snapshots or not Values are: • true - scheduled snapshots will be replicated to the destination. • false - scheduled snapshots will not be replicated to the destination.
isRetentionSameAsSource	Boolean	(Can be only be applied if isReplicatingSnaps is true.) Indicates whether or not the remote (destination) retention policy applied for snapshots is the same as the local (source) retention policy. Values are: • true - The same retention policy is applied to the destination snaphots. • false - A customized policy is applied to destination snapshots.
isAutoDelete	Boolean	(Can be only be applied if isReplicatingSnaps is true and isRetentionSameAsSource is false.) Indicates whether scheduled snapshots will be replicated to the destination can be automatically. Values are: • true - Snapshots can be automatically deleted by the system per threshold settings. • false - Snapshots cannot be deleted automatically.
retentionDuration	unsigned Integer[64(seconds)]	(Can be only be applied if isReplicatingSnaps is true and isRetentionSameAsSource & isAutoDelete are false.) Number of seconds after which the scheduled snapshots will expire on the destination.

Query all members of the replicationSession collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/replicationSession/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the replicationSession collection.

Query a specific replicationSession instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/replicationSession/<id> where <id> is the unique identifier of the replicationSession instance to query. Or GET /api/instances/replicationSession/name:<value> where <value> is the name of the replicationSession instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific replicationSession instance.

Create operation

Create a replication session. Replication can be configured between like type resources. Interface options are optional and applicable to inter-array replication.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/replicationSession/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
remoteSystem	in	remoteSystem	Optional	Unique identifier of the remote system in the replication session, as defined by the remoteSystem resource type.
srcSPAInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the source SPA.
srcSPBInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the source SPB.
dstSPAInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the destination SPA.
dstSPBInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the destination SPB.
srcResourceId	in	String	Required	Unique identifier of the source resource.
dstResourceId	in	String	Required	Unique identifier of the destination resource.
maxTimeOutOfSync	in	signed Integer[32(minutes)]	Required	Maximum time to wait before the system syncs the source and destination resources. Value of -1 specifies that automatic sync is not performed.
autoInitiate	in	Boolean	Optional	(Applies to replication sessions with manual synchronization.) Indicates whether to perform the first replication sync (a full sync) automatically. Values are: • true - Perform the first replication sync automatically. • false - Perform the first replication sync manually.
name	in	String	Optional	Name of the replication session
members	in	List<lunMemberReplication>	Optional	(Applies to replication sessions for Consistency groups) Specify ALL member luns' pairing between source and destination resource of the session. Treat Consistency groups as a single entity when they are replicated.
hourlySnapReplicationPolicy	in	snapReplicationPolicy	Optional	Hourly Snap Replication Policy.
dailySnapReplicationPolicy	in	snapReplicationPolicy	Optional	Daily Snap Replication Policy.
replicateExistingSnaps	in	Boolean	Optional	Whether or not to replicate snapshots already existing on the resource (one-time option at session creation time). Each replica of these snaps will inherit the source snap retention policy.
noAsyncSnapReplication	in	Boolean	Optional	Whether or not snap replication is enabled in asynchronous replication session. When enabled, snap replication is controlled by snap replication policy setting or user action.
cascadeReplicatedSnap	in	Boolean	Optional	Whether or not to replicate snap in the cascade replication session. When enabled, snap will be automatically replicated

				in this replication session when it is replicated from the inbound async replication session.
srcCommonBaseSnap	in	snap	Optional	Snapshot that used as common baseline snap for async replication session source side.
dstCommonBaseSnapId	in	String	Optional	Unique identifier of the destination snapshot that used as common baseline snap for async replication session destination side.
skipSnapSignatureCheck	in	Boolean	Optional	Force to use snapshot as common baseline snap for async replication session.
enableCommonBaseAutoSearch	in	Boolean	Optional	Enable auto searching and pairing common base.
overwriteDestination	in	Boolean	Optional	For LUN/CG replications, enabling this option, which defaults to false, will allow replication copying all of source data and overwriting any data already on the destination LUN(s) in the initial-copy.
id	out	replicationSession	N/A	Unique identifier of the new replication session

Modify operation

Modify properties of a replication session.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/modify where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/modify where <value> is the name of the replicationSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
maxTimeOutOfSync	in	signed Integer[32(minutes)]	Optional	Maximum time to wait before the system syncs the source and destination resources. Value of -1 specifies that automatic sync is not performed.
name	in	String	Optional	Name of the replication session.
srcSPAInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the source SPA.
srcSPBInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the source SPB.
dstSPAInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the destination SPA.
dstSPBInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the destination SPB.
hourlySnapReplicationPolicy	in	snapReplicationPolicy	Optional	Hourly Snap Replication Policy.
dailySnapReplicationPolicy	in	snapReplicationPolicy	Optional	Daily Snap Replication Policy.
noAsyncSnapReplication	in	Boolean	Optional	Whether or not snap replication is enabled in asynchronous replication session. When enabled, snap replication is controlled by snap replication policy setting or user action.
cascadeReplicatedSnap	in	Boolean	Optional	Whether or not to replicate snap in the cascade replication session. When enabled, snap will be automatically replicated in this replication session when it is replicated from the inbound async replication session.

Delete operation

Delete a replication session. This can be applied in any operational state of the session.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/replicationSession/<id> where <id> is the unique identifier of the replicationSession instance to delete. Or DELETE /api/instances/replicationSession/name:<value> where <value> is the name of the replicationSession instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Precheck operation

Precheck the replication session. Check for a common base snap of a sync replication session, and if it is a NAS Server session, also check each includedfilesystem replication session for a common base snap. A common base snap is identified by the corresponding source and destination snap ids for the replicated common base snap. The result will include each common base snap found, which may be an empty list.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/precheck where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/precheck where <value> is the name of the replicationSession instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the Precheck operation

Argument	In/ out	Type	Required?	Description
precheckOutput	out	List<commonBaseSnap>	N/A	The result of the precheck.

Resume operation

Resume a replication session. This can be applied on a replication session when it's operational status is reported as either Failed over or Paused. The allowFullCopy or forceFullCopy option is needed when a replication session goes out of sync due to a fault. Both allowFullCopy and forceFullCopy cannot be set simultaneously. If the session has no common base snapshot and neither allowFullCopy nor forceFullCopy is specified, a full copy will be performed using the same behavior as when allowFullCopy is set to true for a synchronous file replication. For NAS Server synchronous replication, if allowFullCopy or forceFullCopy is specified as false, the operation will fail since NAS Server synchronous replication has never had a common base snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/resume where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/resume where <value> is the name of the replicationSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Resume operation

Argument	In/ out	Type	Required?	Description
srcSPAInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the source SPA.
srcSPBInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the source SPB.
dstSPAInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the destination SPA.
dstSPBInterface	in	remoteInterface	Optional	(Applies to remote replication) Replication interface for the destination SPB.
forceFullCopy	in	Boolean	Optional	Indicates whether to force replicating all data from the source to the destination during the replication session resuming. • true - Replicate all data. • false - Replicate changed data only.
forceDiscardDestinationChanges	in	Boolean	Optional	Normally an asynchronous replication session cannot be resumed when the destination is or has been mounted R/W and may have data written locally. The forceDiscardDestinationChanges option allows resume to proceed. • true - Resync the destination from the source, overwriting any data written to the destination while the replication was not active. • false - The resume command will fail if the destination is R/W and may have data written locally.

Pause operation

Pause a replication session. This can be applied to replication session when in OK state.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/pause where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/pause where <value> is the name of the replicationSession instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Sync operation

Sync a replication session. This operation can be applied to initiate a sync on demand independent of type of session - auto or manual sync.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/sync where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/sync where <value> is the name of the replicationSession instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Failover operation

Fail over a replication session. Note that if a failover occurs and data is written to the new source (original destination), new snaps are taken, and finally a failback occurs: then those snaps will get replicated to the new destination (original source). However, we maintain the local retention for the original source and the remote retention for the original destination. If the same scenario occurs but a resume is requested instead of failback (essentially switching the replication direction), then the local and remote retentions are switched so that the local retention policy is applied on the new source and the remote policy is applied on the new destination.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/failover where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/failover where <value> is the name of the replicationSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Failover operation

Argument	In/ out	Type	Required?	Description
sync	in	Boolean	Optional	Indicates whether to sync the source and destination resources before failing over the asynchronous replication session or whether to keep them in sync after failing over the synchronous replication session. • true - Sync before failing over the asynchronous replication session or keep in sync after failing over the synchronous replication session. • false - Do not sync before failing over the asynchronous replication session or do not keep in sync after failing over the synchronous replication session.
force	in	Boolean	Optional	Indicates to skip pre-checks on file system(s) replication sessions of a NAS server when a replication failover is issued from the source NAS server. • true - skip pre-check. • false - Do not skip pre-check.

Failback operation

Fail back a replication session. This can be applied on a replication session that is failed over. Fail back will synchronize the changes done to the original destination back to original source site and will restore the original direction of session. The allowFullCopy or forceFullCopy option is needed when a replication session goes out of sync due to a fault. Both allowFullCopy and forceFullCopy cannot be set simultaneously. If the session has no common base snapshot and neither allowFullCopy nor forceFullCopy is specified, a full copy will be performed using the same behavior as when allowFullCopy is set to true for a synchronous file replication. For NAS Server synchronous replication, if allowFullCopy or forceFullCopy is specified as false, the operation will fail since NAS Server synchronous replication has never had a common base snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/failback where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/failback where <value> is the name of the replicationSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Failback operation

Argument	In/ out	Type	Required?	Description
forceFullCopy	in	Boolean	Optional	Indicates whether to sync back all data from the destination SP to the source SP during the failback session. Values are: • true - Sync back all data. • false - Sync back changed data only.
force	in	Boolean	Optional	Normally a NAS server synchronous replication session cannot be failed back unless associated asynchronous replication sessions are preserved. The force option allows failback to proceed without preserving asynchronous replication sessions. • true - Allow failback without preserving asynchronous

				replication sessions. • false - Do not allow failback without preserving asynchronous replication sessions.
forceDatalossChoice	in	ReplicationFailbackForceDataLossChoiceEnum	Optional	Normally an asynchronous replication session cannot be failed back if the destination is ReadWrite or has data that was written locally. In this case both the source and destination may have data newer than the replication session stoppage. The forceDatalossChoice option allows a choice of whether to use the source or destination data in this case. • None - the failback operation will fail if both source and destination have been mounted r/w since the replication was stopped. • Discard_Destination_Changes - the source will be synced to the destination before failing back. Any data written to the destination since the replication was stopped will be lost. • Discard_Source_Changes - the destination will be synced to the source before failing back. Any data written to the source since the replication was stopped will be lost.

Preserve_async operation

Preserve an async replication session. Preserve an async replication session associated with original source of this nas server/filesystem sync replication session after a failover. Preserve recreates one prior async replication from the original source. Preserve tries to find the prior async session on the destination remote system identified by the remoteSystem parameter, and if successful, removes the existing session, creates a new async session to the remote system, and starts the replication process. If there is a common base snap available, then that will be used to optimize the initial copy. Preserve requires that the original async sessions are in the hibernated state. It also requires that there is not already an async replication from the local nas_server to the remote system.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/replicationSession/<id>/action/preserve_async where <id> is the unique identifier of the replicationSession instance. Or POST /api/instances/replicationSession/name:<value>/action/preserve_async where <value> is the name of the replicationSession instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Preserve_async operation

Argument	In/ out	Type	Required?	Description
remoteSystem	in	remoteSystem	Optional	Unique identifier of the asynchronous remote system from local site, as defined by the remoteSystem resource type. To support legacy REST request without the remoteSystem parameter, if remoteSystem is not specified, then the system will check all defined remote systems for a candidate async session. The first candidate one will be preserved.

role

Information about the roles in the storage system. Each role identifies a level of authority for accessing and modifying the system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the role instance.
name	String	Name used to identify the role. Valid values are: • administrator - Administrator role. Can view status and performance information. Can also modify all storage system settings, including configure new storage hosts and manage local user, LDAP user, and LDAP group accounts. • storageadmin - Storage administrator role. Can view status and performance information and can modify most system settings, but cannot configure new storage hosts or manage local user, LDAP user, or LDAP group accounts. • vmadmin - VMware administrator role. Can establish a VASA connection from the vCenter to the storage system. • operator - Operator role. Can view system settings, status, and performance information, but cannot modify system settings. • securityadmin - Security administrator role. Can view and modify security settings; Can view system settings, status, and performance information, but cannot modify system settings.
description	String	Role description.

Query all members of the role collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/role/instances

Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the role collection.

Query a specific role instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/role/<id> where <id> is the unique identifier of the role instance to query. Or GET /api/instances/role/name:<value> where <value> is the name of the role instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific role instance.

roleMapping

Information about role mappings in the storage system.

Each role mapping associates a local user, LDAP user, or LDAP group with a role, granting that user or group administrative privileges on the system.

When you create a local user through the REST API, the appropriate role mapping between the new user and the specified role is created implicitly by the storage system. When you create an LDAP user or group through the REST API, you must explicitly specify a role mapping for that user or group by creating a new roleMapping resource.

For information about creating local users, see the Help topic for the user resource type.

Supported operations

Collection query , Instance query ,Create ,Delete ,DeleteAllInAuthority ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the roleMapping instance.
authorityName	String	Authority used to authorize the entity. Values are: • Local, for a local user. • LDAP server authority name, for an LDAP user or group.
roleName	String	Role name to associate with the entity specified by the entityName attribute.
entityName	String	Local user, LDAP user, or LDAP group name to associate with the role specified by the roleName attribute.
mappingType	RoleMappingTypeEnum	Indicates whether the role mapping is for a local user, LDAP user, or LDAP group.

Query all members of the roleMapping collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/roleMapping/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the roleMapping collection.

Query a specific roleMapping instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/roleMapping/<id> where <id> is the unique identifier of the roleMapping instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific roleMapping instance.

Create operation

Create a new role mapping for an LDAP user or LDAP group.

Note: The system automatically creates role mappings for local users when the users are created.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/roleMapping/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/	Type	Required?	Description

	out			
id	out	roleMapping	N/A	Unique identifier for the new roleMapping instance.
authorityName	in	String	Required	Authority used to authorize the entity.
entityName	in	String	Required	LDAP user or LDAP group name to associate with the role specified by the roleName argument.
roleName	in	String	Required	Role name to associate with the entity specified by the entityName argument.
mappingType	in	RoleMappingTypeEnum	Required	Role mapping type.

Delete operation

Delete a role mapping instance for a local user, LDAP user, or LDAP group.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/roleMapping/<id> where <id> is the unique identifier of the roleMapping instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

DeleteAllInAuthority operation

Delete all role mappings that are authenticated by the specified authority.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/roleMapping/action/deleteAllInAuthority
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the DeleteAllInAuthority operation

Argument	In/ out	Type	Required?	Description
authorityName	in	String	Required	Authority for which to delete the associated role mappings.

Modify operation

Modify the role name in a role mapping instance associated with a local user, LDAP user, or LDAP group.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/roleMapping/<id>/action/modify where <id> is the unique identifier of the roleMapping instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
roleName	in	String	Optional	New role name to associate with the entity specified by the entityName argument.

route

Manages static IP routes, including creating, modifying, and deleting these routes.

A route determines where to send a packet next so it can reach its final destination. A static route is set explicitly and does not automatically adapt to the changing network infrastructure. A route is defined by an interface, destination IP address range and an IP address of a corresponding gateway.

Note: IP routes connect an interface (IP address) to the larger network through gateways. Without routes, the interface is no longer accessible outside of its immediate subnet. As a result, network shares and exports associated with the interface are no longer available to clients outside their immediate subnet.

Routes can be created only for iSCSI portals.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the route instance.
ipInterface	ipInterface	Reference to IP interface.
iscsiPortal	iscsiPortal	Reference to iscsiPortal.
fileInterface	fileInterface	Reference to file Interface.
destination	IPAddress • IPv6 supported: true • Prefix-length supported: false	IP address of the target network node based on the specific route type. Values are: • For a default route, there is no value, because the system will use the specified gateway IP address.

	• Port supported: false • DNS name supported: false	• For a host route, the value is the IP address. • For a subnet route, the value is a subnet IP address.
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 netmask for the route, if it uses an IPv4 address.
v6PrefixLength	unsigned Integer[32(bits)] [0..128]	IPv6 prefix length for the route, if it uses an IPv6 address.
gateway	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IP address of the gateway associated with the route.
health	health	Health of the route. The health can be impaired if the corresponding interface is changed in a manner incompatible with the route. Modify the route to make it consistent with the interface to restore health to normal, or remove the route if no longer needed.
isRouteToExternalServices	Boolean	Indicates whether this route is used for external services access like DNS, LDAP, NIS etc.

Query all members of the route collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/route/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the route collection.

Query a specific route instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/route/<id> where <id> is the unique identifier of the route instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific route instance.

Create operation

Create a route.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/route/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
ipInterface	in	ipInterface	Required	Reference to IP interface.
destination	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Required	IP address of the target network node for the newroute, based on the specific route type. Values are: • For a default route, there is no value, because the system will use the specified gateway IP address. • For a host route, the value is the IP address. • For a subnet route, the value is a subnet IP address.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	For a new subnet route, the IP address of the subnet mask.

v6PrefixLength	in	unsigned Integer[32(bits)] [0..128]	Optional	IPv6 prefix length for the route, if the interface uses an IPv6 address.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IP address of the gateway associated with the route.
id	out	route	N/A	New route instance.

Delete operation

Delete a route.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/route/<id> where <id> is the unique identifier of the route instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a route.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/route/<id>/action/modify where <id> is the unique identifier of the route instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
ipInterface	in	ipInterface	Optional	Reference to IP interface.
destination	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IP address of the target network node for theroute, based on the specific route type. Values are: • For a default route, there is no value, because the system will use the specified gateway IP address. • For a host route, the value is the IP address. • For a subnet route, the value is a subnet IP address.
netmask	in	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	For IPv4 subnet route, the IP address of the subnet mask.
v6PrefixLength	in	unsigned Integer[32(bits)] [0..128]	Optional	IPv6 prefix length for the route, if the interface uses an IPv6 address.
gateway	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	Optional	IP address of the gateway associated with the route. To remove gateway from route put empty string.

rpChapSettings

CHAP accounts management for RPA cluster. RPA iSCSI ports act as initiators and log into storage targets, meanwhile, storage iSCSI ports act as initiators and log into RPA targets as well. For security reason, forward CHAP is supported on both directions. Outgoing forward CHAP account is used by storage ports to log into RPAs and incoming foward CHAP account is used by storage to authenticate RPA initiators. However, for now incoming forward

account is managed by iscsiSettings and it will be moved here in later releases.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique instance identifier.
outgoingForwardChapUsername	String	Outgoing Forward CHAP user name, null string indicates chap not set.

Query all members of the rpChapSettings collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/rpChapSettings/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the rpChapSettings collection.

Query a specific rpChapSettings instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/rpChapSettings/<id> where <id> is the unique identifier of the rpChapSettings instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific rpChapSettings instance.

Modify operation

Modify RPA CHAP account.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/rpChapSettings/<id>/action/modify where <id> is the unique identifier of the rpChapSettings instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
outgoingForwardChapUsername	in	String[..255]	Optional	Username of RPA outgoing forward CHAP. Put empty or null string to unset it.
outgoingForwardChapSecret	in	String	Optional	Secret of RPA outgoing forward CHAP. Ignored if outgoingForwardChapUsername is empty or null.
outgoingForwardChapSecretType	in	CHAPSecretTypeEnum	Optional	Secret type of RPA outgoing forward CHAP.

sasPort

(Applies to physical deployments only.) Information about Serial Attached SCSI (SAS) ports in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the SAS port instance.
health	health	Health information for the SAS port, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the SAS port needs replacement. Values are: • true - SAS port needs replacement. • false - SAS port does not need replacement.
parent	resourceRef	Class and identifier of the SAS port's parent enclosure.
name	String[1..32]	SAS port name.
port	unsigned Integer[16]	Physical SAS port number on the storage processor. Valid values are 0 and 1.
currentSpeed	SpeedValuesEnum	Current speed of the SAS port.
connectorType	ConnectorTypeEnum	Physical connector type.

storageProcessor	storageProcessor	SP on which the SAS port directly or indirectly resides, as defined by the storageProcessor resource type.
parentIOModule	ioModule	(Applies if the SAS port resides on an I/O module.) Parent I/O module of the SAS port, as defined by the ioModule resource type.
parentStorageProcessor	storageProcessor	(Applies if the SAS port resides directly on an SP.) Parent SP of the SAS port, as defined by the storageProcessor resource type.

Query all members of the sasPort collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/sasPort/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the sasPort collection.

Query a specific sasPort instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/sasPort/<id> where <id> is the unique identifier of the sasPort instance to query. Or GET /api/instances/sasPort/name:<value> where <value> is the name of the sasPort instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific sasPort instance.

scheduleTimezone

Information about the time zone that is associated with all scheduled snapshots in the storage system.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the timezone instance. Because timezone is a singleton resource type, the value of this field is always 0.
timezone	ScheduleTimezoneCandidatesEnum	Timezone that is associated with all scheduled snapshots.

Query all members of the scheduleTimezone collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/scheduleTimezone/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the scheduleTimezone collection.

Query a specific scheduleTimezone instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/scheduleTimezone/<id> where <id> is the unique identifier of the scheduleTimezone instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific scheduleTimezone instance.

Modify operation

Modify the timezone that is associated with all scheduled snapshots on the storage system.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/scheduleTimezone/<id>/action/modify where <id> is the unique identifier of the scheduleTimezone instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
timezone	in	ScheduleTimezoneCandidatesEnum	Required	New timezone to be applied to all scheduled snapshots.

securitySettings

All the system level security settings.
Use this resource to enable and disable system level security settings.
The settings include:

a) FIPS 140-2
Information about whether the system is working in Federal Information Processing Standard (FIPS) 140-2 mode.

The storage systems support FIPS 140-2 mode for the RSA BSAFE SSL modules on the storage pocessor that handle client management traffic. Management communication into and out of the system is encrypted using SSL. As a part of this process, the client and the Storage Management Server negotiate a cipher suite to use in the exchange. The use of FIPS 140-2 mode restricts the allowable set of cipher suites that can be selected in the negotiation to those that are sufficiently strong.

If FIPS 140-2 mode is enabled, you may find that some of your existing clients can no longer communicate with the management ports of the array if they do not support a cipher suite of acceptable strength.

b) SSO
Information about whether the system is participating in Single Sign On mode.

In Single Sign On (SSO) mode, Unisphere Central (UC) becomes the authentication server for multiple storage system, thus creating a shared authentication domain where cross-array operations can be performed without re-entering user credentials.

If SSO is enabled, the system will participate in Single Sign On mode, and authenticate against Unisphere Central previously configured on this array.

c) TLS Mode
Information about which TLS protocol versions the Storage Management Server allows for TLS communication.

Management communication into and out of the Storage Management Server is encrypted using TLS. As a part of this process, the client and the Storage Management Server negotiate a TLS protocol version to use. There are three options for TLS Mode: tls1_0, tls1_1 and tls1_2. Only tls1_2 is supported in the current version. TLS Mode tls1_2 means that the Storage Management Server only supports TLS communications using the TLSv1.2 protocol or later. TLSv1.0 and TLSv1.1 are not be considered valid protocols. See the Security Configuration Guide for information about backward compatibility.

NOTE: The modification of the supported TLS protocol versions for the NAS server is handled separately. Use the svc_nas service script to configure the supported TLS protocol versions for the NAS server.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the securitySettings instance. The value of this attribute is always 0, because securitySettings is a singleton resource type.
isFIPSEnabled	Boolean	Indicates whether the system is working in FIPS 140-2 mode. Values are: • true - System is working in FIPS 140-2 mode. • false - System is not working in FIPS 140-2 mode.
isSSOEnabled	Boolean	Indicates whether the system has SSO enabled or not. Values are: • true - System is participating in SSO • false - System is not participating in SSO
tlsMode	SecuritySettingsTLSModeEnum	Indicates the TLS mode.

Query all members of the securitySettings collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/securitySettings/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the securitySettings collection.

Query a specific securitySettings instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/securitySettings/<id> where <id> is the unique identifier of the securitySettings instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific securitySettings instance.

