NAS

REST API reference

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Table of Contents

NAS . . . 1
- NAS overview . . . 1
  - Overview . . . 1
  - APIs . . . 1
- Manage NAS audit configurations . . . 1
  - Protocols audit endpoint overview . . . 1
  - Retrieve audit configurations . . . 10
  - Create an audit configuration . . . 20
  - Delete an audit configuration . . . 30
  - Retrieve the audit configuration for an SVM . . . 33
  - Update the audit configuration for an SVM . . . 40
- Manage S3 audit configurations . . . 48
  - Protocols audit svm.uuid object-store endpoint overview . . . 48
  - Delete an S3 audit configuration . . . 56
  - Retrieve S3 audit configurations . . . 59
  - Update the S3 audit configuration for an SVM . . . 68
  - Create an S3 audit configuration . . . 76
- View CIFS domain-related information . . . 86
  - Protocols CIFS domains endpoint overview . . . 86
  - Retrieve the CIFS domain-related information of all SVMs . . . 90
- View CIFS domain-related information (specific SVM) . . . 101
  - Protocols CIFS domains svm.uuid endpoint overview . . . 101
  - Retrieve the CIFS domain-related information for an SVM . . . 105
- Manage CIFS DC configuration . . . 112
  - Protocols CIFS domains svm.uuid preferred-domain-controllers endpoint overview . . . 112
  - Retrieve the CIFS domain preferred DC configuration for an SVM . . . 116
  - Create the CIFS domain preferred DC configuration for an SVM . . . 121
  - Delete the CIFS domain preferred DC configuration for an SVM and domain . . . 124
  - Retrieve the CIFS domain preferred DC configuration for an SVM and domain . . . 126
- Manage home directory search paths . . . 129
  - Protocols CIFS home-directory search-paths endpoint overview . . . 129
  - Retrieve CIFS home directory search paths . . . 133
  - Create a home directory search path . . . 138
  - Delete a CIFS home directory search path . . . 142
  - Retrieve a CIFS home directory search path for an SVM . . . 144
  - Re-order a CIFS home directory search path . . . 147
- Manage local groups . . . 148
  - Protocols CIFS local-groups endpoint overview . . . 148
  - Retrieve local groups for all SVMs . . . 154
  - Create a local group configuration for an SVM . . . 159
  - Delete a local group configuration for an SVM . . . 163
  - Retrieve local group information for a group and SVM . . . 165
  - Update local group information for a group in an SVM . . . 169

Manage local group members . . . 172
Protocols CIFS local-groups svm.uuid local_cifs_group.sid members endpoint overview . . . 172
Delete local users or Active Directory users and groups from a local group and SVM . . . 173
Retrieve local users and Active Directory users and groups that belong to a local group and SVM . . . 177
Add local users and Active Directory users and groups to a local group and SVM . . . 182
Delete a local user, or Active Directory user or group from a local group and SVM . . . 186
Retrieve a local user, Active Directory user or group belonging to a local group and SVM . . . 188
Manage local users . . . 190
Protocols CIFS local-users endpoint overview . . . 190
Retrieve local users for all SVMs . . . 197
Create local user configuration for an SVM . . . 204
Delete local user configuration for an SVM . . . 209
Retrieve local user information for a user and SVM . . . 211
Update local user information for a user and SVM . . . 216
Manage CIFS services . . . 220
Protocols CIFS services endpoint overview . . . 220
Retrieve CIFS servers . . . 228
Create a CIFS server . . . 252
Delete a CIFS server and related configurations . . . 270
Retrieve a CIFS server . . . 275
Update CIFS mandatory and optional parameters . . . 290
Retrieve CIFS protocol historical performance metrics for an SVM . . . 307
View CIFS active sessions . . . 316
Protocols CIFS sessions endpoint overview . . . 316
Retrieve CIFS session information for all SVMs . . . 321
Delete SMB session information for an SVM node . . . 332
Retrieve SMB session information for an SMB connection in an SVM node . . . 334
Manage CIFS shares . . . 342
Protocols CIFS shares endpoint overview . . . 342
Retrieve CIFS shares . . . 350
Create a CIFS share . . . 363
Delete a CIFS share . . . 377
Retrieve a CIFS share . . . 379
Update a CIFS share . . . 389
Manage share-level ACL . . . 400
Protocols CIFS shares svm.uuid share acls endpoint overview . . . 400
Retrieve a share-level ACL on a CIFS share . . . 404
Create a share-level ACL on a CIFS share . . . 410
Delete a share-level ACL on a CIFS share . . . 414
Retrieve a share-level ACL on a CIFS share for a user or group . . . 416
Update a share-level ACL on a CIFS share . . . 421
Manage CIFS UNIX symlink mapping . . . 425
Protocols CIFS unix-symlink-mapping endpoint overview . . . 425
Retrieve UNIX symbolic link mappings for CIFS clients . . . 430
Create a UNIX symbolic link mapping for a CIFS client . . . 436

Delete a UNIX symbolic link mapping for CIFS clients . . . 442
Retrieve a UNIX symbolic link mapping for CIFS clients . . . 444
Update a UNIX symbolic link mapping for CIFS clients . . . 449
Manage CIFS user group privileges . . . 453
Protocols CIFS users-and-groups privileges endpoint overview . . . 453
Retrieve privileges for all local, or Active Directory users or groups and SVMs . . . 456
Add privileges to a local, or Active Directory user or group and SVM . . . 462
Retrieve privileges for a local, or Active Directory user or group and SVM . . . 467
Update privileges for a local, or Active Directory user or group and SVM . . . 471
Retrieve trace results for access allowed or denied events . . . 476
Related ONTAP commands . . . 476
Parameters . . . 476
Response . . . 478
Error . . . 480
Definitions . . . 481
Delete trace results . . . 485
Related ONTAP commands . . . 486
Parameters . . . 486
Response . . . 486
Error . . . 486
Definitions . . . 487
Retrieve trace results for a sequence number . . . 488
Related ONTAP commands . . . 488
Parameters . . . 488
Response . . . 488
Error . . . 491
Definitions . . . 492
Retrieve information about security trace filter entries . . . 495
Related ONTAP commands . . . 496
Parameters . . . 496
Response . . . 497
Error . . . 498
Definitions . . . 499
Creates security trace filter entries . . . 502
Related ONTAP commands . . . 502
Parameters . . . 502
Request Body . . . 502
Response . . . 504
Error . . . 505
Definitions . . . 505
Delete security trace filters . . . 508
Related ONTAP commands . . . 508
Parameters . . . 508
Response . . . 508
Error . . . 508

Definitions . . . 509
Retrieve information about security trace filter entries for an SVM . . . 510
Related ONTAP commands . . . 510
Parameters . . . 510
Response . . . 510
Error . . . 512
Definitions . . . 513
Update security trace filter entries . . . 515
Related ONTAP commands . . . 515
Parameters . . . 515
Request Body . . . 515
Response . . . 516
Error . . . 516
Definitions . . . 516
View file security permissions . . . 518
Protocols file-security effective-permissions svm.uuid path endpoint overview . . . 519

NAS

NAS overview

Overview

These APIs allow you to complete various tasks, including:

- Creating an NFS server for an SVM
- Managing an NFS configuration of an SVM
- Viewing and updating the NFS configuration of an SVM
- Configuring export policies and rules for an SVM
- Managing export policies and rules for an SVM

APIs

NFS

The NFS APIs enable you to create and configure NFS settings for an SVM. You can delete or update NFS configurations, and you can also disable or enable different NFS features as needed. The export APIs allow you to create and manage export policies for an SVM that enable an administrator to restrict access to volumes for clients that match specific IP addresses and specific authentication types. Export APIs are also used to create export rules for an export policy. The APIs allow each rule to specify the number of mask bits in the client IP address that must be matched for that rule to apply to a particular client request. The APIs also allow each export rule to specify the authentication types that are required for both read-only and read-write operations.

Kerberos

Kerberos is a protocol designed to provide strong authentication for users and hosts within a client/server environment. The basis of the protocol is a shared, secret-key cryptology system. (Kerberos uses shared-key encryption to ensure the confidentiality of the data. It also uses hashing techniques to ensure the integrity of the data (so that no one can modify the data unless allowed to do so). With the NetApp multiprotocol storage platform, through which clients based on UNIX or Windows can access data using CIFS or NFS, it is crucial to provide the ability to use standard network services for authentication and for identity storage.

To configure an ONTAP system to use Kerberos for NFS, Kerberos must be enabled on a data LIF in the SVM that owns the NFS server. A Kerberos realm needs to be created before enabling Kerberos on a data LIF. (The Kerberos realm is needed so that the cluster knows how to format Kerberos ticket requests.) The Kerberos APIs allow you to define, create, modify, and delete realms for the SVM. The APIs also allow you to enable/disable Kerberos on a data LIF and update the Kerberos interface configuration for a particular data LIF in the SVM.

Manage NAS audit configurations

Protocols audit endpoint overview

Overview

Auditing for NAS events is a security measure that enables you to track and log certain CIFS and NFS events on storage virtual machines (SVMs). This helps you track potential security problems and provides evidence of any security breaches.

Examples

Creating an audit entry with log rotation size and log retention count

To create an audit entry with log rotation size and log retention count, use the following API. Note the *return_records=true* query parameter is used to obtain the newly created entry in the response.

```
# The API:
POST /api/protocols/audit/

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/audit" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"enabled\":
true, \"events\": { \"authorization_policy\": false, \"cap_staging\":
false, \"cifs_logon_logoff\": true, \"file_operations\": true,
\"file_share\": false, \"security_group\": false, \"user_account\": false
}, \"guarantee\": true, \"log\": { \"format\": \"evtx\", \"retention\": {
\"count\": 10 }, \"rotation\": { \"size\": 2048000 }}, \"log_path\":
\"/\", \"svm\": { \"name\": \"vs1\", \"uuid\": \"ec650e97-156e-11e9-abcb-
005056bbd0bf\" }}"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "ec650e97-156e-11e9-abcb-005056bbd0bf",
      "name": "vs1"
    },
    "enabled": true,
    "events": {
      "authorization_policy": false,
      "cap_staging": false,
      "cifs_logon_logoff": true,
      "file_operations": true,
      "file_share": false,
      "security_group": false,
      "user_account": false
    },
```

```
    "log": {
      "format": "evtx",
      "rotation": {
        "size": 2048000
      },
      "retention": {
        "count": 10,
        "duration": "0s"
      }
    },
    "log_path": "/",
    "guarantee": true
  }
],
"num_records": 1
}
```

Creating an audit entry with log rotation schedule and log retention duration

To create an audit entry with log rotation schedule and log retention duration, use the following API. Note that the *return_records=true* query parameter is used to obtain the newly created entry in the response.

```
# The API:
POST /api/protocols/audit/

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/audit" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"enabled\":
false, \"events\": { \"authorization_policy\": false, \"cap_staging\":
false, \"cifs_logon_logoff\": true, \"file_operations\": true,
\"file_share\": false, \"security_group\": false, \"user_account\": false
}, \"guarantee\": true, \"log\": { \"format\": \"xml\", \"retention\": {
\"duration\": \"P4DT12H30M5S\" }, \"rotation\": { \"schedule\": {
\"days\": [1, 5, 10, 15], \"hours\": [0, 1, 6, 12, 18, 23], \"minutes\":
[10, 15, 30, 45, 59], \"months\": [0], \"weekdays\": [0, 2, 5] } } },
\"log_path\": \"/\", \"svm\": { \"name\": \"vs3\", \"uuid\": \"a8d64674-
13fc-11e9-87b1-005056a7ae7e\" }}"

# The response:
{
"records": [
  {
    "svm": {
```

```
      "uuid": "a8d64674-13fc-11e9-87b1-005056a7ae7e",
      "name": "vs3"
    },
    "enabled": true,
    "events": {
      "authorization_policy": false,
      "cap_staging": false,
      "cifs_logon_logoff": true,
      "file_operations": true,
      "file_share": false,
      "security_group": false,
      "user_account": false
    },
    "log": {
      "format": "xml",
      "rotation": {
        "schedule": {
          "minutes": [
            10,
            15,
            30,
            45,
            59
          ],
          "hours": [
            0,
            1,
            6,
            12,
            18,
            23
          ],
          "weekdays": [
            0,
            2,
            5
          ],
          "days": [
            1,
            5,
            10,
            15
          ],
          "months": [
            0
          ]
```

```
        }
      },
      "retention": {
        "count": 0,
        "duration": "P4DT12H30M5S"
      }
    },
    "log_path": "/",
    "guarantee": true
  }
],
"num_records": 1
}
```

Retrieving an audit configuration for all SVMs in the cluster

```
# The API:
GET /api/protocols/audit/

# The call:
curl -X GET "https://<mgmt-
ip>/api/protocols/audit?fields=*&return_records=true&return_timeout=15" -H
"accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "ec650e97-156e-11e9-abcb-005056bbd0bf",
      "name": "vs1"
    },
    "enabled": true,
    "events": {
      "authorization_policy": false,
      "cap_staging": false,
      "cifs_logon_logoff": true,
      "file_operations": true,
      "file_share": false,
      "security_group": false,
      "user_account": false
    },
```

```
    "log": {
      "format": "evtx",
      "rotation": {
        "size": 2048000
      },
      "retention": {
        "count": 10,
        "duration": "0s"
      }
    },
    "log_path": "/",
    "guarantee": true
  },
  {
    "svm": {
      "uuid": "a8d64674-13fc-11e9-87b1-005056a7ae7e",
      "name": "vs3"
    },
    "enabled": true,
    "events": {
      "authorization_policy": false,
      "cap_staging": false,
      "cifs_logon_logoff": true,
      "file_operations": true,
      "file_share": false,
      "security_group": false,
      "user_account": false
    },
    "log": {
      "format": "xml",
      "rotation": {
        "schedule": {
          "minutes": [
            10,
            15,
            30,
            45,
            59
          ],
          "hours": [
            0,
            1,
            6,
            12,
            18,
            23
```

```
          ],
          "weekdays": [
            0,
            2,
            5
          ],
          "days": [
            1,
            5,
            10,
            15
          ],
          "months": [
            0
          ]
        }
      },
      "retention": {
        "count": 0,
        "duration": "P4DT12H30M5S"
      }
    },
    "log_path": "/",
    "guarantee": true
  }
],
"num_records": 2
}
```


Retrieving specific entries with event list as cifs-logon-logoff, file-ops = true for an SVM

The configuration returned is identified by the events in the list of audit configurations for an SVM.

```
# The API:
GET /api/protocols/audit/

# The call:
curl -X GET "https://<mgmt-
ip>/api/protocols/audit?events.file_operations=true&events.cifs_logon_logo
ff=true&return_records=true&return_timeout=15" -H "accept:
application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "ec650e97-156e-11e9-abcb-005056bbd0bf",
      "name": "vs1"
    },
    "events": {
      "cifs_logon_logoff": true,
      "file_operations": true
    }
  },
  {
    "svm": {
      "uuid": "a8d64674-13fc-11e9-87b1-005056a7ae7e",
      "name": "vs3"
    },
    "events": {
      "cifs_logon_logoff": true,
      "file_operations": true
    }
  }
],
"num_records": 2
}
```

Retrieving a specific audit configuration for an SVM

The configuration returned is identified by the UUID of its SVM.

```
# The API:
GET /api/protocols/audit/{svm.uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/audit/ec650e97-156e-11e9-
abcb-005056bbd0bf" -H "accept: application/json"

# The response:
{
"svm": {
  "uuid": "ec650e97-156e-11e9-abcb-005056bbd0bf",
  "name": "vs1"
},
"enabled": true,
"events": {
  "authorization_policy": false,
  "cap_staging": false,
  "cifs_logon_logoff": true,
  "file_operations": true,
  "file_share" : false,
  "security_group": false,
  "user_account": false
},
"log": {
  "format": "evtx",
  "rotation": {
    "size": 2048000
  },
  "retention": {
    "count": 10,
    "duration": "0s"
  }
},
"log_path": "/",
"guarantee": true
}
```

Updating a specific audit configuration of an SVM

The configuration is identified by the UUID of its SVM and the provided information is updated.

```
# The API:
PATCH /api/protocols/audit/{svm.uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/audit/ec650e97-156e-11e9-
abcb-005056bbd0bf" -H "accept: application/json" -H "Content-Type:
application/json" -d "{ \"enabled\": false}"
```

Deleting a specific audit configuration for an SVM

The entry to be deleted is identified by the UUID of its SVM.

```
# The API:
DELETE /api/protocols/audit/{svm.uuid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/audit/ec650e97-156e-11e9-
abcb-005056bbd0bf?force=true" -H "accept: application/json"
```

Retrieve audit configurations

GET `/protocols/audit`

Introduced In: 9.6

Retrieves audit configurations.

Related ONTAP commands

- `vserver audit show`

Learn more

- DOC /protocols/audit

Parameters

Name	Type	In	Required	Description
guarantee	boolean	query	False	Filter by guarantee • Introduced in: 9.10

Name	Type	In	Required	Description
log_path	string	query	False	Filter by log_path
enabled	boolean	query	False	Filter by enabled
log.format	string	query	False	Filter by log.format
log.retention.count	integer	query	False	Filter by log.retention.count
log.retention.duration	string	query	False	Filter by log.retention.duration
log.rotation.schedule.months	integer	query	False	Filter by log.rotation.schedule.months
log.rotation.schedule.days	integer	query	False	Filter by log.rotation.schedule.days
log.rotation.schedule.hours	integer	query	False	Filter by log.rotation.schedule.hours
log.rotation.schedule.minutes	integer	query	False	Filter by log.rotation.schedule.minutes
log.rotation.schedule.weekdays	integer	query	False	Filter by log.rotation.schedule.weekdays
log.rotation.size	integer	query	False	Filter by log.rotation.size
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
events.authorization_policy	boolean	query	False	Filter by events.authorization_policy

Name	Type	In	Required	Description
events.cifs_logon_logoff	boolean	query	False	Filter by events.cifs_logon_logoff
events.user_account	boolean	query	False	Filter by events.user_account
events.cap_staging	boolean	query	False	Filter by events.cap_staging
events.security_group	boolean	query	False	Filter by events.security_group
events.file_operations	boolean	query	False	Filter by events.file_operations
events.file_share	boolean	query	False	Filter by events.file_share
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[audit]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "guarantee": "",
      "log": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "format": "string",
        "retention": {
          "duration": "P4DT12H30M5S"
        },
        "rotation": {
          "schedule": {
            "days": [
              "integer"
            ],
            "hours": [
              "integer"
            ],
            "minutes": [
              "integer"
            ],
            "months": [
              "integer"
            ],
            "weekdays": [
              "integer"
            ]
          }
        }
      },
      "log_path": "string",
      "svm": {
```

```
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

events

Name	Type	Description
authorization_policy	boolean	Authorization policy change events
cap_staging	boolean	Central access policy staging events
cifs_logon_logoff	boolean	CIFS logon and logoff events
file_operations	boolean	File operation events
file_share	boolean	File share category events
security_group	boolean	Local security group management events
user_account	boolean	Local user account management events

_links

Name	Type	Description
self	href	

retention

Name	Type	Description
count	integer	Determines how many audit log files to retain before rotating the oldest log file out. This is mutually exclusive with duration.
duration	string	Specifies an ISO-8601 format date and time to retain the audit log file. The audit log files are deleted once they reach the specified date/time. This is mutually exclusive with count.

audit_schedule

Rotates the audit logs based on a schedule by using the time-based rotation parameters in any combination. The rotation schedule is calculated by using all the time-related values.

Name	Type	Description
days	array[integer]	Specifies the day of the month schedule to rotate audit log. Leave empty for all.
hours	array[integer]	Specifies the hourly schedule to rotate audit log. Leave empty for all.
minutes	array[integer]	Specifies the minutes schedule to rotate the audit log.
months	array[integer]	Specifies the months schedule to rotate audit log. Leave empty for all.
weekdays	array[integer]	Specifies the weekdays schedule to rotate audit log. Leave empty for all.

rotation

Audit event log files are rotated when they reach a configured threshold log size or are on a configured schedule. When an event log file is rotated, the scheduled consolidation task first renames the active converted file to a time-stamped archive file, and then creates a new active converted event log file.

Name	Type	Description
now	boolean	Manually rotates the audit logs. Optional in PATCH only. Not available in POST.
schedule	audit_schedule	Rotates the audit logs based on a schedule by using the time-based rotation parameters in any combination. The rotation schedule is calculated by using all the time-related values.
size	integer	Rotates logs based on log size in bytes.

log

Name	Type	Description
_links	_links	
format	string	The format in which the logs are generated by consolidation process. Possible values are: • xml - Data ONTAP-specific XML log format • evtx - Microsoft Windows EVTX log format ◦ Default value: 1 ◦ enum: ["xml", "evtx"] ◦ Introduced in: 9.6
retention	retention	
rotation	rotation	Audit event log files are rotated when they reach a configured threshold log size or are on a configured schedule. When an event log file is rotated, the scheduled consolidation task first renames the active converted file to a time-stamped archive file, and then creates a new active converted event log file.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

audit

Auditing for NAS events is a security measure that enables you to track and log certain CIFS and NFS events on SVMs.

Name	Type	Description
enabled	boolean	Specifies whether or not auditing is enabled on the SVM.
events	events	
guarantee	boolean	Indicates whether there is a strict Guarantee of Auditing
log	log	
log_path	string	The audit log destination path where consolidated audit logs are stored.
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message

Name	Type	Description
target	string	The target parameter that caused the error.

Create an audit configuration

POST `/protocols/audit`

Introduced In: 9.6

Creates an audit configuration.

Required properties

- `svm.uuid` or `svm.name` - Existing SVM to which audit configuration is to be created.
- `log_path` - Path in the owning SVM namespace that is used to store audit logs.

Default property values

If not specified in POST, the following default property values are assigned:

- `enabled` - *true*
- `events.authorization_policy` - *false*
- `events.cap_staging` - *false*
- `events.file_share` - *false*
- `events.security_group` - *false*
- `events.user_account` - *false*
- `events.cifs_logon_logoff` - *true*
- `events.file_operations` - *true*
- `log.format` - *evtx*
- `log.retention.count` - *0*
- `log.retention.duration` - *PT0S*
- `log.rotation.size` - *100MB*
- `log.rotation.now` - *false*
- `guarantee` - *true*

Related ONTAP commands

- `vserver audit create`
- `vserver audit enable`

Learn more

- DOC /protocols/audit

Parameters

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:

Request Body

Name	Type	Description
enabled	boolean	Specifies whether or not auditing is enabled on the SVM.
events	events	
guarantee	boolean	Indicates whether there is a strict Guarantee of Auditing
log	log	
log_path	string	The audit log destination path where consolidated audit logs are stored.
svm	svm	

Example request

```
{
  "guarantee": "",
  "log": {
    "format": "string",
    "retention": {
      "duration": "P4DT12H30M5S"
    },
    "rotation": {
      "schedule": {
        "days": [
          "integer"
        ],
        "hours": [
          "integer"
        ],
        "minutes": [
          "integer"
        ],
        "months": [
          "integer"
        ],
        "weekdays": [
          "integer"
        ]
      }
    }
  },
  "log_path": "string",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

```
Status: 202, Accepted
```

Name	Type	Description
num_records	integer	Number of records

Name	Type	Description
records	array[audit]	

Example response


```
{
  "records": [
    {
      "guarantee": "",
      "log": {
        "format": "string",
        "retention": {
          "duration": "P4DT12H30M5S"
        },
        "rotation": {
          "schedule": {
            "days": [
              "integer"
            ],
            "hours": [
              "integer"
            ],
            "minutes": [
              "integer"
            ],
            "months": [
              "integer"
            ],
            "weekdays": [
              "integer"
            ]
          }
        }
      },
      "log_path": "string",
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
262196	Log_rotation_now is not an allowed operation
2621462	The specified SVM does not exist
9699330	An audit configuration already exists
9699337	Audit system internal update is in progress, audit configuration create failed
9699340	SVM UUID lookup failed
9699358	Audit configuration is absent for enabling
9699359	Audit configuration is already enabled
9699360	Final consolidation is in progress, audit enable failed
9699365	Enabling of audit configuration failed
9699370	Auditing was successfully configured, however audit configuration could not be enabled
9699384	The specified log_path does not exist
9699385	The log_path must be a directory
9699386	The log_path must be a canonical path in the SVMs namespace
9699387	The log_path cannot be empty
9699388	Rotate size must be greater than or equal to 1024 KB
9699389	The log_path must not contain a symbolic link
9699398	The log_path exceeds a maximum supported length of characters
9699399	The log_path contains an unsupported read-only (DP/LS) volume
9699400	The specified log_path is not a valid destination for SVM
9699402	The log_path contains an unsupported snaplock volume
9699403	The log_path cannot be accessed for validation
9699406	The log_path validation failed
9699409	Failed to enable multiproto.audit.evtxlog.support support capability

Error Code	Description
9699428	All nodes need to run ONTAP 8.3.0 release to audit CIFS logon-logoff events
9699429	Failed to enable multiproto.audit.cifslogonlogoff.support support capability
9699431	All nodes need to run ONTAP 8.3.0 release to audit CAP staging events
9699432	Failed to enable multiproto.audit.capstaging.support support capability

Definitions

See Definitions

events

Name	Type	Description
authorization_policy	boolean	Authorization policy change events
cap_staging	boolean	Central access policy staging events
cifs_logon_logoff	boolean	CIFS logon and logoff events
file_operations	boolean	File operation events
file_share	boolean	File share category events
security_group	boolean	Local security group management events
user_account	boolean	Local user account management events

href

Name	Type	Description
href	string	

_links

retention

Name	Type	Description
count	integer	Determines how many audit log files to retain before rotating the oldest log file out. This is mutually exclusive with duration.
duration	string	Specifies an ISO-8601 format date and time to retain the audit log file. The audit log files are deleted once they reach the specified date/time. This is mutually exclusive with count.

audit_schedule

Rotates the audit logs based on a schedule by using the time-based rotation parameters in any combination. The rotation schedule is calculated by using all the time-related values.

