



Summary of the REST resources

ONTAP Automation

NetApp

February 11, 2024

This PDF was generated from https://docs.netapp.com/us-en/ontap-automation/resources/overview_categories.html on February 11, 2024. Always check docs.netapp.com for the latest.

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Summary of the REST resources

Overview of the resource categories

The resources available through the ONTAP REST API are organized in categories, as displayed in the ONTAP API online documentation. A brief description of each of the resources is presented below along with additional usage considerations where appropriate.

The REST resources described in this summary are based on the latest version of the product. If you need to understand the changes made from previous releases, see [What's new with the ONTAP REST API](#) as well as the [ONTAP Release Notes](#).



For many of the REST endpoints, you can include a UUID key as part of the path string to access a specific object instance. However, you can also access objects using a property value on a query parameter.

Related information

- [Additional REST considerations](#)
- [API reference](#)

Application

You can use these API calls to manage the ONTAP application resources.

Application snapshots

Applications support snapshot copies, which can be created or restored at any time. This resource type was introduced with ONTAP 9.6.

Applications

The ONTAP applications are arranged based on type, including: templates, applications, components, and Snapshot copies. This resource type was introduced with ONTAP 9.6.

Consistency groups

A consistency group is a set of volumes that are grouped together when performing certain operations such as a snapshot. This feature extends the same crash consistency and data integrity implicit with single-volume operations across a set of volumes. This resource type was introduced with ONTAP 9.10 and updated with 9.12. An endpoint to retrieve metric performance and capacity data was added with ONTAP 9.13.

Consistency groups snapshots

You can use these endpoints to copy, create, inventory, and restore Snapshots for a consistency group. This resource type was introduced with ONTAP 9.10.

Cloud

You can use these API calls to manage connections to object storage resources in the cloud.

Targets

A target represents an object storage resource in the cloud. Each target includes the configuration information needed to connect to the storage resource. This resource type was introduced with ONTAP 9.6.

Cluster

You can use these API calls to manage ONTAP clusters and the related resources.

Capacity pools

The capacity pools licensing model allows you to license storage capacity for each cluster node from a shared pool. This resource type is new with ONTAP 9.8.

Chassis

The chassis is the hardware framework supporting a cluster. This resource type was introduced with ONTAP 9.6.

Clusters

An ONTAP cluster contains one or more nodes and the related configuration settings which define the storage system. This resource type was introduced with ONTAP 9.6.

Counter tables

Various statistical information about ONTAP is captured by the Counter Manager subsystem. You can access this information to assess system performance. This resource type was introduced with ONTAP 9.11.

Firmware

You can retrieve a history of the firmware update requests. This resource type is new with ONTAP 9.8.

Jobs

Asynchronous REST API requests are performed using a background task anchored by a job. This resource type was introduced with ONTAP 9.6.

License instance

Each license can be managed as a separate package. This resource type was introduced with ONTAP 9.6.

License managers

You can manage configuration and other information related to each license manager instance associated with an ONTAP cluster. This resource type is new with ONTAP 9.8.

Licenses

The licenses allow you to implement specific ONTAP features and functionality. This resource type was introduced with ONTAP 9.6.

Mediators

You can manage the mediator associated with MetroCluster, including adding or removing the mediator instance. This resource type is new with ONTAP 9.8.

MetroCluster

You can create and manage a MetroCluster deployment, including executing switchover or switchback operations. This resource type is new with ONTAP 9.8 and updated with 9.11.

MetroCluster diagnostics

You can perform a diagnostic operation on a MetroCluster deployment and retrieve the results. This resource type is new with ONTAP 9.8.

MetroCluster DR groups

You can perform operations related to the MetroCluster DR groups. This resource type is new with ONTAP 9.8.

MetroCluster interconnects

You can retrieve the MetroCluster interconnect status. This resource type is new with ONTAP 9.8.

MetroCluster nodes

You can retrieve the status of the individual nodes in a MetroCluster deployment. This resource type is new with ONTAP 9.8.

MetroCluster operations

You can retrieve a list of the recently executed operations for a MetroCluster configuration. This resource type is new with ONTAP 9.8.

MetroCluster SVMs

You can retrieve information about all the SVM pairs in a MetroCluster configuration. This resource type was introduced with ONTAP 9.11.1.

Nodes

ONTAP clusters are composed of one or more nodes. This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.8.

NTP keys

The Network Time Protocol (NTP) can be configured to use shared private keys between ONTAP and trusted external NTP time servers. This resource type was introduced with ONTAP 9.7.

NTP server

You can use these API calls to configure the ONTAP Network Time Protocol settings, including the external NTP servers and keys. This resource type was introduced with ONTAP 9.7.