Modify operation

Modify the system security settings.
One setting should be modified at a time.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/securitySettings/<id>/action/modify where <id> is the unique identifier of the securitySettings instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isFIPSEnabled	in	Boolean	Optional	Switches the system in or out of FIPS 140-2 mode. Values are: • true - Switches the system to work in FIPS 140-2 mode. • false - Switches the system to no longer work in FIPS 140-2 mode. All system SPs will be rebooted automatically if the FIPS mode is changed for the setting to take effect.
isSSOEnabled	in	Boolean	Optional	Switches the system in or out of SSO mode. Values are: • true - Enables SSO mode on the system. • false - Disables SSO mode on the system.
tlsMode	in	SecuritySettingsTLSModeEnum	Optional	Indicates the minimum TLS version that is enabled. The Management Service will be automatically restarted for the setting to take effect.

serviceAction

Information about storage system service actions.

Collect Service Information (dataCollection): Collect information about the storage system and save it to a file. Your service provider can use the collected information to analyze the storagesystem.

Save Configuration (configCapture): Save details about the configuration settings on the storage system to a file. Your service provider can use this file to assist you with reconfiguring your system after a major system failure or a system reinitialization.

Restart Management Software (restartMGT): Restart the management software to resolve connection problems between the system and Unisphere.

Reinitialize (reinitialize): Reset the storage system to the original factory settings. Both SPs must be installed and operating normally be in Service Mode.

Change Service Password (changeServicePassword): Change the service password for accessing the Service System page.

Shut Down System (shutdownSystem): The system shut down and power cycle procedures will attempt to resolve problems with your storage system that could not be resolved by rebooting or reimaging the SP.

Disable SSH/Enable SSH (changeSSHStatus): Disable the Secure Shell (SSH) protocol to block SSH access to the system, or enable the Secure Shell (SSH) protocol to enable access to the system.

Enter Service Mode (enterServiceModeSPA, enterServiceModeSPB): Stop I/O on the SP so that the SP can enter service mode safely.

Reboot (rebootSPA, rebootSPB): Reboot the selected SP. Use this service action to attempt to resolve minor problems related to system software or SP hardware components.

Reimage (rebootSPA, rebootSPB): Reimage the selected SP. Reimaging analyzes the system software on the SP and attempts to correct any problems automatically.

Reset and Hold(resetAndHoldSPA, resetAndHoldSPB): Reset and hold the selected SP. Use this service task to attempt to reset and hold the SP, so that users can replace the faulty IoModule(s) on that SP.

Supported operations

Collection query , Instance query ,Execute

Attributes

Attribute	Type	Description
id	String	Unique identifier of the serviceAction instance.
scope	SvcScopeEnum	Current service action scope.
name	String	Localized service action name.
description	String	Localized service action description.
isApplicable	Boolean	Indicates whether the service action can be executed. Values are: • true - Service action can be executed. • false - Service action cannot be executed.
applyCondition	String	Localized description of the condition under which the service action is applicable.

Query all members of the serviceAction collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/serviceAction/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the serviceAction collection.

Query a specific serviceAction instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/serviceAction/<id> where <id> is the unique identifier of the serviceAction instance to query. Or GET /api/instances/serviceAction/name:<value> where <value> is the name of the serviceAction instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific serviceAction instance.

Execute operation

Execute the service action.

Header	Accept: application/json

	Content-Type: application/json
Method and URI	POST /api/instances/serviceAction/<id>/action/execute where <id> is the unique identifier of the serviceAction instance. Or POST /api/instances/serviceAction/name:<value>/action/execute where <value> is the name of the serviceAction instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Execute operation

Argument	In/ out	Type	Required?	Description
includePrivateData	in	Boolean	Optional	Indicates whether the capture includes private data when performing the Save Configuration (configCapture) service action. Values are: • true - Include private data (like IP addresses). • false - (Default) Exclude private data.

currentPassword	in	String	Optional	Current password of the service user.
				• In normal mode, this password is required for all the service actions except following ones:
				  • Collect Service Information (dataCollection)
				  • Save Configuration (configCapture)
				  • Restart Management Software (restartMGT)
				• In service mode, this password is required for the Change Service Password service (changeServicePassword) action.

newPassword	in	String	Optional	New password for the service user. Required for Change Service Password (changeServicePassword) action.
generateECOMDump	in	Boolean	Optional	Indicate whether generatate ECOM dump when restarting MGMT software.
generateRawJson	in	Boolean	Optional	Indicate whether generatate raw json when runing config capture.
dataCollectionProfile	in	DataCollectionProfileEnum	Optional	The profile used to collect service information.

serviceContract

(Applies if Dell Support is available.) Information about service contracts.

Supported operations

Collection query , Instance query ,Refresh

Attributes

Attribute	Type	Description
id	String	Unique identifier of the serviceContract instance.
contractId	unsigned Integer[64]	Unique service contract identifier.
contractNumber	String	Contract number generated for the customer.
contractStatus	ServiceContractStatusEnum	Current service contract status.
levelOfService	String	Level of service that the service contract provides.
serviceLineId	String	Service offering identifier.
lastUpdated	DateTime	Date of last service contract renewal.
productStartDate	DateTime	Service contract start date.
productEndDate	DateTime	Service contract end date.

Query all members of the serviceContract collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/serviceContract/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the serviceContract collection.

Query a specific serviceContract instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/serviceContract/<id> where <id> is the unique identifier of the serviceContract instance to query.

Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific serviceContract instance.

Refresh operation

Refresh the service contract information from Dell Online Support.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/serviceContract/action/refresh
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

serviceInfo

Service-related storage system information. You can use this information for servicing the storage system.

Embedded resource types

svcCRU, svcStorageProcessor

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the serviceInfo instance. Because serviceInfo is a singleton resource type, the value of this field is always 0.
productName	String	Product name, for example, Unity400. Usually, it's same as the system.model.
productSerialNumber	String	Product serial number. This has the same value as system.serialNumber.
systemUUID	String	(Applies to virtual deployments only.) Unique system identifier required to service the storage system.
isSSHEnabled	Boolean	Indicates whether Secure Shell (SSH) is enabled on the storage system. Values are: • true - SSH is enabled. • false - SSH is not enabled.
sps	List<svcStorageProcessor>	Storage processor information, as defined by the svcStorageProcessor resource type.

Attributes for svcCRU

Service-related information for the Customer Replaceable Units (CRUs) installed on the storage processors. You can use this information for servicing the CRUs.

Attribute	Type	Description
type	SvcCRUTypeEnum	CRU type
serialNumber	String	CRU serial number.
partNumber	String	CRU part number.

Attributes for svcStorageProcessor

Service-related information for the storage processors on the storage system. You can use this information for servicing the storage processors. There is always one svcStorageProcessor per SP in the system.

Attribute	Type	Description
scope	SvcScopeEnum	Scope of the object
state	SvcStorageProcessorStateEnum	Indicates which state the storage processor is in.
isPrimary	Boolean	Indicates whether the storage processor is the primary SP. The primary SP is the storage processor on which the management stack runs. Values are: • true - SP is the primary SP. • false - SP is not the primary SP.
softwareVersion	String	Software version of the storage processor.
fullSoftwareVersion	String	Full software version of the storage processor.
hostName	String	Host name of the storage processor. This host name corresponds to control path IP on this SP.
serviceModeReason	String	Service mode reason (Rescue Reason Code), is a hexadecimal-formatted code. If the storage processor is in service mode, this code indicates why the SP is in Service Mode. If the SP is in Normal Mode, the value of this attribute is null.
serviceModeReasonHint	String	Service mode reason hint (Rescue reason hint code), is a hexadecimal-formatted code. If the SP is in Service Mode, this code provides additional information as to why the SP is in Service Mode. If the SP is in Normal Mode, the value of this attribute is null.
serviceModeRecommendedAction	String	Localized recommended action in service mode. If the storage processor is in service mode, this message indicates the recommended action the

		user can take to get the storage processor out of service mode. If the SP is in Normal Mode, the value of this attribute is null.
status	String	Localized storage processor status message.
crus	List<svcCRU>	Customer Replaceable Units (CRUs) that are installed on the storage processor. Usually, there is at least one Solid State Drive (SSD) and one or more SLICs.

Query all members of the serviceInfo collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/serviceInfo/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the serviceInfo collection.

Query a specific serviceInfo instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/serviceInfo/<id> where <id> is the unique identifier of the serviceInfo instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific serviceInfo instance.

smtpServer

Information about the SMTP servers in the storage system. You can define up to two SMTP servers:

- The default SMTP server sends email alerts to the IP addresses specified in the AlertConfigSNMPTarget resource when it encounters alert or error conditions.
- The ConnectEMC SMTP server sends the same alerts to the dial-home addresses specified in the AlertConfigSNMPTarget resource. It also sends additional information, if any, to Dell Support.
- If EMC Secure Remote Support (ESRS) is configured, thesystem uses that mechanism instead of the ConnectEMC SMTP server to send alert information.

Supported operations

Collection query , Instance query ,Modify ,Create ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the smtpServer instance.
address	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	IP address of the SMTP server. If a port is not specified, default port 25 will be used.
username	String	User name.
authType	AuthTypeEnum	Authentication type.
sslMethod	SSLMethodEnum	SSL Method.
isBypassProxyEnabled	Boolean	Whether to bypass the global proxy settings in supportProxy resource. By default, this value is false, and the SMTP server is accessed according to the proxy settings in the supportProxy resource. If this is set to true, the SMTP server will be accessed directly instead of using the supportProxy proxy settings.
type	SmtpTypeEnum	SMTP server type.

Query all members of the smtpServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/smtpServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the smtpServer collection.

Query a specific smtpServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/smtpServer/<id> where <id> is the unique identifier of the smtpServer instance to query.
Request body arguments	None
Successful return status	200 OK

Successful response body	JSON representation of a specific smtpServer instance.

Modify operation

Modify SMTP server settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/smtpServer/<id>/action/modify where <id> is the unique identifier of the smtpServer instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
userName	in	String	Optional	User Name of the SMTP server.
password	in	String	Optional	Password of the SMTP server.
authType	in	AuthTypeEnum	Optional	Authentication type of the SMTP server.
sslMethod	in	SSLMethodEnum	Optional	SSL Method of the SMTP server.
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Required	IP address of the SMTP server. If a port is not specified, default port 25 will be used.
isBypassProxyEnabled	in	Boolean	Optional	Whether to bypass global proxy settings.

Create operation

Create a new SMTP server (Default or PhoneHome).

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/smtpServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Required	IP address of the SMTP server. If a port is not specified, default port 25 will be used.
type	in	SmtpTypeEnum	Required	SMTP server type.
userName	in	String	Optional	User Name of the SMTP server.
password	in	String	Optional	Password of the SMTP server.
authType	in	AuthTypeEnum	Optional	Authentication type of the SMTP server.
sslMethod	in	SSLMethodEnum	Optional	SSL Method of the SMTP server.
isBypassProxyEnabled	in	Boolean	Optional	Whether to bypass global proxy settings. The default value is false. Values are: • true - bypass global proxy settings. • false - use global proxy settings.
id	out	smtpServer	N/A	Unique identifier of the smtpServer instance.

Delete operation

Delete a SMTP Server.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/smtpServer/<id> where <id> is the unique identifier of the smtpServer instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

snap

Information about storage resource snapshots in the storage system.

Embedded resource types

snapHostAccess, snapHostAccessParameters, snapRemoteRetentionPolicy, snapRemoteRetentionPolicyParam

Supported operations

Collection query , Instance query ,Create ,Modify ,Replicate ,Delete ,Refresh ,Copy ,Restore ,Attach ,Detach

Attributes

Attribute	Type	Description
id	String	Unique identifier of the snap instance.
name	String	Snapshot name.
description	String	Snapshot description.
storageResource	storageResource	Storage resource for which the snapshot was taken as defined by the storageResource resource type.
lun	lun	For a snapshot of a LUN in a Consistency group, the unique identifier of the source LUN as defined by the lun resource type.
familyBaseStorageResource	storageResource	The unique identifier of the Base Source Storage Resource.
familyBaseLun	lun	For a snapshot of a LUN in a Consistency group, the unique identifier of the Base Source LUN.
snapGroup	snap	For a snapshot of a LUN in a Consistency group, the unique identifier of the snapshot group to which the snapshot belongs, as defined by the snap resource type.
parentSnap	snap	For a snapshot of another snapshot, the unique identifier of the parent snapshot, as defined by the snap resource type.
creationTime	DateTime	Date and time on which the snapshot was taken.
expirationTime	DateTime	Date and time after which the snapshot will expire.
lastRefreshTime	DateTime	Date and time of last refresh operation
creatorType	SnapCreatorTypeEnum	Type of creator that created this snapshot.
creatorUser	user	For a user-created snapshot, information about the user that created the snapshot, as defined by the user resource type.
creatorSchedule	snapSchedule	For a schedule-created snapshot, information about the snapshot schedule that created the snapshot, as defined by the snapSchedule resource type.
isSystemSnap	Boolean	Indicates whether the snapshot is an internal snapshot. Internal snapshots are created by the Replication feature. End user operations are not permitted on internal snapshots. Values are: • true - Snapshot is internal. • false - Snapshot is external.
isModifiable	Boolean	Indicates whether the snapshot is attached or shared in a manner making it writable by clients. Values are: • true - Snapshot can be modified. • false - Snapshot cannot be modified. Snapshots of file systems and VMware NFS datastores are modifiable when they are created with protocol access. Snapshots of LUNs, Consistency Groups and VMware VMFS datastores are modifiable when they are attached.
attachedWWN	String	For an attached snapshot, the World Wide Name (WWN) of the attached LUN.
accessType	FilesystemSnapAccessTypeEnum	For a file system or VMware NFS datastore snapshot, indicates whether the snapshot has checkpoint or protocol type access.
isReadOnly	Boolean	Indicates whether the snapshot is read-only. Values are: • true - Snapshot cannot be modified. • false - Snapshot can be modified. Snapshots of file systems and VMware NFS datastores are read-only when they are created with checkpoint access. Snapshots of LUNs, Consistency Groups and VMware VMFS datastores are read-only when they are attached with read-only access or without access.
lastWritableTime	DateTime	If not attached or shared, and was attached or shared in the past, time of last unattach or share deletion.
isModified	Boolean	Indicates if the snapshot may have changed since it was created. Values are: • true - Snapshot is or was attached or shared with read/write access. • false - Snapshot was never attached or shared.
isAutoDelete	Boolean	Indicates if this snapshot can be automatically deleted by the system per threshold settings. Values are: • true - Snapshot can be automatically deleted by the system per threshold settings. • false - Snapshot cannot be deleted automatically.
state	SnapStateEnum	The snapshot state in Snapshot state enum.
size	unsigned Integer[64(bytes)]	Size of the storage resource when the snapshot was

		created (LUN snapshots only).
ioLimitPolicy	ioLimitPolicy	IO limit policy that applies to the snapshot, as defined by the ioLimitPolicy resource type.
hostAccess	List<snapHostAccess>	(LUN, LUN Group and VMware VMFS datastore snapshots only). Host access permissions for snapshot, as defined by the snapHostAccess resource type. Value is set only if snapshot is attached to dynamic Snapshot Mount Point.
replicationStatus	SnapReplicationStatusEnum	Indicates the replication status of this snap
syncReplicationStatus	SyncSnapReplicationStatusEnum	Indicates the sync replication status of this snap Values are: • 0 - Not marked for replication • 1 - Replicated • 2 - Failed to replicate
replicationOrigin	remoteSystem	Array from which the snapshot was created. Values are: • null - Indicates that the snapshot is not replicated to any remote system, the original remote system is not registered in current system under cascade replication, or it was replicated from a pre-5.1.0 system. Note: refer to opaqueData for replication origin information for the second case. • Remote system - Indicates the original remote system from which the snapshot was replicated.
snapRemoteRetentionPolicies	List<snapRemoteRetentionPolicy>	Information about the remote policies of snap.

Attributes for snapHostAccess

Host access settings for snapshot.

Attribute	Type	Description
host	host	Host that has access to the snapshot, as defined by the host resource type.
allowedAccess	SnapAccessLevelEnum	Access-level permissions for host.

Attributes for snapHostAccessParameters

Host access settings for snapshot.

Attribute	Type	Description
host	host	Host to grant access to snapshot, as defined by host type.
allowedAccess	SnapAccessLevelEnum	Access-level permissions for host.

Attributes for snapRemoteRetentionPolicy

Snap remote retention policy for each remote system.

Attribute	Type	Description
remoteSystem	remoteSystem	Unique identifier of the remote system paticipate in async snap replication.
isRemoteAutoDelete	Boolean	(Applies when replicating a snap and isRemoteRetentionSameAsSource attributes is false.) Indicates whether this snapshot can be automatically deleted by the system per threshold settings on the destination. Values are: • true - Snapshot can be automatically deleted by the system per threshold settings on the destination. • false - Snapshot cannot be deleted automatically on the destination.
remoteExpirationTime	DateTime	(Applies when replicating a snap and the values of the isRemoteRetentionSameAsSource & isRemoteAutoDelete attributes are false.) Date and time after which the snapshot will expire on the destination.
replicationStatus	SnapReplicationStatusEnum	Indicates the replication status of this snap

Attributes for snapRemoteRetentionPolicyParam

Snap remote retention policy for each remote system.

Attribute	Type	Description
remoteSystem	remoteSystem	The remote system to which these retention settings are to be applied.
isRemoteRetentionSameAsSource	Boolean	Indicates whether the remote policy is same as replication session source.
isRemoteAutoDelete	Boolean	(Applies when replicating a snap and isRemoteRetentionSameAsSource attributes is false.) Indicates whether this snapshot can be automatically deleted by the system per threshold settings on the destination. Values are: • true - Snapshot can be automatically deleted by the system per threshold settings on the destination. • false - Snapshot cannot be deleted automatically on the destination.
remoteRetentionDuration	unsigned Integer[64(seconds)]	Period in seconds specifying how long to retain the replicated snapshot on the destination When the retention period expires, the remote system will delete the replicated snapshot. The default retention period is seven days.

Query all members of the snap collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/snap/instances

Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the snap collection.

Query a specific snap instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/snap/<id> where <id> is the unique identifier of the snap instance to query. Or GET /api/instances/snap/name:<value> where <value> is the name of the snap instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific snap instance.

Create operation

Create a snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/snap/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
storageResource	in	storageResource	Required	Id of the storageResource to snap.
name	in	String	Optional	Name for the new snapshot.
description	in	String	Optional	Description for new snapshot.
isAutoDelete	in	Boolean	Optional	Auto delete policy for new snapshot.
retentionDuration	in	unsigned Integer[64(seconds)]	Optional	How long to keep the snapshot (Can be specified only if auto delete is set to false).
isReadOnly	in	Boolean	Optional	Indicates whether the new snapshot should be read-only.
filesystemAccessType	in	FilesystemSnapAccessTypeEnum	Optional	Indicates whether the new snapshot should be created with checkpoint or protocol type access (file system snaps only).
markForReplication	in	Boolean	Optional	
snapRemoteRetentionPolicies	in	List<snapRemoteRetentionPolicyParam>	Optional	List of remote policy parameters of snap.
id	out	snap	N/A	The id of the newly created snapshot.

Modify operation

Modify a snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snap/<id>/action/modify where <id> is the unique identifier of the snap instance. Or POST /api/instances/snap/name:<value>/action/modify where <value> is the name of the snap instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String	Optional	Snapshot name (Applies to block type

				storage resource snaps only. Filesystem snapshot names cannot be modified).
description	in	String	Optional	Snapshot description.
isAutoDelete	in	Boolean	Optional	Indicates whether the system will automatically delete the snapshot when the pool snapshot space or total pool space reaches an automatic deletion threshold. Valid values are: • System will automatically delete the snapshot based on pool automatic deletion thresholds.. • Snapshot will not automatically delete the snapshot based on pool automatic deletion thresholds. For information about automatic deletion thresholds, see the help topic for the pool resource type.
retentionDuration	in	unsigned Integer[64(seconds)]	Optional	Duration in seconds specifying how long to retain the snapshot. When the retention period expires, the system will delete the snapshot; You cannot recover the snapshot after it has been deleted. The default retention period is seven days.
ioLimitParameters	in	ioLimitParameters	Optional	The IO limit policy that is applied to this snapshot. This is only applicable to attached snapshots.
hostAccess	in	List<snapHostAccessParameters>	Optional	List of hosts with access levels each should have to the snapshot. Replaces the existing snapHostAccess list. May not be used with add/remove args. Only read and write access levels are permitted as host settings. Snapshot must be attached. (Applies to block type storage resource snaps only.)
addHostAccess	in	List<snapHostAccessParameters>	Optional	List of hosts to be added with specified access level to the snapshot. May not be used with hostAccess args. If used with removeHostAccess then removeHostAccess is applied first. Any specified host already with other access will be replaced with the new access level. Snapshot must be attached. (Applies to block type storage resource snaps only.)
removeHostAccess	in	List<host>	Optional	List of hosts to be removed from access to the snapshot. May not be used with hostAccess args. The hosts in this list should already be with access to the snapshot. Snapshot must be attached. (Applies to block type storage resource snaps only.)
force	in	Boolean	Optional	If specified, modify the snap regardless of whether snap source Storage Resource is used as replication destination by sync replication session and the snapshot is marked as replicated. (Applies to file type storage resource snaps only.)

Replicate operation

Mark a snapshot for replication to the destination resource.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snap/<id>/action/replicate where <id> is the unique identifier of the snap instance. Or POST /api/instances/snap/name:<value>/action/replicate where <value> is the name of the snap instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Replicate operation

Argument	In/ out	Type	Required?	Description
snapRemoteRetentionPolicies	in	List<snapRemoteRetentionPolicyParam>	Optional	List of remote policy parameters of snap, each indicates the remote policy for each specified remote system.
force	in	Boolean	Optional	If specified, replicate the snap regardless of whether snapshot replication state could not be updated on the sync replication destination system when the corresponding sync replication session is not active. (Applies to file type storage resource snaps only.)

Delete operation

Delete a snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/snap/<id> where <id> is the unique identifier of the snap instance to delete. Or DELETE /api/instances/snap/name:<value> where <value> is the name of the snap instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
overrideLock	in	Boolean	Optional	Whether or not to override a lock held by an application. Setting this to true may have adverse effects on the performance of the applications currently referencing the snap. • 1) If a snap deletion returns an error mentioning the snap is locked. • 2) Do not override the lock to force a delete unless you are sure no application is still referencing the snap.
force	in	Boolean	Optional	Normally, the delete will return an error instead of deleting the snapshot when the snapshot source storage resource is used as a sync replication destination and the snapshot is marked as replicated or if the user requested to manually remove an internal snapshot. (Applies to file type storage resource snapshots only.) Values are: • true - This will override the error and delete the snapshot even though it is internal snapshot or it is a sync replication destination snap. • false - The normal behavior described above default.

Refresh operation

Refresh a snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snap/<id>/action/refresh where <id> is the unique identifier of the snap instance. Or POST /api/instances/snap/name:<value>/action/refresh where <value> is the name of the snap instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Refresh operation

Argument	In/ out	Type	Required?	Description
copyName	in	String	Optional	Name of the snapshot copy created before the refresh operation occurs.
copy	out	snap	N/A	Snapshot copy created before the refresh operation occurs, as defined by the snap resource type, if copyName was specified.

Copy operation

Copy a snapshot. If source snapshot is attached, the new copy has the same source snapshot as a parent and is marked as not modified. If source snapshot is not attached, the behavior depends on child parameter. By default, child parameter is false and the new copy is created as a sibling of source snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snap/<id>/action/copy where <id> is the unique identifier of the snap instance. Or POST /api/instances/snap/name:<value>/action/copy where <value> is the name of the snap instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Copy operation

Argument	In/ out	Type	Required?	Description
copyName	in	String	Optional	Base name for the new snapshot copies.
numCopies	in	unsigned Integer[32]	Optional	Number of snapshot copies to make.
copyStartNum	in	unsigned Integer[32]	Optional	Starting number for the group of copies. This number gets appended to the name specified in the copyName argument to form the name of the first snapshot copy. The system increments the number for each new snapshot.
child	in	Boolean	Optional	If true for an unattached snapshot, the new copy has the source snapshot as a parent. If false, the new copy is created as a sibling

				of the source snapshot. Setting this parameter to false for an attached snapshot causes an error.
copies	out	List<snap>	N/A	Snapshot copies, as defined by the snap resource type.

Restore operation

Restore the snapshot to the associated storage resource.

Before the restoration begins, the system creates a snapshot of the storage resource. You can use this snapshot to restore the storage resource to its previous state.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snap/<id>/action/restore where <id> is the unique identifier of the snap instance. Or POST /api/instances/snap/name:<value>/action/restore where <value> is the name of the snap instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Restore operation

Argument	In/ out	Type	Required?	Description
copyName	in	String	Optional	Name of the backup snapshot created before the Restore operation occurs.
backup	out	snap	N/A	Backup snapshot, as defined by the snap resource type.