Name	Type	Description
days	array[integer]	Specifies the day of the month schedule to rotate audit log. Leave empty for all.
hours	array[integer]	Specifies the hourly schedule to rotate audit log. Leave empty for all.
minutes	array[integer]	Specifies the minutes schedule to rotate the audit log.
months	array[integer]	Specifies the months schedule to rotate audit log. Leave empty for all.
weekdays	array[integer]	Specifies the weekdays schedule to rotate audit log. Leave empty for all.

rotation

Audit event log files are rotated when they reach a configured threshold log size or are on a configured schedule. When an event log file is rotated, the scheduled consolidation task first renames the active converted file to a time-stamped archive file, and then creates a new active converted event log file.

Name	Type	Description
now	boolean	Manually rotates the audit logs. Optional in PATCH only. Not available in POST.
schedule	audit_schedule	Rotates the audit logs based on a schedule by using the time-based rotation parameters in any combination. The rotation schedule is calculated by using all the time-related values.
size	integer	Rotates logs based on log size in bytes.

log

Name	Type	Description
format	string	The format in which the logs are generated by consolidation process. Possible values are: • xml - Data ONTAP-specific XML log format • evtx - Microsoft Windows EVTX log format ◦ Default value: 1 ◦ enum: ["xml", "evtx"] ◦ Introduced in: 9.6
retention	retention	
rotation	rotation	Audit event log files are rotated when they reach a configured threshold log size or are on a configured schedule. When an event log file is rotated, the scheduled consolidation task first renames the active converted file to a time-stamped archive file, and then creates a new active converted event log file.

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

audit

Auditing for NAS events is a security measure that enables you to track and log certain CIFS and NFS events on SVMs.

Name	Type	Description
enabled	boolean	Specifies whether or not auditing is enabled on the SVM.
events	events	
guarantee	boolean	Indicates whether there is a strict Guarantee of Auditing

Name	Type	Description
log	log	
log_path	string	The audit log destination path where consolidated audit logs are stored.
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete an audit configuration

DELETE `/protocols/audit/{svm.uuid}`

Introduced In: 9.6

Deletes an audit configuration.

Related ONTAP commands

- `vserver audit disable`
- `vserver audit delete`

Learn more

- DOC /protocols/audit

Parameters

Name	Type	In	Required	Description
force	boolean	query	False	Indicates to force delete audit configuration. • Introduced in: 9.10
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 202, Accepted
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
9699349	Auditing should be disabled before deleting the audit configuration
9699350	Audit configuration cannot be deleted, final consolidation is in progress
9699410	Failed to disable multiproto.audit.evtxlog.support support capability
9699430	Failed to disable multiproto.audit.cifslogonlogoff.support support capability
9699433	Failed to disable multiproto.audit.capstaging.support support capability

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve the audit configuration for an SVM

GET `/protocols/audit/{svm.uuid}`

Introduced In: 9.6

Retrieves an audit configuration for an SVM.

Related ONTAP commands

- `vserver audit show`

Learn more

- DOC /protocols/audit

Parameters

Name	Type	In	Required	Description
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Name	Type	In	Required	Description
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
enabled	boolean	Specifies whether or not auditing is enabled on the SVM.
events	events	
guarantee	boolean	Indicates whether there is a strict Guarantee of Auditing
log	log	
log_path	string	The audit log destination path where consolidated audit logs are stored.
svm	svm	

Example response


```
{
  "guarantee": "",
  "log": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "format": "string",
    "retention": {
      "duration": "P4DT12H30M5S"
    },
    "rotation": {
      "schedule": {
        "days": [
          "integer"
        ],
        "hours": [
          "integer"
        ],
        "minutes": [
          "integer"
        ],
        "months": [
          "integer"
        ],
        "weekdays": [
          "integer"
        ]
      }
    }
  },
  "log_path": "string",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

events

Name	Type	Description
authorization_policy	boolean	Authorization policy change events
cap_staging	boolean	Central access policy staging events
cifs_logon_logoff	boolean	CIFS logon and logoff events
file_operations	boolean	File operation events
file_share	boolean	File share category events
security_group	boolean	Local security group management events
user_account	boolean	Local user account management events

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

retention

Name	Type	Description
count	integer	Determines how many audit log files to retain before rotating the oldest log file out. This is mutually exclusive with duration.

Name	Type	Description
duration	string	Specifies an ISO-8601 format date and time to retain the audit log file. The audit log files are deleted once they reach the specified date/time. This is mutually exclusive with count.

audit_schedule

Rotates the audit logs based on a schedule by using the time-based rotation parameters in any combination. The rotation schedule is calculated by using all the time-related values.

Name	Type	Description
days	array[integer]	Specifies the day of the month schedule to rotate audit log. Leave empty for all.
hours	array[integer]	Specifies the hourly schedule to rotate audit log. Leave empty for all.
minutes	array[integer]	Specifies the minutes schedule to rotate the audit log.
months	array[integer]	Specifies the months schedule to rotate audit log. Leave empty for all.
weekdays	array[integer]	Specifies the weekdays schedule to rotate audit log. Leave empty for all.

rotation

Audit event log files are rotated when they reach a configured threshold log size or are on a configured schedule. When an event log file is rotated, the scheduled consolidation task first renames the active converted file to a time-stamped archive file, and then creates a new active converted event log file.

Name	Type	Description
now	boolean	Manually rotates the audit logs. Optional in PATCH only. Not available in POST.

Name	Type	Description
schedule	audit_schedule	Rotates the audit logs based on a schedule by using the time-based rotation parameters in any combination. The rotation schedule is calculated by using all the time-related values.
size	integer	Rotates logs based on log size in bytes.

log

Name	Type	Description
_links	_links	
format	string	The format in which the logs are generated by consolidation process. Possible values are: • xml - Data ONTAP-specific XML log format • evtx - Microsoft Windows EVTX log format ◦ Default value: 1 ◦ enum: ["xml", "evtx"] ◦ Introduced in: 9.6
retention	retention	
rotation	rotation	Audit event log files are rotated when they reach a configured threshold log size or are on a configured schedule. When an event log file is rotated, the scheduled consolidation task first renames the active converted file to a time-stamped archive file, and then creates a new active converted event log file.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.

Name	Type	Description
uuid	string	The unique identifier of the SVM.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update the audit configuration for an SVM

PATCH `/protocols/audit/{svm.uuid}`

Introduced In: 9.6

Updates an audit configuration for an SVM.

Related ONTAP commands

- `vserver audit modify`

Learn more

- DOC /protocols/audit

Parameters

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
enabled	boolean	Specifies whether or not auditing is enabled on the SVM.
events	events	
guarantee	boolean	Indicates whether there is a strict Guarantee of Auditing
log	log	

Name	Type	Description
log_path	string	The audit log destination path where consolidated audit logs are stored.
svm	svm	

Example request

```
{
  "guarantee": "",
  "log": {
    "format": "string",
    "retention": {
      "duration": "P4DT12H30M5S"
    },
    "rotation": {
      "schedule": {
        "days": [
          "integer"
        ],
        "hours": [
          "integer"
        ],
        "minutes": [
          "integer"
        ],
        "months": [
          "integer"
        ],
        "weekdays": [
          "integer"
        ]
      }
    }
  },
  "log_path": "string",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

```
Status: 202, Accepted
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
9699340	SVM UUID lookup failed
9699343	Audit configuration is absent for modification
9699358	Audit configuration is absent for enabling
9699359	Audit configuration is already enabled
9699360	Final consolidation is in progress, audit enable failed
9699365	Enabling of audit configuration failed
9699373	Audit configuration is absent for disabling
9699374	Audit configuration is already disabled
9699375	Disabling of audit configuration failed
9699384	The specified log_path does not exist
9699385	The log_path must be a directory
9699386	The log_path must be a canonical path in the SVMs namespace
9699387	The log_path cannot be empty
9699388	Rotate size must be greater than or equal to 1024 KB
9699389	The log_path must not contain a symbolic link
9699398	The log_path exceeds a maximum supported length of characters
9699399	The log_path contains an unsupported read-only (DP/LS) volume
9699400	The specified log_path is not a valid destination for SVM
9699402	The log_path contains an unsupported snaplock volume
9699403	The log_path cannot be accessed for validation
9699406	The log_path validation failed

Error Code	Description
9699407	Additional fields are provided
9699409	Failed to enable multiproto.audit.evtxlog.support support capability
9699410	Failed to disable multiproto.audit.evtxlog.support support capability
9699418	Audit configuration is absent for rotate
9699419	Failed to rotate audit log
9699420	Cannot rotate audit log, auditing is not enabled for this SVM
9699428	All nodes need to run ONTAP 8.3.0 release to audit CIFS logon-logoff events
9699429	Failed to enable multiproto.audit.cifslogonlogoff.support support capability
9699430	Failed to disable multiproto.audit.cifslogonlogoff.support support capability
9699431	All nodes need to run ONTAP 8.3.0 release to audit CAP staging events
9699432	Failed to enable multiproto.audit.capstaging.support support capability
9699433	Failed to disable multiproto.audit.capstaging.support support capability

Definitions

See Definitions

events

Name	Type	Description
authorization_policy	boolean	Authorization policy change events
cap_staging	boolean	Central access policy staging events
cifs_logon_logoff	boolean	CIFS logon and logoff events
file_operations	boolean	File operation events
file_share	boolean	File share category events
security_group	boolean	Local security group management events
user_account	boolean	Local user account management events

href

Name	Type	Description
href	string	

_links

retention

Name	Type	Description
count	integer	Determines how many audit log files to retain before rotating the oldest log file out. This is mutually exclusive with duration.
duration	string	Specifies an ISO-8601 format date and time to retain the audit log file. The audit log files are deleted once they reach the specified date/time. This is mutually exclusive with count.

audit_schedule

Rotates the audit logs based on a schedule by using the time-based rotation parameters in any combination. The rotation schedule is calculated by using all the time-related values.

Name	Type	Description
days	array[integer]	Specifies the day of the month schedule to rotate audit log. Leave empty for all.
hours	array[integer]	Specifies the hourly schedule to rotate audit log. Leave empty for all.
minutes	array[integer]	Specifies the minutes schedule to rotate the audit log.
months	array[integer]	Specifies the months schedule to rotate audit log. Leave empty for all.
weekdays	array[integer]	Specifies the weekdays schedule to rotate audit log. Leave empty for all.

rotation

Audit event log files are rotated when they reach a configured threshold log size or are on a configured schedule. When an event log file is rotated, the scheduled consolidation task first renames the active converted file to a time-stamped archive file, and then creates a new active converted event log file.

Name	Type	Description
now	boolean	Manually rotates the audit logs. Optional in PATCH only. Not available in POST.
schedule	audit_schedule	Rotates the audit logs based on a schedule by using the time-based rotation parameters in any combination. The rotation schedule is calculated by using all the time-related values.
size	integer	Rotates logs based on log size in bytes.

log

Name	Type	Description
format	string	The format in which the logs are generated by consolidation process. Possible values are: • xml - Data ONTAP-specific XML log format • evtx - Microsoft Windows EVTX log format ◦ Default value: 1 ◦ enum: ["xml", "evtx"] ◦ Introduced in: 9.6
retention	retention	
rotation	rotation	Audit event log files are rotated when they reach a configured threshold log size or are on a configured schedule. When an event log file is rotated, the scheduled consolidation task first renames the active converted file to a time-stamped archive file, and then creates a new active converted event log file.

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

audit

Auditing for NAS events is a security measure that enables you to track and log certain CIFS and NFS events on SVMs.

Name	Type	Description
enabled	boolean	Specifies whether or not auditing is enabled on the SVM.
events	events	
guarantee	boolean	Indicates whether there is a strict Guarantee of Auditing

Name	Type	Description
log	log	
log_path	string	The audit log destination path where consolidated audit logs are stored.
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Manage S3 audit configurations

Protocols audit svm.uuid object-store endpoint overview

Overview

S3 events auditing is a security measure that enables you to track and log certain S3 events on storage virtual machines (SVMs). You can track potential security problems and provides evidence of any security breaches.

Examples

Creating an S3 audit entry with log rotation size and log retention count

To create an S3 audit entry with log rotation size and log retention count, use the following API. Note the *return_records=true* query parameter is used to obtain the newly created entry in the response.

```
# The API:
POST /api/protocols/audit/{svm.uuid}/object-store/

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/audit/ec650e97-156e-11e9-
abcb-005056bbd0bf/object-store?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"enabled\":
true, \"events\": { \"data\": false, \"management\": false}, \"log\": {
\"format\": \"json\", \"retention\": { \"count\": 10 }, \"rotation\": {
\"size\": 2048000 }}, \"log_path\": \"/\"}"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "ec650e97-156e-11e9-abcb-005056bbd0bf",
      "name": "vs1"
    },
    "enabled": true,
    "events": {
      "data": false,
      "management": false
    },
    "log": {
      "format": "json",
      "rotation": {
        "size": 2048000
      },
      "retention": {
        "count": 10,
        "duration": "0s"
      }
    },
    "log_path": "/"
  }
],
"num_records": 1
}
```

Creating an S3 audit entry with log rotation schedule and log retention duration

To create an S3 audit entry with log rotation schedule and log retention duration, use the following API. Note that the *return_records=true* query parameter is used to obtain the newly created entry in the response.

```
# The API:
POST /api/protocols/audit/{svm.uuid}/object-store/

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/audit/a8d64674-13fc-11e9-
87b1-005056a7ae7e/object-store?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"enabled\":
false, \"events\": { \"data\": true, \"management\": true }, \"log\": {
\"format\": \"json\", \"retention\": { \"duration\": \"P4DT12H30M5S\" },
\"rotation\": { \"schedule\": { \"days\": [1, 5, 10, 15], \"hours\": [0,
1, 6, 12, 18, 23], \"minutes\": [10, 15, 30, 45, 59], \"months\": [0],
\"weekdays\": [0, 2, 5] } } }, \"log_path\": \"/\"}"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "a8d64674-13fc-11e9-87b1-005056a7ae7e",
      "name": "vs3"
    },
    "enabled": true,
    "events": {
      "data": true,
      "management": true
    },
    "log": {
      "format": "json",
      "rotation": {
        "schedule": {
          "minutes": [
            10,
            15,
            30,
            45,
            59
          ],
          "hours": [
            0,
            1,
            6,
            12,
            18,
            23
          ],
```

```
          "weekdays": [
            0,
            2,
            5
          ],
          "days": [
            1,
            5,
            10,
            15
          ],
          "months": [
            0
          ]
        }
      },
      "retention": {
        "count": 0,
        "duration": "P4DT12H30M5S"
      }
    },
    "log_path": "/"
  }
],
"num_records": 1
}
```

Retrieving an S3 audit configuration for all SVMs in the cluster

```
# The API:
GET /api/protocols/audit/{svm.uuid}/object-store/

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/audit/*/object-
store?fields=*&return_records=true&return_timeout=15" -H "accept:
application/json"

# The response:
{
"records": [
  {
    "svm": {
```

```
      "uuid": "ec650e97-156e-11e9-abcb-005056bbd0bf",
      "name": "vs1"
    },
    "enabled": true,
    "events": {
      "data": false,
      "management": false
    },
    "log": {
      "format": "json",
      "rotation": {
        "size": 2048000
      },
      "retention": {
        "count": 10,
        "duration": "0s"
      }
    },
    "log_path": "/"
  },
  {
    "svm": {
      "uuid": "a8d64674-13fc-11e9-87b1-005056a7ae7e",
      "name": "vs3"
    },
    "enabled": true,
    "events": {
      "data": true,
      "management": true
    },
    "log": {
      "format": "json",
      "rotation": {
        "schedule": {
          "minutes": [
            10,
            15,
            30,
            45,
            59
          ],
          "hours": [
            0,
            1,
            6,
            12,
```

```
            18,
            23
          ],
          "weekdays": [
            0,
            2,
            5
          ],
          "days": [
            1,
            5,
            10,
            15
          ],
          "months": [
            0
          ]
        }
      },
      "retention": {
        "count": 0,
        "duration": "P4DT12H30M5S"
      }
    },
    "log_path": "/"
  }
],
"num_records": 2
}
```


Retrieving specific entries with event list as data and management event for an SVM

The configuration returned is identified by the events in the list of S3 audit configurations of an SVM.

```
# The API:
GET /api/protocols/audit/{svm.uuid}/object-store/

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/audit/*/object-
store?events.data=true&events.management=true&return_records=true&return_t
imeout=15" -H "accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "ec650e97-156e-11e9-abcb-005056bbd0bf",
      "name": "vs1"
    },
    "events": {
      "data": true,
      "management":true
    }
  },
  {
    "svm": {
      "uuid": "a8d64674-13fc-11e9-87b1-005056a7ae7e",
      "name": "vs3"
    },
    "events": {
      "data": true,
      "management": true
    }
  }
],
"num_records": 2
}
```

Retrieving a specific S3 audit configuration of an SVM

The configuration returned is identified by the UUID of its SVM.

```
# The API:
GET /api/protocols/audit/{svm.uuid}/object-store/

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/audit/ec650e97-156e-11e9-
abcb-005056bbd0bf/object-store/" -H "accept: application/json"

# The response:
{
"svm": {
  "uuid": "ec650e97-156e-11e9-abcb-005056bbd0bf",
  "name": "vs1"
},
"enabled": true,
"events": {
  "data": false,
  "management": false
},
"log": {
  "format": "json",
  "rotation": {
    "size": 2048000
  },
  "retention": {
    "count": 10,
    "duration": "0s"
  }
},
"log_path": "/"
}
```

Updating a specific S3 audit configuration of an SVM

The configuration is identified by the UUID of its SVM and the provided information is updated.

```
# The API:
PATCH /api/protocols/audit/{svm.uuid}/object-store/

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/audit/ec650e97-156e-11e9-
abcb-005056bbd0bf/object-store/" -H "accept: application/json" -H
"Content-Type: application/json" -d "{ \"enabled\": false}"
```

Deleting a specific S3 audit configuration of an SVM

The entry to be deleted is identified by the UUID of its SVM.

```
# The API:
DELETE /api/protocols/audit/{svm.uuid}/object-store/

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/audit/ec650e97-156e-11e9-
abcb-005056bbd0bf/object-store" -H "accept: application/json"
```

Delete an S3 audit configuration

DELETE `/protocols/audit/{svm.uuid}/object-store`

Introduced In: 9.10

Deletes an S3 audit configuration.

Related ONTAP commands

- `vserver object-store-server audit disable`
- `vserver object-store-server audit delete`

Learn more

- DOC /protocols/audit/{svm.uuid}/object-store

Parameters

Name	Type	In	Required	Description
force	boolean	query	False	Indicates whether a force deletion of the audit configuration is enabled.
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 202, Accepted
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
140902420	Failed to delete audit configuration for the SVM.
140902421	Failed to delete audit configuration for the SVM because audit is enabled for the SVM.
140902422	Failed to delete audit configuration for the SVM because final conolidation is in progress. Wait a few mintues, and try the operation again.

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve S3 audit configurations

GET `/protocols/audit/{svm.uuid}/object-store`

Introduced In: 9.10

Retrieves S3 audit configurations.

Related ONTAP commands

- `vserver object-store-server audit show`

Learn more

- DOC /protocols/audit/{svm.uuid}/object-store

Parameters

Name	Type	In	Required	Description
enabled	boolean	query	False	Filter by enabled
log_path	string	query	False	Filter by log_path

Name	Type	In	Required	Description
log.retention.count	integer	query	False	Filter by log.retention.count
log.retention.duration	string	query	False	Filter by log.retention.duration
log.rotation.schedule.months	integer	query	False	Filter by log.rotation.schedule.months
log.rotation.schedule.days	integer	query	False	Filter by log.rotation.schedule.days
log.rotation.schedule.hours	integer	query	False	Filter by log.rotation.schedule.hours
log.rotation.schedule.minutes	integer	query	False	Filter by log.rotation.schedule.minutes
log.rotation.schedule.weekdays	integer	query	False	Filter by log.rotation.schedule.weekdays
log.rotation.size	integer	query	False	Filter by log.rotation.size
log.format	string	query	False	Filter by log.format
svm.name	string	query	False	Filter by svm.name
events.management	boolean	query	False	Filter by events.management
events.data	boolean	query	False	Filter by events.data
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Name	Type	In	Required	Description
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
enabled	boolean	Specifies whether or not auditing is enabled on the SVM.
events	events	
log	s3_log	

Name	Type	Description
log_path	string	The audit log destination path where consolidated audit logs are stored.
svm	svm	

Example response


```
{
  "log": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "format": "string",
    "retention": {
      "duration": "P4DT12H30M5S"
    },
    "rotation": {
      "schedule": {
        "days": [
          "integer"
        ],
        "hours": [
          "integer"
        ],
        "minutes": [
          "integer"
        ],
        "months": [
          "integer"
        ],
        "weekdays": [
          "integer"
        ]
      }
    }
  },
  "log_path": "string",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

events

Name	Type	Description
data	boolean	Data events
management	boolean	Management events

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

retention

Name	Type	Description
count	integer	Determines how many audit log files to retain before rotating the oldest log file out. This is mutually exclusive with "duration".
duration	string	Specifies an ISO-8601 format date and time to retain the audit log file. The audit log files are deleted once they reach the specified date/time. This is mutually exclusive with "count".

audit_schedule

Rotates the audit logs based on a schedule by using the time-based rotation parameters in any combination. The rotation schedule is calculated by using all the time-related values.

Name	Type	Description
days	array[integer]	Specifies the day of the month schedule to rotate audit log. Leave empty for all.

Name	Type	Description
hours	array[integer]	Specifies the hourly schedule to rotate audit log. Leave empty for all.
minutes	array[integer]	Specifies the minutes schedule to rotate the audit log.
months	array[integer]	Specifies the months schedule to rotate audit log. Leave empty for all.
weekdays	array[integer]	Specifies the weekdays schedule to rotate audit log. Leave empty for all.

rotation

Audit event log files are rotated when they reach a configured threshold log size or are on a configured schedule. When an event log file is rotated, the scheduled consolidation task first renames the active converted file to a time-stamped archive file, and then creates a new active converted event log file.

Name	Type	Description
now	boolean	Manually rotates the audit logs. Optional in PATCH only. Not available in POST.
schedule	audit_schedule	Rotates the audit logs based on a schedule by using the time-based rotation parameters in any combination. The rotation schedule is calculated by using all the time-related values.
size	integer	Rotates logs based on log size in bytes.

s3_log

Name	Type	Description
_links	_links	

Name	Type	Description
format	string	Format in which the logs are generated by the consolidation process. Possible values are: • json - ONTAP-specific Json log format. ◦ Default value: 1 ◦ enum: ["json"] ◦ Introduced in: 9.10
retention	retention	
rotation	rotation	Audit event log files are rotated when they reach a configured threshold log size or are on a configured schedule. When an event log file is rotated, the scheduled consolidation task first renames the active converted file to a time-stamped archive file, and then creates a new active converted event log file.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments

Name	Type	Description
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update the S3 audit configuration for an SVM

PATCH `/protocols/audit/{svm.uuid}/object-store`

Introduced In: 9.10

Updates an S3 audit configuration for an SVM.

Important notes

- `events` - Not specifying either data or management is equivalent to setting it to false.

Related ONTAP commands

- `vserver object-store-server audit modify`

Learn more

- DOC /protocols/audit/{svm.uuid}/object-store

Parameters

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
enabled	boolean	Specifies whether or not auditing is enabled on the SVM.
events	events	
log	s3_log	

Name	Type	Description
log_path	string	The audit log destination path where consolidated audit logs are stored.