Peers

The peer objects represent endpoints and support the cluster peering relationships. This resource type was introduced with ONTAP 9.6.

Performance counters

Previous ONTAP releases have maintained statistical information about the operational characteristics of the system. With the 9.11.1 release, the information has been enhanced and is now available through the REST API. This feature brings the ONTAP REST API closer to parity with the Data ONTAP API (ONTAPI or ZAPI). This resource type was introduced with ONTAP 9.11.

Resource tags

You can use tags to group REST API resources. You might do this to associate related resources within a specific project or organizational group. Using tags can help to organize and track resources more effectively. This resource type was introduced with ONTAP 9.13.

Schedules

Schedules can be used to automate the perform of tasks. This resource type was introduced with ONTAP 9.6.

Sensors

You can use these endpoints to retrieve details about all the platform environment sensors. This resource type was introduced with ONTAP 9.11.

Software

An ONTAP cluster includes the cluster software profile, software packages collection, and software history collection. This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.8.

Web

You can use these endpoints to update the web services configurations and to retrieve the current configuration. This resource type was introduced with ONTAP 9.10.

Name services

You can use these API calls to manage the name services supported by ONTAP.

Cache

ONTAP name services supports caching which improves performance and resiliency. Configuration of the name services cache can now be access through the REST API. Settings can be applied at multiple levels including: hosts, unix-users, unix-groups, and netgroups. This resource type was introduced with ONTAP 9.11.

DDNS

You can display the Dynamic DNS (DDNS) information and manage the DDNS subsystem. This resource type is new with ONTAP 9.8.

DNS

DNS supports the integration of the ONTAP cluster in your network. This resource type was introduced with ONTAP 9.6 and enhanced with ONTAP 9.13.

Host record

These endpoints allow you to displays the IP address of a specified hostname as well as the hostname for an IP address. This resource type was introduced with ONTAP 9.10.

LDAP

LDAP servers can be used to maintain user information. This resource type was introduced with ONTAP 9.6.

LDAP schemas

You can create, modify, and list the LDAP schemas used by ONTAP. There are four default schemas included. This resource type was introduced with ONTAP 9.11.

Local hosts

You can use these endpoints to display and manage the local mappings for hostnames. This resource type was introduced with ONTAP 9.10.

Name mappings

Name mappings allow you to map identities from one name domain to another. For example, you can map identities from CIFS to UNIX, Kerberos to UNIX, and UNIX to CIFS. This resource type was introduced with ONTAP 9.6.

Netgroup files

You can retrieve netgroup file details and delete a file for an SVM. This resource type was introduced with ONTAP 9.11.

NIS

NIS servers can be used to authenticate users and client workstations. This resource type was introduced with ONTAP 9.6.

UNIX users and groups

Local UNIX users and groups have been a part of previous ONTAP releases. However, support has now been added to the REST API allowing you to display and manage the users and groups. These REST resource types were introduced with ONTAP 9.9 and significantly enhanced with ONTAP 9.10.

NAS

You can use these API calls to manage the CIFS and NFS settings for the cluster and SVMs.

Active Directory

You can manage the Active Directory accounts defined for an ONTAP cluster. This includes creating new accounts as well as displaying, updating, and deleting accounts. This support was added with ONTAP 9.12.

Audit

Certain CIFS and NFS events can be logged for the SVMs, which can help to improve security. This resource type was introduced with ONTAP 9.6.

Audit log redirect

You can redirect NAS auditing events to a specific SVM. This resource type is new with ONTAP 9.8.

CIFS connections

You can retrieve a list of the established CIFS connections. This resource type was introduced with ONTAP 9.11.1.

CIFS domains

Support for CIFS domains has been added at the cluster and SVM level with several categories of endpoints. You can retrieve the domain configuration as well as create and remove preferred domain controllers. This resource type was introduced with ONTAP 9.10 and enhanced with ONTAP 9.13.

CIFS group policies

Endpoints has been added to support the creation and management of CIFS group policies. The configuration information is available and administered through group policy objects that are applied to all or specific SVMs. This support was added with ONTAP 9.12.

CIFS home directory search paths

Home directories for SMB users on a CIFS server can be created without creating an individual SMB share for each user. The home directory search path is a set of absolute paths from the root of an SVM. This resource type was introduced with ONTAP 9.6.

CIFS local groups

The CIFS server can use local groups for authorization when determining share, file, and directory access rights. This resource type was introduced with ONTAP 9.9 and significantly expanded with ONTAP 9.10.

CIFS NetBIOS

You can display information about the NetBIOS connections for the cluster. Details include the IP addresses and registered NetBIOS names. This information can help you to troubleshoot name resolution issues. This

resource type was introduced with ONTAP 9.11.1.

CIFS services

The core configuration of the CIFS server. This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.7.