Attach operation

Attach the snapshot so hosts can access it. Attaching a snapshot makes the snapshot accessible to configured hosts for restoring files and data.

The host must have access to protection data in order to access the snapshot.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snap/<id>/action/attach where <id> is the unique identifier of the snap instance. Or POST /api/instances/snap/name:<value>/action/attach where <value> is the name of the snap instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Attach operation

Argument	In/ out	Type	Required?	Description
copyName	in	String	Optional	Name of the snapshot copy created before the Attach operation occurs.
hostAccess	in	List<snapHostAccessParameters>	Optional	List of hosts with access levels each should have to the snapshot. Only read and write access levels are permitted as host settings. If specified - snapshot will be attached to dynamic Snapshot Mount Point.
force	in	Boolean	Optional	If specified, attach the snap regardless of whether this snap has dependent Thin Clones.
copy	out	snap	N/A	Snapshot copy created before the Attach operation occurs, as defined by the snap resource type, if copyName was specified.

Detach operation

Detach the snapshot so hosts can no longer access it.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snap/<id>/action/detach where <id> is the unique identifier of the snap instance. Or POST /api/instances/snap/name:<value>/action/detach where <value> is the name of the snap instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

snapSchedule

Information about snapshot schedules in the storage system.

Embedded resource types

snapScheduleRule

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the snapSchedule instance.
name	String	Snapshot schedule name.
isDefault	Boolean	Indicates whether the snapshot schedule is a default or user-created schedule. Values are: • true - Snapshot schedule is one of the default schedules. • false - Snapshot schedule is user-created.
modificationTime	DateTime	Date and time when the snapshot schedule was created or last modified.
version	ScheduleVersionEnum	Indicates the version of the snapshot schedule.
rules	List<snapScheduleRule>	Rules that apply to the snapshot schedule, as defined by the snapScheduleRule resource type.
storageResources	List<storageResource>	Storage resources associated with the snapshot schedule.
luns	List<lun>	LUNs associated with the snapshot schedule.
isSyncReplicated	Boolean	Indicates whether the snapshot schedule is synchronously replicated to the remote system. • true - Snapshot schedule is replicated. • false - Snapshot schedule is not replicated.

Attributes for snapScheduleRule

Information about snapshot schedule rules in the storage system.

Attribute	Type	Description
id	String	Unique identifier of the snapScheduleRule instance.
type	ScheduleTypeEnum	Type of snapshot schedule rule.
minute	unsigned Integer[16(minutes)][0..59]	Minute frequency for the snapshot schedule rule.
hours	List<Integer>[16(hours)][0..23]	Hourly frequency for the snapshot schedule rule.
daysOfWeek	List<DayOfWeekEnum>	Days of the week for which the snapshot schedule rule applies.
daysOfMonth	List<Integer>[16(days)][1..31]	Days of the month for which the snapshot schedule rule applies.
interval	unsigned Integer[16(hours|days)][1..31]	Number of days or hours between snaps, depending on the rule type.
isAutoDelete	Boolean	Indicates whether the system can automatically delete the snapshot based on pool automatic-deletion thresholds. Values are: • true - System can delete the snapshot based on pool automatic-deletion thresholds. • false - System cannot delete the snapshot based on pool automatic-deletion thresholds.
retentionTime	unsigned Integer[64(seconds)]	(Applies when the value of the isAutoDelete attribute is false.) Period of time in seconds for which to keep the snapshot.
accessType	FilesystemSnapAccessTypeEnum	For a file system or VMware NFS datastore snapshot schedule, indicates whether the snapshot created by the schedule has checkpoint or protocol type access

Query all members of the **snapSchedule** collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/snapSchedule/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the snapSchedule collection.

Query a specific **snapSchedule** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/snapSchedule/<id> where <id> is the unique identifier of the snapSchedule instance to query. Or GET /api/instances/snapSchedule/name:<value> where <value> is the name of the snapSchedule instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific snapSchedule instance.

Create operation

Create a snapshot schedule.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/snapSchedule/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
name	in	String	Required	Name of new schedule
rules	in	List<snapScheduleRule>	Required	Rules that apply to the snapshot schedule, as defined by the snapScheduleRule resource type.
isSyncReplicated	in	Boolean	Optional	Indicates that all operations on the snapshot schedule will be synchronously replicated to the peer system.
id	out	snapSchedule	N/A	Unique identifier of the new snapSchedule instance.

Delete operation

Delete a snapshot schedule.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/snapSchedule/<id> where <id> is the unique identifier of the snapSchedule instance to delete. Or DELETE /api/instances/snapSchedule/name:<value> where <value> is the name of the snapSchedule instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify a snapshot schedule.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/snapSchedule/<id>/action/modify where <id> is the unique identifier of the snapSchedule instance. Or POST /api/instances/snapSchedule/name:<value>/action/modify where <value> is the name of the snapSchedule instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
addRules	in	List<snapScheduleRule>	Optional	Rules to add to the snapshot schedule, as defined by the snapScheduleRule instance. Pass the desired values for the additional rules instead of the unique identifiers of existing rules.
removeRuleIds	in	List<String>	Optional	Unique identifiers of the rules to remove from the snapshot schedule.

softwareUpgradeSession

Information about a storage system upgrade session.

Create an upgrade session to upgrade the system software or view existing upgrade sessions. The upgrade session installs an upgrade candidate file that was uploaded to the system. Download the latest upgrade candidate from Dell Online Support website. Use the CLI to upload the upgrade candidate to the system before creating the upgrade session. For information, see the *Unisphere CLI User Guide*.

The latest software upgrade candidate contains all available hot fixes. If you have applied hot fixes to your system, the hot fixes are included in the latest upgrade candidate.

Note: All system components must be healthy prior to upgrading the system software. If any system components are degraded, the software update will fail.

Embedded resource types

upgradeMessage, upgradeTask

Supported operations

Collection query , Instance query ,Create ,VerifyUpgradeEligibility ,Resume

Attributes

Attribute	Type	Description
id	String	Unique identifier for the softwareUpgradeSession instance.
type	UpgradeSessionTypeEnum	Type of software to upgrade.

candidate	candidateSoftwareVersion	Candidate software to install in the upgrade session, as defined by the candidateSoftwareVersion resource type.
caption	String	Caption for this upgrade session.
status	UpgradeStatusEnum	Status of the current upgrade session.
messages	List<upgradeMessage>	List of upgrade messages.
creationTime	DateTime	Date and time when the upgrade session was started.
elapsedTime	DateTime[Interval]	Amount of time for which the upgrade session was running.
percentComplete	unsigned Integer[16(percent)] [0..100]	Percentage of the upgrade that is completed.
tasks	List<upgradeTask>	Current upgrade activity in the upgrade session, as defined by the upgradeTask resource type.

Attributes for upgradeMessage

A message occurrence. This is also the message object returned in the body of non-2xx return code REST responses.

Attribute	Type	Description
errorCode	String	Error code for this message.
messages	List<localizedMessage>	List of localized messages.
severity	SeverityEnum	Severity level associated with this message.
httpStatus	unsigned Integer[32]	HTTP status code for this message.

Attributes for upgradeTask

Information about the upgrade task currently in progress.

Attribute	Type	Description
caption	String	Caption for this task.
creationTime	DateTime	Date and time when the upgrade task was started.
status	UpgradeStatusEnum	Current status of the upgrade activity.
type	UpgradeSessionTypeEnum	Upgrade session type.
estRemainTime	DateTime[Interval]	Estimated time remaining for the upgrade task.

Query all members of the softwareUpgradeSession collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/softwareUpgradeSession/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the softwareUpgradeSession collection.

Query a specific softwareUpgradeSession instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/softwareUpgradeSession/<id> where <id> is the unique identifier of the softwareUpgradeSession instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific softwareUpgradeSession instance.

Create operation

Start a session to upgrade the system software with an uploaded upgrade candidate.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/softwareUpgradeSession/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
candidate	in	candidateSoftwareVersion	Optional	Candidate software to install in the upgrade session, as defined by the candidateSoftwareVersion resource type.
selectedModel	in	SPModelNameEnum	Optional	
pauseBeforeReboot	in	Boolean	Optional	Flag to tell that session should stop after the "preinstall" tasks and before first SP reboot.
id	out	softwareUpgradeSession	N/A	The new upgrade session.

VerifyUpgradeEligibility operation

Validate that the system is in a healthy state. This is required for an upgrade and runs automatically when an upgrade is started. You can use this operation to perform a system health check at any time.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/softwareUpgradeSession/action/verifyUpgradeEligibility
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the VerifyUpgradeEligibility operation

Argument	In/ out	Type	Required?	Description
messages	out	List<upgradeMessage>	N/A	List of embedded upgradeMessage which contain the info of message's identifier, localized text, severity and so on.

Resume operation

Resume a session that is currently in paused, failed, or failed_lock state.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/softwareUpgradeSession/<id>/action/resume where <id> is the unique identifier of the softwareUpgradeSession instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

ssc

(Applies to physical deployments only.) Information about System Status Cards (SSCs) in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ssc.
health	health	Health information for the SSC, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the SSC needs replacement. Values are: • true - SSC needs replacement. • false - SSC does not need replacement.
parent	resourceRef	Resource type and unique identifier for the SSC's parent enclosure.
slotNumber	unsigned Integer[32]	Slot where the SSC is located in the parent enclosure.
name	String[1..32]	SSC name.
parentDae	dae	Parent Disk Array Enclosure (DAE) of the SSC.
manufacturer	String	Manufacturer of the SSC.
model	String	Manufacturer's model number for the SSC.
emcPartNumber	String	EMC part number for the SSC.
emcSerialNumber	String	EMC serial number for the SSC.
vendorPartNumber	String	Vendor part number for the SSC.
vendorSerialNumber	String	Vendor serial number for the SSC.

Query all members of the ssc collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ssc/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ssc collection.

Query a specific ssc instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ssc/<id> where <id> is the unique identifier of the ssc instance to query. Or GET /api/instances/ssc/name:<value>

	where <value> is the name of the ssc instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ssc instance.

ssd

(Applies to physical deployments only.) Information about internal Flash-based Solid State Drives (SSDs, mSATAs) in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the ssd.
health	health	Health information for the SSD, as defined by the health resource type.
needsReplacement	Boolean	Indicates whether the SSD needs replacement. Values are: • true - SSD needs replacement. • false - SSD does not need replacement.
parent	resourceRef	Resource type and unique identifier for the SSD's parent enclosure.
slotNumber	unsigned Integer[32]	Slot where the SSD is located in the parent enclosure.
name	String[1..32]	SSD name.
type	SsdTypeEnum	SSD type.
manufacturer	String	Manufacturer of the SSD.
model	String	Manufacturer's model number for the SSD.
firmwareVersion	String	SSD firmware revision number.
emcPartNumber	String	EMC part number for the SSD.
emcSerialNumber	String	EMC serial number for the SSD.
vendorPartNumber	String	Vendor part number for the SSD
vendorSerialNumber	String	Vendor serial number for the SSD.
parentStorageProcessor	storageProcessor	Parent storage processor of the ssd.

Query all members of the ssd collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/ssd/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the ssd collection.

Query a specific ssd instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/ssd/<id> where <id> is the unique identifier of the ssd instance to query. Or GET /api/instances/ssd/name:<value> where <value> is the name of the ssd instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific ssd instance.

storageProcessor

Information about Storage Processors (SPs) in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the storageProcessor instance.
parent	resourceRef	Resource type and unique identifier for the SP's parent enclosure.
health	health	Health information for the SP, as defined by the health resource

		type
needsReplacement	Boolean	Indicates whether the SP needs replacement. Values are: • true - SP needs replacement. • false - SP does not need replacement.
isRescueMode	Boolean	Indicates whether the SP is in Service Mode. Values are: • true - SP is in Service Mode. • false - SP is not in Service Mode.
model	String	Manufacturer's model number for the SP.
slotNumber	unsigned Integer[32]	Slot where the SP is located in the parent enclosure.
name	String	SP name.
emcPartNumber	String	EMC part number for the SP.
emcSerialNumber	String	EMC serial number for the SP.
manufacturer	String	Manufacturer of the SP.
vendorPartNumber	String	Vendor part number for the SP.
vendorSerialNumber	String	Vendor serial number for the SP.
sasExpanderVersion	String	Version number of the SAS Expander associated with the SP.
biosFirmwareRevision	String	Version number of the SP BIOS.
postFirmwareRevision	String	Version number of the SP Power-On Self-Test software.
memorySize	unsigned Integer[32(MB)]	SP RAM size.
parentDpe	dpe	Parent Disk Processor Enclosure (DPE) of the storage processor.
modelName	SPModelNameEnum	The physical model name of storageProcessor

Query all members of the storageProcessor collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/storageProcessor/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the storageProcessor collection.

Query a specific storageProcessor instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/storageProcessor/<id> where <id> is the unique identifier of the storageProcessor instance to query. Or GET /api/instances/storageProcessor/name:<value> where <value> is the name of the storageProcessor instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific storageProcessor instance.

storageResource

Information about storage resources in the storage system.

A storage resource is a specific type of storage entity allocated in the storage system for a particular kind of host or application. The storage system provides the following types of storage resources:

- LUNs
- Consistency groups
- File systems accessed via NFS and/or CIFS shares.
- VMware NFS datastores
- VMware VMFS datastores
- VVol (file)
- VVol (block)

All types of storage resource types can be divided into two major groups:

- Block (or LUN based) storage resources: LUNs, consistency groups, VMware VMFS datastores, VVol (block).
- File system based storage resources: File systems, VMware NFS datastores, VVol (file).

In order to create a storage resource, there must be at least one pool configured on the system. For information about configuring pools, see the help topic for the pool. To provision file system based storage resource there must be at least one nasServer configured on the system.

Embedded resource types

advancedDedupParameters, blockHostAccessParam, capabilityProfileParameters, cifsFilesystemParameters, cifsShareCreate, cifsShareDelete, cifsShareModify, cifsShareParameters, compressionParameters, dataReductionParameters, fastVPParameters, filesystemParameters, lunAdd, lunCreate, lunDelete, lunModify, lunParameters, lunRemove, lunThinCloneCreate, nfsShareCreate, nfsShareDelete, nfsShareModify, nfsShareParameters, replicationParameters, snapScheduleParameters, storageResourceDelete, vmwareIscsiParameters, vmwareNfsParameters, vvolDatastoreCapabilityProfilesParameters

Supported operations

Collection query , Instance query ,CreateLun ,ModifyLun ,CreateConsistencyGroup ,ModifyConsistencyGroup ,CreateVmwareLun ,ModifyVmwareLun ,CreateVmwareNfs ,ModifyVmwareNfs ,CreateFilesystem ,ModifyFilesystem ,Delete ,CreateVVolDatastore ,ModifyVVolDatastore ,EstimateReclaimbleSize ,CreateBulkStandaloneLuns ,CreateLunThinClone ,CreateVmwareLunThinClone ,CreateConsistencyGroupThinClone ,Refresh

Attributes

Attribute	Type	Description
id	String	Unique identifier of the storage resource.
health	health	

		Health information for the storage resource, as defined by the health type.
name	String[1..95]	Name of the storage resource.
description	String[..255]	Storage resource description.
type	StorageResourceTypeEnum	Storage resource type.
isReplicationDestination	Boolean	Indicates whether the storage resource is a replication destination. Valid values are: • true - Storage resource is a replication destination. • false - Storage resource is not a replication destination.
replicationType	ReplicationTypeEnum	Replication type.
syncReplicationType	ReplicationTypeEnum	Sync Replication type.
sizeTotal	unsigned Integer[64(bytes)]	Storage resource size that the system presents to the host or end user.
sizeUsed	unsigned Integer[64(bytes)]	Size of the storage resource space consumed by the host. Applicable only for file system based storage resource. Indicates the size of file system space occupied by user files.
sizeAllocated	unsigned Integer[64(bytes)]	Size of space actually allocated in the pool for the storage resource: • For all thin-provisioned resources, this can be less than the sizeTotal attribute. For a thin-provisioned file system, this can be greater than or equal to the value of the sizeUsed attribute • For non-thin provisioned resources, this is approximately equal to the value of the sizeTotal attribute.
sizePreallocated	unsigned Integer[64(bytes)]	Space reserved from the pool by the storage resource, for future needs to make writes more efficient. The pool may be able to reclaim some of this if space is running low.
sizeAllocatedTotal	unsigned Integer[64(bytes)]	Total space used in the pool for the storage resource.
thinStatus	ThinStatusEnum	Indicates whether the storage resource is thin-provisioned, not thin-provisioned, or mixed.
advancedDedupStatus	DedupStatusEnum	Deduplication status for the storage resource.
dataReductionStatus	DataReductionStatusEnum	DataReduction status for the storage resource.
dataReductionSizeSaved	unsigned Integer[64(bytes)]	Storage resource saved space by data reduction (includes savings from compression and deduplication).
dataReductionPercent	unsigned Integer[16(percent)]	Data reduction percentage is the percentage of the data that does not consume storage - the savings due to data reduction. For example, if 1 TB of data is stored in 250 GB, the data reduction percentage is 75%. 75% data reduction percentage is equivalent to a 4:1 data reduction ratio.
dataReductionRatio	Float	Data reduction ratio. The data reduction ratio is the ratio between the size of the data and the amount of storage actually consumed. For example, 1TB of data consuming 250GB would have a ration of 4:1. A 4:1 data reduction ratio is equivalent to a 75% data reduction percentage.
esxFilesystemMajorVersion	ESXFilesystemMajorVersionEnum	(Applies to VMware VMFS storage resource type only.) VMFS major version.
esxFilesystemBlockSize	ESXFilesystemBlockSizeEnum	(Applies to VMware VMFS storage resource type only.) VMFS block size. Only applies to storage resources with VMFS major version 3.
snapSchedule	snapSchedule	Snapshot schedule for the storage resource, as defined by the snapSchedule This value is not set if the storage resource is not associated with a snapshot schedule.
isSnapSchedulePaused	Boolean	(Applies if the storage resource has an associated snap schedule.) Indicates whether the snapshot schedule for the storage resource is paused. Valid values are: • true - Snapshot schedule for the storage resource is paused. • false - Snapshot schedule for the storage resource is active.
relocationPolicy	TieringPolicyEnum	(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP tiering policy for the storage resource.
perTierSizeUsed	List<Integer>[64(bytes)]	Sizes of space allocations by the storage resource per tiers of the multi-tier storage pool. Multi-tier storage pools can be created on the system when the FAST VP license is installed.
blockHostAccess	List<blockHostAccess>	Host access permissions for a block storage resource types, as defined by the blockHostAccess resource type.
metadataSize	unsigned Integer[64(bytes)]	Size of the storage resource metadata.
metadataSizeAllocated	unsigned Integer[64(bytes)]	Size of pool space allocated for the storage resource metadata.
snapsSizeTotal	unsigned Integer[64(bytes)]	Size of the storage resource snapshots.
snapsSizeAllocated	unsigned Integer[64(bytes)]	Size of pool space allocated for storage resource snapshots.
snapCount	unsigned Integer[32]	Number of storage resource direct snapshots.
vmwareUUID	String	VMware UUID of the VVol datastore assigned by VMware ESXi hypervisor (Applies to VMware VVol datastore resources only.).

pools	List<pool>	List of pools associated with this storage resource. LUNs in a consistency group storage resource can be allocated from different pools.
isThinClone	Boolean	Indicates whether storage resource is a thin clone on not. • true - The storage resource is a thin clone. • false - The storage resource is not a thin clone.
defaultNode	NodeEnum	The storage processor that is the default owner of this LUN.
familyBaseStorageResource	storageResource	The Base Source Storage Resource. Applies only for Thin Clones.
parentSnap	snap	Source Snapshot. Applies only for Thin Clones.
originalParentStorageResource	storageResource	The Parent Source Storage Resource. Applies only for Thin Clones.
familySnapCount	unsigned Integer[32]	Total number of snapshots created in the resource Family, including all derivative snapshot objects. This attribute is not applicable for a Thin Clone
familyCloneCount	unsigned Integer[32]	Total number of thin clones created in the resource Family, including all derivative thin clones objects. This attribute is not applicable for a Thin Clone
nonBaseSizeAllocated	unsigned Integer[64(bytes)]	Total amount of pool space used by resource snapshots and thin clones. This attribute is not applicable for a Thin Clone
familySizeAllocatedTotal	unsigned Integer[64(bytes)]	Total amount of pool space reserved for the Storage Resource. This attribute is not applicable for a Thin Clone
nonBaseSize	unsigned Integer[64(bytes)]	Thin Clones and Snapshots space for the Storage Resource. This attribute is not applicable for a Thin Clone
esxMountProtocol	ESXMountProtocolEnum	(Applies to VMwareNFS storage resources only.) NFS protocol version to use on datastore registration on ESXi side.
datastores	List<datastore>	The datastores associated with the storageResource.
filesystem	filesystem	The filesystem associated with the storageResource.
hostGroupVmwareLUNs	List<hostGroupVmwareLUN>	The hostGroupVmwareLUNs associated with the storageResource.
hostVVolDatastore	List<hostVVolDatastore>	The hostVVolDatastores associated with the storageResource.
luns	List<lun>	The luns associated with the storageResource.
moves	List<moveSession>	The moveSessions associated with the storageResource.
virtualVolumes	List<virtualVolume>	The virtualVolumes associated with the storageResource.

Attributes for advancedDedupParameters

Advanced dedup settings for the storage resource.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
isAdvancedDedupEnabled	Boolean	Indicates whether advanced deduplication is enabled or disabled for the storage resource. Values are: • true - deduplication is enabled. • false - deduplication is disabled.

Attributes for blockHostAccessParam

Host access settings for changing host access of LUNs.

This resource type is embedded in the lunParameters embedded type.

Attribute	Type	Description
host	host	Host to grant access to LUN, as defined by host type.
accessMask	HostLUNAccessEnum	Host access mask.
hlu	unsigned Integer[16]	Host LUN Identifier for the host storage. This is the user specified host LUN ID when access the LUN. If not set, system will automatically generate with next available Host LUN ID.

Attributes for capabilityProfileParameters

Parameters used for creation/modification of a VVol Datastore.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
capProfile	capabilityProfile	CapabilityProfile to add to the VVol Datastore, as defined by the VVol Datastore resource type.
sizeTotal	unsigned Integer[64(bytes)]	Pool allocation size of required CapabilityProfile in required VVol container.

Attributes for cifsFilesystemParameters

Settings for a SMB (also known as CIFS) file system..

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
isCIFSSyncWritesEnabled	Boolean	Indicates whether the CIFS synchronous writes option is enabled for the file system. Values are: • true - CIFS synchronous writes option is enabled. • false - CIFS synchronous writes option is disabled.

isCIFSOpLocksEnabled	Boolean	Indicates whether opportunistic file locks are enabled for the file system. Values are: • true - CIFS opportunistic file locks are enabled. • false - CIFS opportunistic file locks are disabled.
isCIFSNotifyOnWriteEnabled	Boolean	Indicates whether the system generates a notification when the file system is written to. Values are: • true - System generates a notification when the file system is written to. • false - System does not generate a notification when the file system is written to.
isCIFSNotifyOnAccessEnabled	Boolean	Indicates whether the system generates a notification when a user accesses the file system. Values are: • true - System generates a notification when a user accesses the file system. • false - System does not generate a notification when a user accesses the file system.
cifsNotifyOnChangeDirDepth	unsigned Integer[32] [1..512]	Indicates the lowest directory level to which the enabled notifications apply, if any.

Attributes for cifsShareCreate

(Applies to SMB (also known as CIFS) file shares.) Parameters used for creating a CIFS share when creating or modifying a file system.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
path	String[1..1023]	Local path to a location within a file system. By default, the system creates a share to the root of the file system (top-most directory) at file system creation time. This path specifies the unique location of the file system on the storage system. CIFS shares allow you to create multiple network shares with the same local path. You can specify different host-side access controls for different users, while setting up network shares within the file system to access common content. If you want the CIFS network shares within the same file system to access different content, you must first create a share to the root of the file system. Then, you can connect from a Windows host, create additional directories from Windows, and create corresponding network shares using the REST API, Unisphere GUI, or Unisphere CLI.
name	String[1..80]	Name of the CIFS share unique to NAS server.
cifsServer	cifsServer	CIFS server to use for CIFS share creation, as defined by the cifsServer type.
cifsShareParameters	cifsShareParameters	CIFS share settings, as defined by the cifsShareParameters type.

Attributes for cifsShareDelete

Parameters used for deleting a CIFS share when modifying a file system.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
cifsShare	cifsShare	CIFS share to delete, as defined by the cifsShare type.