Example request

```
{
  "log": {
    "format": "string",
    "retention": {
      "duration": "P4DT12H30M5S"
    },
    "rotation": {
      "schedule": {
        "days": [
          "integer"
        ],
        "hours": [
          "integer"
        ],
        "minutes": [
          "integer"
        ],
        "months": [
          "integer"
        ],
        "weekdays": [
          "integer"
        ]
      }
    }
  },
  "log_path": "string"
}
```

Response

```
Status: 202, Accepted
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
140902401	Failed to create an audit configuration for the SVM.
140902402	Audit configuration is already present.
140902402	Audit configuration is already enabled.
140902403	Failed to create staging volume.
140902415	Failed to modify an audit configuration because no audit configuration exists for SVM.
140902416	Failed to modify audit configuration for SVM.
140902422	Final consolidation is in progress, audit delete failed.
140902423	Failed to delete the audit configuration for the SVM.
140902425	Audit configuration is not available for disabling.
140902430	Audit configuration is not available for enabling.
140902431	Audit enable failed, audit configuration already enabled for the SVM.
140902432	Final consolidation is in progress, audit enable failed.
140902445	Audit disable failed, audit configuration does not exist for the SVM.
140902446	Audit configuration is already disabled.
140902446	Audit disable failed, audit configuration does not exist for the SVM.
140902456	The specified log_path does not exist.
140902457	The log_path must be a directory.
140902458	The log_path must be a canonical path in the SVM’s namespace.
140902459	The log_path cannot be empty.
140902460	Rotate size must be greater than or equal to 1024 KB.
140902461	The destination path must not contain a symbolic link.
140902470	The log_path exceeds a maximum supported length of characters.
140902471	The log_path contains an unsupported read-only (DP/LS) volume.
140902472	The log_path is not a valid destination for the SVM.

Error Code	Description
140902474	The log_path contains an unsupported Snaplock volume.
140902478	The log_path validation failed.
140902478	The log_path cannot be accessed for validation.
140902490	Audit configuration is absent for rotate.
140902491	Failed to rotate audit log.
140902492	Cannot rotate audit log, auditing is not enabled for this SVM.

ONTAP Error Response Codes

Error Code	Description
9699340	SVM UUID lookup failed
9699407	Additional fields are provided

Definitions

See Definitions

events

Name	Type	Description
data	boolean	Data events
management	boolean	Management events

href

Name	Type	Description
href	string	

_links

retention

Name	Type	Description
count	integer	Determines how many audit log files to retain before rotating the oldest log file out. This is mutually exclusive with "duration".
duration	string	Specifies an ISO-8601 format date and time to retain the audit log file. The audit log files are deleted once they reach the specified date/time. This is mutually exclusive with "count".

audit_schedule

Rotates the audit logs based on a schedule by using the time-based rotation parameters in any combination. The rotation schedule is calculated by using all the time-related values.

Name	Type	Description
days	array[integer]	Specifies the day of the month schedule to rotate audit log. Leave empty for all.
hours	array[integer]	Specifies the hourly schedule to rotate audit log. Leave empty for all.

Name	Type	Description
minutes	array[integer]	Specifies the minutes schedule to rotate the audit log.
months	array[integer]	Specifies the months schedule to rotate audit log. Leave empty for all.
weekdays	array[integer]	Specifies the weekdays schedule to rotate audit log. Leave empty for all.

rotation

Audit event log files are rotated when they reach a configured threshold log size or are on a configured schedule. When an event log file is rotated, the scheduled consolidation task first renames the active converted file to a time-stamped archive file, and then creates a new active converted event log file.

Name	Type	Description
now	boolean	Manually rotates the audit logs. Optional in PATCH only. Not available in POST.
schedule	audit_schedule	Rotates the audit logs based on a schedule by using the time-based rotation parameters in any combination. The rotation schedule is calculated by using all the time-related values.
size	integer	Rotates logs based on log size in bytes.

s3_log

Name	Type	Description
format	string	Format in which the logs are generated by the consolidation process. Possible values are: • json - ONTAP-specific Json log format. ◦ Default value: 1 ◦ enum: ["json"] ◦ Introduced in: 9.10

Name	Type	Description
retention	retention	
rotation	rotation	Audit event log files are rotated when they reach a configured threshold log size or are on a configured schedule. When an event log file is rotated, the scheduled consolidation task first renames the active converted file to a time-stamped archive file, and then creates a new active converted event log file.

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

s3_audit

Auditing for NAS events is a security measure that enables you to track and log certain S3 events on SVMs.

Name	Type	Description
enabled	boolean	Specifies whether or not auditing is enabled on the SVM.
events	events	
log	s3_log	
log_path	string	The audit log destination path where consolidated audit logs are stored.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Create an S3 audit configuration

POST `/protocols/audit/{svm.uuid}/object-store`

Introduced In: 9.10

Creates an S3 audit configuration.

Required properties

- `log_path` - Path in the owning SVM namespace that is used to store audit logs.

Default property values

If not specified in POST, the following default property values are assigned:

- `enabled` - *true*
- `events.data` - *true*
- `events.management` - *false*
- `log.format` - *json*
- `log.retention.count` - *0*
- `log.retention.duration` - *PT0S*
- `log.rotation.size` - *100MB*
- `log.rotation.now` - *false*

Related ONTAP commands

- `vserver object-store-server audit create`
- `vserver object-store-server audit enable`

Learn more

- DOC /protocols/audit/{svm.uuid}/object-store

Parameters

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
enabled	boolean	Specifies whether or not auditing is enabled on the SVM.
events	events	
log	s3_log	

Name	Type	Description
log_path	string	The audit log destination path where consolidated audit logs are stored.
svm	svm	

Example request


```
{
  "log": {
    "format": "string",
    "retention": {
      "duration": "P4DT12H30M5S"
    },
    "rotation": {
      "schedule": {
        "days": [
          "integer"
        ],
        "hours": [
          "integer"
        ],
        "minutes": [
          "integer"
        ],
        "months": [
          "integer"
        ],
        "weekdays": [
          "integer"
        ]
      }
    }
  },
  "log_path": "string",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

```
Status: 202, Accepted
```

Name	Type	Description
num_records	integer	Number of records
records	array[s3_audit]	

Example response


```
{
  "records": [
    {
      "log": {
        "format": "string",
        "retention": {
          "duration": "P4DT12H30M5S"
        },
        "rotation": {
          "schedule": {
            "days": [
              "integer"
            ],
            "hours": [
              "integer"
            ],
            "minutes": [
              "integer"
            ],
            "months": [
              "integer"
            ],
            "weekdays": [
              "integer"
            ]
          }
        }
      },
      "log_path": "string",
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```


Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
140902401	Failed to create an audit configuration for the SVM.
140902402	Audit configuration is already present.
140902402	Audit configuration is already enabled.
140902403	Failed to create staging volume.
140902415	Failed to modify an audit configuration because no audit configuration exists for the SVM.
140902416	Failed to modify audit configuration for SVM.
140902422	Final consolidation is in progress, audit delete failed.
140902423	Failed to delete the audit configuration for the SVM.
140902425	Audit configuration is not available for disabling.
140902430	Audit configuration is not available for enabling.
140902431	Audit enable failed, audit configuration already enabled for the SVM.
140902432	Final consolidation is in progress, audit enable failed.
140902445	Audit disable failed, audit configuration does not exist for the SVM.
140902446	Audit disable failed, audit configuration does not exist for the SVM.
140902447	Audit disable failed.
140902456	The specified log_path does not exist.
140902457	The log_path must be a directory.
140902458	The log_path must be a canonical path in the SVM’s namespace.
140902459	The log_path cannot be empty.
140902460	Rotate size must be greater than or equal to 1024 KB.
140902461	The destination path must not contain a symbolic link.
140902470	The log_path exceeds a maximum supported length of characters.
140902471	The log_path contains an unsupported read-only (DP/LS) volume.
140902472	The log_path is not a valid destination for the SVM.
140902474	The log_path contains an unsupported Snaplock volume.
140902478	The log_path validation failed.
140902478	The log_path cannot be accessed for validation.

Error Code	Description
140902490	Audit configuration is absent for rotate.
140902491	Failed to rotate audit log.
140902492	Cannot rotate audit log, auditing is not enabled for this SVM.

ONTAP Error Response Codes

Error Code	Description
9699340	SVM UUID lookup failed
9699407	Additional fields are provided

Definitions

See Definitions

events

Name	Type	Description
data	boolean	Data events
management	boolean	Management events

href

Name	Type	Description
href	string	

_links

retention

Name	Type	Description
count	integer	Determines how many audit log files to retain before rotating the oldest log file out. This is mutually exclusive with "duration".
duration	string	Specifies an ISO-8601 format date and time to retain the audit log file. The audit log files are deleted once they reach the specified date/time. This is mutually exclusive with "count".

audit_schedule

Rotates the audit logs based on a schedule by using the time-based rotation parameters in any combination. The rotation schedule is calculated by using all the time-related values.

Name	Type	Description
days	array[integer]	Specifies the day of the month schedule to rotate audit log. Leave empty for all.
hours	array[integer]	Specifies the hourly schedule to rotate audit log. Leave empty for all.

Name	Type	Description
minutes	array[integer]	Specifies the minutes schedule to rotate the audit log.
months	array[integer]	Specifies the months schedule to rotate audit log. Leave empty for all.
weekdays	array[integer]	Specifies the weekdays schedule to rotate audit log. Leave empty for all.

rotation

Audit event log files are rotated when they reach a configured threshold log size or are on a configured schedule. When an event log file is rotated, the scheduled consolidation task first renames the active converted file to a time-stamped archive file, and then creates a new active converted event log file.

Name	Type	Description
now	boolean	Manually rotates the audit logs. Optional in PATCH only. Not available in POST.
schedule	audit_schedule	Rotates the audit logs based on a schedule by using the time-based rotation parameters in any combination. The rotation schedule is calculated by using all the time-related values.
size	integer	Rotates logs based on log size in bytes.

s3_log

Name	Type	Description
format	string	Format in which the logs are generated by the consolidation process. Possible values are: • json - ONTAP-specific Json log format. ◦ Default value: 1 ◦ enum: ["json"] ◦ Introduced in: 9.10

Name	Type	Description
retention	retention	
rotation	rotation	Audit event log files are rotated when they reach a configured threshold log size or are on a configured schedule. When an event log file is rotated, the scheduled consolidation task first renames the active converted file to a time-stamped archive file, and then creates a new active converted event log file.

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

s3_audit

Auditing for NAS events is a security measure that enables you to track and log certain S3 events on SVMs.

Name	Type	Description
enabled	boolean	Specifies whether or not auditing is enabled on the SVM.
events	events	
log	s3_log	
log_path	string	The audit log destination path where consolidated audit logs are stored.
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

View CIFS domain-related information

Protocols CIFS domains endpoint overview

Overview

Displays CIFS domain-related information of all SVMs.

Examples

Retrieving all the fields of CIFS domain configurations of all SVMs

```
# The API:
GET /api/protocols/cifs/domains

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/domains/?fields=*" -H
"accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "09cc9c9a-c7df-11eb-af15-0050568e403e",
      "name": "vs1"
    },
    "name_mapping": {
      "trusted_domains": [
        "SERVER02.COM",
        "SERVER03.COM"
```

```
      ]
    },
    "trust_relationships": [
      {
        "node": {
          "name": "vsNode1",
          "uuid": "a64c0906-c7dd-11eb-af15-0050568e403e"
        },
        "home_domain": "SERVER02.COM",
        "trusted_domains": [
          "SERVER02.COM"
        ]
      },
      {
        "node": {
          "name": "vsNode2",
          "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
        },
        "home_domain": "SERVER02.COM",
        "trusted_domains": [
          "SERVER02.COM"
        ]
      }
    ],
    "discovered_servers": [
      {
        "node": {
          "name": "vsNode2",
          "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
        },
        "domain": "server02.com",
        "server_type": "kerberos",
        "server_name": "scspb0659002001",
        "server_ip": "192.168.20.1",
        "preference": "preferred",
        "state": "undetermined"
      },
      {
        "node": {
          "name": "vsNode2",
          "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
        },
        "domain": "server02.com",
        "server_type": "ms_ldap",
        "server_name": "scspb0659002001",
        "server_ip": "192.168.20.1",
```

```
        "preference": "preferred",
        "state": "undetermined"
      },
      {
        "node": {
          "name": "vsNode2",
          "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
        },
        "domain": "server02.com",
        "server_type": "ms_dc",
        "server_name": "scspb0659002001",
        "server_ip": "192.168.20.1",
        "preference": "preferred",
        "state": "undetermined"
      }
    ],
    "preferred_dcs": [
      {
        "fqdn": "server02.com",
        "server_ip": "192.168.20.1"
      }
    ],
    "password_schedule": {
      "schedule_enabled": false,
      "schedule_weekly_interval": 6,
      "schedule_randomized_minute": 120,
      "schedule_description": "Sun@1:00"
    }
  },
  {
    "svm": {
      "uuid": "6dd78167-c907-11eb-b2bf-0050568e7324",
      "name": "vs2"
    },
    "name_mapping": {
      "trusted_domains": [
        "SERVER03.COM",
        "SERVER04.COM"
      ]
    },
    "trust_relationships": [
      {
        "node": {
          "name": "vsNode1",
          "uuid": "a64c0906-c7dd-11eb-af15-0050568e403e"
        },
```

```
        "home_domain": "SERVER02.COM",
        "trusted_domains": [
          "SERVER02.COM"
        ]
      },
      {
        "node": {
          "name": "vsNode2",
          "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
        },
        "home_domain": "SERVER02.COM",
        "trusted_domains": [
          "SERVER02.COM"
        ]
      }
    ],
    "discovered_servers": [
      {
        "node": {
          "name": "vsNode2",
          "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
        },
        "domain": "server02.com",
        "server_type": "kerberos",
        "server_name": "scspb0659002001",
        "server_ip": "192.168.20.1",
        "preference": "preferred",
        "state": "undetermined"
      },
      {
        "node": {
          "name": "vsNode2",
          "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
        },
        "domain": "server02.com",
        "server_type": "ms_ldap",
        "server_name": "scspb0659002001",
        "server_ip": "192.168.20.1",
        "preference": "preferred",
        "state": "undetermined"
      },
      {
        "node": {
          "name": "vsNode2",
          "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
        },
```

```
        "domain": "server02.com",
        "server_type": "ms_dc",
        "server_name": "scspb0659002001",
        "server_ip": "192.168.20.1",
        "preference": "preferred",
        "state": "undetermined"
      }
    ],
    "preferred_dcs": [
      {
        "fqdn": "server02.com",
        "server_ip": "192.168.20.1"
      }
    ],
    "password_schedule": {
      "schedule_enabled": false,
      "schedule_weekly_interval": 4,
      "schedule_randomized_minute": 120,
      "schedule_description": "Tue@1:00"
    }
  }
],
"num_records": 2
}
```


Retrieve the CIFS domain-related information of all SVMs

GET `/protocols/cifs/domains`

Introduced In: 9.10

Retrieves the CIFS domain-related information of all SVMs.

Related ONTAP commands

- `vserver cifs domain preferred-dc show`
- `vserver cifs domain trusts show`
- `vserver cifs domain discovered-servers show`
- `vserver cifs domain name-mapping-search show`
- `vserver cifs domain schedule show`

Learn more

- DOC /protocols/cifs/domains

Parameters

Name	Type	In	Required	Description
preferred_dcs.server_ip	string	query	False	Filter by preferred_dcs.server_ip
preferred_dcs.fqdn	string	query	False	Filter by preferred_dcs.fqdn
trust_relationships.home_domain	string	query	False	Filter by trust_relationships.home_domain
trust_relationships.node.uuid	string	query	False	Filter by trust_relationships.node.uuid
trust_relationships.node.name	string	query	False	Filter by trust_relationships.node.name
trust_relationships.trusted_domains	string	query	False	Filter by trust_relationships.trusted_domains
discovered_servers.server_name	string	query	False	Filter by discovered_servers.server_name
discovered_servers.domain	string	query	False	Filter by discovered_servers.domain
discovered_servers.state	string	query	False	Filter by discovered_servers.state
discovered_servers.server_ip	string	query	False	Filter by discovered_servers.server_ip
discovered_servers.node.uuid	string	query	False	Filter by discovered_servers.node.uuid

Name	Type	In	Required	Description
discovered_servers.node.name	string	query	False	Filter by discovered_servers.node.name
discovered_servers.preference	string	query	False	Filter by discovered_servers.preference
discovered_servers.server_type	string	query	False	Filter by discovered_servers.server_type
password_schedule.schedule_description	string	query	False	Filter by password_schedule.schedule_description
password_schedule.schedule_last_changed_time	string	query	False	Filter by password_schedule.schedule_last_changed_time
password_schedule.schedule_enabled	boolean	query	False	Filter by password_schedule.schedule_enabled
password_schedule.schedule_weekly_interval	integer	query	False	Filter by password_schedule.schedule_weekly_interval
password_schedule.schedule_warn_message	string	query	False	Filter by password_schedule.schedule_warn_message
password_schedule.schedule_randomized_minute	integer	query	False	Filter by password_schedule.schedule_randomized_minute
name_mapping.trusted_domains	string	query	False	Filter by name_mapping.trusted_domains
svm.uuid	string	query	False	Filter by svm.uuid

Name	Type	In	Required	Description
svm.name	string	query	False	Filter by svm.name
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	

Name	Type	Description
num_records	integer	Number of CIFS domain records.
records	array[cifs_domain]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "discovered_servers": [
        {
          "domain": "test.com",
          "node": {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
            },
            "name": "node1",
            "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
          },
          "preference": "string",
          "server_ip": "string",
          "server_name": "string",
          "server_type": "string",
          "state": "string"
        }
      ],
      "name_mapping": {
        "trusted_domains": [
          "domain.com"
        ]
      },
      "password_schedule": {
        "schedule_description": "string",
        "schedule_last_changed_time": "string",
        "schedule_warn_message": "string"
      },
      "preferred_dcs": [
        {
          "fqdn": "test.com",
          "server_ip": "4.4.4.4"
```

```
        }
      ],
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "trust_relationships": [
        {
          "home_domain": "string",
          "node": {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
            },
            "name": "node1",
            "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
          },
          "trusted_domains": [
            "string"
          ]
        }
      ]
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

discovered_servers

Name	Type	Description
domain	string	Fully Qualified Domain Name.
node	node	
preference	string	Server Preference
server_ip	string	Server IP address
server_name	string	Server Name
server_type	string	Server Type
state	string	Server status

name_mapping

Specifies the name mapping search records.

Name	Type	Description
trusted_domains	array[string]	

password_schedule

Specifies the password schedule records.

Name	Type	Description
schedule_description	string	Schedule description.
schedule_enabled	boolean	Is password schedule enabled.
schedule_last_changed_time	string	Last successful password change time.
schedule_randomized_minute	integer	Minutes within which schedule start can be randomized.
schedule_warn_message	string	Warning message in case job is deleted.
schedule_weekly_interval	integer	Interval in weeks for password change schedule.

preferred_dcs

Name	Type	Description
fqdn	string	Fully Qualified Domain Name.
server_ip	string	IP address of the preferred domain controller (DC). The address can be either an IPv4 or an IPv6 address.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

trust_relationships

Name	Type	Description
home_domain	string	Home Domain Name
node	node	
trusted_domains	array[string]	Trusted Domain Name

cifs_domain

Name	Type	Description
discovered_servers	array[discovered_servers]	Specifies the discovered servers records.
name_mapping	name_mapping	Specifies the name mapping search records.
password_schedule	password_schedule	Specifies the password schedule records.
preferred_dcs	array[preferred_dcs]	Specifies the preferred DC records.
svm	svm	
trust_relationships	array[trust_relationships]	Specifies the trusted domain records.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message

Name	Type	Description
target	string	The target parameter that caused the error.

View CIFS domain-related information (specific SVM)

Protocols CIFS domains svm.uuid endpoint overview

Overview

Displays CIFS domain-related information of the specified SVM.

Examples

Retrieving all the fields of CIFS domain configurations of a specific SVM

```
# The API:
GET /api/protocols/cifs/domains/{svm.uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/domains/6dd78167-c907-
11eb-b2bf-0050568e7324" -H "accept: application/json"

# The response:
{
"svm": {
  "uuid": "6dd78167-c907-11eb-b2bf-0050568e7324",
  "name": "vs2"
},
"name_mapping": {
  "trusted_domains": [
    "SERVER03.COM",
    "SERVER04.COM"
  ]
},
"trust_relationships": [
  {
    "node": {
      "name": "vsNode2",
      "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
    },
    "home_domain": "SERVER02.COM",
    "trusted_domains": [
```

```
      "SERVER02.COM"
    ]
  }
],
"discovered_servers": [
  {
    "node": {
      "name": "vsNode2",
      "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
    },
    "domain": "server02.com",
    "server_type": "kerberos",
    "server_name": "scspb0659002001",
    "server_ip": "192.168.20.1",
    "preference": "preferred",
    "state": "undetermined"
  },
  {
    "node": {
      "name": "vsNode2",
      "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
    },
    "domain": "server02.com",
    "server_type": "ms_ldap",
    "server_name": "scspb0659002001",
    "server_ip": "192.168.20.1",
    "preference": "preferred",
    "state": "undetermined"
  },
  {
    "node": {
      "name": "vsNode2",
      "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
    },
    "domain": "server02.com",
    "server_type": "ms_dc",
    "server_name": "scspb0659002001",
    "server_ip": "192.168.20.1",
    "preference": "preferred",
    "state": "undetermined"
  }
],
"preferred_dcs": [
  {
    "fqdn": "server02.com",
    "server_ip": "192.168.20.1"
```

```
  }
],
"password_schedule": {
  "schedule_enabled": false,
  "schedule_weekly_interval": 4,
  "schedule_randomized_minute": 120,
  "schedule_description": "Tue@1:00"
}
}
```

Applying rediscover_trusts query parameter and retrieving all the fields of CIFS domain configurations

```
# The API:
GET /api/protocols/cifs/domains/{svm.uuid}?rediscover_trusts=true

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/domains/6dd78167-c907-
11eb-b2bf-0050568e7324?rediscover_trusts=true" -H "accept:
application/json"

# The response:
{
"svm": {
  "uuid": "6dd78167-c907-11eb-b2bf-0050568e7324",
  "name": "vs2"
},
"name_mapping": {
  "trusted_domains": [
    "SERVER03.COM",
    "SERVER04.COM"
  ]
},
"trust_relationships": [
  {
    "node": {
      "name": "vsNode1",
      "uuid": "a64c0906-c7dd-11eb-af15-0050568e403e"
    },
    "home_domain": "SERVER02.COM",
    "trusted_domains": [
      "SERVER02.COM"
    ]
```

```
    },
    {
      "node": {
        "name": "vsNode2",
        "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
      },
      "home_domain": "SERVER02.COM",
      "trusted_domains": [
        "SERVER02.COM"
      ]
    }
  ],
  "discovered_servers": [
    {
      "node": {
        "name": "vsNode2",
        "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
      },
      "domain": "server02.com",
      "server_type": "kerberos",
      "server_name": "scspb0659002001",
      "server_ip": "192.168.20.1",
      "preference": "preferred",
      "state": "undetermined"
    },
    {
      "node": {
        "name": "vsNode2",
        "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
      },
      "domain": "server02.com",
      "server_type": "ms_ldap",
      "server_name": "scspb0659002001",
      "server_ip": "192.168.20.1",
      "preference": "preferred",
      "state": "undetermined"
    },
    {
      "node": {
        "name": "vsNode2",
        "uuid": "4d9400f0-c84b-11eb-90ab-0050568e7324"
      },
      "domain": "server02.com",
      "server_type": "ms_dc",
      "server_name": "scspb0659002001",
      "server_ip": "192.168.20.1",
```

```
    "preference": "preferred",
    "state": "undetermined"
  }
],
"preferred_dcs": [
  {
    "fqdn": "server02.com",
    "server_ip": "192.168.20.1"
  }
],
"password_schedule": {
  "schedule_enabled": false,
  "schedule_weekly_interval": 4,
  "schedule_randomized_minute": 120,
  "schedule_description": "Tue@1:00"
}
}
```

Retrieve the CIFS domain-related information for an SVM

GET `/protocols/cifs/domains/{svm.uuid}`

Introduced In: 9.10

Retrieves the CIFS domain-related information of the specified SVM.

Important notes

GET operation with query parameter `rediscover_trusts` and `reset_discovered_servers` returns available CIFS domain configurations and also triggers trusts rediscovery and discovered servers reset asynchronously for that SVM.

Related ONTAP commands

- `vserver cifs domain preferred-dc show`
- `vserver cifs domain trusts show`
- `vserver cifs domain discovered-servers show`
- `vserver cifs domain name-mapping-search show`
- `vserver cifs domain schedule show`

Learn more

- DOC /protocols/cifs/domains/{svm.uuid}

Parameters

Name	Type	In	Required	Description
rediscover_trusts	boolean	query	False	Force the discovery of trusted domains. • Default value:
reset_discovered_servers	boolean	query	False	Force a rediscovery. • Default value:
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
discovered_servers	array[discovered_servers]	Specifies the discovered servers records.
name_mapping	name_mapping	Specifies the name mapping search records.
password_schedule	password_schedule	Specifies the password schedule records.
preferred_dcs	array[preferred_dcs]	Specifies the preferred DC records.
svm	svm	
trust_relationships	array[trust_relationships]	Specifies the trusted domain records.

Example response


```
{
  "discovered_servers": [
    {
      "domain": "test.com",
      "node": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "node1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "preference": "string",
      "server_ip": "string",
      "server_name": "string",
      "server_type": "string",
      "state": "string"
    }
  ],
  "name_mapping": {
    "trusted_domains": [
      "domain.com"
    ]
  },
  "password_schedule": {
    "schedule_description": "string",
    "schedule_last_changed_time": "string",
    "schedule_warn_message": "string"
  },
  "preferred_dcs": [
    {
      "fqdn": "test.com",
      "server_ip": "4.4.4.4"
    }
  ],
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
```

```
  },
  "trust_relationships": [
    {
      "home_domain": "string",
      "node": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "node1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "trusted_domains": [
        "string"
      ]
    }
  ]
}
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
656463	SVM UUID must be provided for a query on the field rediscover_trusts and reset_discovered_servers.

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

discovered_servers

Name	Type	Description
domain	string	Fully Qualified Domain Name.
node	node	
preference	string	Server Preference
server_ip	string	Server IP address
server_name	string	Server Name
server_type	string	Server Type
state	string	Server status

name_mapping

Specifies the name mapping search records.

Name	Type	Description
trusted_domains	array[string]	

password_schedule

Specifies the password schedule records.

Name	Type	Description
schedule_description	string	Schedule description.
schedule_enabled	boolean	Is password schedule enabled.
schedule_last_changed_time	string	Last successful password change time.
schedule_randomized_minute	integer	Minutes within which schedule start can be randomized.
schedule_warn_message	string	Warning message in case job is deleted.
schedule_weekly_interval	integer	Interval in weeks for password change schedule.

preferred_dcs

Name	Type	Description
fqdn	string	Fully Qualified Domain Name.
server_ip	string	IP address of the preferred domain controller (DC). The address can be either an IPv4 or an IPv6 address.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

trust_relationships

Name	Type	Description
home_domain	string	Home Domain Name
node	node	
trusted_domains	array[string]	Trusted Domain Name

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Manage CIFS DC configuration

Protocols CIFS domains svm.uuid preferred-domain-controllers endpoint overview

Overview

You can use this API to display a CIFS domain preferred DC configuration of an SVM.

Retrieving all CIFS domain preferred DC configurations of an SVM

The CIFS domain preferred DC GET endpoint retrieves all the configurations for a specific SVM.

Examples

Retrieving all the fields of all CIFS domain preferred DC configurations of an SVM

```
# The API:
GET /api/protocols/cifs/domains/{svm.uuid}/preferred-domain-controllers

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/domains/1226670c-abc9-
11eb-8de3-0050568eb0c4/preferred-domain-controllers/?fields=*" -H "accept:
application/json"

# The response:
{
 "records": [
{
  "svm": {
    "uuid": "1226670c-abc9-11eb-8de3-0050568eb0c4",
    "name": "svm1"
  },
  "fqdn": "host1",
  "server_ip": "4.4.4.4"
},
{
  "svm": {
    "uuid": "1226670c-abc9-11eb-8de3-0050568eb0c4",
    "name": "svm1"
  },
  "fqdn": "host2",
  "server_ip": "11.11.11.11"
}
],
 "num_records": 2
}
```

Retrieving the CIFS domain preferred DC configuration of a specific SVM, "fqdn" and "server_ip"

```
# The API:
GET /api/protocols/cifs/domains/{svm.uuid}/preferred-domain-
controllers/{fqdn}/{server_ip}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/domains/1226670c-abc9-
11eb-8de3-0050568eb0c4/preferred-domain-controllers/host1/4.4.4.4" -H
"accept: application/json"

# The response:
{
"svm": {
  "uuid": "1226670c-abc9-11eb-8de3-0050568eb0c4",
  "name": "svm1"
},
"fqdn": "host1",
"server_ip": "4.4.4.4"
}
```

Creating a new CIFS domain preferred DC configuration

The CIFS domain preferred DC POST endpoint creates a new configuration. Both bulk and instance POST is supported.