CIFS session files

You can retrieve a list of open files for the CIFS sessions based on several filtering options. This resource type was introduced with ONTAP 9.11.1.

CIFS sessions

You can use this API to retrieve detailed information about a CIFS session. This resource type was introduced with the ONTAP 9.8 REST API and enhanced with ONTAP 9.9.

CIFS shadow copies

Microsoft Remote Volume Shadow Copy Services is an extension of the existing Microsoft VSS functionality. It extends the VSS capability to support shadow copying of SMB shares. This feature is now available through the ONTAP REST API. This resource type was introduced with ONTAP 9.11.1.

CIFS shares

The SMB shares defined at a CIFS server. This resource type was introduced with ONTAP 9.6.

CIFS shares ACLs

The access control lists (ACLs) controlling access to folders and files on the CIFS shares. This resource type was introduced with ONTAP 9.6.

CIFS UNIX symlink mapping

Both CIFS and UNIX clients can access the same datastore. When UNIX clients create symbolic links, these mappings provide a reference to another file or folder to support the CIFS clients. This resource type was introduced with ONTAP 9.6.

CIFS user and group bulk import

You can use the new REST API endpoints to perform a bulk import of the CIFS local users, groups, and group membership information as well as monitor the status of the request. This resource type was introduced with ONTAP 9.11.1.

File access tracing

You can use these API calls to trace access to specific files. This resource type is new with ONTAP 9.8.

File security permissions

You can use these API calls displays the effective permission granted to Windows or Unix user for a specific file or folder. You can also manage NTFS file security and audit policies. This resource type was introduced with the ONTAP 9.8 REST API and significantly enhanced with ONTAP 9.9.

FPolicy

FPolicy is a file access notification framework used to monitor and manage file access events on the SVMs. This resource type was introduced with ONTAP 9.6.

FPolicy connections

These endpoints allow you to display and update connection status information for external FPolicy servers. This resource type was introduced with ONTAP 9.10.

FPolicy engines

The FPolicy engines allow you to identify the external servers that receive the file access notifications. This resource type was introduced with ONTAP 9.6.

FPolicy events

The configuration identifying how file access is monitored and what events are generated. This resource type was introduced with ONTAP 9.6.

FPolicy persistent store

You can configure and administer a persistent store for the ONTAP FPolicy configuration and events. Each SVM can have one persistent store which is shared for the multiple policies within the SVM. This resource type was introduced with ONTAP 9.14.

FPolicy policies

A container for elements of the FPolicy framework, including FPolicy engines and events. This resource type was introduced with ONTAP 9.6.

Locks

A lock is a synchronization mechanism for enforcing limits on concurrent access to files where many clients are accessing the same file simultaneously. You can use these endpoints to retrieve and delete locks. This resource type was introduced with ONTAP 9.10.

NFS connected client maps

The NFS map information for the connected clients is available through the new endpoint. You can retrieve details about the node, SVM, and IP addresses. This resource type was introduced with ONTAP 9.11.1.

NFS connected clients

You can display a list of connected clients with the details of their connection. This resource type was introduced with ONTAP 9.7.

NFS export policies

The policies including rules that describe the NFS exports. This resource type was introduced with ONTAP 9.6.

NFS Kerberos interfaces

The configuration settings for an interface to Kerberos. This resource type was introduced with ONTAP 9.6.

NFS Kerberos realms

The configuration settings for Kerberos realms. This resource type was introduced with ONTAP 9.6.

NFS services

The core configuration of the NFS server. This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.7.

Object store

Auditing of the S3 events is a security improvement allowing you to track and log certain S3 events. An S3 audit event selector can be set on a per SVM per bucket basis. This resource type was introduced with ONTAP 9.10.

Vscan

A security feature to protect your data from viruses and other malicious code. This resource type was introduced with ONTAP 9.6.

Vscan on-access policies

The Vscan policies allowing files objects to be actively scanned when accessed by a client. This resource type was introduced with ONTAP 9.6.

Vscan on-demand policies

The Vscan policies allowing files objects to be immediately scanned on demand or according to a set schedule. This resource type was introduced with ONTAP 9.6.

Vscan scanner pools

A set of attributes used to manage the connection between ONTAP and an external virus-scanning server. This resource type was introduced with ONTAP 9.6.

Vscan server status

The status of the external virus-scanning server. This resource type was introduced with ONTAP 9.6.

NDMP

The Network Data Management Protocol provides a standard for backing up NAS devices. You can use these API calls to manage the NDMP services.

NDMP mode

The NDMP operational mode can be SVM scope or node scope. This resource type was introduced with ONTAP 9.7.

NDMP nodes

You can manage the NDMP configuration of the nodes. This resource type was introduced with ONTAP 9.7.