Attributes for cifsShareModify

Parameters used for modifying a CIFS share when modifying a file system.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
cifsShare	cifsShare	CIFS share to modify, as defined by the cifsShare type.
cifsShareParameters	cifsShareParameters	CIFS share settings, as defined by the cifsShareParameters type.

Attributes for cifsShareParameters

Settings for a CIFS share.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
description	String[..255]	CIFS share description.
isReadOnly	Boolean	Indicates whether the CIFS share is read-only. Values are: • true - CIFS share is read-only. • false - CIFS share is read-write.
isEncryptionEnabled	Boolean	Indicates whether CIFS encryption for Server Message Block (SMB) 3.0 is enabled for the CIFS share. Values are: • true - CIFS encryption for SMB 3.0 is enabled. • false - CIFS encryption for SMB 3.0 is disabled.
isContinuousAvailabilityEnabled	Boolean	Indicates whether continuous availability for SMB 3.0 is enabled for the CIFS share. Values are: • true - Continuous availability for SMB 3.0 is enabled for the CIFS share. • false - Continuous availability for SMB 3.0 is disabled for the CIFS share.
isACEEnabled	Boolean	Indicates whether the CIFS share access-level permissions are enabled. Values are: • true - CIFS share access-level permissions are enabled. • false - CIFS share access-level permissions are disabled.
addACE	List<cifsShareACE>	Users, domain users, or group Security Identifiers (SIDs), and associated access-level permissions, to add to the access list, as defined by cifsShareACE

		resource type.
deleteACE	List<String>	Users, domain users, or group Security Identifiers (SIDs) to remove from the access list.
isABEEnabled	Boolean	Enumerate file with read access and directories with list access in folder listings. Values are: • true - Enumerating is enabled. • false - Enumerating is disabled.
isBranchCacheEnabled	Boolean	Branch Cache optimizes traffic between the NAS server and Branch Office Servers. Values are: • true - Branch Cache is enabled. • false - Branch Cache is disabled.
offlineAvailability	CifsShareOfflineAvailabilityEnum	Offline Files store a version of the shared resources on the client computer in the file system cache, a reserved portion of disk space, which the client computer can access even when it is disconnected from the network.
umask	String	The default UNIX umask for new files created on the share.
defaultAccess	CifsShareDefaultAccessEnum	Default access level for all hosts accessing the CIFS share.
noAccessHosts	List<host>	Hosts with no access to the CIFS share or its snapshots, as defined by the host resource type.
readWriteHosts	List<host>	Hosts with read-write access to the CIFS share and its snapshots, as defined by the host resource type.
noAccessHostsString	String	Hosts with no access to the CIFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
readWriteHostsString	String	Hosts with read-write access to the CIFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups.
exportOption	unsigned Integer[64][0..3]	Specifies the bitmask of various options of the CIFS share. Values are: • 0x0001 - hostString - if set, the access to the NFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.

Attributes for compressionParameters

Inline compression settings for the storage resource.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
isCompressionEnabled	Boolean	Indicates whether inline compression is enabled or disabled for the storage resource. Values are: • true - (default)inline compression is enabled. • false - inline compression is disabled.

Attributes for dataReductionParameters

Data reduction settings for the storage resource.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
isDataReductionEnabled	Boolean	Indicates whether data reduction is enabled or disabled for the storage resource. Values are: • true - data reduction is enabled. • false - (default)data reduction is disabled.

Attributes for fastVPParameters

FAST VP settings for the storage resource.
(Applies if FAST VP is supported on the system and the corresponding license is installed.)
This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
tieringPolicy	TieringPolicyEnum	FAST VP tiering policy for the storage resource.

Attributes for filesystemParameters

Settings for a file system.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
pool	pool	Storage pool to create the file system. The pool is required in creation requests and must not be passed in modification requests.
nasServer	nasServer	NAS server that provides network connectivity to the share from the hosts. The NAS server parameter is required in creation request and must not be passed in modification requests.
supportedProtocols	FSSupportedProtocolEnum	(Applies to create operations only.) Sharing protocols supported by the file system.
flrVersion	FLRVersionEnum	Indicates which File Level Retention (FLR) version is enabled on the file system. Values are: • 0 - FLR is OFF on the file system. • 1 - Enterprise is enabled on the file system. • 2 - Compliance is enabled on the file system.
flrMinRetention	DateTime[Interval]	The shortest period for which files on an FLR-enabled file system can be locked and protected from deletion, the format is: h+:mm:ss[.sss]. The value plus the current date should be before date 2106-Feb-07.

flrDefaultRetention	DateTime[Interval]	The default retention period is used in an FLR-enabled file system when a file is locked and a retention period is not specified, the format is: h+:mm:ss[.sss]. The value plus the current date should be before date 2106-Feb-07.
flrMaxRetention	DateTime[Interval]	The longest period for which files on an FLR-enabled file system can be locked and protected from deletion, the format is: h+:mm:ss[.sss]. The value should be bigger than 0. The value plus the current date should be before date 2106-Feb-07.
isFlrAutoLockEnabled	Boolean	Users can specify whether to automatically lock files in an FLR-enabled file system, as well as a policy interval for how long to wait after files are modified before the files are automatically locked. When enabled, auto-locked files are set with the default retention period value. This attribute indicates whether automatic lock is enabled on the file system. Values are: • true - automatic lock is enabled on the file system. • false - automatic lock is disabled on the file system.
isFlrAutoDeleteEnabled	Boolean	Users can specify whether to automatically delete locked files from an FLR-enabled file system once their retention periods have expired. This value indicates whether automatic delete is enabled on the file system. Values are: • true - automatic delete is enabled on the file system. • false - automatic delete is disabled on the file system.
flrAutoLockDelay	DateTime[Interval]	Indicates how long to wait after files are modified before the files are automatically locked. The default value is 1 hour.
errorThreshold	unsigned Integer[16]	Percentage of high threshold of occupied space for alert in the file system.
warningThreshold	unsigned Integer[16]	Percentage of medium threshold of occupied space for alert in the file system.
infoThreshold	unsigned Integer[16]	Percentage of low threshold of occupied space for alert in the file system.
isThinEnabled	Boolean	(Applies to create operations only.) Indicates whether to enable thin provisioning for file system. Values are: • true - Enable thin provisioning. • false - Disable thin provisioning. **Note:** If you enable thin provisioning for a file system, you cannot disable it later.
isDataReductionEnabled	Boolean	Indicates whether to enable data reduction for the file system. Values are: • true - Enable data reduction(default) • false - Disable data reduction
isAdvancedDedupEnabled	Boolean	Indicates whether to enable advanced dedup for the file system. Values are: • true - Enable advanced dedup • false - Disable advanced dedup(default)
size	unsigned Integer[64(bytes)]	Size of the file system.
hostIOSize	HostIOSizeEnum	Typical write I/O size from the host to the file system.
sizeAllocated	unsigned Integer[64(bytes)]	Allocated size of the file system.
minSizeAllocated	unsigned Integer[64(bytes)]	Minimum size allocated of the file system.
fastVPParameters	fastVPParameters	(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP settings for the file system, as defined by the fastVPParameters.
isCacheDisabled	Boolean	Indicates whether caching is disabled. Values are: • true - Caching is disabled. • false - Caching is enabled.
accessPolicy	AccessPolicyEnum	Access policy.
folderRenamePolicy	FSRenamePolicyEnum	File system folder rename policies. These policy choices control whether directory can be renamed from NFS or SMB clients if at least one file is opened in the directory or in one of its children directory.
lockingPolicy	FSLockingPolicyEnum	Locking policy.
poolFullPolicy	ResourcePoolFullPolicyEnum	Behavior to follow when pool is full and a write to this filesystem is attempted. Values are: • Delete_All_Snaps - All snaps to the File System will be marked for deletion to free up space. • Fail_Writes - Writes to the File System will fail.
fileEventSettings	fileEventSettings	Indicates whether File Event Service is enabled for some protocols on the filesystem.

Attributes for lunAdd

Parameters used for adding a LUN to a Consistency group.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
lun	lun	Existing LUN to add to the Consistency group. This LUN should not belong to any other Consistency group.

Attributes for lunCreate

LUN parameters used for creating a LUN when creating or modifying a Consistency group.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
name	String[1..63]	LUN name unque to the storage system.
description	String[0..170]	LUN description.

lunParameters	lunParameters	(Required) Settings for the LUN, as defined by the lunParameters resource type.

Attributes for lunDelete

Parameters used for deleting a LUN when modifying a Consistency group.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
lun	lun	LUN to remove from the Consistency group and completely delete from the storage system. To remove the LUN from the Consistency group without deletion from the storage system put the LUN into lunRemove object.
forceSnapDeletion	Boolean	Indicates whether to delete all LUN snapshots along with the LUN. Values are: • true - Delete all LUN snapshots. • false - Do not delete LUN snapshots.

Attributes for lunModify

Parameters used for modifying a LUN when modifying a Consistency group.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
lun	lun	LUN to modify.
name	String[1..63]	New name of the LUN unique to the storage system.
description	String[0..170]	New LUN description.
lunParameters	lunParameters	Settings for the LUN, as defined by the lunParameters.

Attributes for lunParameters

Settings for a LUN.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
pool	pool	(Applies only to create requests.) Storage pool from which to create the LUN.
isThinEnabled	Boolean	(Applies only for create requests.) Indicates whether to enable thin provisioning for the LUN. Values are: • true - Enable thin provisioning. • false - Disable thin provisioning. **Note:** If you enable thin provisioning for a LUN, you cannot disable it later.
isDataReductionEnabled	Boolean	Indicates whether to enable data reduction for the LUN. Values are: • true - Enable data reduction(default) • false - Disable data reduction
isAdvancedDedupEnabled	Boolean	Indicates whether to enable advanced deduplication for the LUN. It can only be enabled on the all flash high end platforms and only when the data reduction is enabled. If data reduction is disable, this is disabled automatically. Deduplicated data will remain as is even after advanced deduplication is disabled. Values are: • true - Enable advanced deduplication. • false - Disable advanced deduplication(default).
size	unsigned Integer[64(bytes)]	LUN size. The size is required in creation requests. In the modification requests the size parameter can be greater than the current LUN size in this case the LUN is expanded. To shrink the LUN size this parameter is less than the current LUN size. To allow shrink operation the parameter forceShrink must be set true.
fastVPParameters	fastVPParameters	(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP settings for the LUN, as defined by the fastVPParameters.
defaultNode	NodeEnum	Storage Processor (SP) that owns the LUN. If not specified, the system chooses the default owner automatically.
hostAccess	List<blockHostAccessParam>	Host access settings for the LUN, as defined by the blockHostAccessParam embedded resource type. Replaces the existing blockHostAccess list. May not be used with add/remove args.
addHostAccess	List<blockHostAccessParam>	One or more hosts, with access settings, to be added to the access list for the LUN. May not be used with hostAccess args. If used with removeHostAccess then removeHostAccess is applied first. The hosts in this list will be allowed to access the LUN with the specified access settings. Any specified host already with access will be replaced with the new access settings inluding access level and hlu.
removeHostAccess	List<host>	Hosts whose access to the LUN and snapshots should be removed, as defined by the host. May not be used with hostAccess args. The hosts in this list should already be in the access list for the luns.
ioLimitParameters	ioLimitParameters	IO limit settings for the LUN, as defined by the ioLimitParameters.
migrationState	DCMigrationStateEnum	Migration state for Destination PowerStore Orchestration.

Attributes for lunRemove

Parameters used for removing a LUN from a Consistency group.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
	lun	

lun		LUN to remove from the Consistency group. The LUN removed from Consistency group is not deleted from the storage system and simply becomes a standalone LUN not associated with any Consistency group. A LUN removed from one Consistency group then can be added to another Consistency group. To also delete the LUN after removing it, use the deleteLun parameter instead.

Attributes for lunThinCloneCreate

Parameters used for creating a LUN Thin Clone.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
parentLun	lun	Parent LUN of Thin Clone.
name	String[1..63]	LUN Thin Clone name unique to the storage system.
description	String[0..170]	LUN Thin Clone description.
lunParameters	lunParameters	(Required) Settings for the LUN Thin Clone, as defined by the lunParameters resource type.

Attributes for nfsShareCreate

Parameters used for creating an NFS share when creating or modifying a file system.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
path	String[1..1023]	Local path to a location within the file system. With NFS, each share must have a unique local path. By default, the system creates a share to the root of the file system (top-most directory) at file system creation time. This path specifies the unique location of the file system on the storage system. Before you can create additional shares within an NFS shared folder, you must create directories within it from a Linux/UNIX host that is connected to the file system. After a directory has been created from a mounted host, you can create a corresponding share and set access permissions accordingly.
name	String[1..255]	Unique name of the NFS share.
nfsShareParameters	nfsShareParameters	Common NFS share attributes, as defined by the nfsShareParameters resource type.

Attributes for nfsShareDelete

Parameters used for deleting an NFS share when modifying a file system.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
nfsShare	nfsShare	NFS share to delete.

Attributes for nfsShareModify

Parameters used for modifying an NFS share when modifying a file system.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
nfsShare	nfsShare	NFS share to modify.
nfsShareParameters	nfsShareParameters	NFS share settings, as defined by the nfsShareParameters resource type.

Attributes for nfsShareParameters

Settings for an NFS share.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
description	String[..255]	NFS share description.
isReadOnly	Boolean	Indicates whether the NFS share is read-only. Values are: • true - NFS share is read-only. • false - NFS share is read-write.
defaultAccess	NFSShareDefaultAccessEnum	Default access level for all hosts accessing the NFS share.
minSecurity	NFSShareSecurityEnum	Minimal security level that must be provided by a client to mount the NFS share.
nfsOwnerUsername	String	(Applies to NFS shares of VMware NFS storage resources.) Default owner of the NFS share associated with the datastore. Required if secure NFS enabled. Attribute minSecurity should be set to Kerberos value. For NFSv3 or NFSv4 without Kerberos, the default owner is root.
noAccessHosts	List<host>	Hosts with no access to the NFS share or its snapshots, as defined by the host resource type. Replaces the existing no-access hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
readOnlyHosts	List<host>	Hosts with read-only access to the NFS share and its snapshots, as defined by the host resource type. Replaces the existing read-only hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
readWriteHosts	List<host>	Hosts with read-write access to the NFS share and its snapshots, as defined by the host resource type. Replaces the existing read-write hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
readOnlyRootAccessHosts	List<host>	Hosts with read-only root access to the NFS share and its snapshots, as defined by the host resource

		type. Replaces the existing read-only root hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
rootAccessHosts	List<host>	Hosts with read-write root access to the NFS share and its snapshots, as defined by the host resource type. Replaces the existing read-write root hosts. May not be used with add*Hosts/removeHosts args. Hosts in this list can't appear in other *Hosts args.
addNoAccessHosts	List<host>	Hosts to be added with no access to the NFS share or its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to no-access list.
addReadOnlyHosts	List<host>	Hosts to be added with read-only access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-only list.
addReadWriteHosts	List<host>	Hosts to be added with read-write access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-write list.
addReadOnlyRootAccessHosts	List<host>	Hosts to be added with read-only root access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-only root list.
addRootAccessHosts	List<host>	Hosts to be added with read-write root access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list can't appear in other add*Hosts args. If used with removeHosts args then removeHosts is applied first. Any specified host already with other access will be moved to read-write root list.
removeHosts	List<host>	Hosts to be restored with default access to the NFS share and its snapshots, as defined by the host resource type. May not be used with replacement *Hosts args. Hosts in this list should already be in one of the access lists. It removes the host from existing list.
noAccessHostsString	String	Hosts with no access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing no access hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
readOnlyHostsString	String	Hosts with read-only access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-only hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
readWriteHostsString	String	Hosts with read-write access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-write hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
readOnlyRootHostsString	String	Hosts with read-only root access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-only root hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
readWriteRootHostsString	String	Hosts with read-write root access to the NFS share or its snapshots, defined as comma-separated list of hostnames, subnets, IPs, domains or netgroups. Replaces the existing read-write root hosts. May not be used with add*HostsString/removeHostsString args. Hosts in this list can't appear in other *HostsString args.
addNoAccessHostsString	String	Hosts to be added with no access to the NFS share or its snapshots, defined as hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to no-access list.
addReadOnlyHostsString	String	Hosts to be added with read-only access to the NFS share or its snapshots, defined as hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to read-only list.
addReadWriteHostsString	String	Hosts to be added with read-write access to the NFS share or its snapshots, defined as hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to read-write list.
addReadOnlyRootHostsString	String	Hosts to be added with read-only root access to the NFS share or its snapshots, defined as hostnames,

		subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to read-only root list.
addReadWriteRootHostsString	String	Hosts to be added with read-write root access to the NFS share or its snapshots, defined as hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list can't appear in other add*HostsString args. If used with removeHostsString args then removeHostsString is applied first. Any specified host already with other access will be moved to read-write root list.
removeHostsString	String	Hosts to be restored with default access to the NFS share or its snapshots, defined as hostnames, subnets, IPs, domains or netgroups. May not be used with replacement *HostsString args. Hosts in this list should already be in one of the access lists. It removes the host from existing list.
anonymousUID	unsigned Integer[32]	Specifies the user ID of the anonymous account.
anonymousGID	unsigned Integer[32]	Specifies the group ID of the anonymous account.
exportOption	unsigned Integer[64]	Specifies the bitmask of various options of the NFS share. Values are: • 0x0001 - hostString - if set, the access to the NFS share per host is defined according the hostsString lists. Otherwise, the access is defined according the hostID lists. To switch between the 2 modes, clear all existing host access first, or in the same request. • 0x0002 - noSUID - if set, do not allow access to set SUID. Otherwise, allow access.

Attributes for replicationParameters

Replication settings for the storage resource.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
isReplicationDestination	Boolean	Indicates whether the storage resource is a replication destination. Values are: • true - Storage resource is a replication destination. • false - (Default) Storage resource is not a replication destination.

Attributes for snapScheduleParameters

Snapshot schedule settings for the storage resource.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
snapSchedule	snapSchedule	Snapshot schedule assigned to the storage resource, as defined by the snapSchedule type.
isSnapSchedulePaused	Boolean	Indicates whether the assigned snapshot schedule is paused. Values are: • true - Assigned snapshot schedule is paused. • false - Assigned snapshot schedule is not paused.

Attributes for storageResourceDelete

Parameters used for deleting a storage resource when deleting a batch of storage resources.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
storageResource	storageResource	Storage resource to completely delete from the storage system.
forceSnapDeletion	Boolean	Indicates whether to delete a storage resource's snapshots along with the storage resource. . Values are: • true - Delete all the storage resource's snapshots. • false - Do not delete the storage resource's snapshots.
forceVVolsDeletion	Boolean	Indicates whether to delete all VVols of the VVol datastore along with the storage resource. Values are: • true - Delete all VVols of the VVol datastore. • false - Do not delete all VVols of the VVol datastore.

Attributes for vmwareIscsiParameters

Settings for an iSCSI LUN used as a VMWare VMFS datastore.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
majorVersion	ESXFilesystemMajorVersionEnum	VMFS major version.
blockSize	ESXFilesystemBlockSizeEnum	VMFS block size.

Attributes for vmwareNfsParameters

Settings for an NFS Share used as a VMware NFS datastore.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description
esxMountProtocol	ESXMountProtocolEnum	ESXi Mount Protocol version.

Attributes for vvolDatastoreCapabilityProfilesParameters

Capability profile parameters used for creation/modification of a VVol Datastore.

This resource type is embedded in the storageResource resource type.

Attribute	Type	Description

addCapabilityProfile	List<capabilityProfileParameters>	CapabilityProfiles to add to the VVol datastore, as defined by the VVol Datastore resource type.
modifyCapabilityProfile	List<capabilityProfileParameters>	CapabilityProfiles, used by the VVol Datastore, support of that should be modified.
removeCapabilityProfile	List<capabilityProfile>	CapabilityProfiles to remove from the VVol datastore, as defined by the VVol Datastore resource type.

Query all members of the storageResource collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/storageResource/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the storageResource collection.

Query a specific storageResource instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/storageResource/<id> where <id> is the unique identifier of the storageResource instance to query. Or GET /api/instances/storageResource/name:<value> where <value> is the name of the storageResource instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific storageResource instance.

CreateLun operation

Create a standalone LUN.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageResource/action/createLun
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateLun operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..63]	Required	Name of the standalone LUN unique to the storage system.
description	in	String[..170]	Optional	Description of the LUN.
replicationParameters	in	replicationParameters	Optional	Replication settings for the LUN, as defined by the replicationParameters resource type.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the LUN, as defined by the snapScheduleParameters.
lunParameters	in	lunParameters	Required	LUN settings for the LUN, as defined by the lunParameters. **Note:** The following lunParameters arguments are required for this operation: • pool • size All other lunParameters arguments are optional.
storageResource	out	storageResource	N/A	Storage resource instance that represents the new LUN, as defined by the storageResource. This is an output parameter. **Note:** If this method is called asynchronously then the LUN identified by this output parameter may not yet exist on the system after the call of createLun method.

ModifyLun operation

Modify a standalone LUN.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/modifyLun where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/modifyLun where <value> is the name of the storageResource instance.

Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyLun operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..63]	Optional	Name of the LUN unique to the storage system.
description	in	String[..170]	Optional	Description of the LUN.
replicationParameters	in	replicationParameters	Optional	Replication settings for the LUN, as defined by the replicationParameters.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the LUN, as defined by the snapScheduleParameters.
lunParameters	in	lunParameters	Optional	LUN settings for the LUN, as defined by the lunParameters. **Note:** Do not pass the following lunParameters arguments to this operation, because their values cannot be changed: • pool • isThinEnabled All other lunParameters arguments are optional.

CreateConsistencyGroup operation

Create a consistency group (former LUN group).

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageResource/action/createConsistencyGroup
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateConsistencyGroup operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..95]	Required	Name of the consistency group unique to the storage system.
description	in	String[..255]	Optional	Description of the consistency group.
replicationParameters	in	replicationParameters	Optional	Replication settings for the consistency group, as defined by the replicationParameters.
advancedDedupParameters	in	advancedDedupParameters	Optional	Advanced deduplication settings for the LUN group, as defined by the advancedDedupParameters.
dataReductionParameters	in	dataReductionParameters	Optional	Data reduction settings for the LUN group, as defined by the dataReductionParameters resource type.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the consistency group, as defined by the snapScheduleParameters.
fastVPParameters	in	fastVPParameters	Optional	(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP settings for the consistency group, as defined by the fastVPParameters.
blockHostAccess	in	List<blockHostAccessParam>	Optional	Host access settings for the consistency group, as defined by the blockHostAccess.
lunCreate	in	List<lunCreate>	Optional	LUN to create and add to the consistency group, as defined by the lunCreate. **Note:** The following lunCreate arguments are required for this operation: • name • lunParameters.pool • lunParameters.size All other lunCreate arguments are optional.
lunAdd	in	List<lunAdd>	Optional	Existing LUNs to add to the consistency group, as defined by the lunAdd. These LUNs should not belong to the other consistency group. **Note:** The lunAdd.lun argument is required for this operation.
storageResource	out	storageResource	N/A	Storage resource instance that represents the new consistency group, as defined by the storageResource. **Note:** If this method is called

				asynchronously then the consistency group identified by this output parameter may yet not exist on the system after the call of createConsistencyGroup method.