Examples

Creating a single CIFS domain preferred DC configuration

```
# The API:
POST /api/protocols/cifs/domains/{svm.uuid}/preferred-domain-controllers

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/cifs/domains/1226670c-abc9-
11eb-8de3-0050568eb0c4/preferred-domain-
controllers?skip_config_validation=true&return_records=false" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"fqdn\":
\"testing.com\", \"server_ip\": \"1.1.1.1\"}"
```

Deleting an existing CIFS domain preferred DC configuration

The CIFS domain preferred DC DELETE endpoint deletes an existing configuration. Both bulk and instance delete is supported.

Examples

Deleting the CIFS domain preferred DC configuration of a specific SVM, "fqdn" and "server_ip"

```
# The API:
DELETE /api/protocols/cifs/domains/{svm.uuid}/preferred-domain-
controllers/{fqdn}/{server_ip}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/cifs/domains/1226670c-
abc9-11eb-8de3-0050568eb0c4/preferred-domain-controllers/sample/4.4.4.4"
```

```
### Deleting the CIFS domain preferred DC configurations of a specific SVM
and "fqdn"
```

```
# The API:
DELETE /api/protocols/cifs/domains/{svm.uuid}/preferred-domain-controllers

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/cifs/domains/1226670c-
abc9-11eb-8de3-0050568eb0c4/preferred-domain-controllers/?fqdn=sampl"
```

Deleting all CIFS domain preferred DC configurations of a specific SVM

```
# The API:
DELETE /api/protocols/cifs/domains/{svm.uuid}/preferred-domain-controllers

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/cifs/domains/1226670c-
abc9-11eb-8de3-0050568eb0c4/preferred-domain-controllers/?fqdn=*"
```

Deleting the CIFS domain preferred DC configurations of a specific SVM, "fqdn" and set of "server_ips"

```
# The API:
DELETE /api/protocols/cifs/domains/{svm.uuid}/preferred-domain-controllers

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/cifs/domains/1226670c-
abc9-11eb-8de3-0050568eb0c4/preferred-domain-
controllers/?fqdn=sample&server_ip=3.3.3.3&#124;4.4.4.4&#124;1.1.1.1&#124;
2.2.2.2"
```

Deleting the CIFS domain preferred DC configurations of a specifc SVM and set of "server_ips"

```
# The API:
DELETE /api/protocols/cifs/domains/{svm.uuid}/preferred-domain-controllers

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/cifs/domains/1226670c-
abc9-11eb-8de3-0050568eb0c4/preferred-domain-
controllers/?server_ip=3.3.3.3&#124;4.4.4.4&#124;1.1.1.1&#124;2.2.2.2"
```

Retrieve the CIFS domain preferred DC configuration for an SVM

GET `/protocols/cifs/domains/{svm.uuid}/preferred-domain-controllers`

Introduced In: 9.10

Retrieves the CIFS domain preferred DC configuration of an SVM.

Related ONTAP commands

- `vserver cifs domain preferred-dc show`

Learn more

- DOC /protocols/cifs/domains/{svm.uuid}/preferred-domain-controllers

Parameters

Name	Type	In	Required	Description
server_ip	string	query	False	Filter by server_ip
fqdn	string	query	False	Filter by fqdn
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
max_records	integer	query	False	Limit the number of records returned.
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	Number of CIFS preferred domain controller records.
records	array[cifs_domain_preferred_dc]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "fqdn": "test.com",
      "server_ip": "4.4.4.4"
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

cifs_domain_preferred_dc

Name	Type	Description
fqdn	string	Fully Qualified Domain Name.
server_ip	string	IP address of the preferred domain controller (DC). The address can be either an IPv4 or an IPv6 address.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Create the CIFS domain preferred DC configuration for an SVM

POST `/protocols/cifs/domains/{svm.uuid}/preferred-domain-controllers`

Introduced In: 9.10

Creates a CIFS preferred DC configuration for an SVM.

Important notes

- In the case of bulk POST requests, the create operation should be performed serially since there can be interdependence between records. In order to avoid issues, it is advisable to always use the query parameter "serial_records=true".

Required properties

- `svm.uuid` - Existing SVM in which to create the preferred-dc.
- `domain` - Fully Qualified Domain Name.
- `server_ip` - IPv4/IPv6 address of the Preferred Domain Controller.

The following parameters are optional:

- skip_config_validation

Related ONTAP commands

- `vserver cifs domain preferred-dc add`

Learn more

- DOC /protocols/cifs/domains/{svm.uuid}/preferred-domain-controllers

Parameters

Name	Type	In	Required	Description
skip_config_validation	boolean	query	False	Skip the validation of the specified preferred DC configuration. • Default value:
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:

Name	Type	In	Required	Description
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
fqdn	string	Fully Qualified Domain Name.
server_ip	string	IP address of the preferred domain controller (DC). The address can be either an IPv4 or an IPv6 address.

Example request

```
{
  "fqdn": "test.com",
  "server_ip": "4.4.4.4"
}
```

Response

```
Status: 201, Created
```

Name	Type	Description
fqdn	string	Fully Qualified Domain Name.
server_ip	string	IP address of the preferred domain controller (DC). The address can be either an IPv4 or an IPv6 address.

Example response


```
{
  "fqdn": "test.com",
  "server_ip": "4.4.4.4"
}
```


Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
2621516	Only data SVMs allowed.
655918	The fully qualified domain name cannot be longer than 254 bytes.
656408	RPC failure occured during the CIFS preferred-dc configuration validation.
656407	Failed to validate CIFS preferred-dc for domain. Reason: Configuration not found at SecD. Contact technical support for assistance.
655366	Invalid domain controller.
655506	Failed to add preferred-dc.

Definitions

See Definitions

cifs_domain_preferred_dc

Name	Type	Description
fqdn	string	Fully Qualified Domain Name.
server_ip	string	IP address of the preferred domain controller (DC). The address can be either an IPv4 or an IPv6 address.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete the CIFS domain preferred DC configuration for an SVM and domain

DELETE `/protocols/cifs/domains/{svm.uuid}/preferred-domain-controllers/{fqdn}/{server_ip}`

Introduced In: 9.10

Deletes the CIFS domain preferred DC configuration of the specified SVM and domain.

Related ONTAP commands

- `vserver cifs domain preferred-dc delete`

Learn more

- DOC /protocols/cifs/domains/{svm.uuid}/preferred-domain-controllers

Parameters

Name	Type	In	Required	Description
fqdn	string	path	True	Fully Qualified Domain Name
server_ip	string	path	True	Domain Controller IP address
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655507	Failed to remove preferred-dc.

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve the CIFS domain preferred DC configuration for an SVM and domain

GET `/protocols/cifs/domains/{svm.uuid}/preferred-domain-`

`controllers/{fqdn}/{server_ip}`

Introduced In: 9.10

Retrieves the CIFS domain preferred DC configuration of an SVM.

Related ONTAP commands

- `vserver cifs domain preferred-dc show`

Learn more

- DOC /protocols/cifs/domains/{svm.uuid}/preferred-domain-controllers

Parameters

Name	Type	In	Required	Description
fqdn	string	path	True	Fully Qualified Domain Name
server_ip	string	path	True	Domain Controller IP address
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
fqdn	string	Fully Qualified Domain Name.
server_ip	string	IP address of the preferred domain controller (DC). The address can be either an IPv4 or an IPv6 address.

Example response


```
{
  "fqdn": "test.com",
  "server_ip": "4.4.4.4"
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Manage home directory search paths

Protocols CIFS home-directory search-paths endpoint overview

Overview

ONTAP home directory functionality can be used to create home directories for SMB users on the CIFS server and automatically offer each user a dynamic share to their home directory 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 that directs ONTAP to search for home directories. If there are multiple search paths, ONTAP tries them in the order specified until it finds a valid path. To use the CIFS home directories feature, at least one home directory search path must be added for an SVM.

Examples

Creating a home directory search path

To create a home directory search path, use the following API. Note the *return_records=true* query parameter used to obtain the newly created entry in the response.

```
# The API:
POST /api/protocols/cifs/home-directory/search-paths

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/cifs/home-directory/search-
paths?return_records=true" -H "accept: applicaion/json" -H "Content-Type:
application/json" -d "{ \"path\": \"/\", \"svm\": { \"name\": \"vs1\",
\"uuid\": \"a41fd873-ecf8-11e8-899d-0050568e9333\" }}"

# The response:
{
"num_records": 1,
"records": [
  {
    "svm": {
      "uuid": "a41fd873-ecf8-11e8-899d-0050568e9333",
      "name": "vs1"
    },
  "path": "/"
  }
]
}
```

Retrieving the CIFS home directory search paths configuration for all SVMs in the cluster

```
# The API:
GET /protocols/cifs/home-directory/search-paths

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/home-directory/search-
paths?fields=*&return_records=true&return_timeout=15" -H "accept:
application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "2d96f9aa-f4ce-11e8-b075-0050568e278e",
      "name": "vs1"
    },
    "index": 1,
    "path": "/"
```

```
  },
  {
    "svm": {
      "uuid": "2d96f9aa-f4ce-11e8-b075-0050568e278e",
      "name": "vs1"
    },
      "index": 2,
      "path": "/a"
  },
  {
    "svm": {
      "uuid": "4f23449b-f4ce-11e8-b075-0050568e278e",
      "name": "vs2"
    },
    "index": 1,
    "path": "/"
  },
  {
    "svm": {
      "uuid": "4f23449b-f4ce-11e8-b075-0050568e278e",
      "name": "vs2"
    },
    "index": 2,
    "path": "/1"
  }
],
"num_records": 4
}
```


Retrieving a specific home directory searchpath configuration for an SVM

The configuration returned is identified by the UUID of its SVM and the index (position) in the list of search paths that is searched to find a home directory of a user.

```
# The API:
GET /api/protocols/home-directory/search-paths/{svm.uuid}/{index}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/home-directory/search-
paths/2d96f9aa-f4ce-11e8-b075-0050568e278e/2" -H "accept:
application/json"

# The response:
{
"svm": {
  "uuid": "2d96f9aa-f4ce-11e8-b075-0050568e278e",
  "name": "vs1"
},
"index": 2,
"path": "/a"
}
```

Reordering a specific home drectory search path in the list

An entry in the home directory search path list can be reordered to a new positin by specifying the 'new_index' field. The reordered configuration is identified by the UUID of its SVM and the index.

```
# The API:
PATCH /api/protocols/cifs/home-directory/search-paths/{svm.uuid}/{index}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/cifs/home-directory/search-
paths/2d96f9aa-f4ce-11e8-b075-0050568e278e/2?new_index=1" -H "accept:
application/json"
```

Removing a specific home directory search path for an SVM

The entry being removed is identified by the UUID of its SVM and the index.

```
# The API:
DELETE /api/protocols/cifs/home-directory/search-paths/{svm.uuid}/{index}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/cifs/home-
directory/search-paths/2d96f9aa-f4ce-11e8-b075-0050568e278e/2" -H "accept:
application/json"
```

Retrieve CIFS home directory search paths

GET `/protocols/cifs/home-directory/search-paths`

Introduced In: 9.6

Retrieves CIFS home directory search paths.

Related ONTAP commands

- `cifs server home-directory search-path show`

Learn more

- DOC /protocols/cifs/home-directory/search-paths

Parameters

Name	Type	In	Required	Description
path	string	query	False	Filter by path
index	integer	query	False	Filter by index
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[cifs_search_path]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "index": 0,
      "path": "/HomeDirectory/EngDomain",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

cifs_search_path

This is a list of CIFS home directory search paths. When a CIFS client connects to a home directory share, these paths are searched in the order indicated by the position field to find the home directory of the connected CIFS client.

Name	Type	Description
index	integer	The position in the list of paths that is searched to find the home directory of the CIFS client. Not available in POST.
path	string	The file system path that is searched to find the home directory of the CIFS client.
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Create a home directory search path

POST `/protocols/cifs/home-directory/search-paths`

Introduced In: 9.6

Creates a home directory search path.

Required properties

- `svm.uuid` or `svm.name` - Existing SVM in which to create the home directory search path.
- `path` - Path in the owning SVM namespace that is used to search for home directories.

Related ONTAP commands

- `cifs server home-directory search-path add`

Learn more

- DOC /protocols/cifs/home-directory/search-paths

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:

Request Body

Name	Type	Description
index	integer	The position in the list of paths that is searched to find the home directory of the CIFS client. Not available in POST.
path	string	The file system path that is searched to find the home directory of the CIFS client.
svm	svm	

Example request

```
{
  "index": 0,
  "path": "/HomeDirectory/EngDomain",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

```
Status: 201, Created
```

Name	Type	Description
num_records	integer	Number of records
records	array[cifs_search_path]	

Example response


```
{
  "records": [
    {
      "index": 0,
      "path": "/HomeDirectory/EngDomain",
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```


Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655551	Invalid home-directory search-path path
655462	The specified path is an invalid file-type

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

cifs_search_path

This is a list of CIFS home directory search paths. When a CIFS client connects to a home directory share, these paths are searched in the order indicated by the position field to find the home directory of the connected CIFS client.

Name	Type	Description
index	integer	The position in the list of paths that is searched to find the home directory of the CIFS client. Not available in POST.
path	string	The file system path that is searched to find the home directory of the CIFS client.
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments

Name	Type	Description
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete a CIFS home directory search path

DELETE `/protocols/cifs/home-directory/search-paths/{svm.uuid}/{index}`

Introduced In: 9.6

Deletes a CIFS home directory search path.

Related ONTAP commands

- `cifs server home-directory search-path remove`

Learn more

- DOC /protocols/cifs/home-directory/search-paths

Parameters

Name	Type	In	Required	Description
index	integer	path	True	Home directory search path index
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 200, Ok
```

Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve a CIFS home directory search path for an SVM

GET `/protocols/cifs/home-directory/search-paths/{svm.uuid}/{index}`

Introduced In: 9.6

Retrieves a CIFS home directory search path of an SVM.

Related ONTAP commands

- `cifs server home-directory search-path show`

Learn more

- DOC /protocols/cifs/home-directory/search-paths

Parameters

Name	Type	In	Required	Description
index	integer	path	True	Home directory search path index
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
index	integer	The position in the list of paths that is searched to find the home directory of the CIFS client. Not available in POST.
path	string	The file system path that is searched to find the home directory of the CIFS client.
svm	svm	

Example response


```
{
  "index": 0,
  "path": "/HomeDirectory/EngDomain",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Re-order a CIFS home directory search path

PATCH `/protocols/cifs/home-directory/search-paths/{svm.uuid}/{index}`

Introduced In: 9.6

Reorders a CIFS home directory search path.

Related ONTAP commands

- `cifs server home-directory search-path reorder`

Learn more

- DOC /protocols/cifs/home-directory/search-paths

Parameters

Name	Type	In	Required	Description
index	integer	path	True	Home directory search path index
new_index	integer	query	False	New position for the home directory search path
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655463	Failed to reorder the search-path because the new-index is invalid. It cannot be '0' and it cannot go beyond the current entries

Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Manage local groups

Protocols CIFS local-groups endpoint overview

Overview

The CIFS server can use local groups for authorization when determining share, file and directory access rights. You can use this API to display local group information and to control local group configurations.

Retrieving local group information

The local group GET endpoint retrieves all of the local groups configurations for data SVMs.

Examples

Retrieving all of the fields for all of the local group configurations

The local group GET endpoint retrieves all of the local groups configurations for data SVMs.

```
# The API:
/api/protocols/cifs/local-groups

# The call:
```

```
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/local-groups?fields=**"
-H "accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "b009a9e7-4081-b576-7575-ada21efcaf16",
      "name": "vs1"
    },
    "sid": "S-1-5-32-544",
    "name": "BUILTIN\\Administrators",
    "description": "Built-in Administrators group",
    "members": [
      {
        "name": "CIFS_SERVER\\Administrator"
      },
      {
        "name": "AD_DOMAIN\\Domain Admins"
      }
    ]
  },
  {
    "svm": {
      "uuid": "b009a9e7-4081-b576-7575-ada21efcaf16",
      "name": "vs1"
    },
    "sid": "S-1-5-32-545",
    "name": "BUILTIN\\Users",
    "description": "All users",
    "members": [
      {
        "name": "AD_DOMAIN\\Domain Users"
      }
    ]
  },
  {
    "svm": {
      "uuid": "b009a9e7-4081-b576-7575-ada21efcaf16",
      "name": "vs1"
    },
    "sid": "S-1-5-32-546",
    "name": "BUILTIN\\Guests",
    "description": "Built-in Guests Group",
    "members": [
```

```
      {
        "name": "SACHILDAP02\\Domain Guests"
      }
    ]
  },
  {
    "svm": {
      "uuid": "b009a9e7-4081-b576-7575-ada21efcaf16",
      "name": "vs1"
    },
    "sid": "S-1-5-32-547",
    "name": "BUILTIN\\Power Users",
    "description": "Restricted administrative privileges"
  },
  {
    "svm": {
      "uuid": "b009a9e7-4081-b576-7575-ada21efcaf16",
      "name": "vs1"
    },
    "sid": "S-1-5-32-551",
    "name": "BUILTIN\\Backup Operators",
    "description": "Backup Operators group"
  },
  {
    "svm": {
      "uuid": "b009a9e7-4081-b576-7575-ada21efcaf16",
      "name": "vs1"
    },
    "sid": "S-1-5-21-256008430-3394229847-3930036330-1001",
    "name": "CIFS_SERVER\\group2",
    "description": "local group2"
  },
  {
    "svm": {
      "uuid": "5060077c-5be6-11eb-90b7-0050568e5169",
      "name": "vs2"
    },
    "sid": "S-1-5-32-544",
    "name": "BUILTIN\\Administrators",
    "description": "Built-in Administrators group",
    "members": [
      {
        "name": "VS2.CIFS\\Administrator"
      },
      {
        "name": "VS2.CIFS\\user3"
```

```
      },
      {
        "name": "SACHILDAP02\\Domain Admins"
      }
    ]
  },
  {
    "svm": {
      "uuid": "5060077c-5be6-11eb-90b7-0050568e5169",
      "name": "vs2"
    },
    "sid": "S-1-5-32-545",
    "name": "BUILTIN\\Users",
    "description": "All users",
    "members": [
      {
        "name": "SACHILDAP02\\Domain Users"
      }
    ]
  },
  {
    "svm": {
      "uuid": "5060077c-5be6-11eb-90b7-0050568e5169",
      "name": "vs2"
    },
    "sid": "S-1-5-32-546",
    "name": "BUILTIN\\Guests",
    "description": "Built-in Guests Group",
    "members": [
      {
        "name": "SACHILDAP02\\Domain Guests"
      }
    ]
  },
  {
    "svm": {
      "uuid": "5060077c-5be6-11eb-90b7-0050568e5169",
      "name": "vs2"
    },
    "sid": "S-1-5-32-547",
    "name": "BUILTIN\\Power Users",
    "description": "Restricted administrative privileges"
  },
  {
    "svm": {
      "uuid": "5060077c-5be6-11eb-90b7-0050568e5169",
```

```
      "name": "vs2"
    },
    "sid": "S-1-5-32-551",
    "name": "BUILTIN\\Backup Operators",
    "description": "Backup Operators group"
  },
  {
    "svm": {
      "uuid": "5060077c-5be6-11eb-90b7-0050568e5169",
      "name": "vs2"
    },
    "sid": "S-1-5-21-1625922807-3304708894-3529444428-1001",
    "name": "CIFS_SERVER\\group1",
    "description": "local group1"
  }
],
"num_records": 12
}
```

Retrieving a local group configuration of a specific SVM and group

```
# The API:
/api/protocols/cifs/local-groups/{svm.uuid}/{sid}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/local-groups/25b363a6-
2971-11eb-88e1-0050568eefd4/S-1-5-21-256008430-3394229847-3930036330-1001"
-H "accept: application/json"

# The response:
{
"svm": {
  "uuid": "25b363a6-2971-11eb-88e1-0050568eefd4",
  "name": "vs1"
},
"sid": "S-1-5-21-256008430-3394229847-3930036330-1001",
"name": "CIFS_SERVER\\group1",
"description": "local group"
}
```

Creating a local group configuration

The local group POST endpoint creates a local group configuration for the specified SVM.

Example

```
# The API:
/api/protocols/cifs/local-groups

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/cifs/local-groups" -H
"accept: application/json" -H "Content-Type: application/json" -d '{
"svm": {"uuid": "179d3c85-7053-11e8-b9b8-005056b41bd1"}, "name":
"group1"}'
```

Updating a local group configuration

The local group PATCH endpoint updates the name and description of the specified local group and the specified SVM.

Example

Update the local group name from 'group1' to 'group2'

```
# The API:
/api/protocols/local-groups/{svm.uuid}/{sid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/cifs/local-groups/179d3c85-
7053-11e8-b9b8-005056b41bd1/S-1-5-21-256008430-3394229847-3930036330-1257"
-H "accept: application/json" -H "Content-Type: application/json" -d '{
"name": "group2", "description": "local group"}'
```

Deleting a local group configuration

The local group DELETE endpoint deletes the specified local group of the specified SVM.

Example

Delete the local group 'group1'

```
# The API:
/api/protocols/cifs/local-groups/{svm.uuid}/{sid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/cifs/local-
groups/179d3c85-7053-11e8-b9b8-005056b41bd1/S-1-5-21-256008430-3394229847-
3930036330-1001" -H "accept: application/json"
```

Retrieve local groups for all SVMs

GET `/protocols/cifs/local-groups`

Introduced In: 9.9

Retrieves the local groups for all of the SVMs.

Advanced properties

- `members`

Related ONTAP commands

- `vserver cifs users-and-groups local-group show`
- `vserver cifs users-and-groups local-group show-members`

Learn more

- DOC /protocols/cifs/local-groups

Parameters

Name	Type	In	Required	Description
sid	string	query	False	Filter by sid • Introduced in: 9.10
members.name	string	query	False	Filter by members.name
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
description	string	query	False	Filter by description
name	string	query	False	Filter by name
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	Number of local group records.
records	array[local_cifs_group]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "description": "This is a local group",
      "members": [
        {
          "name": "string"
        }
      ],
      "name": "SMB_SERVER01\\group",
      "sid": "S-1-5-21-256008430-3394229847-3930036330-1001",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

members

Name	Type	Description
name	string	Local user, Active Directory user, or Active Directory group which is a member of the specified local group.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

local_cifs_group

Name	Type	Description
_links	_links	
description	string	Description for the local group.
members	array[members]	

Name	Type	Description
name	string	Local group name. The maximum supported length of a group name is 256 characters.
sid	string	The security ID of the local group which uniquely identifies the group. The group SID is automatically generated in POST and it is retrieved using the GET method.
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Create a local group configuration for an SVM

POST `/protocols/cifs/local-groups`

Introduced In: 9.9

Creates the local group configuration for the specified SVM.

Important notes

- The group name can contain up to 256 characters.
- The group name cannot be terminated by a period.

- The group name does not support any of the following characters: " / ? [ ] , : \| < > + = ; ? * @ or ASCII characters in the range 1-31.

Required properties

- `svm.uuid` or `svm.name` - Existing SVM in which to create the local group.
- `name` - Name of the local group.

Related ONTAP commands

- `vserver cifs users-and-groups local-group create`

Learn more

- DOC /protocols/cifs/local-groups

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:

Request Body

Name	Type	Description
description	string	Description for the local group.
name	string	Local group name. The maximum supported length of a group name is 256 characters.
svm	svm	

Example request

```
{
  "description": "This is a local group",
  "name": "SMB_SERVER01\\group",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

```
Status: 201, Created
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
262278	Name is a required field.
655399	CIFS server must exist to create a local group.
655660	The operation is allowed only on data SVMs.
655661	The group name and description should not exceed 256 characters.
655668	The specified group name contains illegal characters.
655675	The local domain name specified in the group name does not exist.
655677	This operation does not allow for the creation of a group in the BUILTIN domain.
655682	The group name cannot be blank.
655717	The specified group name already exists.
2621706	The specified SVM UUID is incorrect for the specified SVM name.

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

members

Name	Type	Description
name	string	Local user, Active Directory user, or Active Directory group which is a member of the specified local group.

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

local_cifs_group

Name	Type	Description
description	string	Description for the local group.
name	string	Local group name. The maximum supported length of a group name is 256 characters.
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete a local group configuration for an SVM

DELETE `/protocols/cifs/local-groups/{svm.uuid}/{sid}`

Introduced In: 9.10

Deletes a local group configuration for the specified SVM.

Related ONTAP commands

- `vserver cifs users-and-groups local-group delete`

Learn more

- DOC /protocols/cifs/local-groups

Parameters

Name	Type	In	Required	Description
sid	string	path	True	Local group SID
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 200, Ok
```

Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve local group information for a group and SVM

GET `/protocols/cifs/local-groups/{svm.uuid}/{sid}`

Introduced In: 9.10

Retrieves local group information for the specified group and SVM.

Advanced properties

- `members`

Related ONTAP commands

- `vserver cifs users-and-groups local-group show`
- `vserver cifs users-and-groups local-group show-members`

Learn more

- DOC /protocols/cifs/local-groups

Parameters

Name	Type	In	Required	Description
sid	string	path	True	Local group SID
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
description	string	Description for the local group.
members	array[members]	
name	string	Local group name. The maximum supported length of a group name is 256 characters.

Name	Type	Description
sid	string	The security ID of the local group which uniquely identifies the group. The group SID is automatically generated in POST and it is retrieved using the GET method.
svm	svm	

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "description": "This is a local group",
  "members": [
    {
      "name": "string"
    }
  ],
  "name": "SMB_SERVER01\\group",
  "sid": "S-1-5-21-256008430-3394229847-3930036330-1001",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

members

Name	Type	Description
name	string	Local user, Active Directory user, or Active Directory group which is a member of the specified local group.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code

Name	Type	Description
message	string	Error message
target	string	The target parameter that caused the error.