NDMP sessions

You can retrieve and delete NDMP session details for a specific SVM or node. This resource type was introduced with ONTAP 9.7.

NDMP SVMs

You can manage the NDMP configuration of the SVMs. This resource type was introduced with ONTAP 9.7.

NDMP SVM user passwords

You can generate and retrieve passwords for a specific NDMP user within the SVM content. This resource type was introduced with the ONTAP 9.8 REST API and enhanced with ONTAP 9.9.

Networking

You can use these API calls to manage the physical and logical networking resources used with the cluster.

BGP peer groups

You can create and administer Border Gateway Protocol peer groups. This resource type was introduced with ONTAP 9.7.

Ethernet broadcast domains

An Ethernet broadcast domain is a set of physical ports that appear to be part of the same physical network. All the ports receive a packet when broadcast from one of the ports in the domain. Each broadcast domain is

part of an IPspace. This resource type was introduced with ONTAP 9.6.

Ethernet ports

An Ethernet port is a physical or virtual networking endpoint. The ports can be combined into a Link Aggregate Group (LAG) or separated using a Virtual LAN (VLAN). This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.8.

Ethernet switch ports

You can retrieve the port information for an Ethernet switch. This resource type is new with ONTAP 9.8.

Ethernet switches

You can retrieve or modify the configuration for Ethernet switches used for the ONTAP cluster or storage network. This resource type is new with ONTAP 9.8 and updated with 9.11.

Fibre Channel fabrics

You can use the Fibre Channel (FC) fabric REST API endpoints to retrieve information about the FC network. This includes the connections between the ONTAP cluster and the FC fabric, the switches comprising the fabric, and the zones of the active zoneset. This resource type was introduced with ONTAP 9.11.

Fibre Channel interfaces

A Fibre Channel interface is a logical endpoint associated with an SVM. This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.8. Support for retrieving performance metrics data was added with ONTAP 9.14.

Fibre Channel ports

A Fibre Channel port is a physical adapter on an ONTAP node used to connect to the Fibre Channel network. This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.8. Support for retrieving performance metrics data was added with ONTAP 9.14.

HTTP proxy

You can configure an HTTP proxy for either an SVM or a cluster IPspace. This resource type was introduced with ONTAP 9.7.

IP interfaces

A logical interface (LIF) is an IP address with additional configuration attributes. This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.8.

IP routes

A routing table is a collection of IP routes used to forward traffic to its destination. This resource type was introduced with ONTAP 9.6.

IP service policies

The IP service policies define the services available at a specific LIF. Service policies can be configured within the context of an SVM or IPspace. This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.8.

IP subnets

The ONTAP networking capability has been expanded to support IP subnets. The REST API provides access to the configuration and management of the IP subnets within an ONTAP cluster. This resource type was introduced with ONTAP 9.11.

IPspaces

An IPspace creates a networking space to support one or more SVMs. The IPspaces can be isolated from each other, providing security and privacy. This resource type was introduced with ONTAP 9.6.

NVMe

You can use these API calls to manage resources supporting non-volatile memory express (NVMe).

Fibre Channel logins

Fibre Channel logins represent connections formed by Fibre Channel initiators logged in to ONTAP. This resource type was introduced with ONTAP 9.6.

Namespaces

An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol. This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.8. Support for retrieving performance metrics data was added with ONTAP 9.14.

NVMe interfaces

NVMe interfaces are the network interfaces configured to support the NVMe over Fabrics (NVMe-oF) protocol. This resource type was introduced with ONTAP 9.6.

NVMe services

An NVMe service defines the properties of the NVMe controller target for an SVM. This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.7. Support for retrieving performance metrics data was added with ONTAP 9.14.

NVMe subsystem controllers

The NVMe subsystem controllers represent dynamic connections between hosts and a storage solution. This resource type was introduced with ONTAP 9.6.

NVMe subsystem maps

An NVMe subsystem map is an association of an NVMe namespace with an NVMe subsystem. This resource type was introduced with ONTAP 9.6.

NVMe subsystems

An NVMe subsystem maintains configuration state and namespace access control for a set of NVMe-connected hosts. This resource type was introduced with ONTAP 9.6.

Object store

You can use these API calls to access S3-based object storage.

Buckets

A bucket is a container of objects and is structured using an object name space. Each S3 object server can have multiple buckets. This resource type was introduced with ONTAP 9.7 and updated with ONTAP 9.8.

Services

You can create and manage the ONTAP S3 configuration, including servers and bucket configurations. This resource type was introduced with ONTAP 9.7.

Service buckets

A bucket is a container of objects and is structured using an object name space. You can manage the buckets for a specific S3 server. This resource type was introduced with ONTAP 9.7.