ModifyConsistencyGroup operation

Modify a consistency group.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/modifyConsistencyGroup where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/modifyConsistencyGroup where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyConsistencyGroup operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..95]	Optional	Name of the consistency group unique to the storage system.
description	in	String[..255]	Optional	Description of the consistency group.
replicationParameters	in	replicationParameters	Optional	Replication settings for the consistency group, as defined by the replicationParameters.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot protection schedule settings for the consistency group, as defined by the snapScheduleParameters.
fastVPParameters	in	fastVPParameters	Optional	(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP settings for the consistency group, as defined by the fastVPParameters.
advancedDedupParameters	in	advancedDedupParameters	Optional	Advanced deduplication settings for the LUN group, as defined by the advancedDedupParameters.
dataReductionParameters	in	dataReductionParameters	Optional	Data reduction settings for the LUN group, as defined by the dataReductionParameters resource type.
blockHostAccess	in	List<blockHostAccessParam>	Optional	Host access settings for the consistency group, as defined by the blockHostAccess resource type. Replaces existing blockHostAccess list. May not be used with add/remove args.
addBlockHostAccess	in	List<blockHostAccessParam>	Optional	One or more hosts, with access settings, to add to the access list for the consistency group. May not be used with blockHostAccess args. If used with removeBlockHostAccess then removeBlockHostAccess is applied first. The hosts will be allowed to access each LUN in the consistency group with the specified access settings. Any specified host already with other access will be replaced with the new access level.
removeBlockHostAccess	in	List<host>	Optional	Hosts whose access to the consistency group should be removed. May not be used with blockHostAccess args. The hosts in this list should already be in the access list for all the luns in the consistency group.
lunCreate	in	List<lunCreate>	Optional	LUN to create and add to the consistency group, as defined by the lunCreate. **Note:** The following lunCreate arguments are required for this operation: • name • lunParameters.pool • lunParameters.size All other lunCreate arguments are optional.
lunModify	in	List<lunModify>	Optional	LUN to modify in the consistency group, as defined by the lunModify. **Notes:** • The lunModify.lun argument is required for this operation. • Do not pass the lunModify.lunParameters.pool, or lunModify.lunParameters.isThinEnabled arguments to this operation, because their values cannot be changed. • All other lunModify arguments are optional.
lunAdd	in	List<lunAdd>	Optional	Existing LUNs to add to the consistency group, as defined by the lunAdd. These LUNs should not belong to the other consistency group. **Note:** The lunAdd.lun argument is required for this operation.
lunRemove	in	List<lunRemove>	Optional	LUNs to remove from the consistency group, as defined by the lunRemove. The LUNs are not deleted from the storage system when you remove them from the

				consistency group. The LUN removed from consistency group becomes standalone LUN. **Note:** The lunRemove.lun argument is required for this operation.
lunDelete	in	List<lunDelete>	Optional	LUNs to remove from the consistency group and completely delete from the storage system. **Note:** The lunDelete.lun argument is required for this operation.

CreateVmwareLun operation

Create a VMware VMFS datastore.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageResource/action/createVmwareLun
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateVmwareLun operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..62]	Required	Name of the VMware VMFS datastore unique to the storage resource.
description	in	String[..170]	Optional	Description of the VMware VMFS datastore.
replicationParameters	in	replicationParameters	Optional	Replication settings for the VMware VMFS datastore, as defined by the replicationParameters.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the VMware VMFS datastore, as defined by the snapScheduleParameters.
vmwareIscsiParameters	in	vmwareIscsiParameters	Optional	VMware VMFS settings for the VMFS datastore, as defined by the vmwareIscsiParameters.
lunParameters	in	lunParameters	Required	LUN settings for the VMware VMFS datastore, as defined by the lunParameters. **Note:** The following lunParameters arguments are required for this operation: • pool • size All other lunParameters arguments are optional.
storageResource	out	storageResource	N/A	Storage resource instance that represents the new VMware VMFS datastore, as defined by the storageResource. **Note:** If this method is called asynchronously then the VMware VMFS datastore identified by this output parameter may not yet exist on the system after the call of createVmwareLun method.

ModifyVmwareLun operation

Modify a VMware VMFS datastore.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/modifyVmwareLun where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/modifyVmwareLun where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyVmwareLun operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..62]	Optional	name of the VMware VMFS datastore unique to the system.
description	in	String[..170]	Optional	Description of the VMware VMFS datastore.
replicationParameters	in	replicationParameters	Optional	Replication settings for the VMware VMFS datastore, as defined by the replicationParameters.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the VMware VMFS datastore, as defined by the snapScheduleParameters.

vmwareIscsiParameters	in	vmwareIscsiParameters	Optional	VMware VMFS settings for the VMFS datastore, as defined by the vmwareIscsiParameters.
lunParameters	in	lunParameters	Optional	LUN settings for the VMware VMFS datastore, as defined by the lunParameters. **Note:** Do not pass the following lunParameters arguments to this operation, because their values cannot be changed: • pool • isThinEnabled All other lunParameters arguments are optional.

CreateVmwareNfs operation

Create a VMware NFS datastore.

Note: Before creating a VMware NFS datastore, at least one NAS server must exist on the storage system.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageResource/action/createVmwareNfs
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateVmwareNfs operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..95]	Required	Unique name of the VMware NFS datastore.
description	in	String[..255]	Optional	Description of the VMware NFS datastore.
replicationParameters	in	replicationParameters	Optional	Replication settings for the VMware NFS datastore, as defined by the replicationParameters.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the VMware NFS datastore, as defined by the snapScheduleParameters.
fsParameters	in	filesystemParameters	Required	File system settings for the VMware NFS datastore, as defined by the filesystemParameters. **Note:** The following fsParameters arguments are required for this operation: • pool • nasServer • size All other fsParameter arguments are optional.
nfsShareParameters	in	nfsShareParameters	Optional	NFS share settings for the VMware NFS datastore, as defined by the nfsShareParameters.
vmwareNfsParameters	in	vmwareNfsParameters	Optional	
storageResource	out	storageResource	N/A	Storage resource instance that represents the new VMware NFS datastore, as defined by the storageResource. **Note:** If this method is called asynchronously then the VMware NFS datastore identified by this output parameter may not yet exist on the system after the call of createVmwareNfs method.

ModifyVmwareNfs operation

Modify a VMware NFS datastore.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/modifyVmwareNfs where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/modifyVmwareNfs where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyVmwareNfs operation

Argument	In/ out	Type	Required?	Description
description	in	String[..255]	Optional	Description of the VMware NFS datastore.
replicationParameters	in	replicationParameters	Optional	Replication parameters for the VMware NFS datastore, as defined by the

snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the VMware NFS datastore, as defined by the snapScheduleParameters.
fsParameters	in	filesystemParameters	Optional	File system settings for the VMware datastore, as defined by the filesystemParameters. **Note:** Do not pass the following filesystemParameters to this operation, because their values cannot be changed: • pool • nasServer • supportedProtocols • isFLREnabledarguments
nfsShareParameters	in	nfsShareParameters	Optional	NFS share settings for the VMware NFS datastore, as defined by the nfsShareParameters.
vmwareNfsParameters	in	vmwareNfsParameters	Optional	

CreateFilesystem operation

Create a file system.

Note: Before creating a file system, at least one NAS server must exist on the storage system.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageResource/action/createFilesystem
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateFilesystem operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..95]	Required	Name of the file system. This name must be unique within the associated NAS server.
description	in	String[..255]	Optional	File system description.
replicationParameters	in	replicationParameters	Optional	Replication settings for the file system, as defined by the replicationParameters.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the file system, as defined by the snapScheduleParameters.
fsParameters	in	filesystemParameters	Required	File system settings, as defined by the filesystemParameters. **Note:** The following filesystemParameters arguments are required: • pool • nasServer • size All other filesystemParameters arguments are optional.
cifsFsParameters	in	cifsFilesystemParameters	Optional	CIFS file system settings, as defined by the cifsFsParameters.
nfsShareCreate	in	List<nfsShareCreate>	Optional	Parameters used for creating NFS shares in the file system, as defined by the nfsShareCreate. **Note:** The following nfsShareCreate arguments are required for this operation: • path • name All other nfsShareCreate arguments are optional.
cifsShareCreate	in	List<cifsShareCreate>	Optional	Parameters used for creating CIFS shares in the file system, as defined by the cifsShareCreate. **Note:** The following cifsShareCreate arguments are required for this operation: • path • name • cifsServer All other cifsShareCreate arguments are optional.
ioLimitParameters	in	ioLimitParameters	Optional	The IO limit policy that is applied to this filesystem.
storageResource	out	storageResource	N/A	Storage resource instance that represents the new file system, as defined by the storageResource. **Note:** If this method called asynchronously then the file system identified by this output parameter may not yet exist on the system after the call of createFilesystem method.

ModifyFilesystem operation

Modify a file system.

Header	Accept: application/json Content-Type: application/json

Method and URI	POST /api/instances/storageResource/<id>/action/modifyFilesystem where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/modifyFilesystem where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyFilesystem operation

Argument	In/ out	Type	Required?	Description
description	in	String[..255]	Optional	File system description.
replicationParameters	in	replicationParameters	Optional	Replication settings for the file system, as defined by the replicationParameters.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot protection schedule settings for the file system, as defined by the snapScheduleParameters.
fsParameters	in	filesystemParameters	Optional	File system settings for the file system, as defined by the fsParameters. **Note:** Do not pass the following filesystemParameters arguments to this operation, because their values cannot be changed: • pool • nasServer • supportedProtocols • isFLREnabled All other fsParameters arguments are optional.
cifsFsParameters	in	cifsFilesystemParameters	Optional	CIFS file system settings, as defined by the cifsFilesystemParameters.
nfsShareCreate	in	List<nfsShareCreate>	Optional	Parameters used for creating NFS shares in the file system, as defined by the nfsShareCreate. **Note:** The following nfsShareCreate arguments are required for this operation: • path • name All other nfsShareCreate arguments are optional.
nfsShareModify	in	List<nfsShareModify>	Optional	Parameters used for modifying NFS shares in the file system, as defined by the nfsShareModify. **Note:** The nfsShareModify.nfsShare argument is required for this operation. All other nfsShareModify arguments are optional.
nfsShareDelete	in	List<nfsShareDelete>	Optional	Parameters used for deleting an NFS share in the file system, as defined by the nfsShareDelete. **Note:** The nfsShareDelete nfsShare argument is required for this operation.
cifsShareCreate	in	List<cifsShareCreate>	Optional	Parameters used for creating a CIFS share in the file system, as defined by the cifsShareCreate. **Note:** The following cifsShareCreate nfsShare arguments are required for this operation: • path • name • cifsServer All other cifsShareCreate argument values are optional.
cifsShareModify	in	List<cifsShareModify>	Optional	Parameters used for modifying CIFS shares in the file system, as defined by the cifsShareModify. **Note:** The cifsShareModify.cifsShare argument is required for this operation. All other cifsShareModify arguments are optional.
cifsShareDelete	in	List<cifsShareDelete>	Optional	Parameters used for deleting CIFS shares in the file system, as defined by the cifsShareDelete. **Note:** The cifsShareDelete.cifsShare argument is required for this operation.
ioLimitParameters	in	ioLimitParameters	Optional	The IO limit policy that is applied to this filesystem.

Delete operation

Delete a storage resource. If this method is called asynchronously then the storage resource may still exist after the call of delete() method.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/storageResource/<id> where <id> is the unique identifier of the storageResource instance to delete. Or

	DELETE /api/instances/storageResource/name:<value> where <value> is the name of the storageResource instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
forceSnapDeletion	in	Boolean	Optional	Indicates whether to delete a storage resource's snapshots along with the storage resource. Values are: • true - Delete the storage resource's snapshots. • false - Do not delete the storage resource's snapshots.
forceVvolDeletion	in	Boolean	Optional	

CreateVVolDatastore operation

Create a VVol datastore.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageResource/action/createVVolDatastore
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateVVolDatastore operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..63]	Required	Unique name of the VVol datastore.
vvolDatastoreType	in	VVolDatastoreTypeEnum	Required	VVol datastore type.
description	in	String[..255]	Optional	Description of the VVol datastore.
hosts	in	List<host>	Optional	The list of hosts that allowed to access the VVol datastore.
vvolDatastoreCapabilityProfilesParameters	in	vvolDatastoreCapabilityProfilesParameters	Optional	VVol datastore capability profiles parameters, as defined by the vvolDatastoreCapabilityProfilesParameters.
storageResource	out	storageResource	N/A	Storage resource instance that represents the new VVol datastore, as defined by the storageResource. **Note:** If this method is called asynchronously then the VVol datastore identified by this output parameter may not yet exist on the system after the call of createVVolDatastore() method.

ModifyVVolDatastore operation

Modify a VVol datastore.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/modifyVVolDatastore where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/modifyVVolDatastore where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyVVolDatastore operation

Argument	In/ out	Type	Required?	Description
name	in	String[1..63]	Optional	Unique name of the VVol datastore.
description	in	String[..255]	Optional	Description of the VVol datastore.
hosts	in	List<host>	Optional	The list of hosts that are allowed to access the VVol datastore. Replaces the existing hosts with access. May not be used with add/remove args.
addHosts	in	List<host>	Optional	The list of hosts to be added that are allowed to access the VVol datastore. May not be used with hosts args. If used with removeHosts then removeHosts is applied first.
removeHosts	in	List<host>	Optional	The list of hosts to be removed from those allowed to access the VVol datastore. May not be used with hosts args. The hosts in this list should already be in the access list.
force	in	Boolean	Optional	Specifies whether Virtual Volumes shall be

				unbound in this case, if host access is removed for some hosts that have associated protocol endpoints with bound virtual volumes.
vvolDatastoreCapabilityProfilesParameters	in	vvolDatastoreCapabilityProfilesParameters	Optional	VVol datastore capability profiles parameters, as defined by the vvolDatastoreCapabilityProfilesParameters.

EstimateReclaimbleSize operation

Estimate the reclaimable size of storage resource for shrink operation with a target size.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/estimateReclaimbleSize where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/estimateReclaimbleSize where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the EstimateReclaimbleSize operation

Argument	In/ out	Type	Required?	Description
targetSize	in	unsigned Integer[64(bytes)]	Required	The target size to shrink to.
reclaimableSize	out	unsigned Integer[64(bytes)]	N/A	The estimated reclaimable size.

CreateBulkStandaloneLuns operation

Create a number of standalone LUNs.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageResource/action/createBulkStandaloneLuns
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateBulkStandaloneLuns operation

Argument	In/ out	Type	Required?	Description
fastVPParameters	in	fastVPParameters	Optional	(Applies if FAST VP is supported on the system and the corresponding license is installed.) FAST VP settings of created standalone LUNs, as defined by the fastVPParameters.
blockHostAccess	in	List<blockHostAccessParam>	Optional	Host access settings for created standalone LUNs, as defined by the blockHostAccess.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for created standalone LUNs, as defined by the snapScheduleParameters.
replicationParameters	in	replicationParameters	Optional	Replication settings for created standalone LUNs, as defined by the replicationParameters.
lunCreate	in	List<lunCreate>	Required	LUN to create, as defined by the lunCreate. **Note:** The following lunCreate arguments are required for this operation: • name • lunParameters.pool • lunParameters.size All other lunCreate arguments are optional.
storageResources	out	List<storageResource>	N/A	Storage resource instances that represents the new standalone LUNs, as defined by the storageResource. **Note:** If this method is called asynchronously then the LUNs identified by this output parameter may yet not exist on the system after the call of createBulkStandaloneLuns method.

CreateLunThinClone operation

Create a Standalone LUN Thin Clone.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/createLunThinClone where <id> is the unique identifier of the storageResource instance. Or

	POST /api/instances/storageResource/name:<value>/action/createLunThinClone where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateLunThinClone operation

Argument	In/ out	Type	Required?	Description
snap	in	snap	Required	The reference to the source snapshot object.
name	in	String[1..63]	Required	Name for the new Thin Clone, unique to the system.
description	in	String[..170]	Optional	Description of the Thin Clone.
replicationParameters	in	replicationParameters	Optional	Replication settings for the Thin Clone.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the Thin Clone.
lunParameters	in	lunParameters	Optional	LUN settings for the Thin clone. Only hostAccess and ioLimitParameters settings are applicable for Thin Clones.
storageResource	out	storageResource	N/A	Storage resource instance that represents the new Thin Clone.

CreateVmwareLunThinClone operation

Create a VMware VMFS datastore Thin Clone.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/createVmwareLunThinClone where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name: <value>/action/createVmwareLunThinClone where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateVmwareLunThinClone operation

Argument	In/ out	Type	Required?	Description
snap	in	snap	Required	The reference to the source snapshot object.
name	in	String[1..63]	Required	Name for the new Thin Clone, unique to the system.
description	in	String[..170]	Optional	Description of the Thin clone.
replicationParameters	in	replicationParameters	Optional	Replication settings for the Thin Clone.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the Thin Clone.
lunParameters	in	lunParameters	Optional	LUN settings for the Thin Clone. Only hostAccess and ioLimitParameters settings are applicable for Thin Clones.
storageResource	out	storageResource	N/A	Storage resource instance that represents the new Thin Clone.

CreateConsistencyGroupThinClone operation

Create a Consistency Group Thin Clone.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/createConsistencyGroupThinClone where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name: <value>/action/createConsistencyGroupThinClone where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateConsistencyGroupThinClone operation

Argument	In/ out	Type	Required?	Description
snap	in	snap	Required	The reference to the source

				snapshot object
name	in	String[1..63]	Required	Name for the new Thin Clone, unique to the system.
description	in	String[..170]	Optional	Description of the Thin Clone.
replicationParameters	in	replicationParameters	Optional	Replication settings for the Thin Clone.
snapScheduleParameters	in	snapScheduleParameters	Optional	Snapshot schedule settings for the Thin Clone.
blockHostAccess	in	List<blockHostAccessParam>	Optional	Host access settings for the Thin Clone.
lunThinCloneCreate	in	List<lunThinCloneCreate>	Optional	
storageResource	out	storageResource	N/A	Storage resource instance that represents the new Thin Clone.

Refresh operation

Refresh a Storage Resource. Storage resource will be overwritten with a copy of the data from specified snapshot. When a thin clone storage resource is refreshed, this will be the new value of its parentSnap property. After a snap is taken, named using the copyName parameter, the storage resource will be overwritten with data from the specified snap.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/storageResource/<id>/action/refresh where <id> is the unique identifier of the storageResource instance. Or POST /api/instances/storageResource/name:<value>/action/refresh where <value> is the name of the storageResource instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 204 No Content (no out args), 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Refresh operation

Argument	In/ out	Type	Required?	Description
snap	in	snap	Required	The reference to the new source snapshot object. The new source snapshot may be any snap of this storage resource's base storage resource, including the current one.
copyName	in	String	Required	Name of the snapshot copy created before the refresh operation occurs.
force	in	Boolean	Optional	When set, the refresh operation will proceed even if host access is configured on the storage resource.
copy	out	snap	N/A	The resulting snapshot.

storageResourceCapabilityProfile

An association between a capability profile and a datastore-type storage resource, with capacity usage information about virtual volumes provisioned accordingly.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the storage resource capability profile.
storageResource	storageResource	The datastore-type storage resource instance.
capabilityProfile	capabilityProfile	Reference to the supported capability profile.
isInUse	Boolean	True, if any VVol's are provisioned in the storage resource with the given capability profile.
sizeUsed	unsigned Integer[64(bytes)]	Used size of virtual volumes provisioned in this storage resource (datastore) using this capability profile.
sizeAllocated	unsigned Integer[64(bytes)]	Storage element allocated size per allocation pool, associated with required capability profile.
sizeTotal	unsigned Integer[64(bytes)]	The maximum capacity, that could be used by the storage element per allocation pool, associated with required capability profile.
logicalSizeUsed	unsigned Integer[64(bytes)]	The maximum capacity, that the storage elements of required capability profile are allowed to use from required pool.

Query all members of the storageResourceCapabilityProfile collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/storageResourceCapabilityProfile/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the storageResourceCapabilityProfile collection.

Query a specific storageResourceCapabilityProfile instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/storageResourceCapabilityProfile/<id> where <id> is the unique identifier of the storageResourceCapabilityProfile instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific storageResourceCapabilityProfile instance.

storageTier

Set of possible RAID configurations that a storage tier can support. (A storage tier is the collection of all drives of a particular type on the storage system.) For example, if you have 11 drives in a tier, you can support R5 (4+1), R5 (8+1), but not R5(12+1).

Use this resource type to create custom pools. For more information, see the help topic for the pool resource type.

Embedded resource types

raidConfiguration, storageTierExtension, stripeWidthConfiguration

Supported operations

Collection query , Instance query ,RecommendPoolConfiguration ,GetStorageTierConfiguration ,GetStorageTierConfigurationsForDynamicPool

Attributes

Attribute	Type	Description
id	String	Unique identifier of the storageTier instance.
tierType	TierTypeEnum	Tier type.
raidConfigurations	List<raidConfiguration>	Possible RAID configurations for the storage tier, as defined by the raidConfiguration embedded object.
disksTotal	unsigned Integer[32(disks)]	Total number of drives in the storage system that have the same storage tier type as that specified by the tierType attribute.
disksUnused	unsigned Integer[32(disks)]	Total number of unused drives in the storage system that have the same tier type as that specified by the tierType attribute.
disksReservedForHotSpare	unsigned Integer[32(disks)]	Total number of hot spare drives in the storage system that have the same tier type as that specified by the tierType attribute.
virtualDisksTotal	unsigned Integer[32]	Total number of virtual drives in the storage system that have the same tier type as that specified by the tierType attribute.
virtualDisksUnused	unsigned Integer[32]	Total number of unused virtual drives in the storage system that have the same tier type as that specified by the tierType attribute.
sizeTotal	unsigned Integer[64(bytes)]	Total raw capacity of all physical drives and virtual drives in the storage system that have the same tier type as that specified by the tierType attribute.
sizeFree	unsigned Integer[64(bytes)]	Total raw capacity of all unused physical drives and virtual drives in the storage system that have the same tier type as that specified by the tierType attribute.

Attributes for raidConfiguration

Possible RAID configurations for the pool tier. These configurations have the same RAID type (or RAID level) and different stripe widths (or RAID moduluses).

Attribute	Type	Description
raidType	RaidTypeEnum	RAID type (or RAID level) of the RAID configuration.
isDefault	Boolean	Indicates whether the RAID configuration is the default RAID configuration for the associated storage tier. Values are: • true - RAID configuration is the default RAID configuration for the associated storage tier. • false - RAID configuration is not the default RAID configuration for the associated storage tier.
stripeWidthConfig	List<stripeWidthConfiguration>	List of supported stripe widths (or RAID moduluses) for the RAID type.

Attributes for storageTierExtension

Set of RAID configurations for each storage tier that can be used for pool expansion.

Attribute	Type	Description
tierType	TierTypeEnum	Tier type.
raidConfigurations	List<raidConfiguration>	List of RAID configurations that can be used to expand the specified tier type, as defined by the raidConfiguration type.

Attributes for stripeWidthConfiguration

Possible stripe width (or RAID modulus) values for the specified RAID type and tier type.

Attribute	Type	Description
id	String	Unique identifier of the stripeWidthConfiguration instance. This identifier can be used to find corresponding profile in CLI.
stripeWidth	RaidStripeWidthEnum	RAID group stripe width.
parityDisks	unsigned Integer[16(disks)]	Number of parity drives.
sizePotential	unsigned Integer[64(bytes)]	Maximum usable capacity. The system calculates this figure by summing up the capacities of all available drives that have the required drive type, RAID type, and stripe width.
isDefault	Boolean	

		Indicates whether the stripe width is the default stripe width for the associated RAID type. Values are: • true - Stripe width is the default stripe width for the associated RAID type. • false - Stripe width is not the default stripe width for the associated RAID type.
type	StoragePoolTypeEnum	Indicates type of storage pools this stripe width applies to.

Query all members of the storageTier collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/storageTier/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the storageTier collection.

Query a specific storageTier instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/storageTier/<id> where <id> is the unique identifier of the storageTier instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific storageTier instance.

RecommendPoolConfiguration operation

Return all possible storage tier configurations that can be used to expand the specified pool.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageTier/action/recommendPoolConfiguration
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the RecommendPoolConfiguration operation

Argument	In/ out	Type	Required?	Description
pool	in	pool	Required	Pool for which to return all possible storage tier configurations, as defined by the pool.
recommendedConfiguration	out	List<storageTierExtension>	N/A	Recommended storage tier configurations, as defined by the storageTier.

GetStorageTierConfiguration operation

Return all possible RAID configurations for the tier. Applied to traditional pools only.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageTier/action/getStorageTierConfiguration
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the GetStorageTierConfiguration operation

Argument	In/ out	Type	Required?	Description
tierType	in	TierTypeEnum	Required	Type of the tier.
raidType	in	RaidTypeEnum	Required	Preferred RAID type (RAID level) for the storage tier.
stripeWidth	in	RaidStripeWidthEnum	Required	Preferred RAID stripe width (RAID modulus) for the tier.
storageConfiguration	out	storageTierConfiguration	N/A	All possible configurations for the tier, as defined by the storageTierConfiguration embedded object.

GetStorageTierConfigurationsForDynamicPool operation

Return all possible RAID configurations for the parameters which specify tier type, RAID type, stripe width. Applied to dynamic pools only.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/storageTier/action/getStorageTierConfigurationsForDynamicPool
Request body arguments	See the arguments table below.

Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the GetStorageTierConfigurationsForDynamicPool operation

Argument	In/ out	Type	Required?	Description
storageTierParameters	in	List<storageTierConfigurationParameters>	Required	List of sepcified pamameters.
storageTierConfigurations	out	List<storageTierConfiguration>	N/A	All possible configurations for the list of specified parameters, as defined by the storageTierConfiguration embedded object.

supportAsset

Information about the support assets on the main Unisphere Support page and its sub-pages.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the supportAsset instance.
name	String	Localized support asset name.
description	String	Localized support asset description.