Update local group information for a group in an SVM

PATCH `/protocols/cifs/local-groups/{svm.uuid}/{sid}`

Introduced In: 9.10

Updates the local group information of the specified group in the specified SVM. This API can also be used to rename a local group.

Related ONTAP commands

- `vserver cifs users-and-groups local-group modify`
- `vserver cifs users-and-groups local-group rename`

Learn more

- DOC /protocols/cifs/local-groups

Parameters

Name	Type	In	Required	Description
sid	string	path	True	Local group SID
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
description	string	Description for the local group.
name	string	Local group name. The maximum supported length of a group name is 256 characters.
svm	svm	

Example request

```
{
  "description": "This is a local group",
  "name": "SMB_SERVER01\\group",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655661	The group name and description should not exceed 256 characters.
655668	The specified group name contains illegal characters.
655675	The local domain name specified in the group name does not exist.
655682	The group name cannot be blank.
655712	To rename an existing group, the local domain specified in name must match the local domain of the group to be renamed.
655713	Failed to rename a group. The error code returned details the failure along with the reason for the failure. Take corrective actions as per the specified reason.

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

members

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

local_cifs_group

Name	Type	Description
description	string	Description for the local group.
name	string	Local group name. The maximum supported length of a group name is 256 characters.
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message

Name	Type	Description
target	string	The target parameter that caused the error.

Manage local group members

Protocols CIFS local-groups svm.uuid local_cifs_group.sid members endpoint overview

Overview

You can use this API to display local group members and to add or delete local users, Active Directory users and/or Active Directory groups to a local group of an SVM.

Examples

Retrieving the members of a specific local group

```
# The API:
/api/protocols/cifs/local-groups/{svm.uuid}/{local_cifs_group.sid}/members

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/local-groups/2ebec9c7-
28be-11eb-95f4-0050568ed0a2/S-1-5-21-256008430-3394229847-3930036330-
1257/members" -H "accept: application/json"

# The response:
{
"records": [
  {
    "name": "CIFS_SERVER1\\user1"
  },
  {
    "name": "CIFS_SERVER1\\user2"
  }
],
"num_records": 2
}
```

Adding members to a local group

The local group members POST endpoint adds local users, Active Directory users and/or Active Directory groups to the specified local group and the SVM.

Adding local users to a group

```
# The API:
/api/protocols/cifs/local-groups/{svm.uuid}/{local_cifs_group.sid}/members

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/cifs/local-groups/179d3c85-
7053-11e8-b9b8-005056b41bd1/S-1-5-21-256008430-3394229847-3930036330-
1001/members" -H "accept: application/json" -H "Content-Type:
application/json" -d '{ "records": [ { "name": "user1" }, { "name":
"user2"} ] }'
```

Deleting local users from the local group of a specific SVM

Example

Delete the local users 'user1' and 'user2' from the specified local group

```
# The API:
/api/protocols/cifs/local-groups/{svm.uuid}/{local_cifs_group.sid}/members

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/cifs/local-
groups/179d3c85-7053-11e8-b9b8-005056b41bd1/S-1-5-21-256008430-3394229847-
3930036330-1001/members" -H "accept: application/json" -d '{ "records": [
{ "name": "user1"}, { "name": "user2"} ] }'
```

Delete local users or Active Directory users and groups from a local group and SVM

DELETE `/protocols/cifs/local-groups/{svm.uuid}/{local_cifs_group.sid}/members`

Introduced In: 9.10

Deletes the local users, Active Directory users and/or Active Directory groups from the specified local group and SVM.

Related ONTAP commands

- `vserver cifs users-and-groups local-group remove-members`

Learn more

- DOC /protocols/cifs/local-groups/{svm.uuid}/{local_cifs_group.sid}/members

Parameters

Name	Type	In	Required	Description
local_cifs_group.sid	string	path	True	Local group SID
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
name	string	Local user, Active Directory user, or Active Directory group which is a member of the specified local group.
records	array[records]	An array of local users, Active Directory users, and Active Directory groups specified to add or delete multiple members to or from a local group in a single API call. Not allowed when the `name` property is used.

Example request

```
{
  "name": "string",
  "records": [
    {
      "name": "string"
    }
  ]
}
```

Response

```
Status: 200, Ok
```

Error

```
Status: Default, Error ontap error response codes | error code |
description | | ---------- | ---------- | | 655673     | failed to
resolve the member to be deleted from the specified group. | | 655719
| failed to delete a member from the specified group. the error code
returned details the failure along with the reason for the failure. take
corrective actions as per the specified reason. | | 655742     | the
"records" field must not be specified when a single user is to be deleted.
| | 655743     | svm uuid and cifs local group sid are invalid fields for
the "records" parameter. |
```

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

records

Name	Type	Description
name	string	Local user, Active Directory user, or Active Directory group which is a member of the specified local group.

local_cifs_group_members

Name	Type	Description
name	string	Local user, Active Directory user, or Active Directory group which is a member of the specified local group.
records	array[records]	An array of local users, Active Directory users, and Active Directory groups specified to add or delete multiple members to or from a local group in a single API call. Not allowed when the `name` property is used.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve local users and Active Directory users and groups that belong to a local group and SVM

GET `/protocols/cifs/local-groups/{svm.uuid}/{local_cifs_group.sid}/members`

Introduced In: 9.10

Retrieves local users, Active Directory users and Active Directory groups which are members of the specified local group and SVM.

Related ONTAP commands

- `vserver cifs users-and-groups local-group show-members`

Learn more

- DOC /protocols/cifs/local-groups/{svm.uuid}/{local_cifs_group.sid}/members

Parameters

Name	Type	In	Required	Description
local_cifs_group.sid	string	path	True	Local group SID
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc
desc] direction. Default direction is 'asc' for ascending.	svm.uuid	string	path	True
UUID of the SVM to which this object belongs.	fields	array[string]	query	False

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	Number of local group records.
records	array[local_cifs_group_members]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "name": "string"
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

records

Name	Type	Description
name	string	Local user, Active Directory user, or Active Directory group which is a member of the specified local group.

local_cifs_group_members

Name	Type	Description
name	string	Local user, Active Directory user, or Active Directory group which is a member of the specified local group.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code

Name	Type	Description
message	string	Error message
target	string	The target parameter that caused the error.

Add local users and Active Directory users and groups to a local group and SVM

POST `/protocols/cifs/local-groups/{svm.uuid}/{local_cifs_group.sid}/members`

Introduced In: 9.10

Adds local users, Active Directory users and Active Directory groups to the specified local group and SVM.

Important note

- Specified members are appended to the existing list of members.

Required properties

- `svm.uuid` or `svm.name` - Existing SVM for which members are added to local group.
- `local_cifs_group.sid` - Security ID of the local group to which members are added.
- `name` or `records` - Local users, Active Directory users, or Active Directory groups to be added to a particular local group.

Related ONTAP commands

- `vserver cifs users-and-groups local-group add-members`

Learn more

- DOC /protocols/cifs/local-groups/{svm.uuid}/{local_cifs_group.sid}/members

Parameters

Name	Type	In	Required	Description
local_cifs_group.sid	string	path	True	Local group SID
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:

Name	Type	In	Required	Description
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
name	string	Local user, Active Directory user, or Active Directory group which is a member of the specified local group.
records	array[records]	An array of local users, Active Directory users, and Active Directory groups specified to add or delete multiple members to or from a local group in a single API call. Not allowed when the `name` property is used.

Example request

```
{
  "name": "string",
  "records": [
    {
      "name": "string"
    }
  ]
}
```

Response

```
Status: 201, Created
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655673	Failed to resolve the member to be added to the specified group.
655718	Failed to add a member to the specified group. The error code returned details the failure along with the reason for the failure. Take corrective actions as per the specified reason.
655742	The "records" field must not be specified when a single user is added.
655743	SVM UUID and CIFS local group SID are invalid fields for the "records" parameter.

Definitions

See Definitions

records

Name	Type	Description
name	string	Local user, Active Directory user, or Active Directory group which is a member of the specified local group.

local_cifs_group_members

Name	Type	Description
name	string	Local user, Active Directory user, or Active Directory group which is a member of the specified local group.
records	array[records]	An array of local users, Active Directory users, and Active Directory groups specified to add or delete multiple members to or from a local group in a single API call. Not allowed when the `name` property is used.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete a local user, or Active Directory user or group from a local group and SVM

DELETE `/protocols/cifs/local-groups/{svm.uuid}/{local_cifs_group.sid}/members/{name}`

Introduced In: 9.10

Deletes the local user, Active Directory user and/or Active Directory group from the specified local group and SVM.

Related ONTAP commands

- `vserver cifs users-and-groups local-group remove-members`

Learn more

- DOC /protocols/cifs/local-groups/{svm.uuid}/{local_cifs_group.sid}/members

Parameters

Name	Type	In	Required	Description
local_cifs_group.sid	string	path	True	Local group SID
name	string	path	True	Member name
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 200, Ok
```

Error

```
Status: Default, Error ontap error response codes | error code |
description | | ---------- | ---------- | | 655673     | failed to
resolve the member to be deleted from the specified group. | | 655719
| failed to delete a member from the specified group. the error code
returned details the failure along with the reason for the failure. take
corrective actions as per the specified reason. |
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve a local user, Active Directory user or group belonging to a local group and SVM

GET `/protocols/cifs/local-groups/{svm.uuid}/{local_cifs_group.sid}/members/{name}`

Introduced In: 9.10

Retrieves local user, Active Directory user and Active Directory group which is member of the specified local group and SVM.

Related ONTAP commands

- `vserver cifs users-and-groups local-group show-members`

Learn more

- DOC /protocols/cifs/local-groups/{svm.uuid}/{local_cifs_group.sid}/members

Parameters

Name	Type	In	Required	Description
local_cifs_group.sid	string	path	True	Local group SID
name	string	path	True	Member name
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
name	string	Local user, Active Directory user, or Active Directory group which is a member of the specified local group.

Example response


```
{
  "name": "string"
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

records

Name	Type	Description
name	string	Local user, Active Directory user, or Active Directory group which is a member of the specified local group.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Manage local users

Protocols CIFS local-users endpoint overview

Overview

The CIFS server can use local users for CIFS authentication. The local users can also be used for authorization when determining both share and file/directory access rights to data residing on the storage virtual machine (SVM). You can use this API to display local user information and to control local user configurations.

Retrieving local user information

You can use the local user GET endpoint to retrieve all of the local user configurations for data SVMs.

Examples

Retrieving all of the fields for local user configurations for all SVMs

```
# The API:
/api/protocols/cifs/local-users

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/local-users?fields=**"
-H "accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "25b363a6-2971-11eb-88e1-0050568eefd4",
      "name": "vs1"
    },
    "sid": "S-1-5-21-256008430-3394229847-3930036330-500",
    "name": "CIFS_SERVER1\\Administrator",
    "full_name": "",
    "description": "Built-in administrator account",
    "account_disabled": false,
    "membership": [
      {
        "name": "BUILTIN\\Administrators",
        "sid": "S-1-5-32-544"
      }
    ]
  },
  {
    "svm": {
      "uuid": "25b363a6-2971-11eb-88e1-0050568eefd4",
      "name": "vs1"
    },
    "sid": "S-1-5-21-256008430-3394229847-3930036330-1001",
    "name": "CIFS_SERVER1\\user1",
    "full_name": "local user1",
    "description": "This is CIFS local user",
    "account_disabled": false
  },
  {
    "svm": {
      "uuid": "25b363a6-2971-11eb-88e1-0050568eefd4",
```

```
      "name": "vs1"
    },
    "sid": "S-1-5-21-256008430-3394229847-3930036330-1002",
    "name": "CIFS_SERVER1\\user2",
    "full_name": "local user2",
    "description": "This is CIFS local user",
    "account_disabled": false,
    "membership": [
      {
        "name": "CIFS_SERVER1\\grp1",
        "sid": "S-1-5-21-256008430-3394229847-3930036330-1001"
      },
      {
        "name": "CIFS_SERVER1\\grp2",
        "sid": "S-1-5-21-256008430-3394229847-3930036330-1002"
      }
    ]
  },
  {
    "svm": {
      "uuid": "3f479a01-2971-11eb-88e1-0050568eefd4",
      "name": "vs2"
    },
    "sid": "S-1-5-21-1625922807-3304708894-3529444428-500",
    "name": "CIFS_SERVER2\\Administrator",
    "full_name": "",
    "description": "Built-in administrator account",
    "account_disabled": false,
    "membership": [
      {
        "name": "BUILTIN\\Administrators",
        "sid": "S-1-5-32-544"
      }
    ]
  },
  {
    "svm": {
      "uuid": "3f479a01-2971-11eb-88e1-0050568eefd4",
      "name": "vs2"
    },
    "sid": "S-1-5-21-1625922807-3304708894-3529444428-1001",
    "name": "CIFS_SERVER2\\user1",
    "full_name": "local user1",
    "description": "This is CIFS local user",
    "account_disabled": false
  }
```

```
],
"num_records": 5
}
```

Retrieving the local user configuration of a specific SVM

```
# The API:
/api/protocols/cifs/local-users

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/local-
users?svm.uuid=25b363a6-2971-11eb-88e1-0050568eefd4&fields=**" -H "accept:
application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "25b363a6-2971-11eb-88e1-0050568eefd4",
      "name": "vs1"
    },
    "sid": "S-1-5-21-256008430-3394229847-3930036330-500",
    "name": "CIFS_SERVER1\\Administrator",
    "full_name": "",
    "description": "Built-in administrator account",
    "account_disabled": false,
    "membership": [
      {
        "name": "BUILTIN\\Administrators",
        "sid": "S-1-5-32-544"
      }
    ]
  },
  {
    "svm": {
      "uuid": "25b363a6-2971-11eb-88e1-0050568eefd4",
      "name": "vs1"
    },
    "sid": "S-1-5-21-256008430-3394229847-3930036330-1001",
    "name": "CIFS_SERVER1\\user1",
    "full_name": "local user1",
```

```
    "description": "This is CIFS local user",
    "account_disabled": false
  },
  {
    "svm": {
      "uuid": "25b363a6-2971-11eb-88e1-0050568eefd4",
      "name": "vs1"
    },
    "sid": "S-1-5-21-256008430-3394229847-3930036330-1002",
    "name": "CIFS_SERVER1\\user2",
    "full_name": "local user2",
    "description": "This is CIFS local user",
    "account_disabled": false,
    "membership": [
      {
        "name": "CIFS_SERVER1\\grp1",
        "sid": "S-1-5-21-256008430-3394229847-3930036330-1001"
      },
      {
        "name": "CIFS_SERVER1\\grp2",
        "sid": "S-1-5-21-256008430-3394229847-3930036330-1002"
      }
    ]
  },
],
"num_records": 3
}
```


Retrieving a local user configuration of a specific SVM and user

```
# The API:
/api/protocols/cifs/local-users/{svm.uuid}/{sid}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/local-users/25b363a6-
2971-11eb-88e1-0050568eefd4/S-1-5-21-1625922807-3304708894-3529444428-
1001" -H "accept: application/json"

# The response:
{
"svm": {
  "uuid": "25b363a6-2971-11eb-88e1-0050568eefd4",
  "name": "vs1"
},
"sid": "S-1-5-21-256008430-3394229847-3930036330-1001",
"name": "CIFS_SERVER1\\user1",
"full_name": "local user1",
"description": "This is CIFS local user",
"account_disabled": false
}
```

Creating a local user configuration

The local user POST endpoint creates a local user configuration for the specified SVM.

Examples

Creating a local user configuration with all fields specified

```
# The API:
/api/protocols/cifs/local-users

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/cifs/local-users" -H
"accept: application/json" -H "Content-Type: application/json" -d "{
\"account_disabled\": false, \"description\": \"This is local user.\",
\"full_name\": \"user name\", \"name\": \"SMB_SERVER01\\\\user\",
\"password\": \"netapp1N\", \"svm\": { \"name\": \"vs1\", \"uuid\":
\"25b363a6-2971-11eb-88e1-0050568eefd4\" }}"
```

Creating a local user configuration with only mandatory fields specified

```
# The API:
/api/protocols/cifs/local-users

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/cifs/local-users" -H
"accept: application/json" -d "{ \"name\": \"user1\", \"password\":
\"netapp1N\", \"svm\": { \"uuid\": \"25b363a6-2971-11eb-88e1-
0050568eefd4\" }}"
```

Updating a local user configuration

The local user PATCH endpoint updates the local user configuration for the specified user and SVM.

Updating a local user name and password

```
# The API:
/api/protocols/cifs/local-users/{svm.uuid}/{sid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/cifs/local-users/25b363a6-
2971-11eb-88e1-0050568eefd4/S-1-5-21-1625922807-3304708894-3529444428-
1001" -H "accept: application/json" -d "{ \"name\": \"new_user1\",
\"password\": \"netapp1Net\" }"
```

Deleting a local user configuration

The local user DELETE endpoint deletes the specified local user for the specified SVM. The following example shows a DELETE operation:

```
# The API:
/api/protocols/cifs/local-users/{svm.uuid}/{sid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/cifs/local-users/25b363a6-
2971-11eb-88e1-0050568eefd4/S-1-5-21-1625922807-3304708894-3529444428-
1001" -H "accept: application/json"
```

Retrieve local users for all SVMs

GET `/protocols/cifs/local-users`

Introduced In: 9.9

Retrieves local users for all of the SVMs. Local groups to which this user belongs to are also displayed.

Advanced properties

- `membership`

Related ONTAP commands

- `vserver cifs users-and-groups local-user show`
- `vserver cifs users-and-groups local-user show-membership`

Learn more

- DOC /protocols/cifs/local-users

Parameters

Name	Type	In	Required	Description
description	string	query	False	Filter by description
membership.name	string	query	False	Filter by membership.name
membership.sid	string	query	False	Filter by membership.sid • Introduced in: 9.10
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
name	string	query	False	Filter by name
sid	string	query	False	Filter by sid • Introduced in: 9.10
full_name	string	query	False	Filter by full_name

Name	Type	In	Required	Description
account_disabled	boolean	query	False	Filter by account_disabled
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	

Name	Type	Description
num_records	integer	Number of local user records.
records	array[local_cifs_user]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "description": "This is local user.",
      "full_name": "user name",
      "membership": [
        {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "SMB_SERVER01\\group",
          "sid": "S-1-5-21-256008430-3394229847-3930036330-1001"
        }
      ],
      "name": "SMB_SERVER01\\user",
      "sid": "S-1-5-21-256008430-3394229847-3930036330-1001",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```

Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

membership

Name	Type	Description
_links	_links	
name	string	Local group name. The maximum supported length of a group name is 256 characters.
sid	string	The security ID of the local group which uniquely identifies the group. The group SID is automatically generated in POST and it is retrieved using the GET method.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

local_cifs_user

Name	Type	Description
_links	_links	
account_disabled	boolean	Indicates whether the user account is enabled or disabled.
description	string	Description for the local user.
full_name	string	User's full name.
membership	array[membership]	Specifies local groups of which this local user is a member.
name	string	Local user name. The maximum supported length of an user name is 20 characters.
sid	string	The security ID of the local user which uniquely identifies the user. The user SID is automatically generated in POST and it is retrieved using the GET method.
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Create local user configuration for an SVM

POST `/protocols/cifs/local-users`

Introduced In: 9.9

Creates the local user configuration for an SVM.

Important notes

- The user name can contain up to 20 characters.
- The user name cannot be terminated by a period.
- The user name does not support any of the following characters: " / ? [ ] , : \| < > + = ; ? * @ or ASCII characters in the range 1-31.
- The password must be at least six characters in length and must not contain the user account name.
- The password must contain characters from three of the following four categories:
- English uppercase characters (A through Z)
- English lowercase characters (a through z)
- Base 10 digits (0 through 9)
- Special characters: ~ ! @ # 0 ^ & * _ - + = ` ? \| ( ) [ ] : ; " ' < > , . ? /

Required properties

- `svm.uuid` or `svm.name` - Existing SVM in which to create the local user.
- `name` - Name of the local user.
- `password` - Password for the local user.

Default property values

If not specified in POST, the following default property value is assigned:

- `account_disabled` - false

Related ONTAP commands

- `vserver cifs users-and-groups local-user create`

Learn more

- DOC /protocols/cifs/local-users

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:

Request Body

Name	Type	Description
account_disabled	boolean	Indicates whether the user account is enabled or disabled.
description	string	Description for the local user.
full_name	string	User's full name.
name	string	Local user name. The maximum supported length of an user name is 20 characters.
password	string	Password for the local user.
svm	svm	

Example request

```
{
  "description": "This is local user.",
  "full_name": "user name",
  "name": "SMB_SERVER01\\user",
  "password": "string",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

```
Status: 201, Created
```

Name	Type	Description
num_records	integer	Number of local user records.
records	array[local_cifs_user]	

Example response


```
{
  "records": [
    {
      "description": "This is local user.",
      "full_name": "user name",
      "name": "SMB_SERVER01\\user",
      "password": "string",
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```


Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
262278	Name and password are required fields.
655399	CIFS server must exist to create a local user.
655660	The operation is allowed only on data SVMs.
655661	The user name should not exceed 20 characters. Also full_name and description should not exceed 256 characters.
655665	The user name must not match the CIFS server name of the specified SVM.
655668	The specified user name contains illegal characters.
655675	The local domain name specified in user name doesn't exist.

Error Code	Description
655682	The user name cannot be blank.
655733	The password does not meet the password complexity requirements.
655736	The specified user name already exists.
2621706	The specified SVM UUID is incorrect for the specified SVM name.

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

membership

Name	Type	Description
name	string	Local group name. The maximum supported length of a group name is 256 characters.

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

local_cifs_user

Name	Type	Description
account_disabled	boolean	Indicates whether the user account is enabled or disabled.
description	string	Description for the local user.
full_name	string	User's full name.
name	string	Local user name. The maximum supported length of an user name is 20 characters.
password	string	Password for the local user.
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete local user configuration for an SVM

DELETE `/protocols/cifs/local-users/{svm.uuid}/{sid}`

Introduced In: 9.10

Deletes a local user configuration for the specified SVM.

Related ONTAP commands

- `vserver cifs users-and-groups local-user delete`

Learn more

- DOC /protocols/cifs/local-users

Parameters

Name	Type	In	Required	Description
sid	string	path	True	Local user SID
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655735	The local Administrator account cannot be deleted.

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve local user information for a user and SVM

GET `/protocols/cifs/local-users/{svm.uuid}/{sid}`

Introduced In: 9.10

Retrieves local user information for the specified user and SVM.

Advanced properties

- `membership`

Related ONTAP commands

- `vserver cifs users-and-groups local-user show`
- `vserver cifs users-and-groups local-user show-membership`

Learn more

- DOC /protocols/cifs/local-users

Parameters

Name	Type	In	Required	Description
sid	string	path	True	Local user SID
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
account_disabled	boolean	Indicates whether the user account is enabled or disabled.
description	string	Description for the local user.
full_name	string	User's full name.
membership	array[membership]	Specifies local groups of which this local user is a member.
name	string	Local user name. The maximum supported length of an user name is 20 characters.
sid	string	The security ID of the local user which uniquely identifies the user. The user SID is automatically generated in POST and it is retrieved using the GET method.
svm	svm	

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "description": "This is local user.",
  "full_name": "user name",
  "membership": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "SMB_SERVER01\\group",
      "sid": "S-1-5-21-256008430-3394229847-3930036330-1001"
    }
  ],
  "name": "SMB_SERVER01\\user",
  "sid": "S-1-5-21-256008430-3394229847-3930036330-1001",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

membership

Name	Type	Description
_links	_links	
name	string	Local group name. The maximum supported length of a group name is 256 characters.
sid	string	The security ID of the local group which uniquely identifies the group. The group SID is automatically generated in POST and it is retrieved using the GET method.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update local user information for a user and SVM

PATCH `/protocols/cifs/local-users/{svm.uuid}/{sid}`

Introduced In: 9.10

Updates local user information for the specified user and SVM. The PATCH endpoint is also used to rename a user and to set the password for the user.

Related ONTAP commands

- `vserver cifs users-and-groups local-user modify`
- `vserver cifs users-and-groups local-user rename`
- `vserver cifs users-and-groups local-user set-password`

Learn more

- DOC /protocols/cifs/local-users

Parameters

Name	Type	In	Required	Description
sid	string	path	True	Local user SID
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
account_disabled	boolean	Indicates whether the user account is enabled or disabled.

Name	Type	Description
description	string	Description for the local user.
full_name	string	User's full name.
name	string	Local user name. The maximum supported length of an user name is 20 characters.
password	string	Password for the local user.
svm	svm	

Example request

```
{
  "description": "This is local user.",
  "full_name": "user name",
  "name": "SMB_SERVER01\\user",
  "password": "string",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655661	The user name should not exceed 20 characters. Also full_name and description should not exceed 256 characters.
655668	The specified user name contains illegal characters.

Error Code	Description
655675	The local domain name specified in the user name does not exist.
655682	The user name cannot be blank.
655732	Failed to rename a user. The error code returned details the failure along with the reason for the failure. Take corrective actions as per the specified reason.
655733	The specified password does not meet the password complexity requirements.
655737	To rename an existing user, the local domain specified in name must match the local domain of the user to be renamed.

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

membership

Name	Type	Description
name	string	Local group name. The maximum supported length of a group name is 256 characters.

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

local_cifs_user

Name	Type	Description
account_disabled	boolean	Indicates whether the user account is enabled or disabled.
description	string	Description for the local user.
full_name	string	User's full name.
name	string	Local user name. The maximum supported length of an user name is 20 characters.
password	string	Password for the local user.
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Manage CIFS services

Protocols CIFS services endpoint overview

Overview

A CIFS server is necessary to provide SMB clients with access to the Storage Virtual Machine (SVM). Before you begin, the following prerequisites must be in place:

- At least one SVM LIF must exist on the SVM.
- The LIFs must be able to connect to the DNS servers configured on the SVM and to an Active Directory domain controller of the domain to which you want to join the CIFS server.
- The DNS servers must contain the service location records that are needed to locate the Active Directory domain services.
- The cluster time must be synchronized to within five minutes of the Active Directory domain controller.