S3 bucket rules

The S3 buckets can include a rule definition. Each rule is a list objects and defines the set of actions to be performed on an object within the bucket. This resource type was introduced with ONTAP 9.13.

S3 groups

You can create groups of S3 users and manage access control at the group level. This resource type is new with ONTAP 9.8.

S3 policies

You can create an S3 policy and associate it with a resource to define various permissions. This resource type is new with ONTAP 9.8.

Users

The S3 user accounts are maintained at the S3 server. User accounts are based on a pair of keys and associated with the buckets they control. This resource type was introduced with ONTAP 9.7.

SAN

You can use these API calls to manage storage area networking (SAN) resources.

Fibre Channel logins

Fibre Channel logins represent connections formed by Fibre Channel initiators that have logged in to ONTAP. This resource type was introduced with ONTAP 9.6.

Fibre Channel Protocol services

A Fibre Channel Protocol (FCP) service defines the properties of a Fibre Channel target for an SVM. This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.7. Support for retrieving performance metrics data was added with ONTAP 9.14.

Fibre Channel WWPN aliases

A world wide port name (WWPN) is a 64-bit value uniquely identifying a Fibre Channel port. This resource type was introduced with ONTAP 9.6.

igroups

An initiator group (igroup) is a collection of Fibre Channel WWPNs (world wide port names), and iSCSI IQNs (qualified names), and iSCSI EUIs (extended unique identifiers) that identify host initiators. This resource type was originally introduced with ONTAP 9.6.

Nested igroups is a new feature with ONTAP 9.9 and support has also been added to the REST API. This REST resource type was introduced with ONTAP 9.9.

Initiators

An initiator is a Fibre Channel (FC) world wide port name (WWPN), an iSCSI Qualified Name (IQN), or an iSCSI EUI (Extended Unique Identifier) that identifies a host endpoint. You can retrieve initiators for the cluster or a specific SVM. This resource type was introduced with ONTAP 9.14.

iSCSI credentials

The iSCSI credentials object contains authentication credentials which are used by an initiator and ONTAP. This resource type was introduced with ONTAP 9.6.

iSCSI services

An iSCSI service defines the properties of the iSCSI target for an SVM. This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.7. Support for retrieving performance metrics data was added with ONTAP 9.14.

iSCSI sessions

An iSCSI session is one or more TCP connections that link an iSCSI initiator with an iSCSI target. This resource type was introduced with ONTAP 9.6.

LUN attributes

LUN attributes are caller-defined name/value pairs that can be optionally stored with a LUN. Attributes are available to save small amounts of application-specific metadata and are not interpreted by ONTAP. The endpoints allow you to create, update, delete, and discover attributes for a LUN. This resource type was introduced with ONTAP 9.10.

LUN maps

A LUN map is an association between a LUN and an initiator group. This resource type was introduced with ONTAP 9.6.

LUN maps reporting nodes

The reporting nodes are the cluster nodes from which network paths to a mapped LUN are advertised using the SAN protocols as part of the selective LUN map (SLM) feature of ONTAP. The new endpoints allow you to add, remove, and discover the reporting nodes of a LUN map. This resource type was introduced with ONTAP 9.10.

LUNs

A LUN is the logical representation of storage in a storage area network (SAN). This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.7. Support for retrieving performance metrics data was added with ONTAP 9.14.

Port sets

A port set is a collection of Fibre Channel or iSCSI network interfaces associated with the *portset* Storage VM. While this feature has existed with previous releases of ONTAP, support has now been added to the REST API. This REST resource type was introduced with ONTAP 9.9.

vVol bindings

A VMware virtual volume (vVol) binding is an association between a LUN of class `protocol_endpoint` and a LUN of class `vvol`. The vVol binding REST API allows you to create, delete, and discover vVol bindings. This resource type was introduced with ONTAP 9.10.

Security

These API calls can be used to manage the cluster and SVM security settings.

Accounts

There is a collection of user accounts for the cluster and SVMs. This resource type was introduced with ONTAP 9.6.

Accounts name

The configuration for a scoped user account. This resource type was introduced with ONTAP 9.6.

Active Directory proxy

You can administer the SVM account information at the Active Directory server. This resource type was introduced with ONTAP 9.7.

Anti-ransomware

ONTAP detects files potentially containing a ransomware threat. There are several categories of endpoints. You can retrieve a list of these suspect files as well as remove them from a volume. This resource type was introduced with ONTAP 9.10.1.

Audit

The settings which determine what is logged to the audit log files. This resource type was introduced with ONTAP 9.6.

Audit destinations

These settings control how audit log information is forwarded to remote systems or splunk servers. This resource type was introduced with ONTAP 9.6.