Query all members of the supportAsset collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/supportAsset/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the supportAsset collection.

Query a specific supportAsset instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/supportAsset/<id> where <id> is the unique identifier of the supportAsset instance to query. Or GET /api/instances/supportAsset/name:<value> where <value> is the name of the supportAsset instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific supportAsset instance.

supportAssist

Information about the SupportAssist configuration

SupportAssist is a remote monitoring and support feature that provides authorized personnel with DELL remote access capabilities to storage systems via a secure and encrypted tunnel. The secure tunnel that SupportAssist establishes between the storage system and systems on the DELL network can be used to transfer files (like upgrade image) out to the storage system or back to DELL.

Setting up SupportAssist requires:

- An installed DELL Supportlicense

For information about SupportAssist components and setup, go to the support website.

Examples

Operations need to perform to enable SupportAssist

Step 1: Accept EULA. The EULA must be accepted before or at the same time as any other configurations.

```
POST /api/instances/supportAssist/0/action/modify
{
   "isEULAAccepted" : "true"
}
```

Step 2: Initialize Connection [Optional]. If user didn't enable ESRS in old version, after upgrading to new version, the initialization operation must be performed before enabling Connection.

```
POST /api/instances/supportAssist/0/action/initialize
{
   "accessKey" : "23A5E582",

   "pin" : "1234"
}
```

Step 3: Enable Direct Connection.
Operations need to perform to enable Direct Connection.

```
POST /api/instances/supportAssist/0/action/modify
{
   "remoteServiceType" : "1",
   "allowRemoteAccess" : "false"
}
```

Also, Direct Connection could be enabled with one step (Except the scenario in step 3).

```
POST /api/instances/supportAssist/0/action/modify
{
   "isEULAAccepted" : "true",
   "remoteServiceType" : "1",
   "allowRemoteAccess" : "true"
}
```

Direct Connection has been enabled so far.

Operations need to perform to enable Gateway Connection
The user must specify at least one gateway Address. And isFollowSupportProxy must be set to false since gatway connection type doesn't support proxy any more. After setting the gateway successfully, Gateway Connection will be enabled.

```
POST /api/instances/supportAssist/0/action/modify
{
   "remoteServiceType" : "2",
   "allowRemoteAccess" : "true",
   "gatewayAddresses" : "["1.1.1.1:8080", "2.2.2.2"]",
   "isFollowSupportProxy" : "false"
}
```

Gateway Connection has been enabled so far.

Enabling RSC support

```
POST /api/instances/supportAssist/0/action/modify
{
   "isRSCEnabled" : "true"
}
```

Modify remote access when remote service type is not disabled

```
POST /api/instances/supportAssist/0/action/modify
{
   "allowRemoteAccess" : "true"
}
```

Disabling SupportAssist

```
POST /api/instances/supportAssist/0/action/modify
{
   "remoteServiceType" : "0"
}
```

Test callhome

```
POST /api/instances/supportAssist/0/action/testCallhome
```

Supported operations

Collection query , Instance query ,Modify ,Initialize ,CheckNetwork ,TestCallhome

Attributes

Attribute	Type	Description
id	String	Unique identifier of the SupportAssist instance. --eng This value is always 0, because at any given time there can only one SupportAssist instance enabled.
status	SupportAssistStatusEnum	SupportAssist connectivity status.
isRSCEnabled	Boolean	Indicates whether RSC (Remote Secure Credential) is enabled or not. RSC is a scheme to allow service people to access the storage system with remote secure credential. RSC should be enabled when it's necessary for service personnel to access the storage system with the remote secure credential. RSC can be disabled when it is no longer necessary for service personnel to access the storage system with the remote secure credential. Values are: • true - RSC is enabled. • false - RSC is disabled.
remoteServiceType	RemoteServiceTypeEnum	Remote Service Type.
isEULAAccepted	Boolean	Indicates whether the End User License Agreement (EULA) has been accepted.

		Values are: • true - The EULA has been accepted. • false - The EULA has not been accepted.
isInitialized	Boolean	Indicates whether Supportable is initialized. It represents whether SupportAssist service can be enabled or not. Values are: • true - The SupportAssist service can be enabled. • false - The SupportAssist enable operation will not be allowed.
gatewayAddresses	List<IPAddress> • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Before setting the gateway, users need to accept EULA. After setting gateway successfully, the SupportAssist type will change to Gateway Connection. The gateway IP addresses. • Supports IPv4 or Fully Qualified Domain Name (FQDN). • Required version: Secure Connect Gateway (SCG) 5.12 or higher.
isFollowSupportProxy	Boolean	Whether to use the proxy defined in supportProxy when supportProxy.isEnabled is true. Values are: • true - Use the proxy defined in supportProxy when supportProxy.isEnabled is true. • false - Do not use the proxy for SupportAssist connection.
allowRemoteAccess	Boolean	Indicates whether allow Remote Access. Values are: • true - Allow Remote Access. • false - Not allow Remote Access.

Query all members of the supportAssist collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/supportAssist/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the supportAssist collection.

Query a specific supportAssist instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/supportAssist/<id> where <id> is the unique identifier of the supportAssist instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific supportAssist instance.

Modify operation

Modify SupportAssist settings.

Enable, disable or change SupportAssist options.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/supportAssist/<id>/action/modify where <id> is the unique identifier of the supportAssist instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isEULAAccepted	in	Boolean	Optional	Indicate whether to accept the SupportAssist End User License Agreement (EULA). Any other configuration changes to SupportAssist should be performed after accepting the EULA. • true - To accept the SupportAssist EULA.
remoteServiceType	in	RemoteServiceTypeEnum	Optional	Remote Service type. Values are: • 0 - Remote service is disabled on the storage system. • 1 - Connect to remote service directly. • 2 - Connect to remote service through the gateway.
gatewayAddresses	in	List<IPAddress> • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	The gateway IP address for SupportAssist. Users need to accept EULA before performing gateway operation. • Supports IPv4 or Fully Qualified Domain Name (FQDN). • Required version: Secure Connect Gateway (SCG) 5.12 or higher.

isFollowSupportProxy	in	Boolean	Optional	Whether to use the proxy defined in supportProxy when supportProxy.isEnabled is true. It cannot be true when remoteServiceType is set to gateway since gateway connection doesn't support proxy any more. Values are: • true - Use the proxy defined in supportProxy when supportProxy.isEnabled is true. • false - Do not use the proxy for SupportAssist connection.
allowRemoteAccess	in	Boolean	Optional	Indicates whether allow Remote Access. Values are: • true - Allow Remote Access. • false - Not allow Remote Access.
isRSCEnabled	in	Boolean	Optional	Enable or disable RSC (Remote Secure Credential). RSC could only be enabled after enabling Direct Connection with configuration remote access. Values are: • true - Enable RSC. • false - Disable RSC.
errorMsgParams	out	List<String>	N/A	List of Dell backend servers that could not be reached.

Initialize operation

Initialize the SupportAssist.

If only accessKey and pin are passed in, initialize SupportAssist through direct connection. .
If accessKey and pin are passed in with gatewayAddresses, initialize SupportAssist through gateway.
Access Key can be generated from Product Support Page in Dell website. You can visit the page from Support->Product Portal->Unity Portal in Unisphere GUI.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/supportAssist/<id>/action/initialize where <id> is the unique identifier of the supportAssist instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Initialize operation

Argument	In/ out	Type	Required?	Description
accessKey	in	String	Required	It is a verification code generated by serial number. Values are: • An eight-bit ASCII string of numbers and letters. The value must match all of following regex expressions • ^[A-Za-z0-9]{8}$
pin	in	String	Required	It is an arbitrary four-digit number entered by the user. Values are: • A four-digit number. The value must match all of following regex expressions • ^[0-9]{4}$
gatewayAddresses	in	List<IPAddress> • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	Specify the list of gateway addresses to be used to initialize, the addresses won't be persisted to supportAssist after initialization. • Supports IPv4 or Fully Qualified Domain Name (FQDN). • Required version: Secure Connect Gateway (SCG) 5.12 or higher.

CheckNetwork operation

Check network connectivity.

Check network connectivity between Unity and Dell backend servers.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/supportAssist/<id>/action/checkNetwork where <id> is the unique identifier of the supportAssist instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the CheckNetwork operation

Argument	In/ out	Type	Required?	Description

remoteServiceType	in	RemoteServiceTypeEnum	Required	Specify the SupportAssist connectivity type.
allowRemoteAccess	in	Boolean	Required	Whether to allow remote access.
isFollowSupportProxy	in	Boolean	Required	Whether to use the proxy defined in supportProxy when supportProxy.isEnabled is true. It cannot be true when gatewayAddresses is specified since gateway connection doesn't support proxy any more.
gatewayAddresses	in	List<IPAddress> • IPv6 supported: false • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	Specify the list of gateway addresses to be checked when remoteServiceType is Gateway. If remoteServiceType is Direct, only run direct network check, this parameter will be ignored. • Supports IPv4 or Fully Qualified Domain Name (FQDN). • Required version: Secure Connect Gateway (SCG) 5.12 or higher.
errorMsgParams	out	List<String>	N/A	List of Dell backend servers that could not be reached.

TestCallhome operation

Test callhome.

Test callhome between Unity and Dell backend servers.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/supportAssist/<id>/action/testCallhome where <id> is the unique identifier of the supportAssist instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the TestCallhome operation

Argument	In/ out	Type	Required?	Description
errorMsgParams	out	List<String>	N/A	List of Dell backend servers that could not be reached.

supportProxy

Proxy Server settings.

A proxy server is a server that acts as an intermediary for requests from clients seeking resources from other servers.

The system uses the proxy server (if it's enabled) to access Dell web services such as authenticate support credential, get technical advisories, etc.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the support proxy instance. --eng This value is always 0, because at any given time there is only one proxy.
isEnabled	Boolean	Indicates whether the proxy server is enabled. Values are: • true - Uses proxy server • false - Does not use proxy server
protocol	ProxyProtocolEnum	Protocol used for communication with the proxy Server.
address	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Support proxy Server. If a port is not specified the following default ports will be used: • Protocol = http, Default port = 3128 • Protocol = socks, Default port = 1080
username	String	The user name for proxy server.

Query all members of the supportProxy collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/supportProxy/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the supportProxy collection.

Query a specific supportProxy instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/supportProxy/<id> where <id> is the unique identifier of the supportProxy instance to query.
Request body arguments	None

Successful return status	200 OK
Successful response body	JSON representation of a specific supportProxy instance.

Modify operation

Modify support proxy settings.
Enable, disable or change support proxy options.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/supportProxy/<id>/action/modify where <id> is the unique identifier of the supportProxy instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isEnabled	in	Boolean	Optional	Configure the use of a proxy server. Values are: • true - Uses a proxy server • false - Does not use a proxy server
protocol	in	ProxyProtocolEnum	Optional	Protocol used for communications with the proxy server. Valid values from 0 to 1 only.
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: true • DNS name supported: true	Optional	Address of proxy server. If a port is not specified the following default ports will be used: • Protocol = http, Default port = 3128 • Protocol = socks, Default port = 1080
username	in	String[..64]	Optional	User account with permission to access the proxy server.
password	in	String[..64]	Optional	User account password for the proxy server.

supportService

(Applies if Dell Support is available.) Information about the support services associated with customers.

Supported operations

Collection query , Instance query ,Modify ,VerifySupportCredentials

Attributes

Attribute	Type	Description
id	String	Unique identifier of the supportService instance.
supportUsername	String	Username for logging into Dell Support.
supportCredentialStatus	SupportCredentialStatusEnum	Status of the support credentials.
isEMCServiced	Boolean	Indicates whether the customer has a valid Dell self-service support ecosystem license or service contract. Valid values are: • true - Customer has a valid Dell self-service support ecosystem license or service contract. • false - Customer does not have a valid self-service support ecosystem license or service contract.
isContractReportEnabled	Boolean	Indicates whether the storage system automatically updates its service contracts list once a week. Values are: • true - System automatically updates its service contracts list once a week. • false - System does not automatically update its service contracts list once a week.
isCloudManagementEnabled	Boolean	Indicates whether the customer has enabled management by the Dell APEX AIOps Observability product. Valid values are: • true - Customer has enabled APEX AIOps Observability. • false - Customer has not enabled APEX AIOps Observability.

Query all members of the supportService collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/supportService/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the supportService collection.

Query a specific supportService instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/supportService/<id> where <id> is the unique identifier of the supportService instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific supportService instance.

Modify operation

Modify the support services associated with a storage system user.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/supportService/<id>/action/modify where <id> is the unique identifier of the supportService instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
supportUsername	in	String	Optional	Username for logging into Dell Support.
supportPassword	in	String	Optional	Password for logging into Dell Support.
isContractReportEnabled	in	Boolean	Optional	
isCloudManagementEnabled	in	Boolean	Optional	Indicates whether APEX AIOps Observability is enabled or not.

VerifySupportCredentials operation

Verify the stored support username and password for logging into Dell Support.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/supportService/<id>/action/verifySupportCredentials where <id> is the unique identifier of the supportService instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

system

Information about general settings for the storage system.

Supported operations

Collection query , Instance query ,Failback ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the system instance.
health	health	Health information for the system, as defined by the health resource type.
name	String	System name.
model	String	System model name.
serialNumber	String	System product serial number.
uuidBase	unsigned Integer[32]	Base value used to generate UUIDs in the host environment(e.g. OVMS host).
internalModel	String	Internal model name for the system.
platform	String	Hardware platform for the system.
isAllFlash	Boolean	Indicates whether sytem is all flash.
macAddress	String	MAC address of the management interface.
isEULAAccepted	Boolean	Indicates whether the End User License Agreement (EULA) was accepted for an upgrade. Once the EULA is accepted, users can upload product licenses and configure the system, or both. Values are: • true - EULA was accepted on the system. Once you set this value, you cannot set it to false later on. • false - EULA was not accepted on the system.
isUpgradeComplete	Boolean	Indicates whether an upgrade completed. Operations that change the configuration of the system are not allowed while an upgrade is in progress. Values are: • true - Upgrade completed.

		• false - Upgrade did not complete.
isAutoFailbackEnabled	Boolean	Indicates whether the automatic failback of NAS servers is enabled for the system. Values are: • true - Automatic failback for NAS servers is enabled. • false - Automatic failback for NAS servers is disabled.
currentPower	unsigned Integer[32(watts)]	Current amount of power used by the system.
avgPower	unsigned Integer[32(watts)]	Average amount of power used by the system. The system uses a one hour window of 30-second samples to determine this value.
supportedUpgradeModels	List<SPModelNameEnum>	List of all supported models for hardware upgrade.
isRemoteSysInterfaceAutoPair	Boolean	Indicates whether remote system interface automatic pairing is enabled for the system. When enabled, only pingable replication interfaces between two Unity systems are used by replication remote system. The default value is true. Modify the value to false if it is intended to use all replication interfaces for the replication remote system despite their connectivity. Values are: • true - Remote system interface automatic pairing is enabled. • false - Remote system interface automatic pairing is disabled.

Query all members of the system collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/system/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the system collection.

Query a specific system instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/system/<id> where <id> is the unique identifier of the system instance to query. Or GET /api/instances/system/name:<value> where <value> is the name of the system instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific system instance.

Failback operation

Immediately fail back the storage system to the other storage processor.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/system/<id>/action/failback where <id> is the unique identifier of the system instance. Or POST /api/instances/system/name:<value>/action/failback where <value> is the name of the system instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Modify the system configuration.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/system/<id>/action/modify where <id> is the unique identifier of the system instance. Or POST /api/instances/system/name:<value>/action/modify where <value> is the name of the system instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/	Type	Required?	Description

name	in	String	Optional	System name.
uuidBase	in	unsigned Integer[32]	Optional	Base value used to generate UUIDs in the host environment(e.g. OVMS host). This value should be a non-negative number, and not greater than 16385. OpenVMS requires an unique OVMS device UUID for every device visible to an OVMS host, the OVMS device UUID must also be consistent for any given device across all nodes of an OVMS cluster. Dell VNX and Unity systems create the OVMS device UUID by appending the LUN number to the configured Unity or VNX OVMS base UUID. In the situation of multiple storage systems visible to the same OVMS host(s) the storage systems must be configured with unique values which avoid conflicting OVMS device UUIDs. Unity and VNX devices connected to multi-node OVMS clusters should be configured into a consistency group to ensure a consistent OVMS device UUID for the same device across all OVMS cluster nodes.
isUpgradeCompleted	in	Boolean	Optional	Indicates whether to manually mark an upgrade process completed. This value is automatically set to true by the upgrade provider at the end of the upgrade process and back to false by the first GUI request. Values are: • true - Mark the upgrade completed. • false - Do not mark upgrade completed. This attribute is required by the GUI to display the upgrade details window on the first login after the upgrade completes. It does not depend on the session. The user who started an upgrade may not see its results, if another user logged in earlier.
isEulaAccepted	in	Boolean	Optional	Indicates whether to accept the End User License Agreement (EULA) for an upgrade. Once the EULA is accepted, users can upload product licenses and configure the system, or both. Values are: • true - Accept the EULA.. • false - Do not accept the EULA.
isAutoFailbackEnabled	in	Boolean	Optional	Indicates whether to enable the automatic failback of NAS servers in the system. Values are: • true - Enable the automatic failback of NAS servers. • false - Disable the automatic failback of NAS servers.
isRemoteSysInterfaceAutoPair	in	Boolean	Optional	Indicates whether remote system interface automatic pairing is enabled for the system. Values are: • true - Remote system interface automatic pairing is enabled. • false - Remote system interface automatic pairing is disabled.

systemCapacity

Capacity data for all pools collected for the storage system.

Embedded resource types

systemTierCapacity

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the systemCapacity instance.
sizeFree	unsigned Integer[64(bytes)]	Amount of free space available in the pools on the storage system.
sizeTotal	unsigned Integer[64(bytes)]	Total amount of space in the pools on the storage system, which will be the sum of sizeFree, sizeUsed and sizePreallocated space.
sizeUsed	unsigned Integer[64(bytes)]	Amount of used space in the pools on the storage system.
sizePreallocated	unsigned Integer[64(bytes)]	Space reserved form the pools on the storage system. These space is for future needs to make writes more efficient. pools may be able to reclaim some of this if space is running low.
dataReductionSizeSaved	unsigned Integer[64(bytes)]	Amount of space saved by data reduction (includes savings from compression, deduplication and advanced deduplication) in the pools on the storage system.
dataReductionPercent	unsigned Integer[32(percent)]	Data reduction applied increase of storage space expressed as percentage of summary of used and data reduction saved space size (includes space saved from compression and deduplication).
dataReductionRatio	Float[64]	Storage efficiency ratio of applying data reduction on the system, calculated according to the data reduction savings (includes savings from compression and deduplication) for each block and file object (LUN/Filesystem/datastore) and its snapshots, thus demonstrating the efficiency of data reduction.
sizeSubscribed	unsigned Integer[64(bytes)]	Size of space requested by the storage resources allocated in all pools for possible future allocations. If this value is greater than the total size, it means pools are oversubscribed.
totalLogicalSize	unsigned Integer[64(bytes)]	Total logical provisioned capacity of primary storage objects visible to hosts (as defined by the “size” attribute for each primary storage objects), plus the total logical provisioned capacity of all Snapshots (that is, the total capacity that would be required if every snapshot were a fully provisioned copy instead).
thinSavingsRatio	Float[64]	

		Storage efficiency ratio of thin provisioned primary storage resources on the system, which demonstrates the efficiency of thin provisioning. This is calculated as follows: (Total provisioned size of all primary storage resources) / (Total allocated size of all primary storage resources without including data reduction savings, if any). Because savings due to thin provisioning are virtual savings, this could exceed the total system capacity. This does not include data reduction savings or snapshot savings.
snapsSavingsRatio	Float[64]	Storage efficiency ratio of snapshots on the system, calculated based on the capacity that would have been required for fully provisioned copies, which demonstrates the efficiency of snapshots. This is calculated as follows: (Total snapshot size of all snapshots as if they were full copies) / (Total allocated size of all snapshots without including data reduction savings, if any). This does not include data reduction savings or thin provisioning savings.
overallEfficiencyRatio	Float[64]	System-level storage efficiency ratio, calculated by dividing the total logical capacity of the System by the actual Used capacity on the System, This leverages the efficiency features of thin provisioning, snapshots and data reduction(compression and deduplication).
tiers	List<systemTierCapacity>	Size information (total, free, used) per tier.

Attributes for systemTierCapacity

Capacity data for one tier, collected from all pools.

Attribute	Type	Description
tierType	TierTypeEnum	Tier type.
sizeFree	unsigned Integer[64(bytes)]	Amount of free space available in the tier.
sizeTotal	unsigned Integer[64(bytes)]	Total amount of space (used space plus free space) in the tier.
sizeUsed	unsigned Integer[64(bytes)]	Amount of space used by the tier's associated storage resources.

Query all members of the systemCapacity collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/systemCapacity/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the systemCapacity collection.

Query a specific systemCapacity instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/systemCapacity/<id> where <id> is the unique identifier of the systemCapacity instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific systemCapacity instance.

systemInformation

Contact information for storage system.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the systemInformation instance.
contactFirstName	String	Contact first name for the storage system.
contactLastName	String	Contact last name for the storage system.
contactCompany	String	Contact company name for the storage system.
contactPhone	String	Phone number for the person who should be contacted by the service provider for service issues.
contactEmail	String	Contact email address for the storage system.
locationName	String	The physical location of this system within the user's environment. For example: Building C, lab 5, tile C25
streetAddress	String	Street address for the storage system.
city	String	City where the storage system resides.
state	String	State where the storage system resides.
zipcode	String	Zip code or postal code where the storage system resides. --eng Zip Code is not currently supported by the ESRS VE system information api
country	String	Country where the storage system resides.
siteId	String	The ID identifying the site where this system is installed.
contactMobilePhone	String	Mobile phone number for the person who should be contacted by the service provider for service issues.

Query all members of the systemInformation collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/systemInformation/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the systemInformation collection.

Query a specific systemInformation instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/systemInformation/<id> where <id> is the unique identifier of the systemInformation instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific systemInformation instance.

Modify operation

Modify cotact and location information for the storage system displayed in Unisphere Central.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/systemInformation/<id>/action/modify where <id> is the unique identifier of the systemInformation instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
contactFirstName	in	String	Optional	
contactLastName	in	String	Optional	
contactEmail	in	String	Optional	
contactPhone	in	String	Optional	
locationName	in	String	Optional	
contactMobilePhone	in	String	Optional	
siteId	in	String	Optional	
contactCompany	in	String	Optional	
streetAddress	in	String	Optional	
city	in	String	Optional	
state	in	String	Optional	
country	in	String	Optional	
zipcode	in	String	Optional	

systemLimit

Information about system limits.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the systemLimit instance.
name	String	Limit name.
description	String	Limit description.
unit	UnitEnum	Units of measurement for limit and threshold values.
limitValue	unsigned Integer[64]	Boundary value that cannot be exceeded.
thresholdValue	unsigned Integer[64]	Value at which the system generates alert notifications, if any.
resources	List<String>	Resource types to which the limit applies.
license	license	License on which the limit depends, if any, as defined by the license resource type.

Query all members of the systemLimit collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/systemLimit/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the systemLimit collection.

Query a specific systemLimit instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/systemLimit/<id> where <id> is the unique identifier of the systemLimit instance to query. Or GET /api/instances/systemLimit/name:<value> where <value> is the name of the systemLimit instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific systemLimit instance.

systemTime

Current system time.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the systemTime instance. Because systemTime is a singleton resource type, the value of this field is always 0.
time	DateTime	Current system time.

Query all members of the systemTime collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/systemTime/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the systemTime collection.

Query a specific systemTime instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/systemTime/<id> where <id> is the unique identifier of the systemTime instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific systemTime instance.

Modify operation

Modify the current system time.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/systemTime/<id>/action/modify where <id> is the unique identifier of the systemTime instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
time	in	DateTime	Required	New system time.
rebootPrivilege	in	RebootPrivilegeEnum	Required	Indicates whether to reboot the system after modifying the system time. A reboot is required if the time shift exceeds 1000 seconds.

technicalAdvisory

Information about the Technical Advisories provided by Dell Support.

Supported operations

Collection query , Instance query ,Refresh

Attributes

Attribute	Type	Description
id	String	Unique identifier of the technicalAdvisory instance.
knowledgeBaseId	String	Knowledgebase number for the Technical Advisory.
description	String	Description of the Technical Advisory.
modificationTime	DateTime	Latest publication date for the Technical Advisory.