Performance monitoring

Performance of the SVM can be monitored by the `metric.*` and `statistics.*` properties. These show the performance of the SVM in terms of IOPS, latency and throughput. The `metric.*` properties denote an average whereas `statistics.*` properties denote a real-time monotonically increasing value aggregated across all nodes.

Information on the CIFS server

You must keep the following in mind when creating the CIFS server:

- The CIFS server name might or might not be the same as the SVM name.

- The CIFS server name can be up to 15 characters in length.
- The following characters are not allowed: @ # * ( ) = + [ ] \| ; : " , < > \ / ?
- You must use the FQDN when specifying the domain.
- The default is to add the CIFS server machine account to the Active Directory "CN=Computer" object.
- You can choose to add the CIFS server to a different organizational unit (OU) by specifying the "organizational_unit" parameter. When specifying the OU, do not specify the domain portion of the distinguished name; only specify the OU or CN portion of the distinguished name. ONTAP appends the value provided for the required "-domain" parameter onto the value provided for the "-ou" parameter to create the Active Directory distinguished name, which is used when joining the Active Directory domain.
- You can optionally choose to add a text comment of up to 48 characters about the CIFS server. If there is a space in the comment text, you must enclose the entire string in quotation marks.
- You can optionally choose to add a comma-delimited list of one or more NetBIOS aliases for the CIFS server.
- The initial administrative status of the CIFS server is "up".
- The large-mtu and multichannel features are enabled for the new CIFS server.
- If LDAP is configured with the *use_start_tls* and *session_security* features, the new CIFS server will also have this property set.

Examples

Creating a CIFS server

To create a CIFS server, use the following API. Note the *return_records=true* query parameter used to obtain the newly created entry in the response.

```
# The API:
POST /api/protocols/cifs/services

# The call:
curl -X POST "https://<mgmt-
ip>/api/protocols/cifs/services?return_timeout=10&return_records=true" -H
"accept: application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE="
-H "Content-Type: application/json" -d "{ \"ad_domain\": { \"fqdn\":
\"ontapavc.com\", \"organizational_unit\": \"CN=Computers\", \"password\":
\"cifs*123\", \"user\": \"administrator\" }, \"comment\": \"This CIFS
Server Belongs to CS Department\", \"default_unix_user\": \"string\",
\"enabled\": true, \"metric\": {}, \"name\": \"CIFS1\", \"netbios\": {
\"aliases\": [ \"ALIAS_1\", \"ALIAS_2\", \"ALIAS_3\" ], \"enabled\":
false, \"wins_servers\": [ \"10.224.65.20\", \"10.224.65.21\" ] },
\"options\": { \"admin_to_root_mapping\": true, \"advanced_sparse_file\":
true, \"copy_offload\": true, \"fake_open\": true, \"fsctl_trim\": true,
\"junction_reparse\": true, \"large_mtu\": true, \"multichannel\": true,
\"null_user_windows_name\": \"string\", \"path_component_cache\": true,
\"referral\": false, \"smb_credits\": 128, \"widelink_reparse_versions\":
```

```
[ \"smb1\" ] }, \"security\": { \"encrypt_dc_connection\": false,
\"kdc_encryption\": false, \"restrict_anonymous\": \"no_enumeration\",
\"session_security\": \"none\", \"smb_encryption\": false,
\"smb_signing\": false, \"use_ldaps\": false, \"use_start_tls\": false },
\"statistics\": {}, \"svm\": { \"name\": \"vs1\", \"uuid\": \"e0c20d9c-
96cd-11eb-97da-0050568e684d\" }}"

# The response:
{
"num_records": 1,
"records": [
  {
    "svm": {
      "uuid": "e0c20d9c-96cd-11eb-97da-0050568e684d",
      "name": "vs1"
    },
    "name": "CIFS1",
    "ad_domain": {
      "fqdn": "ONTAPAVC.COM",
      "organizational_unit": "CN=Computers"
    },
    "enabled": true,
    "comment": "This CIFS Server Belongs to CS Department",
    "security": {
      "restrict_anonymous": "no_enumeration",
      "smb_signing": false,
      "smb_encryption": false,
      "kdc_encryption": false,
      "aes_netlogon_enabled": false,
      "try_ldap_channel_binding": false,
      "referral_enabled": false,
      "lm_compatibility_level": "lm_ntlm_ntlmv2_krb",
      "encrypt_dc_connection": false,
      "use_start_tls": false,
      "session_security": "none",
      "use_ldaps": false
    },
    "netbios": {
      "aliases": [
        "ALIAS_1",
        "ALIAS_2",
        "ALIAS_3"
      ],
      "wins_servers": [
        "10.224.65.20",
        "10.224.65.21"
```

```
      ],
      "enabled": false
    },
    "default_unix_user": "string",
    "metric": {
      "timestamp": "2021-04-06T18:07:15Z",
      "duration": "PT15S",
      "status": "ok",
      "throughput": {
        "read": 0,
        "write": 0,
        "total": 0
      },
      "iops": {
        "read": 0,
        "write": 0,
        "other": 0,
        "total": 0
      },
      "latency": {
        "read": 0,
        "write": 0,
        "other": 0,
        "total": 0
      }
    },
    "statistics": {
      "timestamp": "2021-04-06T18:11:35Z",
      "status": "ok",
      "throughput_raw": {
        "read": 0,
        "write": 0,
        "total": 0
      },
      "iops_raw": {
        "read": 0,
        "write": 0,
        "other": 0,
        "total": 0
      },
      "latency_raw": {
        "read": 0,
        "write": 0,
        "other": 0,
        "total": 0
      }
```

```
    },
    "options": {
      "advanced_sparse_file": true,
      "referral": false,
      "widelink_reparse_versions": [
        "smb1"
      ],
      "multichannel": true,
      "path_component_cache": true,
      "null_user_windows_name": "string",
      "junction_reparse": true,
      "fsctl_trim": true,
      "large_mtu": true,
      "fake_open": true,
      "smb_credits": 128,
      "admin_to_root_mapping": true,
      "copy_offload": true
    }
  }
],
"job": {
  "uuid": "825a0b4b-9703-11eb-8cc1-0050568e684d",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/825a0b4b-9703-11eb-8cc1-0050568e684d"
    }
  }
}
}
```

Retrieving the full CIFS server configuration for all SVMs in the cluster

```
# The API:
GET /api/protocols/cifs/services

# The call:
curl -X GET "https://<mgmt-
ip>/api/protocols/cifs/services?fields=*&return_records=true&return_timeou
t=15" -H "accept: application/json" -H "authorization: Basic
YWRtaW46bmV0YXBwMSE="

# The response:
```

```
{
"records": [
  {
    "svm": {
      "uuid": "e0c20d9c-96cd-11eb-97da-0050568e684d",
      "name": "vs1"
    },
    "name": "CIFS1",
    "ad_domain": {
      "fqdn": "ONTAPAVC.COM",
      "organizational_unit": "CN=Computers"
    },
    "enabled": true,
    "comment": "This CIFS Server Belongs to CS Department",
    "security": {
      "restrict_anonymous": "no_enumeration",
      "smb_signing": false,
      "smb_encryption": false,
      "kdc_encryption": false,
      "aes_netlogon_enabled": false,
      "try_ldap_channel_binding": false,
      "referral_enabled": false,
      "lm_compatibility_level": "lm_ntlm_ntlmv2_krb",
      "encrypt_dc_connection": false,
      "use_start_tls": false,
      "session_security": "none",
      "use_ldaps": false
    },
    "netbios": {
      "aliases": [
        "ALIAS_1",
        "ALIAS_2",
        "ALIAS_3"
      ],
      "wins_servers": [
        "10.224.65.20",
        "10.224.65.21"
      ],
      "enabled": false
    },
    "default_unix_user": "string",
    "options": {
      "advanced_sparse_file": true,
      "referral": false,
      "widelink_reparse_versions": [
        "smb1"
```

```
      ],
      "multichannel": true,
      "path_component_cache": true,
      "null_user_windows_name": "string",
      "junction_reparse": true,
      "fsctl_trim": true,
      "large_mtu": true,
      "fake_open": true,
      "smb_credits": 128,
      "admin_to_root_mapping": true,
      "copy_offload": true
    }
  }
],
"num_records": 1
}
```

Retrieving CIFS server configuration details for a specific SVM

```
# The API:
GET /api/protocols/cifs/services/{svm.uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/services/e0c20d9c-96cd-
11eb-97da-0050568e684d" -H "accept: application/json" -H "authorization:
Basic YWRtaW46bmV0YXBwMSE="

# The response:
{
"svm": {
  "uuid": "e0c20d9c-96cd-11eb-97da-0050568e684d",
  "name": "vs1"
},
"name": "CIFS1",
"ad_domain": {
  "fqdn": "ONTAPAVC.COM",
  "organizational_unit": "CN=Computers"
},
"enabled": true,
"comment": "This CIFS Server Belongs to CS Department",
"security": {
  "restrict_anonymous": "no_enumeration",
```

```
  "smb_signing": false,
  "smb_encryption": false,
  "kdc_encryption": false,
  "aes_netlogon_enabled": false,
  "try_ldap_channel_binding": false,
  "referral_enabled": false,
  "lm_compatibility_level": "lm_ntlm_ntlmv2_krb",
  "encrypt_dc_connection": false,
  "use_start_tls": false,
  "session_security": "none",
  "use_ldaps": false
},
"netbios": {
  "aliases": [
    "ALIAS_1",
    "ALIAS_2",
    "ALIAS_3"
  ],
  "wins_servers": [
    "10.224.65.20",
    "10.224.65.21"
  ],
  "enabled": false
},
"default_unix_user": "string",
"options": {
  "advanced_sparse_file": true,
  "referral": false,
  "widelink_reparse_versions": [
    "smb1"
  ],
  "multichannel": true,
  "path_component_cache": true,
  "null_user_windows_name": "string",
  "junction_reparse": true,
  "fsctl_trim": true,
  "large_mtu": true,
  "fake_open": true,
  "smb_credits": 128,
  "admin_to_root_mapping": true,
  "copy_offload": true
}
}
```

Updating CIFS server properties for the specified SVM

```
# The API:
PATCH /api/protocols/cifs/services/{svm.uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/cifs/services/e0c20d9c-
96cd-11eb-97da-0050568e684d" -H "accept: application/json" -H
"authorization: Basic YWRtaW46bmV0YXBwMSE=" -H "Content-Type:
application/json" -d "{ \"comment\": \"CIFS SERVER MODIFICATION\"}"
```

Removing a CIFS server for a specific SVM

To delete a CIFS server, use the following API. This will delete the CIFS server along with other CIFS configurations such as CIFS share, share ACLs, homedir search-path, and so on.

```
# The API:
DELETE /api/protocols/cifs/services/{svm.uuid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/cifs/services/e0c20d9c-
96cd-11eb-97da-0050568e684d" -H "accept: application/json" -H
"authorization: Basic YWRtaW46bmV0YXBwMSE=" -H "Content-Type:
application/json" -d "{ \"ad_domain\": { \"fqdn\": \"ontapavc.com\",
\"organizational_unit\": \"CN=Computers\", \"password\": \"cifs*123\",
\"user\": \"administrator\" }}"
```

Retrieve CIFS servers

GET `/protocols/cifs/services`

Introduced In: 9.6

Retrieves CIFS servers.

Expensive properties

There is an added cost to retrieving values for these properties. They are not included by default in GET results and must be explicitly requested using the `fields` query parameter. See Requesting specific fields to learn more.

- `statistics.*`
- `metric.*`

Related ONTAP commands

- `vserver cifs server show`
- `vserver cifs server options show`
- `vserver cifs server security show`

Learn more

- DOC /protocols/cifs/services

Parameters

Name	Type	In	Required	Description
name	string	query	False	Filter by name
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
metric.duration	string	query	False	Filter by metric.duration • Introduced in: 9.7
metric.timestamp	string	query	False	Filter by metric.timestamp • Introduced in: 9.7
metric.latency.total	integer	query	False	Filter by metric.latency.total • Introduced in: 9.7
metric.latency.write	integer	query	False	Filter by metric.latency.write • Introduced in: 9.7

Name	Type	In	Required	Description
metric.latency.other	integer	query	False	Filter by metric.latency.other • Introduced in: 9.7
metric.latency.read	integer	query	False	Filter by metric.latency.read • Introduced in: 9.7
metric.iops.total	integer	query	False	Filter by metric.iops.total • Introduced in: 9.7
metric.iops.write	integer	query	False	Filter by metric.iops.write • Introduced in: 9.7
metric.iops.other	integer	query	False	Filter by metric.iops.other • Introduced in: 9.7
metric.iops.read	integer	query	False	Filter by metric.iops.read • Introduced in: 9.7
metric.status	string	query	False	Filter by metric.status • Introduced in: 9.7
metric.throughput.read	integer	query	False	Filter by metric.throughput.read • Introduced in: 9.7

Name	Type	In	Required	Description
metric.throughput.total	integer	query	False	Filter by metric.throughput.total • Introduced in: 9.7
metric.throughput.write	integer	query	False	Filter by metric.throughput.write • Introduced in: 9.7
security.use_ldaps	boolean	query	False	Filter by security.use_ldaps • Introduced in: 9.10
security.try_ldap_channel_binding	boolean	query	False	Filter by security.try_ldap_channel_binding • Introduced in: 9.10
security.use_start_tls	boolean	query	False	Filter by security.use_start_tls • Introduced in: 9.10
security.smb_encryption	boolean	query	False	Filter by security.smb_encryption
security.ldap_referral_enabled	boolean	query	False	Filter by security.ldap_referral_enabled • Introduced in: 9.10

Name	Type	In	Required	Description
security.aes_netlogon_enabled	boolean	query	False	Filter by security.aes_netlogon_enabled • Introduced in: 9.10
security.session_security	string	query	False	Filter by security.session_security • Introduced in: 9.10
security.smb_signing	boolean	query	False	Filter by security.smb_signing
security.kdc_encryption	boolean	query	False	Filter by security.kdc_encryption
security.restrict_anonymous	string	query	False	Filter by security.restrict_anonymous
security.lm_compatibility_level	string	query	False	Filter by security.lm_compatibility_level • Introduced in: 9.8
security.encrypt_dc_connection	boolean	query	False	Filter by security.encrypt_dc_connection • Introduced in: 9.8
enabled	boolean	query	False	Filter by enabled
statistics.latency_raw.total	integer	query	False	Filter by statistics.latency_raw.total • Introduced in: 9.7

Name	Type	In	Required	Description
statistics.latency_raw.write	integer	query	False	Filter by statistics.latency_raw.write • Introduced in: 9.7
statistics.latency_raw.other	integer	query	False	Filter by statistics.latency_raw.other • Introduced in: 9.7
statistics.latency_raw.read	integer	query	False	Filter by statistics.latency_raw.read • Introduced in: 9.7
statistics.status	string	query	False	Filter by statistics.status • Introduced in: 9.7
statistics.iops_raw.total	integer	query	False	Filter by statistics.iops_raw.total • Introduced in: 9.7
statistics.iops_raw.write	integer	query	False	Filter by statistics.iops_raw.write • Introduced in: 9.7
statistics.iops_raw.other	integer	query	False	Filter by statistics.iops_raw.other • Introduced in: 9.7

Name	Type	In	Required	Description
statistics.iops_raw.read	integer	query	False	Filter by statistics.iops_raw.read • Introduced in: 9.7
statistics.timestamp	string	query	False	Filter by statistics.timestamp • Introduced in: 9.7
statistics.throughput_raw.read	integer	query	False	Filter by statistics.throughput_raw.read • Introduced in: 9.7
statistics.throughput_raw.total	integer	query	False	Filter by statistics.throughput_raw.total • Introduced in: 9.7
statistics.throughput_raw.write	integer	query	False	Filter by statistics.throughput_raw.write • Introduced in: 9.7
comment	string	query	False	Filter by comment
ad_domain.organizational_unit	string	query	False	Filter by ad_domain.organizational_unit
ad_domain.fqdn	string	query	False	Filter by ad_domain.fqdn
options.advanced_sparse_file	boolean	query	False	Filter by options.advanced_sparse_file • Introduced in: 9.10

Name	Type	In	Required	Description
options.admin_to_root_mapping	boolean	query	False	Filter by options.admin_to_root_mapping • Introduced in: 9.10
options.large_mtu	boolean	query	False	Filter by options.large_mtu • Introduced in: 9.10
options.multichannel	boolean	query	False	Filter by options.multichannel • Introduced in: 9.10
options.path_component_cache	boolean	query	False	Filter by options.path_component_cache • Introduced in: 9.10
options.smb_credits	integer	query	False	Filter by options.smb_credits • Introduced in: 9.10
options.copy_offload	boolean	query	False	Filter by options.copy_offload • Introduced in: 9.10
options.fsctl_trim	boolean	query	False	Filter by options.fsctl_trim • Introduced in: 9.10
options.fake_open	boolean	query	False	Filter by options.fake_open • Introduced in: 9.10

Name	Type	In	Required	Description
options.referral	boolean	query	False	Filter by options.referral • Introduced in: 9.10
options.widelink_reparse_versions	string	query	False	Filter by options.widelink_reparse_versions • Introduced in: 9.10
options.junction_reparse	boolean	query	False	Filter by options.junction_reparse • Introduced in: 9.10
options.null_user_windows_name	string	query	False	Filter by options.null_user_windows_name • Introduced in: 9.10
default_unix_user	string	query	False	Filter by default_unix_user
netbios.aliases	string	query	False	Filter by netbios.aliases
netbios.wins_servers	string	query	False	Filter by netbios.wins_servers
netbios.enabled	boolean	query	False	Filter by netbios.enabled
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[cifs_service]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "ad_domain": {
        "fqdn": "example.com",
        "organizational_unit": "string"
      },
      "comment": "This CIFS Server Belongs to CS Department",
      "default_unix_user": "string",
      "metric": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "duration": "PT15S",
        "iops": {
          "read": 200,
          "total": 1000,
          "write": 100
        },
        "latency": {
          "read": 200,
          "total": 1000,
          "write": 100
        },
        "status": "ok",
        "throughput": {
          "read": 200,
          "total": 1000,
          "write": 100
```

```
      },
      "timestamp": "2017-01-25T11:20:13Z"
    },
    "name": "CIFS1",
    "netbios": {
      "aliases": [
        "ALIAS_1",
        "ALIAS_2",
        "ALIAS_3"
      ],
      "wins_servers": [
        "10.224.65.20",
        "10.224.65.21"
      ]
    },
    "options": {
      "null_user_windows_name": "string",
      "smb_credits": 128,
      "widelink_reparse_versions": [
        "smb1"
      ]
    },
    "security": {
      "lm_compatibility_level": "string",
      "restrict_anonymous": "string",
      "session_security": "string"
    },
    "statistics": {
      "iops_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "latency_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "status": "ok",
      "throughput_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "timestamp": "2017-01-25T11:20:13Z"
    },
```

```
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

ad_domain

Name	Type	Description
fqdn	string	The fully qualified domain name of the Windows Active Directory to which this CIFS server belongs. A CIFS server appears as a member of Windows server object in the Active Directory store. POST and PATCH only.
organizational_unit	string	Specifies the organizational unit within the Active Directory domain to associate with the CIFS server. POST and PATCH only.

iops

The rate of I/O operations observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

latency

The round trip latency in microseconds observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

throughput

The rate of throughput bytes per second observed at the storage object.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

metric

Name	Type	Description
_links	_links	
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:
iops	iops	The rate of I/O operations observed at the storage object.
latency	latency	The round trip latency in microseconds observed at the storage object.
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_ delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput	throughput	The rate of throughput bytes per second observed at the storage object.
timestamp	string	The timestamp of the performance data.

cifs_netbios

Name	Type	Description
aliases	array[string]	
enabled	boolean	Specifies whether NetBios name service (NBNS) is enabled for the CIFS. If this service is enabled, the CIFS server will start sending the broadcast for name registration.
wins_servers	array[string]	

cifs_service_options

Name	Type	Description
admin_to_root_mapping	boolean	Specifies whether or not Administrator can be mapped to the UNIX user "root".
advanced_sparse_file	boolean	Specifies whether or not the CIFS server supports the advanced sparse file capabilities. This allows CIFS clients to query the allocated ranges of a file and to write zeroes or free data blocks for ranges of a file.
copy_offload	boolean	Specifies whether or not to enable the Copy Offload feature. This feature enables direct data transfers within or between compatible storage devices without transferring the data through the host computer. Note that this will also enable/disable the direct copy feature accordingly.
fake_open	boolean	Specifies whether or not fake open support is enabled. This parameter allows you to optimize the open and close requests coming from SMB 2 clients.
fsctl_trim	boolean	Specifies whether or not the trim requests (FSCTL_FILE_LEVEL_TRIM) are supported on the CIFS server.

Name	Type	Description
junction_reparse	boolean	Specifies whether or not the reparse point support is enabled. When enabled the CIFS server exposes junction points to Windows clients as reparse points. This parameter is only active if the client has negotiated use of the SMB 2 or SMB 3 protocol. This parameter is not supported for SVMs with Infinite Volume.
large_mtu	boolean	Specifies whether or not SMB clients can send reads up to 1 MB in size.
multichannel	boolean	Specifies whether or not the CIFS server supports Multichannel.
null_user_windows_name	string	Specifies a Windows User or Group name that should be mapped in case of a NULL user value.
path_component_cache	boolean	Specifies whether or not the path component cache is enabled on the CIFS server.
referral	boolean	Specifies whether or not to refer clients to more optimal LIFs. When enabled, it automatically refers clients to a data LIF local to the node which hosts the root of the requested share.
smb_credits	integer	Specifies the maximum number of outstanding requests on a CIFS connection.
widelink_reparse_versions	array[string]	Specifies the CIFS protocol versions for which the widelink is reported as reparse point.

cifs_service_security

Name	Type	Description
aes_netlogon_enabled	boolean	Specifies whether or not an AES session key is enabled for the Netlogon channel.
encrypt_dc_connection	boolean	Specifies whether encryption is required for domain controller connections.
kdc_encryption	boolean	Specifies whether AES-128 and AES-256 encryption is enabled for all Kerberos-based communication with the Active Directory KDC. To take advantage of the strongest security with Kerberos-based communication, AES-256 and AES-128 encryption can be enabled on the CIFS server. Kerberos-related communication for CIFS is used during CIFS server creation on the SVM, as well as during the SMB session setup phase. The CIFS server supports the following encryption types for Kerberos communication: • RC4-HMAC • DES • AES When the CIFS server is created, the domain controller creates a computer machine account in Active Directory. After a newly created machine account authenticates, the KDC and the CIFS server negotiates encryption types. At this time, the KDC becomes aware of the encryption capabilities of the particular machine account and uses those capabilities in subsequent communication with the CIFS server. In addition to negotiating encryption types during CIFS server creation, the encryption types are renegotiated when a machine account password is reset.

Name	Type	Description
ldap_referral_enabled	boolean	Specifies whether or not LDAP referral chasing is enabled for AD LDAP connections.
lm_compatibility_level	string	It is CIFS server minimum security level, also known as the LMCompatibilityLevel. The minimum security level is the minimum level of the security tokens that the CIFS server accepts from SMB clients. The available values are: • lm_ntlm_ntlmv2_krb Accepts LM, NTLM, NTLMv2 and Kerberos • ntlm_ntlmv2_krb Accepts NTLM, NTLMv2 and Kerberos • ntlmv2_krb Accepts NTLMv2 and Kerberos • krb Accepts Kerberos only
restrict_anonymous	string	Specifies what level of access an anonymous user is granted. An anonymous user (also known as a "null user") can list or enumerate certain types of system information from Windows hosts on the network, including user names and details, account policies, and share names. Access for the anonymous user can be controlled by specifying one of three access restriction settings. The available values are: • no_restriction - No access restriction for an anonymous user. • no_enumeration - Enumeration is restricted for an anonymous user. • no_access - All access is restricted for an anonymous user.

Name	Type	Description
session_security	string	Specifies client session security for AD LDAP connections. The available values are: • none - No Signing or Sealing. • sign - Sign LDAP traffic. • seal - Seal and Sign LDAP traffic
smb_encryption	boolean	Specifies whether encryption is required for incoming CIFS traffic.
smb_signing	boolean	Specifies whether signing is required for incoming CIFS traffic. SMB signing helps to ensure that network traffic between the CIFS server and the client is not compromised.
try_ldap_channel_binding	boolean	Specifies whether or not channel binding is attempted in the case of TLS/LDAPS.
use_ldaps	boolean	Specifies whether or not to use use LDAPS for secure Active Directory LDAP connections by using the TLS/SSL protocols.
use_start_tls	boolean	Specifies whether or not to use SSL/TLS for allowing secure LDAP communication with Active Directory LDAP servers.

iops_raw

The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

latency_raw

The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

throughput_raw

Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

statistics

Name	Type	Description
iops_raw	iops_raw	The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.
latency_raw	latency_raw	The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput_raw	throughput_raw	Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.
timestamp	string	The timestamp of the performance data.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

cifs_service

Name	Type	Description
_links	_links	
ad_domain	ad_domain	
comment	string	A descriptive text comment for the CIFS server. SMB clients can see the CIFS server comment when browsing servers on the network. If there is a space in the comment, you must enclose the entire string in quotation marks.
default_unix_user	string	Specifies the UNIX user to which any authenticated CIFS user is mapped to, if the normal user mapping rules fails.
enabled	boolean	Specifies if the CIFS service is administratively enabled.
metric	metric	
name	string	The name of the CIFS server.
netbios	cifs_netbios	
options	cifs_service_options	
security	cifs_service_security	
statistics	statistics	
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code

Name	Type	Description
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Create a CIFS server

POST `/protocols/cifs/services`

Introduced In: 9.6

Creates a CIFS server. Each SVM can have one CIFS server.

Important notes

- The CIFS server name might or might not be the same as the SVM name.
- The CIFS server name can contain up to 15 characters.
- The CIFS server name does not support the following characters: @ # * ( ) = + [ ] \| ; : " , < > / ?

Required properties

- `svm.uuid` or `svm.name` - Existing SVM in which to create the CIFS server.
- `name` - Name of the CIFS server.
- `ad_domain.fqdn` - Fully qualified domain name of the Windows Active Directory to which this CIFS server belongs.
- `ad_domain.user` - User account with the access to add the CIFS server to the Active Directory.
- `ad_domain.password` - Account password used to add this CIFS server to the Active Directory.