Audit messages

You can retrieve the audit log messages. This resource type was introduced with ONTAP 9.6.

AWS KMS

Amazon Web Services includes a key management service that provides secure storage for keys and other secrets. You can access this service through the REST API to allow ONTAP to securely store its encryption keys in the cloud. In addition, you can create and list the authentication keys used with NetApp Storage Encryption. This support is new with ONTAP 9.12.

Azure Key Vault

This set of API calls allows you to use the Azure Key Vault to store the ONTAP encryption keys. This resource type is new with ONTAP 9.8.

Certificates

The APIs calls can be used to install, display, and delete certificates used by ONTAP. This resource type was introduced with ONTAP 9.7.

Cisco Duo

Duo provides two-factor authentication for SSH logins. You can configure Duo to operate at the ONTAP cluster or SVM level. This resource type was introduced with ONTAP 9.14.

Cluster security

You can retrieve details of the cluster-wide security and update certain parameters. This resource type was introduced with ONTAP 9.7 and updated with ONTAP 9.8.

GCP KMS

This set of API calls allows you to use the Google Cloud Platform Key Management Service to store and manage the ONTAP encryption keys. This resource type was initially introduced with the ONTAP 9.8 REST API. However, this feature has been redesigned and so is considered to be new, with new resources types, in ONTAP 9.9.

IPSec

Internet Protocol Security (IPSec) is a suite of protocols providing security between two endpoints over an underlying IP network. This resource type is new with ONTAP 9.8.

IPSec CA certificates

You can add, remove, and retrieve IPsec CA certificates. This resource type is new with ONTAP 9.10.

IPsec policies

You can use this set of API calls to manage the policies in effect for an IPsec deployment. This resource type is new with ONTAP 9.8.

IPsec security associations

You can use this set of API calls to manage the security associations in effect for an IPsec deployment. This resource type is new with ONTAP 9.8.

Key manager configurations

These endpoints allow you to retrieve and update the configurations for key managers. This resource type is new with ONTAP 9.10.

Key managers

A key manager allows client modules within ONTAP to securely store keys. This resource type was introduced with ONTAP 9.6 and updated for ONTAP 9.7. There was another update with ONTAP 9.12 to support authentication keys. A restore capability was added with ONTAP 9.13.

Key stores

A key store describes the type of a key manager. This resource type is new with ONTAP 9.10. Additional endpoints supporting enhanced control were added with ONTAP 9.14.

LDAP authentication

These API calls are used to retrieve and manage the cluster LDAP server configuration. This resource type was introduced with ONTAP 9.6.

Login messages

Used to display and manage the login messages used by ONTAP. This resource type was introduced with ONTAP 9.6.

Multiple administrator verification

The multiple administrator verification feature provides a flexible authorization framework for protecting access to ONTAP commands or operations. There are seventeen new endpoints that support defining, requesting, and approving access in the following areas:

- Rules
- Requests
- Approval groups

Providing the option for multiple administrators to approve access improves the security of your ONTAP and IT environments. These resource types were introduced with ONTAP 9.11.

NIS authentication

These settings are used to retrieve and manage the cluster NIS server configuration. This resource type was introduced with ONTAP 9.6.

OAuth 2.0

Open Authorization (OAuth 2.0) is a token-based framework that can be used to restrict access to your ONTAP storage resources. You can use it with clients that access ONTAP through the REST API. Configuration can be performed with any of the ONTAP administrative interfaces including the REST API. This resource type was introduced with ONTAP 9.14.

Password authentication

This includes the API call used to change the password for a user account. This resource type was introduced with ONTAP 9.6.

Privileges for a role instance

Manage the privileges for a specific role. This resource type was introduced with ONTAP 9.6.

Public key authentication

You can use these API calls to configure the public keys for user accounts. This resource type was introduced with ONTAP 9.7.

Roles

The roles provide a way to assign privileges to user accounts. This resource type was introduced with ONTAP 9.6.

Roles instance

Specific instance of a role. This resource type was introduced with ONTAP 9.6.

SAML service provider

You can display and manage the configuration for the SAML service provider. This resource type was introduced with ONTAP 9.6.

SSH

These calls allow you to set the SSH configuration. This resource type was introduced with ONTAP 9.7.

SSH SVMs

These endpoints allow you to retrieve the SSH security configuration for all SVMs. This resource type was introduced with ONTAP 9.10.

TOTPS

You can use the REST API to configure time-based one-time password (TOTP) profiles for accounts that sign in and access ONTAP using SSH. This resource type was introduced with ONTAP 9.13.

SnapLock

SnapLock is a storage-based implementation of the traditional WORM (write once, read many) optical solution and provides for the long-term retention of data. You can use these API calls to administer the SnapLock feature.