Query all members of the technicalAdvisory collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/technicalAdvisory/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the technicalAdvisory collection.

Query a specific technicalAdvisory instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/technicalAdvisory/<id> where <id> is the unique identifier of the technicalAdvisory instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific technicalAdvisory instance.

Refresh operation

Check for new Technical Advisories from Dell Online Support.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/technicalAdvisory/action/refresh
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

tenant

A tenant is a representation of a datacenter client, who uses an independent network structure and gets the independent and exclusive access to certain storage resources. On the storage array, it corresponds to a NAS server group with an independent IP addressing. At the moment, iSCSI and management resources do not support multi-tenant access. For each tenant a corresponding Linux network namespace is created. In the current design, traffic separation between the tenants is done by the VLANs. Each tenant reserves a group of VLANs, and each VLAN can belong to one tenant maximum. Every tenant gets a name and the Universally Unique Identifier (UUID). The UUID cannot be changed during the tenant life cycle. The asynchronous replication of the NAS servers is allowed only between the servers belonging to the tenants with the same UUID. The NAS servers and VLANs can still belong to no tenant. Such NAS servers and VLANs operate in the Linux base network namespace, together with management and iSCSI interfaces. The control stack of the system does not allow user to log in in the tenant administrator role. All the tenants, NAS servers and VLANs are managed from the single system administrator account. To allow this, the corresponding GUI and CLI modifications are made.

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of the tenant instance.
name	String	User-specified name of the tenant.
uuid	String	UUID of the tenant.
vlans	List<Integer>[32][1..4094]	VLAN IDs assigned to the tenant.
hosts	List<host>	The hosts associated with the tenant.

Query all members of the tenant collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/tenant/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the tenant collection.

Query a specific tenant instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/tenant/<id> where <id> is the unique identifier of the tenant instance to query. Or GET /api/instances/tenant/name:<value> where <value> is the name of the tenant instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific tenant instance.

Create operation

Create a tenant.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/tenant/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
name	in	String	Required	Name.
uuid	in	String	Optional	UUID of tenant object.
vlans	in	List<Integer>[32][1..4094]	Required	List of VLAN IDs.
id	out	tenant	N/A	Unique identifier of the new tenant instance.

Modify operation

Modify a tenant.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/tenant/<id>/action/modify where <id> is the unique identifier of the tenant instance. Or POST /api/instances/tenant/name:<value>/action/modify where <value> is the name of the tenant instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
name	in	String	Optional	New tenant name.
vlans	in	List<Integer>[32][1..4094]	Optional	List of VLAN IDs to set.

Delete operation

Destroy a tenant.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/tenant/<id> where <id> is the unique identifier of the tenant instance to delete. Or DELETE /api/instances/tenant/name:<value> where <value> is the name of the tenant instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

treeQuota

A treeQuota instance represents a quota limit applied to a specific directory tree in a file system.

Supported operations

Collection query , Instance query ,Create ,Modify ,Delete

Attributes

Attribute	Type	Description

id	String	Unique identifier of the tree quota instance.
filesystem	filesystem	Associated file system.
quotaConfig	quotaConfig	Associated quotaConfig instance.
path	String	Path relative to the root of the filesystem.
description	String	Description of the tree quota.
state	QuotaStateEnum	State of the tree quota.
hardLimit	unsigned Integer[64(bytes)]	Hard limit.
softLimit	unsigned Integer[64(bytes)]	Soft limit.
remainingGracePeriod	unsigned Integer[64(seconds)]	The remaining grace period, when the soft limit is exceeded. The value 0 means the grace period has been past.
sizeUsed	unsigned Integer[64(bytes)]	The size already used.

Query all members of the treeQuota collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/treeQuota/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the treeQuota collection.

Query a specific treeQuota instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/treeQuota/<id> where <id> is the unique identifier of the treeQuota instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific treeQuota instance.

Create operation

Create a tree quota.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/treeQuota/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
filesystem	in	filesystem	Required	Filesystem instance.
path	in	String	Required	Path (relative to the root of the file system) of the tree quota.
description	in	String	Optional	Description of the tree quota.
hardLimit	in	unsigned Integer[64(bytes)]	Optional	Hard limit. The default value 0 means no limitation.
softLimit	in	unsigned Integer[64(bytes)]	Optional	Soft limit. The default value 0 means no limitation.
id	out	treeQuota	N/A	New treeQuota instance.

Modify operation

Modify a tree quota.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/treeQuota/<id>/action/modify where <id> is the unique identifier of the treeQuota instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
description	in	String	Optional	Description.
	in		Optional	

hardLimit		unsigned Integer[64(bytes)]		Hard limit. The value 0 means no limitation.
softLimit	in	unsigned Integer[64(bytes)]	Optional	Soft limit. The value 0 means no limitation.

Delete operation

Delete a tree quota.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/treeQuota/<id> where <id> is the unique identifier of the treeQuota instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

udoctorPackage

Information about the UDoctor package. It is used to apply a fix, workaround, or configuration change to the system.

Supported operations

Collection query , Instance query ,Install ,Delete ,Cancel

Attributes

Attribute	Type	Description
id	String	Unique identifier of the udoctorPackage instance.
name	String	File name of the udoctorPackage.
description	String	Description of the udoctorPackage.
scheduleTime	DateTime	Scheduled date and time to install the udoctorPackage, if set.
status	UDoctorPackageStatusEnum	Status of the udoctorPackage.
installTime	DateTime	Date and time when the udoctorPackage is actually installed.

Query all members of the udoctorPackage collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/udoctorPackage/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the udoctorPackage collection.

Query a specific udoctorPackage instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/udoctorPackage/<id> where <id> is the unique identifier of the udoctorPackage instance to query. Or GET /api/instances/udoctorPackage/name:<value> where <value> is the name of the udoctorPackage instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific udoctorPackage instance.

Install operation

Install the udoctorPackage.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/udoctorPackage/<id>/action/install where <id> is the unique identifier of the udoctorPackage instance. Or POST /api/instances/udoctorPackage/name:<value>/action/install where <value> is the name of the udoctorPackage instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Install operation

Argument	In/ out	Type	Required?	Description
scheduleTime	in	DateTime	Optional	Scheduled date and time to install the udoctorPackage. If not set, the

				package will be installed immediately.

Delete operation

Delete the udoctorPackage, and the package will not be able to be installed later.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/udoctorPackage/<id> where <id> is the unique identifier of the udoctorPackage instance to delete. Or DELETE /api/instances/udoctorPackage/name:<value> where <value> is the name of the udoctorPackage instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Cancel operation

If the package is scheduled for install, and the install has not yet begun, this cancels the scheduled install. The package may still be installed or scheduled for install again later.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/udoctorPackage/<id>/action/cancel where <id> is the unique identifier of the udoctorPackage instance. Or POST /api/instances/udoctorPackage/name:<value>/action/cancel where <value> is the name of the udoctorPackage instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

uncommittedPort

(Applies to physical deployments only.) Information about Uncommitted ports in the storage system.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the Uncommitted port instance.
health	health	Health information for the Uncommitted port, as defined by the health resource type.
name	String[1..32]	Uncommitted port name.
portNumber	unsigned Integer[16]	Physical Uncommitted port number on the storage processor.
connectorType	ConnectorTypeEnum	Physical connector type.
sfpSupportedSpeeds	List<SFPSpeedValuesEnum>	SFP (the small form-factor pluggable) supported speeds of the Uncommitted port.
sfpSupportedProtocols	List<SFPProtocolValuesEnum>	SFP (the small form-factor pluggable) supported protocols of the Uncommitted port.
needsReplacement	Boolean	Indicates whether the Uncommitted port needs replacement. Values are: • true - Uncommitted port needs replacement. • false - Uncommitted port does not need replacement.
storageProcessor	storageProcessor	SP on which the Uncommitted port directly or indirectly resides, as defined by the storageProcessor resource type.
parentIOModule	ioModule	(Applies if the Ethernet port resides on an I/O module.) Parent I/O module of the Uncommitted port, as defined by the ioModule resource type.
parentStorageProcessor	storageProcessor	(Applies if the Ethernet port resides directly on an SP.) Parent SP of the Uncommitted port, as defined by the storageProcessor resource type.
parent	resourceRef	Resource type and identifier of the Uncommitted port's parent enclosure, as defined by the resourceRef resource type.

Query all members of the uncommittedPort collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/uncommittedPort/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the uncommittedPort collection.

Query a specific **uncommittedPort** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/uncommittedPort/<id> where <id> is the unique identifier of the uncommittedPort instance to query. Or GET /api/instances/uncommittedPort/name:<value> where <value> is the name of the uncommittedPort instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific uncommittedPort instance.

upgradeSession

Information about a storage system upgrade session.

Create or view an upgrade session to upgrade the system software or hardware.

A hardware upgrade session starts or shows the status of a hardware upgrade.

A software upgrade session installs an upgrade candidate file that was uploaded to the system. Download the latest upgrade candidate from Dell Online Support website. Use the CLI to upload the upgrade candidate to the system before creating the upgrade session. For information, see the *Unisphere CLI User Guide*.

The latest software upgrade candidate contains all available hot fixes. If you have applied hot fixes to your system, the hot fixes are included in the latest upgrade candidate.

Note: All system components must be healthy prior to upgrading the system software. If any system components are degraded, the software update will fail.

Supported operations

Collection query , Instance query ,Create ,VerifyUpgradeEligibility ,Resume ,Cancel ,Acknowledge

Attributes

Attribute	Type	Description
id	String	Unique identifier for the upgradeSession instance.
type	UpgradeSessionTypeEnum	Type of software or hardware upgrade.
candidate	candidateSoftwareVersion	Candidate software to install in the upgrade session, as defined by the candidateSoftwareVersion resource type. This value does not exist for a hardware upgrade session.
caption	String	Caption for this upgrade session.
status	UpgradeStatusEnum	Status of the current upgrade session.
messages	List<upgradeMessage>	List of upgrade messages.
creationTime	DateTime	Date and time when the upgrade session was started.
elapsedTime	DateTime[Interval]	Amount of time for which the upgrade session was running.
percentComplete	unsigned Integer[16(percent)] [0..100]	Percentage of the upgrade that is completed.
tasks	List<upgradeTask>	Current upgrade activity in the upgrade session, as defined by the upgradeTask resource type.

Query all members of the **upgradeSession** collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/upgradeSession/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the upgradeSession collection.

Query a specific **upgradeSession** instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/upgradeSession/<id> where <id> is the unique identifier of the upgradeSession instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific upgradeSession instance.

Create operation

Start a session to upgrade the system software with an uploaded upgrade candidate.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/upgradeSession/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
candidate	in	candidateSoftwareVersion	Optional	Candidate software to install in the upgrade session, as defined by the candidateSoftwareVersion resource type.
selectedModel	in	SPModelNameEnum	Optional	Storage processor model to upgrade to in the online or offline hardware upgrade procedure
pauseBeforeReboot	in	Boolean	Optional	(optional) Flag to tell that session should stop after the "preinstall" tasks and before first SP reboot.
pauseBetweenReboots	in	Boolean	Optional	(optional) Flag to tell that session should stop after the first SP reboot.
offline	in	Boolean	Optional	flag to run a disruptive storage processor upgrade. Offline SP upgrade is faster but all data will be unavailable during the proceedure.
id	out	upgradeSession	N/A	The new upgrade session.

VerifyUpgradeEligibility operation

Validate that the system is in a healthy state. This is required for an upgrade and runs automatically when an upgrade is started. You can use this operation to perform a system health check at any time.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/upgradeSession/action/verifyUpgradeEligibility
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the VerifyUpgradeEligibility operation

Argument	In/ out	Type	Required?	Description
messages	out	List<upgradeMessage>	N/A	List of embedded upgradeMessage which contain the info of message's identifier, localized text, severity and so on.

Resume operation

Resume a session that is currently in paused, failed, or failed_lock state.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/upgradeSession/<id>/action/resume where <id> is the unique identifier of the upgradeSession instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

Cancel operation

Cancel paused or failed upgrade. This will make the upgrade un-resumable, and remove uploaded candidateSoftwareVersion if any.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/upgradeSession/<id>/action/cancel where <id> is the unique identifier of the upgradeSession instance.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Acknowledge operation

User acknowledges that an upgrade operation is in a succesful or cancelled state.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/upgradeSession/<id>/action/acknowledge where <id> is the unique identifier of the upgradeSession instance.
Request body arguments	None
Successful return status	204 No Content
Successful response body	No body content.

urServer

Information for registering a storage system with Unisphere Central.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
address	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	IP address of the Unisphere Central server.
id	String	Unique identifier of the urServer instance. This value is always 0, because the object is a singleton.

Query all members of the urServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/urServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the urServer collection.

Query a specific urServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/urServer/<id> where <id> is the unique identifier of the urServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific urServer instance.

Modify operation

Modify storage system registration information.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/urServer/<id>/action/modify where <id> is the unique identifier of the urServer instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
address	in	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	Optional	Unisphere Central server IP address.
certificateHash	in	String	Optional	Hash of the existing certificate.
sharedSecret	in	String	Optional	Challenge phrase used by the Unisphere Central server to sign the certificate.

user

Information about local users, including their roles, and how they are authenticated.

Supported operations

Collection query , Instance query ,Create ,Delete ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the user instance.
name	String	Name of the user.
role	role	User role as defined by the role resource type.

Query all members of the user collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/user/instances
Request body arguments	None

Successful return status	200 OK
Successful response body	JSON representation of all members of the user collection.

Query a specific user instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/user/<id> where <id> is the unique identifier of the user instance to query. Or GET /api/instances/user/name:<value> where <value> is the name of the user instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific user instance.

Create operation

Create a local user. When you create a local user, the system automatically creates a roleMapping resource for that user, based on the value of the role attribute.

Use the roleMapping resource type to create authentication for LDAP users and LDAP groups, as described in the associated help topic.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/user/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
id	out	user	N/A	Unique identifier for the new user.
name	in	String	Required	User name.
role	in	String	Required	User role.
password	in	String	Required	Initial password for the user. The value must match all of following regex expressions • ^(?=.*\d)(?!.*[&'])(?!.*[\s])(?=.*[a-z])(?=.*[A-Z]).{8,64}$

Delete operation

Delete a local user. When you delete a local user, the system also deletes the roleMapping resource associated with the user.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/user/<id> where <id> is the unique identifier of the user instance to delete. Or DELETE /api/instances/user/name:<value> where <value> is the name of the user instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Modify operation

Change the local user's password or/and role.

Use the roleMapping resource type to change the access privileges for LDAP users and LDAP groups, as described in the associated help topic.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/user/<id>/action/modify where <id> is the unique identifier of the user instance. Or POST /api/instances/user/name:<value>/action/modify where <value> is the name of the user instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
role	in	String	Optional	Role with which to associate the user.
password	in	String	Optional	User's new password. The value must match all of following regex expressions

				• ^(?=.*\d)(?!.*[&'])(?!.*[\s])(?=.*[a-z])(?=.*[A-Z]).{8,64}$
oldPassword	in	String	Optional	User's existing password.

userQuota

A userQuota instance represents a quota limit applied to a user within a quota tree or a file system.

Supported operations

Collection query , Instance query ,Create ,Modify

Attributes

Attribute	Type	Description
id	String	Unique identifier of the user quota instance.
filesystem	filesystem	Associated file system.
treeQuota	treeQuota	Associated tree quota. Values are: • null - if the user quota is not within a quota tree. • treeQuota instance - if the user quota is within a quota tree.
uid	unsigned Integer	User ID of the user.
unixName	String	Unix user name for this quota's uid.
windowsNames	List<String>	Windows user name(s) that map to this quota's uid.
windowsSIDs	List<String>	Windows SID(s) that map to this quota's uid.
state	QuotaStateEnum	State of the user quota.
hardLimit	unsigned Integer[64(bytes)]	Hard limit. The value 0 means no limitations.
softLimit	unsigned Integer[64(bytes)]	Soft limit. The value 0 means no limitations.
remainingGracePeriod	unsigned Integer[64(seconds)]	Remaining grace period when the soft limit is exceeded. The grace period of userQuota is set in quotaConfig.
sizeUsed	unsigned Integer[64(bytes)]	Size already used by the user.

Query all members of the userQuota collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/userQuota/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the userQuota collection.

Query a specific userQuota instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/userQuota/<id> where <id> is the unique identifier of the userQuota instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific userQuota instance.

Create operation

Create a user quota within either a file system or a tree quota.
Either the filesystem or treeQuota that will contain the new user quota must be specified.
Exactly one of uid, unixName or winName must be specified.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/userQuota/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
filesystem	in	filesystem	Optional	The filesystem in which the new user quota will be created.
treeQuota	in	treeQuota	Optional	The treeQuota (instead of filesystem) in which the new quota will be created.
uid	in	unsigned Integer	Optional	User ID of the user.
unixName	in	String	Optional	Unix Name of the user.
winName	in	String	Optional	Windows Name of the user. The format is "domain\\user" for the domain user.

hardLimit	in	unsigned Integer[64(bytes)]	Optional	Hard limit. The default value 0 means no limitations.
softLimit	in	unsigned Integer[64(bytes)]	Optional	Soft limit. The default value 0 means no limitations.
id	out	userQuota	N/A	New user quota instance.

Modify operation

Modify a user quota.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/userQuota/<id>/action/modify where <id> is the unique identifier of the userQuota instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
hardLimit	in	unsigned Integer[64(bytes)]	Optional	Hard limit. The value 0 means no limitations.
softLimit	in	unsigned Integer[64(bytes)]	Optional	Soft limit. The value 0 means no limitations.

virtualVolume

VASA 2.0 virtual volume (VVol).

Embedded resource types

virtualVolumeBinding

Supported operations

Collection query , Instance query ,Delete ,CreateSnap ,Restore

Attributes

Attribute	Type	Description
id	String	Unique identifier of the VVol.
health	health	Health information for the virtual volume.
name	String	Virtual volume name.
vvolType	VVolTypeEnum	Type of the VVol.
replicaType	ReplicaTypeEnum	Replica type of the VVol.
parent	virtualVolume	For non-base VVols, the parent VVol.
storageResource	storageResource	The datastore-type storage resource in which the VVol is provisioned.
pool	pool	Pool associated with the VVol.
capabilityProfile	capabilityProfile	Capability profile associated with this VVol.
policyProfileName	String	The name of the VASA Policy Profile that vSphere has associated with this virtual volume.
isCompliant	Boolean	Indicates whether the is VVol compliant with associated policy profile. true - VVol is compliant. false - VVol is not compliant.
isThinEnabled	Boolean	True if thin provisioning is enabled.
sizeTotal	unsigned Integer[64][0]	Logical or addressable size of the object.
sizeUsed	unsigned Integer[64][0]	The amount of space used by the object from the pool.
bindings	List<virtualVolumeBinding>	List of virtualVolumeBinding objects which contain binding information. Empty if virtual volume is not bound.
vmUUID	String	VMware UUID of the hosted virtual machine. Helps to identify virtual machine if VMware integration is not set.
vm	vm	Reference to the virtual machine hosted on the virtual volume. Always empty if VMware integration not configured.
vmDisk	vmDisk	Reference to associated virual machine disk object. Always empty if VMware integration not configured.
maxIOPSDensity	unsigned Integer[64][0]	Density-based IOPS limit. This is applicable only when the maximum IOPS limit is density based.
maxKBPSDensity	unsigned Integer[64][0]	Density-based KBPS limit. This is applicable only when the maximum KBPS limit is density based.
effectiveMaxIOPS	unsigned Integer[64][0]	Effective Maximum IO/second depends on the type of the policy. In case of Density based policy, will be the product of maxIOPSDensity and Size of the attached resource.
effectiveMaxKBPS	unsigned Integer[64][0]	Effective Maximum KBPS depends on the type of the policy. In case of Density based policy, will be the product of maxKBPSDensity and Size of the attached resource.
burstRate	unsigned Integer[32(percentage)]	The percentage of read/write IOPS and Bandwidth over the limits a storage object is allowed to process during a spike in demand.

burstTime	DateTime[Interval]	How long a storage object is allowed to process burst traffic.
burstFrequency	DateTime[Interval]	How often a storage object is allowed to process burst traffic for the duration of burst time
spOwner	storageProcessor	Storage processor where the virtual volume is placed
creationTime	DateTime	Date and time when the virtual volume was created.

Attributes for virtualVolumeBinding

VASA 2.0 VVol bindings, showing the connection between the VVol on the storage array and the VMware protocol endpoint.

Attribute	Type	Description
vmwarePE	vmwarePE	VMware protocol endpoint to which the VVol is bound.
bindingDetails	String	Export path for Virtual Volumes bound with NFS. Secondary SCSI ID for Virtual Volumes bound with iSCSI.

Query all members of the virtualVolume collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/virtualVolume/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the virtualVolume collection.

Query a specific virtualVolume instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/virtualVolume/<id> where <id> is the unique identifier of the virtualVolume instance to query. Or GET /api/instances/virtualVolume/name:<value> where <value> is the name of the virtualVolume instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific virtualVolume instance.

Delete operation

Delete a virtual volume. Virtual volumes are managed from VCenter via the VASA API. Delete is available in REST only for extraordinary cases.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/virtualVolume/<id> where <id> is the unique identifier of the virtualVolume instance to delete. Or DELETE /api/instances/virtualVolume/name:<value> where <value> is the name of the virtualVolume instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
force	in	Boolean	Optional	Unbind and delete the VVol and all of its derivatives.

CreateSnap operation

Create a snapshot of an existing Virtual Volume.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/virtualVolume/<id>/action/createSnap where <id> is the unique identifier of the virtualVolume instance. Or POST /api/instances/virtualVolume/name:<value>/action/createSnap where <value> is the name of the virtualVolume instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the CreateSnap operation

Argument	In/ out	Type	Required?	Description
name	in	String	Optional	

snapVVolId	out	virtualVolume	N/A	Id of snapshot VVol.

Restore operation

Restore the data in the specified virtual volume to the specified one of its snapshots.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/virtualVolume/<id>/action/restore where <id> is the unique identifier of the virtualVolume instance. Or POST /api/instances/virtualVolume/name:<value>/action/restore where <value> is the name of the virtualVolume instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Restore operation

Argument	In/ out	Type	Required?	Description
snapVVolId	in	virtualVolume	Required	Id of snapshot VVol.

virusChecker

Information about the anti-virus service of a NAS server.

The storage system supports third-party anti-virus servers that perform virus scans and reports back to the storage system. For example, when an SMB client creates, moves, or modifies a file, the NAS server invokes the anti-virus server to scan the file for known viruses. During the scan any access to this file is blocked. If the file does not contain a virus, it is written to the file system. If the file is infected, corrective action (fixed, removed or placed in quarantine) is taken as defined by the anti-virus server. You can optionally set up the service to scan the file on read access based on last access of the file compared to last update of the third-party anti-virus date.
A virusChecker object is created each time the anti-virus service is enabled on a NAS server. A configuration file (named viruschecker.conf) needs to be uploaded on the NAS server before enabling the anti-virus service.

Supported operations

Collection query , Instance query ,Modify

Attributes

Attribute	Type	Description
id	String	Unique instance id.
nasServer	nasServer	NAS server that is configured with these anti-virus settings.
isEnabled	Boolean	Indicates whether the anti-virus service is enabled on this NAS server. Value are: • true - Anti-virus service is enabled. Each file created or modified by an SMB client is scanned by the third-party anti-virus servers. If a virus is detected, the access to the file system is denied. If third-party anti-virus servers are not available, according the policy, the access to the file systems is denied to prevent potential viruses propagation. • false - Anti-virus service is disabled. File systems of the NAS servers are available for access without virus checking

Query all members of the virusChecker collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/virusChecker/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the virusChecker collection.

Query a specific virusChecker instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/virusChecker/<id> where <id> is the unique identifier of the virusChecker instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific virusChecker instance.

Modify operation

Modify the Virus Checker settings.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/virusChecker/<id>/action/modify where <id> is the unique identifier of the virusChecker instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Modify operation

Argument	In/ out	Type	Required?	Description
isEnabled	in	Boolean	Optional	Indicates whether the anti-virus service is enabled on this NAS server. Value are: • true - Anti-virus service is enabled. Each file created or modified by an SMB client is scanned by the third-party anti-virus servers. If a virus is detected, the access to the file system is denied. If third-party anti-virus servers are not available, the access to the file systems is denied to prevent potential viruses propagation. • false - Anti-virus service is disabled. File systems of the NAS servers are available for access without virus checking

vlanInfo

Information about VLAN IDs.