Recommended optional properties

- `comment` - Add a text comment of up to 48 characters about the CIFS server.
- `netbios.aliases` - Add a comma-delimited list of one or more NetBIOS aliases for the CIFS server.
- `netbios.wins_servers` - Add a list of Windows Internet Name Server (WINS) addresses that manage

and map the NetBIOS name of the CIFS server to their network IP addresses. The IP addresses must be IPv4 addresses.

Default property values

If not specified in POST, the following default property values are assigned:

- `ad_domain.organizational_unit` - *CN=Computers*
- `enabled` - *true*
- `restrict_anonymous` - *no_enumeration*
- `smb_signing` - *false*
- `smb_encryption` - *false*
- `encrypt_dc_connection` - *false*
- `kdc_encryption` - *false*
- `default_unix_user` - *pcuser*
- `netbios_enabled` - *false* However, if either "netbios.wins-server" or "netbios.aliases" is set during POST and if `netbios_enabled` is not specified then `netbios_enabled` is set to true.
- `aes_netlogon_enabled` - *false*
- `try_ldap_channel_binding` - *true*
- `ldap_referral_enabled` - *false*

Related ONTAP commands

- `vserver cifs server create`
- `vserver cifs server options modify`
- `vserver cifs security modify`
- `vserver cifs server add-netbios-aliases`

Learn more

- DOC /protocols/cifs/services

Parameters

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:

Request Body

Name	Type	Description
ad_domain	ad_domain	

Name	Type	Description
comment	string	A descriptive text comment for the CIFS server. SMB clients can see the CIFS server comment when browsing servers on the network. If there is a space in the comment, you must enclose the entire string in quotation marks.
default_unix_user	string	Specifies the UNIX user to which any authenticated CIFS user is mapped to, if the normal user mapping rules fails.
enabled	boolean	Specifies if the CIFS service is administratively enabled.
metric	metric	
name	string	The name of the CIFS server.
netbios	cifs_netbios	
options	cifs_service_options	
security	cifs_service_security	
statistics	statistics	
svm	svm	

Example request


```
{
  "ad_domain": {
    "fqdn": "example.com",
    "organizational_unit": "string",
    "password": "string",
    "user": "string"
  },
  "comment": "This CIFS Server Belongs to CS Department",
  "default_unix_user": "string",
  "metric": {
    "duration": "PT15S",
    "iops": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "latency": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "status": "ok",
    "throughput": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "timestamp": "2017-01-25T11:20:13Z"
  },
  "name": "CIFS1",
  "netbios": {
    "aliases": [
      "ALIAS_1",
      "ALIAS_2",
      "ALIAS_3"
    ],
    "wins_servers": [
      "10.224.65.20",
      "10.224.65.21"
    ]
  },
  "options": {
    "null_user_windows_name": "string",
    "smb_credits": 128,
```

```
    "widelink_reparse_versions": [
      "smb1"
    ]
  },
  "security": {
    "restrict_anonymous": "string",
    "session_security": "string"
  },
  "statistics": {
    "iops_raw": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "latency_raw": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "status": "ok",
    "throughput_raw": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "timestamp": "2017-01-25T11:20:13Z"
  },
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```


Response

```
Status: 202, Accepted
```

Name	Type	Description
job	job_link	

Example response


```
{
  "job": {
    "uuid": "string"
  }
}
```


Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
4915251	STARTTLS and LDAPS cannot be used together.

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

ad_domain

Name	Type	Description
fqdn	string	The fully qualified domain name of the Windows Active Directory to which this CIFS server belongs. A CIFS server appears as a member of Windows server object in the Active Directory store. POST and PATCH only.
organizational_unit	string	Specifies the organizational unit within the Active Directory domain to associate with the CIFS server. POST and PATCH only.
password	string	The account password used to add this CIFS server to the Active Directory. This is not audited.
user	string	The user account used to add this CIFS server to the Active Directory.

iops

The rate of I/O operations observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.

Name	Type	Description
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

latency

The round trip latency in microseconds observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

throughput

The rate of throughput bytes per second observed at the storage object.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

metric

Name	Type	Description
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:
iops	iops	The rate of I/O operations observed at the storage object.
latency	latency	The round trip latency in microseconds observed at the storage object.
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_ delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput	throughput	The rate of throughput bytes per second observed at the storage object.
timestamp	string	The timestamp of the performance data.

cifs_netbios

Name	Type	Description
aliases	array[string]	
enabled	boolean	Specifies whether NetBios name service (NBNS) is enabled for the CIFS. If this service is enabled, the CIFS server will start sending the broadcast for name registration.
wins_servers	array[string]	

cifs_service_options

Name	Type	Description
admin_to_root_mapping	boolean	Specifies whether or not Administrator can be mapped to the UNIX user "root".
advanced_sparse_file	boolean	Specifies whether or not the CIFS server supports the advanced sparse file capabilities. This allows CIFS clients to query the allocated ranges of a file and to write zeroes or free data blocks for ranges of a file.
copy_offload	boolean	Specifies whether or not to enable the Copy Offload feature. This feature enables direct data transfers within or between compatible storage devices without transferring the data through the host computer. Note that this will also enable/disable the direct copy feature accordingly.
fake_open	boolean	Specifies whether or not fake open support is enabled. This parameter allows you to optimize the open and close requests coming from SMB 2 clients.
fsctl_trim	boolean	Specifies whether or not the trim requests (FSCTL_FILE_LEVEL_TRIM) are supported on the CIFS server.

Name	Type	Description
junction_reparse	boolean	Specifies whether or not the reparse point support is enabled. When enabled the CIFS server exposes junction points to Windows clients as reparse points. This parameter is only active if the client has negotiated use of the SMB 2 or SMB 3 protocol. This parameter is not supported for SVMs with Infinite Volume.
large_mtu	boolean	Specifies whether or not SMB clients can send reads up to 1 MB in size.
multichannel	boolean	Specifies whether or not the CIFS server supports Multichannel.
null_user_windows_name	string	Specifies a Windows User or Group name that should be mapped in case of a NULL user value.
path_component_cache	boolean	Specifies whether or not the path component cache is enabled on the CIFS server.
referral	boolean	Specifies whether or not to refer clients to more optimal LIFs. When enabled, it automatically refers clients to a data LIF local to the node which hosts the root of the requested share.
smb_credits	integer	Specifies the maximum number of outstanding requests on a CIFS connection.
widelink_reparse_versions	array[string]	Specifies the CIFS protocol versions for which the widelink is reported as reparse point.

cifs_service_security

Name	Type	Description
aes_netlogon_enabled	boolean	Specifies whether or not an AES session key is enabled for the Netlogon channel.
encrypt_dc_connection	boolean	Specifies whether encryption is required for domain controller connections.
kdc_encryption	boolean	Specifies whether AES-128 and AES-256 encryption is enabled for all Kerberos-based communication with the Active Directory KDC. To take advantage of the strongest security with Kerberos-based communication, AES-256 and AES-128 encryption can be enabled on the CIFS server. Kerberos-related communication for CIFS is used during CIFS server creation on the SVM, as well as during the SMB session setup phase. The CIFS server supports the following encryption types for Kerberos communication: • RC4-HMAC • DES • AES When the CIFS server is created, the domain controller creates a computer machine account in Active Directory. After a newly created machine account authenticates, the KDC and the CIFS server negotiates encryption types. At this time, the KDC becomes aware of the encryption capabilities of the particular machine account and uses those capabilities in subsequent communication with the CIFS server. In addition to negotiating encryption types during CIFS server creation, the encryption types are renegotiated when a machine account password is reset.

Name	Type	Description
ldap_referral_enabled	boolean	Specifies whether or not LDAP referral chasing is enabled for AD LDAP connections.
restrict_anonymous	string	Specifies what level of access an anonymous user is granted. An anonymous user (also known as a "null user") can list or enumerate certain types of system information from Windows hosts on the network, including user names and details, account policies, and share names. Access for the anonymous user can be controlled by specifying one of three access restriction settings. The available values are: • no_restriction - No access restriction for an anonymous user. • no_enumeration - Enumeration is restricted for an anonymous user. • no_access - All access is restricted for an anonymous user.
session_security	string	Specifies client session security for AD LDAP connections. The available values are: • none - No Signing or Sealing. • sign - Sign LDAP traffic. • seal - Seal and Sign LDAP traffic
smb_encryption	boolean	Specifies whether encryption is required for incoming CIFS traffic.
smb_signing	boolean	Specifies whether signing is required for incoming CIFS traffic. SMB signing helps to ensure that network traffic between the CIFS server and the client is not compromised.

Name	Type	Description
try_ldap_channel_binding	boolean	Specifies whether or not channel binding is attempted in the case of TLS/LDAPS.
use_ldaps	boolean	Specifies whether or not to use use LDAPS for secure Active Directory LDAP connections by using the TLS/SSL protocols.
use_start_tls	boolean	Specifies whether or not to use SSL/TLS for allowing secure LDAP communication with Active Directory LDAP servers.

iops_raw

The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

latency_raw

The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

throughput_raw

Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

statistics

Name	Type	Description
iops_raw	iops_raw	The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.
latency_raw	latency_raw	The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.

Name	Type	Description
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput_raw	throughput_raw	Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.
timestamp	string	The timestamp of the performance data.

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

cifs_service

Name	Type	Description
ad_domain	ad_domain	

Name	Type	Description
comment	string	A descriptive text comment for the CIFS server. SMB clients can see the CIFS server comment when browsing servers on the network. If there is a space in the comment, you must enclose the entire string in quotation marks.
default_unix_user	string	Specifies the UNIX user to which any authenticated CIFS user is mapped to, if the normal user mapping rules fails.
enabled	boolean	Specifies if the CIFS service is administratively enabled.
metric	metric	
name	string	The name of the CIFS server.
netbios	cifs_netbios	
options	cifs_service_options	
security	cifs_service_security	
statistics	statistics	
svm	svm	

job_link

Name	Type	Description
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete a CIFS server and related configurations

DELETE `/protocols/cifs/services/{svm.uuid}`

Introduced In: 9.6

Deletes a CIFS server and related CIFS configurations.

Related ONTAP commands

- `vserver cifs server delete`
- `vserver cifs remove-netbios-aliases`

Learn more

- DOC /protocols/cifs/services

Parameters

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
ad_domain	ad_domain	

Example request


```
{
  "ad_domain": {
    "fqdn": "example.com",
    "organizational_unit": "string",
    "password": "string",
    "user": "string"
  }
}
```


Response

```
Status: 202, Accepted
```

Name	Type	Description
job	job_link	

Example response


```
{
  "job": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uuid": "string"
  }
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

ad_domain

Name	Type	Description
fqdn	string	The fully qualified domain name of the Windows Active Directory to which this CIFS server belongs. A CIFS server appears as a member of Windows server object in the Active Directory store. POST and PATCH only.
organizational_unit	string	Specifies the organizational unit within the Active Directory domain to associate with the CIFS server. POST and PATCH only.
password	string	The account password used to add this CIFS server to the Active Directory. This is not audited.
user	string	The user account used to add this CIFS server to the Active Directory.

cifs_service_delete

Name	Type	Description
ad_domain	ad_domain	

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

job_link

Name	Type	Description
_links	_links	

Name	Type	Description
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve a CIFS server

GET `/protocols/cifs/services/{svm.uuid}`

Introduced In: 9.6

Retrieves a CIFS server.

Related ONTAP commands

- `vserver cifs server show`
- `vserver cifs server options show`
- `vserver cifs server security show`

Learn more

- DOC /protocols/cifs/services

Parameters

Name	Type	In	Required	Description
svm.uuid	string	path	True	
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
ad_domain	ad_domain	
comment	string	A descriptive text comment for the CIFS server. SMB clients can see the CIFS server comment when browsing servers on the network. If there is a space in the comment, you must enclose the entire string in quotation marks.
default_unix_user	string	Specifies the UNIX user to which any authenticated CIFS user is mapped to, if the normal user mapping rules fails.
enabled	boolean	Specifies if the CIFS service is administratively enabled.
metric	metric	
name	string	The name of the CIFS server.
netbios	cifs_netbios	
options	cifs_service_options	
security	cifs_service_security	
statistics	statistics	
svm	svm	

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "ad_domain": {
    "fqdn": "example.com",
    "organizational_unit": "string"
  },
  "comment": "This CIFS Server Belongs to CS Department",
  "default_unix_user": "string",
  "metric": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "duration": "PT15S",
    "iops": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "latency": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "status": "ok",
    "throughput": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "timestamp": "2017-01-25T11:20:13Z"
  },
  "name": "CIFS1",
  "netbios": {
    "aliases": [
      "ALIAS_1",
      "ALIAS_2",
      "ALIAS_3"
    ],
```

```
      "wins_servers": [
        "10.224.65.20",
        "10.224.65.21"
      ]
    },
    "options": {
      "null_user_windows_name": "string",
      "smb_credits": 128,
      "widelink_reparse_versions": [
        "smb1"
      ]
    },
    "security": {
      "lm_compatibility_level": "string",
      "restrict_anonymous": "string",
      "session_security": "string"
    },
    "statistics": {
      "iops_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "latency_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "status": "ok",
      "throughput_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "timestamp": "2017-01-25T11:20:13Z"
    },
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    }
  }
```

Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

ad_domain

Name	Type	Description
fqdn	string	The fully qualified domain name of the Windows Active Directory to which this CIFS server belongs. A CIFS server appears as a member of Windows server object in the Active Directory store. POST and PATCH only.
organizational_unit	string	Specifies the organizational unit within the Active Directory domain to associate with the CIFS server. POST and PATCH only.

iops

The rate of I/O operations observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.

Name	Type	Description
write	integer	Peformance metric for write I/O operations.

latency

The round trip latency in microseconds observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

throughput

The rate of throughput bytes per second observed at the storage object.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

metric

Name	Type	Description
_links	_links	

Name	Type	Description
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:
iops	iops	The rate of I/O operations observed at the storage object.
latency	latency	The round trip latency in microseconds observed at the storage object.
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_ delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput	throughput	The rate of throughput bytes per second observed at the storage object.
timestamp	string	The timestamp of the performance data.

cifs_netbios

Name	Type	Description
aliases	array[string]	
enabled	boolean	Specifies whether NetBios name service (NBNS) is enabled for the CIFS. If this service is enabled, the CIFS server will start sending the broadcast for name registration.
wins_servers	array[string]	

cifs_service_options

Name	Type	Description
admin_to_root_mapping	boolean	Specifies whether or not Administrator can be mapped to the UNIX user "root".
advanced_sparse_file	boolean	Specifies whether or not the CIFS server supports the advanced sparse file capabilities. This allows CIFS clients to query the allocated ranges of a file and to write zeroes or free data blocks for ranges of a file.
copy_offload	boolean	Specifies whether or not to enable the Copy Offload feature. This feature enables direct data transfers within or between compatible storage devices without transferring the data through the host computer. Note that this will also enable/disable the direct copy feature accordingly.
fake_open	boolean	Specifies whether or not fake open support is enabled. This parameter allows you to optimize the open and close requests coming from SMB 2 clients.
fsctl_trim	boolean	Specifies whether or not the trim requests (FSCTL_FILE_LEVEL_TRIM) are supported on the CIFS server.

Name	Type	Description
junction_reparse	boolean	Specifies whether or not the reparse point support is enabled. When enabled the CIFS server exposes junction points to Windows clients as reparse points. This parameter is only active if the client has negotiated use of the SMB 2 or SMB 3 protocol. This parameter is not supported for SVMs with Infinite Volume.
large_mtu	boolean	Specifies whether or not SMB clients can send reads up to 1 MB in size.
multichannel	boolean	Specifies whether or not the CIFS server supports Multichannel.
null_user_windows_name	string	Specifies a Windows User or Group name that should be mapped in case of a NULL user value.
path_component_cache	boolean	Specifies whether or not the path component cache is enabled on the CIFS server.
referral	boolean	Specifies whether or not to refer clients to more optimal LIFs. When enabled, it automatically refers clients to a data LIF local to the node which hosts the root of the requested share.
smb_credits	integer	Specifies the maximum number of outstanding requests on a CIFS connection.
widelink_reparse_versions	array[string]	Specifies the CIFS protocol versions for which the widelink is reported as reparse point.

cifs_service_security

Name	Type	Description
aes_netlogon_enabled	boolean	Specifies whether or not an AES session key is enabled for the Netlogon channel.
encrypt_dc_connection	boolean	Specifies whether encryption is required for domain controller connections.
kdc_encryption	boolean	Specifies whether AES-128 and AES-256 encryption is enabled for all Kerberos-based communication with the Active Directory KDC. To take advantage of the strongest security with Kerberos-based communication, AES-256 and AES-128 encryption can be enabled on the CIFS server. Kerberos-related communication for CIFS is used during CIFS server creation on the SVM, as well as during the SMB session setup phase. The CIFS server supports the following encryption types for Kerberos communication: • RC4-HMAC • DES • AES When the CIFS server is created, the domain controller creates a computer machine account in Active Directory. After a newly created machine account authenticates, the KDC and the CIFS server negotiates encryption types. At this time, the KDC becomes aware of the encryption capabilities of the particular machine account and uses those capabilities in subsequent communication with the CIFS server. In addition to negotiating encryption types during CIFS server creation, the encryption types are renegotiated when a machine account password is reset.

Name	Type	Description
ldap_referral_enabled	boolean	Specifies whether or not LDAP referral chasing is enabled for AD LDAP connections.
lm_compatibility_level	string	It is CIFS server minimum security level, also known as the LMCompatibilityLevel. The minimum security level is the minimum level of the security tokens that the CIFS server accepts from SMB clients. The available values are: • lm_ntlm_ntlmv2_krb Accepts LM, NTLM, NTLMv2 and Kerberos • ntlm_ntlmv2_krb Accepts NTLM, NTLMv2 and Kerberos • ntlmv2_krb Accepts NTLMv2 and Kerberos • krb Accepts Kerberos only
restrict_anonymous	string	Specifies what level of access an anonymous user is granted. An anonymous user (also known as a "null user") can list or enumerate certain types of system information from Windows hosts on the network, including user names and details, account policies, and share names. Access for the anonymous user can be controlled by specifying one of three access restriction settings. The available values are: • no_restriction - No access restriction for an anonymous user. • no_enumeration - Enumeration is restricted for an anonymous user. • no_access - All access is restricted for an anonymous user.

Name	Type	Description
session_security	string	Specifies client session security for AD LDAP connections. The available values are: • none - No Signing or Sealing. • sign - Sign LDAP traffic. • seal - Seal and Sign LDAP traffic
smb_encryption	boolean	Specifies whether encryption is required for incoming CIFS traffic.
smb_signing	boolean	Specifies whether signing is required for incoming CIFS traffic. SMB signing helps to ensure that network traffic between the CIFS server and the client is not compromised.
try_ldap_channel_binding	boolean	Specifies whether or not channel binding is attempted in the case of TLS/LDAPS.
use_ldaps	boolean	Specifies whether or not to use use LDAPS for secure Active Directory LDAP connections by using the TLS/SSL protocols.
use_start_tls	boolean	Specifies whether or not to use SSL/TLS for allowing secure LDAP communication with Active Directory LDAP servers.

iops_raw

The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

latency_raw

The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

throughput_raw

Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

statistics

Name	Type	Description
iops_raw	iops_raw	The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.
latency_raw	latency_raw	The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput_raw	throughput_raw	Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.
timestamp	string	The timestamp of the performance data.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update CIFS mandatory and optional parameters

PATCH `/protocols/cifs/services/{svm.uuid}`

Introduced In: 9.6

Updates both the mandatory and optional parameters of the CIFS configuration. Ensure the CIFS server is administratively disabled when renaming the CIFS server or modifying the *ad_domain* properties.

Related ONTAP commands

- `vserver cifs server modify`
- `vserver cifs server options modify`
- `vserver cifs security modify`
- `vserver cifs server add-netbios-aliases`

- `vserver cifs server remove-netbios-aliases`

Learn more

- DOC /protocols/cifs/services

Parameters

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
ad_domain	ad_domain	

Name	Type	Description
comment	string	A descriptive text comment for the CIFS server. SMB clients can see the CIFS server comment when browsing servers on the network. If there is a space in the comment, you must enclose the entire string in quotation marks.
default_unix_user	string	Specifies the UNIX user to which any authenticated CIFS user is mapped to, if the normal user mapping rules fails.
enabled	boolean	Specifies if the CIFS service is administratively enabled.
metric	metric	
name	string	The name of the CIFS server.
netbios	cifs_netbios	
options	cifs_service_options	
security	cifs_service_security	
statistics	statistics	
svm	svm	

Example request


```
{
  "ad_domain": {
    "fqdn": "example.com",
    "organizational_unit": "string",
    "password": "string",
    "user": "string"
  },
  "comment": "This CIFS Server Belongs to CS Department",
  "default_unix_user": "string",
  "metric": {
    "duration": "PT15S",
    "iops": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "latency": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "status": "ok",
    "throughput": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "timestamp": "2017-01-25T11:20:13Z"
  },
  "name": "CIFS1",
  "netbios": {
    "aliases": [
      "ALIAS_1",
      "ALIAS_2",
      "ALIAS_3"
    ],
    "wins_servers": [
      "10.224.65.20",
      "10.224.65.21"
    ]
  },
  "options": {
    "null_user_windows_name": "string",
    "smb_credits": 128,
```

```
      "widelink_reparse_versions": [
        "smb1"
      ]
    },
    "security": {
      "restrict_anonymous": "string",
      "session_security": "string"
    },
    "statistics": {
      "iops_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "latency_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "status": "ok",
      "throughput_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "timestamp": "2017-01-25T11:20:13Z"
    },
    "svm": {
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    }
}
```


Response

```
Status: 202, Accepted
```

Name	Type	Description
job	job_link	

Example response