Log

The SnapLock log structure is based on directories and files on a specific volume which contain the log records. Log files are filled and archived based on the maximum log size. This resource type was introduced with ONTAP 9.7.

Compliance clock

The compliance clock determines the expiration time of the SnapLock objects. The clock must be initialized outside of the REST API and cannot be changed. This resource type was introduced with ONTAP 9.7.

Event retention

You can use the SnapLock Event Based Retention (EBR) feature to define how long a file is retained after the occurrence of an event. This resource type was introduced with ONTAP 9.7.

File retention and privileged delete

You can manage the retention time of a file created by SnapLock. If needed, you can also delete unexpired WORM files on a SnapLock enterprise volume. This resource type was introduced with ONTAP 9.7.



The only built-in role with authority to execute the delete operation is vsadmin-snaplock.

File fingerprint

You can view and manage the core information describing files and volumes, such as type and expiration date. This resource type was introduced with ONTAP 9.7.

Legal hold

You can use these API calls to manage files that are part of a litigation process. This resource type was introduced with ONTAP 9.7.

SnapMirror

You can use these API calls to manage the SnapMirror data protection technology.

Policies

The SnapMirror policies are applied to relationships, and control the configuration attributes and behavior of each relationship. This resource type was introduced with ONTAP 9.6.

Relationships

Both asynchronous and synchronous relationships establish the connectivity needed transfer data. This resource type was introduced with ONTAP 9.6.

Relationships transfers

You can manage the SnapMirror transfers over existing SnapMirror relationships. This resource type was introduced with ONTAP 9.6.

Storage

You can use these API calls to manage the physical and logical storage.

Aggregate metrics

You can retrieve historical metrics data for a specific aggregate. This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.7.

Aggregate plexes

A physical copy of the WAFL storage within an aggregate. This resource type was introduced with ONTAP 9.6.

Aggregates

An aggregate consists of one or more RAID groups. This resource type was introduced with ONTAP 9.6.

Bridges

You can retrieve the bridges in a cluster. This resource type was introduced with ONTAP 9.9.

Disks

The physical disks in the cluster. This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.7 and 9.8.

File clone

You can use these endpoints to create file clones, retrieve split status, and manage split loads. The file cloning endpoint resources were first introduced with ONTAP 9.6 and expanded with ONTAP 9.8. They were significantly expanded again with ONTAP 9.10.

File moves

You can use these REST API endpoints to move a file between two FlexVol volumes or within a FlexGroup volume. After the request is accepted you can monitor the progress and status. This resource type was introduced with ONTAP 9.11.1.

FlexCache

This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.8.

FlexCache origins

FlexCache is a persistent cache of an origin volume. This resource type was originally introduced with ONTAP 9.6. Support has been enhanced with the ONTAP 9.9 REST API to support modification through the HTTP PATCH method.

Monitored files

You can designate specific files for additional monitoring. This resource type is new with ONTAP 9.8.

Pools

You can create a shared storage pool as well as retrieve the storage pools in a cluster. This resource type was introduced with ONTAP 9.11.1.

Ports

Storage ports of the cluster. This resource type was introduced with ONTAP 9.6 and enhanced with ONTAP 9.11.1.

QOS policies

Quality of service policy configuration. This resource type was introduced with ONTAP 9.6.

QOS options

Endpoints have been introduced to allow you to retrieve and set QOS options for the cluster. For example, you can reserve a percentage of available system processing resources for background tasks. This resource type was introduced with ONTAP 9.14.

QOS workloads

A QOS workload represents a storage object tracked by QOS. You can retrieve the QOS workflows. This resource type was introduced with ONTAP 9.10.

Qtrees

You can use these API calls to management Qtrees, a type of logically divided file system. This resource type was introduced with ONTAP 9.6.

Quota reports

Report on quotas, which is a technique for restricting or tracking files or space usage. This resource type was introduced with ONTAP 9.6.

Quota rules

The rules used to enforce the quotas. This resource type was introduced with ONTAP 9.6 and updated with ONTAP 9.7.

Shelves

Shelves in the cluster. This resource type was introduced with ONTAP 9.6.

Snapshot policies

Snapshots are created based on policies. This resource type was introduced with ONTAP 9.6.

Snapshot schedules

You can control the snapshot schedules. This resource type is newly redesigned with ONTAP 9.8.

Switches

You can retrieve the switches in a cluster. This resource type was introduced with ONTAP 9.9.

Tape devices

You can retrieve the tape devices in a cluster. This resource type was introduced with ONTAP 9.9.

Top metrics

The top metrics endpoints allow you to determine activity for a volume filtered by a specific metric. Filtering can be done based on clients, directories, files, and users. This resource type was introduced with ONTAP 9.10.