Embedded resource types

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique identifier of the vlanInfo instance.
vlanId	unsigned Integer[32]	VLAN ID.
interfaces	List<ipInterface>	List of IP interfaces created on this VLAN.
tenant	tenant	Tenant to which the VLAN belongs.

Query all members of the vlanInfo collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/vlanInfo/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the vlanInfo collection.

Query a specific vlanInfo instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/vlanInfo/<id> where <id> is the unique identifier of the vlanInfo instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific vlanInfo instance.

vm

Represents a virtual machine.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
id	String	Unique instance id.
datastore	datastore	The storageResource that hosts configuration data of the VM.
name	String	Friendly name of VM displayed on vCenter.
guestAddresses	List<IPAddress> • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: true	The guest addresses of VM. Can be IPv4, IPv6, or both.
guestHostName	String	The host name of VM guest host.
notes	String	Notes for VM.
osType	String	The OS type of VM.
host	host	ESXi host that hosts VM.
state	VMPowerStateEnum	The state of VM.
virtualVolumes	List<virtualVolume>	The virtualVolumes associated with the vm.
vmDisks	List<vmDisk>	The vmDisks associated with the vm.

Query all members of the vm collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/vm/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the vm collection.

Query a specific vm instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/vm/<id> where <id> is the unique identifier of the vm instance to query. Or GET /api/instances/vm/name:<value> where <value> is the name of the vm instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific vm instance.

vmDisk

Virtual Machine disk object.

Supported operations

Collection query , Instance query

Attributes

Attribute	Type	Description
datastore	datastore	The datastore that hosts the VM disk.
id	String	Unique instance ID.
vm	vm	The associated VM.
name	String	Friendly name of VM disk displayed on vCenter.
spaceTotal	unsigned Integer[64(bytes)]	Size of the VM disk.
type	VMDiskTypeEnum	Type of the VM disk.
virtualVolumes	virtualVolume	The virtualVolume associated with the vmDisk.

Query all members of the vmDisk collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/vmDisk/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the vmDisk collection.

Query a specific vmDisk instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/vmDisk/<id> where <id> is the unique identifier of the vmDisk instance to query. Or GET /api/instances/vmDisk/name:<value> where <value> is the name of the vmDisk instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific vmDisk instance.

vmwareNasPEServer

A resource representing NAS VMware Protocol Endpoint Server. Only one instance per NAS Server can be created.

Supported operations

Collection query , Instance query ,Create ,Delete

Attributes

Attribute	Type	Description
id	String	Unique identifier of NAS VMware Protocol Endpoint Server.
nasServer	nasServer	NAS server for this protocol endpoint.

fileInterfaces	List<fileInterface>	A list of file IP interfaces to be used by NAS VMware Protocol Endpoint Server.
boundVVolCount	unsigned Integer[64]	The number of bound VVols associated with NAS VMware Protocol Endpoint Server.

Query all members of the vmwareNasPEServer collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/vmwareNasPEServer/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the vmwareNasPEServer collection.

Query a specific vmwareNasPEServer instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/vmwareNasPEServer/<id> where <id> is the unique identifier of the vmwareNasPEServer instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific vmwareNasPEServer instance.

Create operation

Create a new NAS VMware Protocol Endpoint Server. The id is returned upon success.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/vmwareNasPEServer/instances
Request body arguments	See the arguments table below.
Successful return status	201 Created, 202 Accepted (async response)
Successful response body	JSON representation of the <id> attribute

Arguments for the Create operation

Argument	In/ out	Type	Required?	Description
nasServer	in	nasServer	Required	NAS server associated with the NAS VMware Protocol Endpoint Server.
fileInterfaces	in	List<fileInterface>	Required	A list of file IP interfaces, associated with NAS server, that will be used by NAS VMware Protocol Endpoint Server.
id	out	vmwareNasPEServer	N/A	Id of created instance.

Delete operation

Delete an existing NAS VMware Protocol Endpoint Server.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/vmwareNasPEServer/<id> where <id> is the unique identifier of the vmwareNasPEServer instance to delete.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the Delete operation

Argument	In/ out	Type	Required?	Description
force	in	Boolean	Optional	Specifying force flag with unconditionally removes all VMware NAS Protocol Endpoints using this NAS VMware Protocol Endpoint Server and unbinds all Virtual Volumes that are bound using them.

vmwarePE

A resource representing VMware protocol endpoint of both possible types: NAS protocol endpoint and SCSI protocol endpoint. An instance of this class is created automatically as part of VVol datastore (storage resource) host access configuration.

Embedded resource types

Supported operations

Collection query , Instance query ,ModifyScsiPe

Attributes

Attribute	Type	Description
id	String	Unique identifier of VMware protocol endpoint.
	vmwareNasPEServer	

vmwareNasPEServer		For NAS VMware protocol endpoints, the associated NAS VMware protocol endpoint server.
name	String	VMware protocol endpoint name.
type	VmwarePETypeEnum	Protocol Endpoint type.
vmwareUUID	String	VMware UUID for this protocol endpoint.
exportPath	String	For NAS VMware protocol endpoints, the export path.
ipAddress	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	For NAS VMware protocol endpoints, the IP address.
ipProtocolVersion	IpProtocolVersionEnum	For NAS VMware protocol endpoints, IP protocol version (IPv4 or IPv6).
defaultNode	NodeEnum	For SCSI VMware protocol endpoints, the default owning SP.
currentNode	NodeEnum	For SCSI VMware protocol endpoints, the current SP.
wwn	String	WWN for SCSI VMware protocol endpoints.
naa	String	For SCSI VMware protocol endpoints, the VMware protocol endpoint SCSI identifier in naa format.
vvolds	storageResource	For NAS protocol endpoints, the associated datastore type storage resource.
host	host	For SCSI VMware protocol endpoints, the unique identifier of associated host.
lunId	unsigned Integer[32]	For SCSI VMware protocol endpoints, the identifier of assiciated LUN.
boundVVolCount	unsigned Integer[64]	The number of bound VVols associated with NAS VMware Protocol Endpoint.
health	health	Health information for the VMware Protocol Endpoint.

Query all members of the vmwarePE collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/vmwarePE/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the vmwarePE collection.

Query a specific vmwarePE instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/vmwarePE/<id> where <id> is the unique identifier of the vmwarePE instance to query. Or GET /api/instances/vmwarePE/name:<value> where <value> is the name of the vmwarePE instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific vmwarePE instance.

ModifyScsiPe operation

Modify SCSI PE.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/vmwarePE/<id>/action/modifyScsiPe where <id> is the unique identifier of the vmwarePE instance. Or POST /api/instances/vmwarePE/name:<value>/action/modifyScsiPe where <value> is the name of the vmwarePE instance.
Request body arguments	See the arguments table below.
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

Arguments for the ModifyScsiPe operation

Argument	In/ out	Type	Required?	Description
lunID	in	unsigned Integer[32]	Required	New LUN ID to set.

x509Certificate

Information about the X.509 certificates installed on the storage system. The X.509 certificate format is described in RFC 5280.

Supported operations

Collection query , Instance query ,ImportCertificateByString ,Delete ,ExportCertificateByString

Attributes

Attribute	Type	Description
id	String	Unique identifier of the x509Certificate instance.
type	CertificateTypeEnum	Certificate type.
service	ServiceTypeEnum	Service with which the certificate is associated.
scope	certificateScope	Scope of the certificate.
isTrustAnchor	Boolean	Indicates whether the certificate is trusted as end-of-chain for peer certificate verification. This applies to certificates with a type of CA only. Values are: • true - Certificate is trusted. It is either permanent, or the expiration date has not yet passed. • false - Certificate is not trusted.
version	unsigned Integer[32]	Certificate version.
serialNumber	String	Certificate serial number.
signatureAlgorithm	SignatureAlgoTypeEnum	Certificate signature algorithm.
issuer	String	Name of the certificate issuer.
validFrom	DateTime	Date and time when the certificate became valid.
validTo	DateTime	Date and time when the certificate will expire.
subject	String	Certificate subject.
subjectAlternativeName	String	Certificate subject alternative name.
publicKeyAlgorithm	PublicKeyAlgoTypeEnum	Certificate public key algorithm.
keyLength	unsigned Integer[32(bits)]	Certificate key length.
thumbprintAlgorithm	ThumbprintAlgoTypeEnum	Certificate thumbprint algorithm.
thumbprint	String	Certificate thumbprint.
hasPrivateKey	Boolean	Indicates whether the certificate has an associated private key. Values are: • true - Certificate has an associated private key. • false - Certificate does not have an associated private key.

Query all members of the x509Certificate collection

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/types/x509Certificate/instances
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of all members of the x509Certificate collection.

Query a specific x509Certificate instance

Header	Accept: application/json Content-Type: application/json
Method and URI	GET /api/instances/x509Certificate/<id> where <id> is the unique identifier of the x509Certificate instance to query.
Request body arguments	None
Successful return status	200 OK
Successful response body	JSON representation of a specific x509Certificate instance.

ImportCertificateByString operation

Import an X.509 certificate by string.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/types/x509Certificate/action/importCertificateByString
Request body arguments	See the arguments table below.
Successful return status	200 OK, 202 Accepted (async response)
Successful response body	JSON representation of the returned attributes.

Arguments for the ImportCertificateByString operation

Argument	In/ out	Type	Required?	Description
certificateString	in	String	Required	Certificate string to import the certificate. The certificate string can be PEM-encoded, and can contain the encrypted private key string to associate with the certificate. Note: Line feeds in the PEM-encoded string must be replaced by \"\n\" characters.
type	in	CertificateTypeEnum	Required	Certificate type.

service	in	ServiceTypeEnum	Required	Service with which the certificate is associated.
scope	in	certificateScope	Optional	Scope of the certificate.
passphrase	in	String	Optional	Passphrase used to decrypt the private key. This argument is required if the string contains a private key.
id	out	x509Certificate	N/A	Unique identifier of the new x509Certificate instance.

Delete operation

Delete an X.509 certificate.

Header	Accept: application/json Content-Type: application/json
Method and URI	DELETE /api/instances/x509Certificate/<id> where <id> is the unique identifier of the x509Certificate instance to delete.
Request body arguments	None
Successful return status	204 No Content, 202 Accepted (async response)
Successful response body	No body content.

ExportCertificateByString operation

Export an X.509 certificate by string.

Header	Accept: application/json Content-Type: application/json
Method and URI	POST /api/instances/x509Certificate/<id>/action/exportCertificateByString where <id> is the unique identifier of the x509Certificate instance.
Request body arguments	See the arguments table below.
Successful return status	200 OK
Successful response body	JSON representation of the returned attributes.

Arguments for the ExportCertificateByString operation

Argument	In/ out	Type	Required?	Description
certificateString	out	String	N/A	Certificate string for the PEM-encoded certificate. Note: Line feeds in the PEM-encoded string will be replaced by \"\n\" characters.

baseRequest

This object is used to represent a generic POST request action. It contains different set of strongly typed properties for different concrete actions.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

None

ioLimitParameters

IO limit settings for the storage resource. This resource type is embedded in the lunParameter and snap resource types.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
ioLimitPolicy	ioLimitPolicy	IO limit policy that applies to the storage resource, as defined by the ioLimitPolicy resource type.

baseResponse

This is used to represent a generic method response. It contains different set of strongly typed properties for different actions.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

None

raidGroupConfiguration

RAID group configurations for particular tier.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
diskCount	unsigned Integer[32(disks)]	Number of disks used.
sizeFree	unsigned Integer[64(bytes)]	Unused capacity of the disks.
hotSpareCandidates	unsigned Integer[32(disks)]	Number of unused disks that can be used as hot spares.
isVaultUsed	Boolean	Indicates whether system disks are used. Values are: true - System disks are used.

		• false - System disks are not used.
raidStripeConfigurations	List<raidStripeConfiguration>	Comma-separated list of allowed stripe width configurations.
diskUnusedCount	unsigned Integer[32(disks)]	Number of unused disks.
isDefault	Boolean	Indicates whether the RAID configuration is default. Values are: • true - RAID configuration is default. • false - RAID configuration is not default. •
sizeTotal	unsigned Integer[64(bytes)]	Usable capacity of the disks.

storageTierConfigurationParameters

Set of parameters to specify a storage tier, a specified RAID type (or RAID Level) and stripe width (or RAID modulus) as input pamameter to function for getting storage tier configuration for dynamic pools.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
tierType	TierTypeEnum	Tier type.
raidType	RaidTypeEnum	RAID type (or RAID level).
stripeWidth	RaidStripeWidthEnum	Stripe width (or RAID modulus).
spareDriveCount	unsigned Integer[32]	Tier spare drive count (for dynamic pool).

resourceInfo

This embedded type provided details of a resource.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
resId	String	Identifier of the resource.
name	String	Name of the resource.
system	remoteSystem	System on which the resource exists.

certificateScope

Scope of the certificate:

- If the certificate scope is global, the attribute values are blank.
- If the certificate scope is local, the scope is defined by one attribute value (for queries) or one argument value (for create and import operations). For example, if the scope of the certificate is NAS server nas01, the value of the nasServer attribute would be nas01, and all other attributes would be blank.

For information about which scopes apply to which services, see the help topic for the ServiceTypeEnum.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
nasServer	nasServer	NAS Server with which the certificate is associated.

storageTierConfiguration

Possible disk selections for a storage tier, given a specified storage tier type, RAID type, and stripe width.

Use this resource type, along with the pool, diskGroup, and storageTier resource types, to create custom pools. For more information, see the help topic for the pool resource type. Use this

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
storageTier	storageTier	Storage tier for which you want to obtain proposed configurations as defined by the storageCapability resource type.
raidType	RaidTypeEnum	(Applies to physical deployments only.) RAID type of the proposed storage configuration.
stripeWidth	RaidStripeWidthEnum	(Applies to physical deployments only.) Stripe width of the proposed storage configuration.
disksTotal	unsigned Integer[32(disks)]	(Applies to physical deployments only.) Total number of disks in system that can be configured with the specified disk type, RAID type, and stripe width.
sizeTotal	unsigned Integer[64(bytes)]	Maximum usable capacity for the specified storage configuration if all available disks are used for the configuration.
diskGroupConfigurations	List<diskGroupConfiguration>	(Applies to physical deployments only.) Possible amounts of disks and capacities for each diskGroup that contains disks of type corresponding to storageCapability (EFD, SAS, NL-SAS)
driveSets	List<diskGroupSet>	(Applies to dynamic pools of physical deployments only.) The list of disk group set: Each disk group in the disk group set should be considered together to meet minimum number

		of disks to form the dynamic pool.

blockHostAccess

Host access settings for the storage resource.

This resource type is embedded in the storageResource resource type.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
host	host	Host associated with the storage resource, as defined by the host resource type.
accessMask	HostLUNAccessEnum	Host access permissions.
productionAccess	BlockHostAccessEnum	Production LUN(s) access mask.
hlu	unsigned Integer[16]	Host LUN Identifier for the host storage group. This only represents the indentifiers of the LUN(s) on the host and not the Snapshot LUN(s).
snapshotAccess	BlockHostAccessEnum	Snapshot LUN(s) access mask.

cifsServerInfo

Information about SMB server of a remote Virtual Datamover (VDM).

This resource type is embedded in the vdmInfo type.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
name	String	User-specified name for the SMB server.
description	String	Description of the SMB server.
netbiosName	String	Computer Name of the SMB server in Windows network.
domain	String	Domain name where SMB server is registered in Active Directory, if applicable.
workgroup	String	(Applies to stand-alone SMB servers.) Windows network workgroup for the SMB server.
isStandalone	Boolean	Indicates whether the SMB server is standalone. Values are: • true - SMB server is standalone. • false - SMB server is joined to the Active Directory.
cifsUsername	String	User name for authentication to CIFS server on the source VDM. it could be the same as Active Directory domain user name in some cases, and which will be used initialized to the Active Directory domain user name in GUI side.

lunMemberReplication

Member lun element pair details in a replication session. Applies to block storage resource replications.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
srcStatus	ReplicationSessionStatusEnum	Status of the source element.
networkStatus	ReplicationSessionNetworkStatusEnum	Status of the network on which the replication session exists.
dstStatus	ReplicationSessionStatusEnum	Status of the destination element in the replication session.
srcLunId	String	Unique identifier of the source element in the element pair.
dstLunId	String	Unique identifier of the destination element in the element pair.

localizedMessage

List of name value pairs used to embed additional data in an object.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
locale	String	
message	String	

raidStripeConfiguration

RAID stripe configurations for raidGroupConfiguration.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
stripeWidth	RaidStripeWidthEnum	Stripe width
raidGroupCount	unsigned Integer[32]	Amount of RAID groups for the stripeWidth
parityDisks	unsigned Integer[32(disks)]	Amount of parity disks for the stripeWidth

pingResult

Information about ping command result.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
result	Boolean	Ping result. True if accessible, False otherwise.
latency	Float	Latency in milliseconds

poolUnitParameters

Parameters for adding a pool unit to a pool, or modifying a pool unit. At this time, only virtual disk type pool units can be modified.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
poolUnit	poolUnit	Pool unit for which these parameters are being specified. Indeed it is Virtual Disk identifier, but in the future it can be the other pool unit object types allowed.
name	String[1..32]	Pool unit name. Can be used for Virtual Disk modification only.
tierType	TierTypeEnum	Tier type. If virtualDisk tier type is unknown it can be specified at the time of adding to pool.

health

Health of the associated resource.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
value	HealthEnum	Health value.
descriptionIds	List<String>	Description ids.
descriptions	List<String>	Descriptions are localized messages describing details of the operating condition.
resolutionIds	List<String>	Resolution ids.
resolutions	List<String>	Resolutions are URLs to get more information about thishealth state.

diskGroupConfiguration

Set of possible disk selections for a storage tier, given a specified RAID type (or RAID Level) and stripe width (or RAID modulus).

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
diskGroup	diskGroup	Disk group from which to take disks for the storage tier configuration.
unusedDisks	unsigned Integer[32(disks)]	Number of unused disks.
tierType	TierTypeEnum	Tier type.
partNumber	String	Part number for the disks.
diskRpm	unsigned Integer[32(rpm)]	
advertisedSize	unsigned Integer[64(bytes)]	Disk capacity written on the label of the disks.
diskSize	unsigned Integer[64(bytes)]	Disk capacity.
raidGroupConfigurations	List<raidGroupConfiguration>	Comma-separated list of allowed RAID group configurations.
diskTechnology	DiskTechnologyEnum	Disk technology of the disks.
isDefault	Boolean	Indicates whether the configuration is the default. Values are: • Storage tier configuration is the default configuration. • Storage tier configuration is not the default configuration.>/li>
minHotSpareCandidates	unsigned Integer[32(disks)]	Minimum number of hot spares required for existing traditional pool(s) in the disk group. Can be 0 if no

		traditional pool uses this disk group. As a rule one Hot spare is required per 30 disks.

vdmInfo

Information of a remote Virtual Datamover (VDM).

This resource type is embedded in the migrationObject resource type.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
interfaces	List<interfaceInfo>	List of interfaces associated with the VDM
unixDirectoryServiceList	List<ImportUnixDirectoryServiceEnum>	List of unix directory services associated with the VDM
supportedProtocols	VDMSupportedProtocolsEnum	Protocols supported by the VDM.
cifsServerInfo	List<cifsServerInfo>	CIFS server object for renaming on the source VDM.

message

A message occurrence. This is also the message object returned in the body of non-2xx return code REST responses.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
severity	SeverityEnum	
errorCode	unsigned Integer[32]	Error code for this message.
created	DateTime	Time at which the message occurred.
httpStatusCode	unsigned Integer[32]	HTTP status code for this message when returned from a REST API request.
messages	List<localizedMessage>	A list of localized strings for this message, as pairs of (locale, message_string).
messageArgs	List<String>	Arguments to be filled in error message

fileEventSettings

File Event Service supported protocols.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
isCIFSEnabled	Boolean	Indicates whether file access over CIFS protocol will trigger sending events to the CEPA server.
isNFSEnabled	Boolean	Indicates whether file access over NFSv3 or NFSv4 protocols will trigger sending events to the CEPA server.

resourceRef

This is used to contain a reference to an instance where the class may vary. A property or arg of this type, if mapped to an OSLS property/arg, means that the OSLS value is the instance id (instance name) of the target object. This can be looked up to find the class and id for this interface.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
resource	String	The class name of the referenced instance.
id	String	The id of the referenced instance.

cifsShareACE

Access Control Entry (ACE) settings for CIFS shares.

This resource type is embedded in the storageResource type.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
sid	String	Domain user or group Security Identifier (SID).
accessType	ACEAccessTypeEnum	ACE type. Set this value to **None** to remove the ACE for a SID from a CIFS share.
accessLevel	ACEAccessLevelEnum	ACE level.

resourceConfig

Embedded type to describe a resource configuration.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
poolId	String	Storage pool of the resource
isThinEnabled	Boolean	Is thin type or not
isDeduplicationEnabled	Boolean	Is deduplication enabled or not
isCompressionEnabled	Boolean	Is in-line compression (ILC) Enabled or not
isBackupOnly	Boolean	Is backup only or not
size	unsigned Integer[64(bytes)]	Size of the resource
tieringPolicy	TieringPolicyEnum	Tiering policy for the resource
requestId	String	Unique request ID for the configuration
srcId	String	Storage resource if it already exists
defaultSP	NodeEnum	Default Storage processor for the resource
replicationResourceType	ReplicationEndpointResourceTypeEnum	Replication resource type

interfaceInfo

Information of the IP inteface associated to a VDM.

This resource type is embedded in the vdmInfo embedded type.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
ipAddress	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IP address of the interface.
ipProtocolVersion	IpProtocolVersionEnum	IP protocol version of the interface.
netmask	IPAddress • IPv6 supported: false • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 netmask for the interface, if it uses an IPv4 address.
v6PrefixLength	unsigned Integer[32][0..32]	IPv6 prefix length for the interface, if it uses an IPv6 address.
gateway	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IPv4 or IPv6 gateway address for the interface.
vlanId	unsigned Integer[16][4094..0]	Virtual Local Area Network (VLAN) identifier for the interface. The interface uses the identifier to accept packets that have matching VLAN tags. Values are 0 - 4094. The default is 0, which means that the packets to accept do not have VLAN tags.
name	String	Name of the interface.
portName	String	Port name on which the interface is configured.

raidGroupParameters

Parameters to create RAID group from the disks and add it to the pool.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
dskGroup	diskGroup	Disk Group identifier.
numDisks	unsigned Integer[32]	Number of disks.
raidType	RaidTypeEnum	RAID type (or RAID level).
stripeWidth	RaidStripeWidthEnum	Stripe width (or RAID modulus).
spareDriveCount	unsigned Integer[32]	Number of hot spare drives capacity.

tracerouteResult

Information about traceroute command result.

NOTE: This resource is embedded. The API described here is *not* independently accessible.

Attribute	Type	Description
hop	unsigned Integer[32]	Hop number.
ipAddress	IPAddress • IPv6 supported: true • Prefix-length supported: false • Port supported: false • DNS name supported: false	IP Address
latency	Float	Latency in milliseconds
result	Boolean	True if accessible, False otherwise.
raw	String	Raw string output.

Appendix

What's changed?

This part describes REST API changes in Unity 5.5.0 comparing to 5.4.0

Resources

filesystem (Modified)

New Attributes	ioLimitPolicy

ioLimitPolicy (Modified)

New Attributes	ioType nasServers filesystems
New Arguments	New arguments of create operation • ioType • nasServers • filesystems

nasServer (Modified)

New Attributes	ioLimitPolicy
New Arguments	New arguments of create operation • ioLimitParameters New arguments of modify operation • ioLimitParameters

nfsShare (Modified)

New Attributes	hostCount

remoteSyslog (Modified)

New Attributes	category
New Operations	verifyConnection
New Arguments	New arguments of create operation • category New arguments of modify operation • category

storageResource (Modified)

New Arguments	New arguments of createFilesystem operation • ioLimitParameters New arguments of modifyFilesystem operation • ioLimitParameters

systemInformation (Modified)

New Arguments	New arguments of modify operation • siteId • contactCompany • streetAddress

	• city • state • country • zipcode

Enumerations

IOLimitPolicyIOTypeEnum (New)

IOLimitPolicyIOTypeEnum is a brand new enumeration in Unity 5.5.0.

IpProtocolTypeEnum (Modified)

New Attributes	TLS

RemoteSyslogCategoryEnum (New)

RemoteSyslogCategoryEnum is a brand new enumeration in Unity 5.5.0.

ServiceTypeEnum (Modified)

New Attributes	RemoteSyslog