Volume efficiency policies

You can use these API calls to configure the efficiencies applied to an entire volume. This resource type is new with ONTAP 9.8.

Volumes

Logical containers are used to serve data to clients. This resource type was originally introduced with ONTAP 9.6 REST API. Many of the parameter values used with the API were significantly expanded with ONTAP 9.9 including those used with space management.

Volume files

You can retrieve a list of files and directories for a specific directory on a volume. This resource type was introduced with ONTAP 9.7 and updated with ONTAP 9.8.

Volumes Snapshots

Snapshots for a volume. This resource type was introduced with ONTAP 9.6.

Support

You can use these API calls to manage the ONTAP features used to support a cluster.

Application log

A standalone application can record EMS events and optionally generated AutoSupport packages at an ONTAP system by issuing a POST request. This resource type was introduced with ONTAP 9.11.1

Automatic update

The automatic update feature keeps your ONTAP systems current by downloading and applying the latest software updates. There are several endpoint categories to support the feature, including status, configurations, and updates. These resource types were introduced with ONTAP 9.10.

AutoSupport

AutoSupport collects configuration and status details as well as errors, and reports the information to NetApp. This resource type was introduced with ONTAP 9.6.

AutoSupport messages

Each node maintains AutoSupport messages that can be generated and retrieved. This resource type was introduced with ONTAP 9.6.

Configuration backup

You can use these APIs to retrieve and update the current backup settings. This resource type was introduced with ONTAP 9.6.

Configuration backup operations

You can create, retrieve, and delete configuration backup files. This resource type was introduced with ONTAP 9.7.

Core dump

You can use these endpoints to retrieve and manage the memory core dumps generated by a cluster or node. This resource type was introduced with ONTAP 9.10.

EMS

The event management system (EMS) collects events and sends notifications to one or more destinations. This resource type was introduced with ONTAP 9.6.

EMS destinations

The EMS destinations determine how and where notifications are sent. This resource type was introduced with ONTAP 9.6.

EMS destinations instance

An EMS destination instance is defined by type and location. This resource type was introduced with ONTAP 9.6.

EMS events

This is a live collection of system events for the cluster. This resource type was introduced with ONTAP 9.6.

EMS filters

The EMS filters collectively identify the events that require additional processing. This resource type was introduced with ONTAP 9.6.

EMS filters instance

An EMS filter instance is a collection of rules that are applied to the events. This resource type was introduced with ONTAP 9.6.

EMS messages

Provides access to the EMS event catalog. This resource type was introduced with ONTAP 9.6.

EMS role configuration

The EMS support feature allows for the management of roles and the access control configuration assigned to the roles. This provides the ability to limit or filter the events and messages based on the role configuration. This resource type was introduced with ONTAP 9.13.

EMS rules for filter instance

A list of rules can be managed for a specific instance of an EMS filter. This resource type was introduced with ONTAP 9.6.

EMS rules instance for filter instance

An individual rule for a specific instance of an EMS filter. This resource type was introduced with ONTAP 9.6.

SNMP

You can enable and disable SNMP and trap operations for the cluster. This resource type was introduced with ONTAP 9.7.

SNMP trap host

An SNMP trap host is a system that is configured to receive SNMP traps from ONTAP. You can retrieve and define the hosts. This resource type was introduced with ONTAP 9.7.

SNMP trap host instance

You can manage specific SNMP trap hosts. This resource type was introduced with ONTAP 9.7.

SNMP users

You can define and administer SNMP users. This resource type was introduced with ONTAP 9.7.

SNMP users instance

You can administer a specific SNMP user where the engine ID is associated with the administrative SVM or a data SVM. This resource type was introduced with ONTAP 9.7.

SVM

You can use these API calls to manage storage virtual machines (SVMs).

Migrations

You can migrate an SVM from a source cluster to a destination cluster. The new endpoints provide complete control, including the ability to pause, resume, retrieve status, and abort a migration operation. This resource type was introduced with ONTAP 9.10.

Peer permissions

Peer permissions can be assigned which enable the SVM peering relationships. This resource type was introduced with ONTAP 9.6.

Peers

The peering relationships establish connectivity among the SVMs. This resource type was introduced with ONTAP 9.6.

SVMs

You can manage the SVMs that are bound to a cluster. This resource type was introduced with ONTAP 9.6.

Top metrics

You can access additional performance metrics data for a specific SVM instance. There are four lists available and each provides the top I/O activity for ONTAP FlexVol and FlexGroup volumes. The lists include:

- Clients
- Directories
- Files
- Users

These resource types were introduced with ONTAP 9.11.

Web

You can use these endpoints to update and retrieve the web services security configuration for each data SVM. This resource type was introduced with ONTAP 9.10.

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