```
{
  "job": {
    "uuid": "string"
  }
}
```


Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
4915251	STARTTLS and LDAPS cannot be used together.

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

ad_domain

Name	Type	Description
fqdn	string	The fully qualified domain name of the Windows Active Directory to which this CIFS server belongs. A CIFS server appears as a member of Windows server object in the Active Directory store. POST and PATCH only.
organizational_unit	string	Specifies the organizational unit within the Active Directory domain to associate with the CIFS server. POST and PATCH only.
password	string	The account password used to add this CIFS server to the Active Directory. This is not audited.
user	string	The user account used to add this CIFS server to the Active Directory.

iops

The rate of I/O operations observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.

Name	Type	Description
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

latency

The round trip latency in microseconds observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

throughput

The rate of throughput bytes per second observed at the storage object.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

metric

Name	Type	Description
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:
iops	iops	The rate of I/O operations observed at the storage object.
latency	latency	The round trip latency in microseconds observed at the storage object.
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_ delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput	throughput	The rate of throughput bytes per second observed at the storage object.
timestamp	string	The timestamp of the performance data.

cifs_netbios

Name	Type	Description
aliases	array[string]	
enabled	boolean	Specifies whether NetBios name service (NBNS) is enabled for the CIFS. If this service is enabled, the CIFS server will start sending the broadcast for name registration.
wins_servers	array[string]	

cifs_service_options

Name	Type	Description
admin_to_root_mapping	boolean	Specifies whether or not Administrator can be mapped to the UNIX user "root".
advanced_sparse_file	boolean	Specifies whether or not the CIFS server supports the advanced sparse file capabilities. This allows CIFS clients to query the allocated ranges of a file and to write zeroes or free data blocks for ranges of a file.
copy_offload	boolean	Specifies whether or not to enable the Copy Offload feature. This feature enables direct data transfers within or between compatible storage devices without transferring the data through the host computer. Note that this will also enable/disable the direct copy feature accordingly.
fake_open	boolean	Specifies whether or not fake open support is enabled. This parameter allows you to optimize the open and close requests coming from SMB 2 clients.
fsctl_trim	boolean	Specifies whether or not the trim requests (FSCTL_FILE_LEVEL_TRIM) are supported on the CIFS server.

Name	Type	Description
junction_reparse	boolean	Specifies whether or not the reparse point support is enabled. When enabled the CIFS server exposes junction points to Windows clients as reparse points. This parameter is only active if the client has negotiated use of the SMB 2 or SMB 3 protocol. This parameter is not supported for SVMs with Infinite Volume.
large_mtu	boolean	Specifies whether or not SMB clients can send reads up to 1 MB in size.
multichannel	boolean	Specifies whether or not the CIFS server supports Multichannel.
null_user_windows_name	string	Specifies a Windows User or Group name that should be mapped in case of a NULL user value.
path_component_cache	boolean	Specifies whether or not the path component cache is enabled on the CIFS server.
referral	boolean	Specifies whether or not to refer clients to more optimal LIFs. When enabled, it automatically refers clients to a data LIF local to the node which hosts the root of the requested share.
smb_credits	integer	Specifies the maximum number of outstanding requests on a CIFS connection.
widelink_reparse_versions	array[string]	Specifies the CIFS protocol versions for which the widelink is reported as reparse point.

cifs_service_security

Name	Type	Description
aes_netlogon_enabled	boolean	Specifies whether or not an AES session key is enabled for the Netlogon channel.
encrypt_dc_connection	boolean	Specifies whether encryption is required for domain controller connections.
kdc_encryption	boolean	Specifies whether AES-128 and AES-256 encryption is enabled for all Kerberos-based communication with the Active Directory KDC. To take advantage of the strongest security with Kerberos-based communication, AES-256 and AES-128 encryption can be enabled on the CIFS server. Kerberos-related communication for CIFS is used during CIFS server creation on the SVM, as well as during the SMB session setup phase. The CIFS server supports the following encryption types for Kerberos communication: • RC4-HMAC • DES • AES When the CIFS server is created, the domain controller creates a computer machine account in Active Directory. After a newly created machine account authenticates, the KDC and the CIFS server negotiates encryption types. At this time, the KDC becomes aware of the encryption capabilities of the particular machine account and uses those capabilities in subsequent communication with the CIFS server. In addition to negotiating encryption types during CIFS server creation, the encryption types are renegotiated when a machine account password is reset.

Name	Type	Description
ldap_referral_enabled	boolean	Specifies whether or not LDAP referral chasing is enabled for AD LDAP connections.
restrict_anonymous	string	Specifies what level of access an anonymous user is granted. An anonymous user (also known as a "null user") can list or enumerate certain types of system information from Windows hosts on the network, including user names and details, account policies, and share names. Access for the anonymous user can be controlled by specifying one of three access restriction settings. The available values are: • no_restriction - No access restriction for an anonymous user. • no_enumeration - Enumeration is restricted for an anonymous user. • no_access - All access is restricted for an anonymous user.
session_security	string	Specifies client session security for AD LDAP connections. The available values are: • none - No Signing or Sealing. • sign - Sign LDAP traffic. • seal - Seal and Sign LDAP traffic
smb_encryption	boolean	Specifies whether encryption is required for incoming CIFS traffic.
smb_signing	boolean	Specifies whether signing is required for incoming CIFS traffic. SMB signing helps to ensure that network traffic between the CIFS server and the client is not compromised.

Name	Type	Description
try_ldap_channel_binding	boolean	Specifies whether or not channel binding is attempted in the case of TLS/LDAPS.
use_ldaps	boolean	Specifies whether or not to use use LDAPS for secure Active Directory LDAP connections by using the TLS/SSL protocols.
use_start_tls	boolean	Specifies whether or not to use SSL/TLS for allowing secure LDAP communication with Active Directory LDAP servers.

iops_raw

The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

latency_raw

The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

throughput_raw

Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

statistics

Name	Type	Description
iops_raw	iops_raw	The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.
latency_raw	latency_raw	The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.

Name	Type	Description
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput_raw	throughput_raw	Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.
timestamp	string	The timestamp of the performance data.

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

cifs_service

Name	Type	Description
ad_domain	ad_domain	

Name	Type	Description
comment	string	A descriptive text comment for the CIFS server. SMB clients can see the CIFS server comment when browsing servers on the network. If there is a space in the comment, you must enclose the entire string in quotation marks.
default_unix_user	string	Specifies the UNIX user to which any authenticated CIFS user is mapped to, if the normal user mapping rules fails.
enabled	boolean	Specifies if the CIFS service is administratively enabled.
metric	metric	
name	string	The name of the CIFS server.
netbios	cifs_netbios	
options	cifs_service_options	
security	cifs_service_security	
statistics	statistics	
svm	svm	

job_link

Name	Type	Description
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve CIFS protocol historical performance metrics for an SVM

GET `/protocols/cifs/services/{svm.uuid}/metrics`

Introduced In: 9.7

Retrieves historical performance metrics for the CIFS protocol of an SVM.

Parameters

Name	Type	In	Required	Description
throughput.total	integer	query	False	Filter by throughput.total
throughput.write	integer	query	False	Filter by throughput.write
throughput.other	integer	query	False	Filter by throughput.other
throughput.read	integer	query	False	Filter by throughput.read
iops.total	integer	query	False	Filter by iops.total
iops.write	integer	query	False	Filter by iops.write
iops.other	integer	query	False	Filter by iops.other
iops.read	integer	query	False	Filter by iops.read
status	string	query	False	Filter by status
timestamp	string	query	False	Filter by timestamp

Name	Type	In	Required	Description
latency.total	integer	query	False	Filter by latency.total
latency.write	integer	query	False	Filter by latency.write
latency.other	integer	query	False	Filter by latency.other
latency.read	integer	query	False	Filter by latency.read
duration	string	query	False	Filter by duration
svm.uuid	string	path	True	Unique identifier of the SVM.

Name	Type	In	Required	Description
interval	string	query	False	The time range for the data. Examples can be 1h, 1d, 1m, 1w, 1y. The period for each time range is as follows: • 1h: Metrics over the most recent hour sampled over 15 seconds. • 1d: Metrics over the most recent day sampled over 5 minutes. • 1w: Metrics over the most recent week sampled over 30 minutes. • 1m: Metrics over the most recent month sampled over 2 hours. • 1y: Metrics over the most recent year sampled over a day. • Default value: 1 • enum: ["1h", "1d", "1w", "1m", "1y"]

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
order_by	array[string]	query	False	Order results by specified fields and optional [asc
desc] direction. Default direction is 'asc' for ascending.	return_records	boolean	query	False

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[records]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "duration": "PT15S",
      "iops": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "latency": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "status": "ok",
      "throughput": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "timestamp": "2017-01-25T11:20:13Z"
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

iops

The rate of I/O operations observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

latency

The round trip latency in microseconds observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

throughput

The rate of throughput bytes per second observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

records

Performance numbers, such as IOPS latency and throughput.

Name	Type	Description
_links	_links	

Name	Type	Description
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:
iops	iops	The rate of I/O operations observed at the storage object.
latency	latency	The round trip latency in microseconds observed at the storage object.
status	string	Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_ delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput	throughput	The rate of throughput bytes per second observed at the storage object.
timestamp	string	The timestamp of the performance data.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

View CIFS active sessions

Protocols CIFS sessions endpoint overview

Overview

ONTAP CIFS sessions `show` functionality is used to provide a list of currently established CIFS sessions with SMB Clients.

Information on the CIFS session

- List all the SMB sessions for SVM and the clients along with volume information on which the clients are using.

Example

Retrieves established sessions information

To retrieve the list of CIFS sessions, use the following API. Note that *return_records=true*.

```
# The API:
GET /protocols/cifs/sessions

# The call:
curl -X GET "https://<cluster-mgmt-
ip>/api/protocols/cifs/sessions?return_timeout=15&return_records=true" -H
```

```
"accept: application/json"

# The response:
{
"records": [
  {
    "node": {
      "uuid": "85d46998-4e5d-11ea-afb1-0050568ec4e4",
      "name": "bkalyan-vsim1"
    },
    "svm": {
      "uuid": "fc824aa8-4e60-11ea-afb1-0050568ec4e4",
      "name": "vs1"
    },
    "identifier": 625718873227788300,
    "connection_id": 91842,
    "lif_address": "10.140.70.197",
    "address": "10.74.7.182",
    "auth_mechanism": "ntlmv2",
    "windows_user": "NBCIFSQA2\\administrator",
    "unix_user": "root",
    "shares": 1,
    "files": 2,
    "other": 0,
    "connected_time": "PT16H54M47S",
    "idle_time": "PT3S",
    "protocol_version": "smb3_1",
    "continuously_available": "unavailable",
    "is_session_signed": false,
    "smb_encryption_status": "unencrypted",
    "connection_count": 1,
    "is_large_mtu_enabled": true,
    "vol_names": [
      "vol12",
      "origin",
      "fg",
      "vol1"
    ],
    "vol_uuids": [
      "954d697f-4e62-11ea-afb1-0050568ec4e4",
      "0f909e06-4e6e-11ea-afb1-0050568ec4e4",
      "08c27b7d-4e61-11ea-afb1-0050568ec4e4",
      "02f0a240-4e61-11ea-afb1-0050568ec4e4"
    ]
  },
  {
```

```
    "node": {
      "uuid": "85d46998-4e5d-11ea-afb1-0050568ec4e4",
      "name": "bkalyan-vsim1"
    },
    "svm": {
      "uuid": "fc824aa8-4e60-11ea-afb1-0050568ec4e4",
       "name": "vs1"
    },
    "identifier": 625718873227788500,
    "connection_id": 92080,
    "lif_address": "10.140.70.197",
    "address": "10.140.133.97",
    "auth_mechanism": "ntlmv2",
    "windows_user": "NBCIFSQA2\\administrator",
    "unix_user": "root",
    "shares": 1,
    "files": 1,
    "other": 0,
    "connected_time": "PT1M19S",
    "idle_time": "PT1M1S",
    "protocol_version": "smb3",
    "continuously_available": "unavailable",
    "is_session_signed": false,
    "smb_encryption_status": "unencrypted",
    "connection_count": 1,
    "is_large_mtu_enabled": true,
    "vol_names": [
      "origin",
      "fg",
      "vol1"
    ],
    "vol_uuids": [
      "0f909e06-4e6e-11ea-afb1-0050568ec4e4",
      "08c27b7d-4e61-11ea-afb1-0050568ec4e4",
      "02f0a240-4e61-11ea-afb1-0050568ec4e4"
    ]
  }
],
"num_records": 2
}
```


Retrieving CIFS server configuration details for a specific SVM

```
# The API:
GET
/protocols/cifs/sessions/{node.uuid}/{svm.uuid}/{identifier}/{connection_i
d}

# The call:
curl -X GET "https://<cluster-mgmt-
ip>/api/protocols/cifs/sessions/85d46998-4e5d-11ea-afb1-
0050568ec4e4/fc824aa8-4e60-11ea-afb1-
0050568ec4e4/625718873227788300/91842?fields=*" -H "accept:
application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE="

# The response:
{
"node": {
  "uuid": "85d46998-4e5d-11ea-afb1-0050568ec4e4",
  "name": "bkalyan-vsim1"
},
"svm": {
  "uuid": "fc824aa8-4e60-11ea-afb1-0050568ec4e4",
  "name": "vs1"
},
"identifier": 625718873227788300,
"connection_id": 91842,
"lif_address": "10.140.70.197",
"address": "10.74.7.182",
"auth_mechanism": "ntlmv2",
"windows_user": "NBCIFSQA2\\administrator",
"unix_user": "root",
"shares": 1,
"files": 2,
"other": 0,
"connected_time": "PT16H54M47S",
"idle_time": "PT3S",
"protocol_version": "smb3_1",
"continuously_available": "unavailable",
"is_session_signed": false,
"smb_encryption_status": "unencrypted",
"connection_count": 1,
"is_large_mtu_enabled": true,
"vol_names": [
  "vol12",
  "origin",
  "fg",
  "vol1"
],
```

```
"vol_uuids": [
  "954d697f-4e62-11ea-afb1-0050568ec4e4",
  "0f909e06-4e6e-11ea-afb1-0050568ec4e4",
  "08c27b7d-4e61-11ea-afb1-0050568ec4e4",
  "02f0a240-4e61-11ea-afb1-0050568ec4e4"
]
}
```

Removing all existing CIFS sessions for a specific node on a specific SVM

To delete all the existing CIFS session, pass the identifier and connection ID as zero (0) in the following API. This will delete all of the CIFS sessions for the given SVM on the node.

```
# The API:
DELETE
/protocols/cifs/sessions/{node.uuid}/{svm.uuid}/{identifier}/{connection_i
d}

# The call:
curl -X DELETE "https://<cluster-mgmt-
ip>/api/protocols/cifs/sessions/85d46998-4e5d-11ea-afb1-
0050568ec4e4/fc824aa8-4e60-11ea-afb1-0050568ec4e4/0/0" -H "accept:
application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE="
```

Removing all CIFS sessions for a specific connection on a specific node on a specific SVM

To delete a CIFS session, use the following API. This will delete the CIFS sessions for a given SVM on the node.

```
# The API:
DELETE
/protocols/cifs/sessions/{node.uuid}/{svm.uuid}/{identifier}/{connection_i
d}

# The call:
curl -X DELETE "https://<cluster-mgmt-
ip>/api/protocols/cifs/sessions/85d46998-4e5d-11ea-afb1-
0050568ec4e4/fc824aa8-4e60-11ea-afb1-0050568ec4e4/0/91842" -H "accept:
application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE="
```

Removing a specific CIFS session for a specific Node on a specific SVM

To delete a specific CIFS session, use the following API. This will delete the specific CIFS session for the given SVM on the node.

```
# The API:
DELETE
/protocols/cifs/sessions/{node.uuid}/{svm.uuid}/{identifier}/{connection_i
d}

# The call:
curl -X DELETE "https://<cluster-mgmt-
ip>/api/protocols/cifs/sessions/85d46998-4e5d-11ea-afb1-
0050568ec4e4/fc824aa8-4e60-11ea-afb1-
0050568ec4e4/625718873227788300/91842" -H "accept: application/json" -H
"authorization: Basic YWRtaW46bmV0YXBwMSE="
```

Retrieve CIFS session information for all SVMs

GET `/protocols/cifs/sessions`

Introduced In: 9.8

Retrieves the CIFS sessions information for all SVMs.

Related ONTAP commands

- `vserver cifs session show -active-volumes`

Learn more

- DOC /protocols/cifs/sessions

Parameters

Name	Type	In	Required	Description
idle_duration	string	query	False	Filter by idle_duration
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
mapped_unix_user	string	query	False	Filter by mapped_unix_user
open_other	integer	query	False	Filter by open_other
smb_encryption	string	query	False	Filter by smb_encryption
connection_id	integer	query	False	Filter by connection_id
open_shares	integer	query	False	Filter by open_shares
open_files	integer	query	False	Filter by open_files
server_ip	string	query	False	Filter by server_ip
identifier	integer	query	False	Filter by identifier
smb_signing	boolean	query	False	Filter by smb_signing
authentication	string	query	False	Filter by authentication
protocol	string	query	False	Filter by protocol
continuous_availability	string	query	False	Filter by continuous_availability
client_ip	string	query	False	Filter by client_ip

Name	Type	In	Required	Description
volumes.uuid	string	query	False	Filter by volumes.uuid
volumes.name	string	query	False	Filter by volumes.name
connection_count	integer	query	False	Filter by connection_count
user	string	query	False	Filter by user
connected_duration	string	query	False	Filter by connected_duration
node.uuid	string	query	False	Filter by node.uuid
node.name	string	query	False	Filter by node.name
large_mtu	boolean	query	False	Filter by large_mtu
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[cifs_session]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "authentication": "ntlmv2",
      "client_ip": "10.74.7.182",
      "connected_duration": "P4DT84H30M5S",
      "connection_count": 0,
      "connection_id": 22802,
      "continuous_availability": "unavailable",
      "identifier": 4622663542519103507,
      "idle_duration": "P4DT84H30M5S",
      "large_mtu": 1,
      "mapped_unix_user": "root",
      "node": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "node1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "open_files": 0,
      "open_other": 0,
      "open_shares": 0,
      "protocol": "smb3_1",
      "server_ip": "10.140.78.248",
      "smb_encryption": "unencrypted",
      "smb_signing": "",
      "svm": {
        "_links": {
```

```
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "user": "NBCIFSQA2\\administrator",
      "volumes": [
        {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "volume1",
          "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
        }
      ]
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volumes

Name	Type	Description
_links	_links	
name	string	The name of the volume.

Name	Type	Description
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.8

cifs_session

Name	Type	Description
_links	_links	
authentication	string	SMB authentication over which the client accesses the share. The following values are supported: • none - No authentication • ntlmv1 - Ntlm version 1 mechanism • ntlmv2 - Ntlm version 2 mechanism • kerberos - Kerberos authentication • anonymous - Anonymous mechanism
client_ip	string	Specifies IP address of the client.
connected_duration	string	Specifies an ISO-8601 format of date and time used to retrieve the connected time duration in hours, minutes, and seconds format.
connection_count	integer	A counter used to track requests that are sent to the volumes to the node.
connection_id	integer	A unique 32-bit unsigned number used to represent each SMB session's connection ID.

Name	Type	Description
continuous_availability	string	The level of continuous availabilty protection provided to the SMB sessions and/or files. • unavailable - Open file is not continuously available. For sessions, it contains one or more open files but none of them are continuously available. • available - open file is continuously available. For sessions, it contains one or more open files and all of them are continuously available. • partial - Sessions only. Contains at least one continuously available open file with other files open but not continuously available.
identifier	integer	A unique 64-bit unsigned number used to represent each SMB session's identifier.
idle_duration	string	Specifies an ISO-8601 format of date and time used to retrieve the idle time duration in hours, minutes, and seconds format.
large_mtu	boolean	Specifies whether the large MTU is enabled or not for an SMB session.
mapped_unix_user	string	Indicated that a mapped UNIX user has logged in.
node	node	
open_files	integer	Number of files the SMB session has opened.
open_other	integer	Number of other files the SMB session has opened.
open_shares	integer	Number of shares the SMB session has opened.

Name	Type	Description
protocol	string	The SMB protocol version over which the client accesses the volumes. The following values are supported: • smb1 - SMB version 1 • smb2 - SMB version 2 • smb2_1 - SMB version 2 minor version 1 • smb3 - SMB version 3 • smb3_1 - SMB version 3 minor version 1
server_ip	string	Specifies the IP address of the SVM.
smb_encryption	string	Indicates an SMB encryption state. The following values are supported: • unencrypted - SMB session is not encrypted • encrypted - SMB session is fully encrypted. SVM level encryption is enabled and encryption occurs for the entire session. • partially_encrypted - SMB session is partially encrypted. Share level encryption is enabled and encryption is initiated when the tree-connect occurs.
smb_signing	boolean	Specifies whether or not SMB signing is enabled.
svm	svm	
user	string	Indicates that a Windows user has logged in.
volumes	array[volumes]	A group of volumes, the client is accessing.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete SMB session information for an SVM node

DELETE
`/protocols/cifs/sessions/{node.uuid}/{svm.uuid}/{identifier}/{connection_id}`

Introduced In: 9.9

Deletes SMB session information on a node for an SVM.

- To delete the specific SMB session information, pass the relavant SMB session's identifier and connection Id.
- To delete all the SMB session information on specific node and SVM, pass the both SMB session's identifier and connection Id as zero(0)
- To delete all the SMB session information on specific connection, pass the specific SMB session's Identifier value as zero(0).
- To delete all the SMB session information on specific Identifier alone is not allowed.

Learn more

- DOC /protocols/cifs/sessions

Parameters

Name	Type	In	Required	Description
node.uuid	string	path	True	Node UUID.

Name	Type	In	Required	Description
identifier	integer	path	True	Unique identifier for the SMB session.
connection_id	integer	path	True	Unique identifier for the SMB connection.
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655503	The SMB session delete does not allow a connection ID of zero (0).

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve SMB session information for an SMB connection in an SVM node

GET `/protocols/cifs/sessions/{node.uuid}/{svm.uuid}/{identifier}/{connection_id}`

Introduced In: 9.8

Retrieves specific SMB session information for a specific SMB connection in a node on an SVM.

Learn more

- DOC /protocols/cifs/sessions

Parameters

Name	Type	In	Required	Description
node.uuid	string	path	True	Node UUID.
identifier	integer	path	True	Unique identifier for the SMB session.
connection_id	integer	path	True	Unique identifier for the SMB connection.
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
authentication	string	SMB authentication over which the client accesses the share. The following values are supported: • none - No authentication • ntlmv1 - Ntlm version 1 mechanism • ntlmv2 - Ntlm version 2 mechanism • kerberos - Kerberos authentication • anonymous - Anonymous mechanism

Name	Type	Description
client_ip	string	Specifies IP address of the client.
connected_duration	string	Specifies an ISO-8601 format of date and time used to retrieve the connected time duration in hours, minutes, and seconds format.
connection_count	integer	A counter used to track requests that are sent to the volumes to the node.
connection_id	integer	A unique 32-bit unsigned number used to represent each SMB session's connection ID.
continuous_availability	string	The level of continuous availabilty protection provided to the SMB sessions and/or files. • unavailable - Open file is not continuously available. For sessions, it contains one or more open files but none of them are continuously available. • available - open file is continuously available. For sessions, it contains one or more open files and all of them are continuously available. • partial - Sessions only. Contains at least one continuously available open file with other files open but not continuously available.
identifier	integer	A unique 64-bit unsigned number used to represent each SMB session's identifier.
idle_duration	string	Specifies an ISO-8601 format of date and time used to retrieve the idle time duration in hours, minutes, and seconds format.
large_mtu	boolean	Specifies whether the large MTU is enabled or not for an SMB session.

Name	Type	Description
mapped_unix_user	string	Indicated that a mapped UNIX user has logged in.
node	node	
open_files	integer	Number of files the SMB session has opened.
open_other	integer	Number of other files the SMB session has opened.
open_shares	integer	Number of shares the SMB session has opened.
protocol	string	The SMB protocol version over which the client accesses the volumes. The following values are supported: • smb1 - SMB version 1 • smb2 - SMB version 2 • smb2_1 - SMB version 2 minor version 1 • smb3 - SMB version 3 • smb3_1 - SMB version 3 minor version 1
server_ip	string	Specifies the IP address of the SVM.
smb_encryption	string	Indicates an SMB encryption state. The following values are supported: • unencrypted - SMB session is not encrypted • encrypted - SMB session is fully encrypted. SVM level encryption is enabled and encryption occurs for the entire session. • partially_encrypted - SMB session is partially encrypted. Share level encryption is enabled and encryption is initiated when the tree-connect occurs.

Name	Type	Description
smb_signing	boolean	Specifies whether or not SMB signing is enabled.
svm	svm	
user	string	Indicates that a Windows user has logged in.
volumes	array[volumes]	A group of volumes, the client is accessing.

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "authentication": "ntlmv2",
  "client_ip": "10.74.7.182",
  "connected_duration": "P4DT84H30M5S",
  "connection_count": 0,
  "connection_id": 22802,
  "continuous_availability": "unavailable",
  "identifier": 4622663542519103507,
  "idle_duration": "P4DT84H30M5S",
  "large_mtu": 1,
  "mapped_unix_user": "root",
  "node": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "open_files": 0,
  "open_other": 0,
  "open_shares": 0,
  "protocol": "smb3_1",
  "server_ip": "10.140.78.248",
  "smb_encryption": "unencrypted",
  "smb_signing": "",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "user": "NBCIFSQA2\\administrator",
  "volumes": [
    {
```

```
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "volume1",
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volumes

Name	Type	Description
_links	_links	
name	string	The name of the volume.
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.8

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Manage CIFS shares

Protocols CIFS shares endpoint overview

Overview

Before any users or applications can access data on the CIFS server over SMB, a CIFS share must be created with sufficient share permissions. CIFS share is a named access point in a volume which is tied to the CIFS server on the SVM. Before creating a CIFS share make sure that the path is valid within the scope of the SVM and that it is reachable.

Permissions can be assigned to this newly created share by specifying the 'acls' field. When a CIFS share is created, ONTAP creates a default ACL for this share with 'Full-Control' permissions for an 'Everyone' user.

Examples

Creating a CIFS share

To create a CIFS share for a CIFS server, use the following API. Note the *return_records=true* query parameter used to obtain the newly created entry in the response.

```
# The API:
POST /api/protocols/cifs/shares

# The call:
curl -X POST "https://<mgmt-
```

```
ip>/api/protocols/cifs/shares?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{
\"access_based_enumeration\": false, \"acls\": [ { \"permission\":
\"no_access\", \"type\": \"unix_user\", \"user_or_group\": \"root\" } ],
\"change_notify\": true, \"comment\": \"HR Department Share\",
\"encryption\": false, \"home_directory\": false, \"name\": \"TEST\",
\"oplocks\": true, \"no_strict_security\": true, \"path\": \"/\", \"svm\":
{ \"name\": \"vs1\", \"uuid\": \"6d8e8870-8753-11eb-8d86-0050568ea61a\" },
\"unix_symlink\": \"local\", \"show_snapshot\": \"true\",
\"continuously_available\": \"false\", \"namespace_caching\": \"true\",
\"file_umask\": \"025\", \"dir_umask\": \"026\", \"offline_files\":
\"documents\", \"vscan_profile\": \"standard\",
\"force_group_for_create\": \"root\"}"

# The response:
{
"num_records": 1,
"records": [
  {
    "svm": {
      "uuid": "6d8e8870-8753-11eb-8d86-0050568ea61a",
      "name": "vs1"
    },
    "name": "TEST",
    "path": "/",
    "comment": "HR Department Share",
    "home_directory": false,
    "oplocks": true,
    "access_based_enumeration": false,
    "change_notify": true,
    "encryption": false,
    "unix_symlink": "local",
    "acls": [
      {
        "user_or_group": "root",
        "type": "unix_user",
        "permission": "no_access",
        "winsid_unixId": "0"
      }
    ],
    "no_strict_security": true,
    "show_snapshot": true,
    "continuously_available": false,
    "namespace_caching": true,
    "file_umask": 25,
    "dir_umask": 26,
```

```
    "offline_files": "documents",
    "vscan_profile": "standard",
    "force_group_for_create": "root"
  }
]
}
```

Retrieving CIFS Shares for all SVMs in the cluster

```
# The API:
GET /api/protocols/cifs/shares

# The call:
curl -X GET "https://<mgmt-
ip>/api/protocols/cifs/shares?fields=*&return_records=true&return_timeout=
15" -H "accept application/hal+json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "6d8e8870-8753-11eb-8d86-0050568ea61a",
      "name": "vs1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/6d8e8870-8753-11eb-8d86-0050568ea61a"
        }
      }
    },
    "name": "c$",
    "path": "/",
    "home_directory": false,
    "oplocks": true,
    "access_based_enumeration": false,
    "change_notify": true,
    "encryption": false,
    "unix_symlink": "local",
    "acls": [
      {
        "user_or_group": "BUILTIN\\Administrators",
        "type": "windows",
```

```
        "permission": "full_control"
      }
    ],
    "volume": {
      "name": "vol1",
      "uuid": "6f4fb33a-8753-11eb-8d86-0050568ea61a"
    },
    "show_snapshot": false,
    "cache_attribute": false,
    "continuously_available": false,
    "namespace_caching": false,
    "vscan_profile": "standard",
    "_links": {
      "self": {
        "href": "/api/protocols/cifs/shares/6d8e8870-8753-11eb-8d86-
0050568ea61a/c%24"
      }
    }
  },
  {
    "svm": {
      "uuid": "6d8e8870-8753-11eb-8d86-0050568ea61a",
      "name": "vs1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/6d8e8870-8753-11eb-8d86-0050568ea61a"
        }
      }
    },
    "name": "ipc$",
    "path": "/",
    "home_directory": false,
    "oplocks": false,
    "access_based_enumeration": false,
    "change_notify": false,
    "encryption": false,
    "volume": {
      "name": "vol1",
      "uuid": "6f4fb33a-8753-11eb-8d86-0050568ea61a"
    },
    "show_snapshot": false,
    "cache_attribute": false,
    "continuously_available": false,
    "namespace_caching": false,
    "vscan_profile": "standard",
    "_links": {
```

```
      "self": {
        "href": "/api/protocols/cifs/shares/6d8e8870-8753-11eb-8d86-
0050568ea61a/ipc%24"
      }
    }
  },
  {
    "svm": {
      "uuid": "6d8e8870-8753-11eb-8d86-0050568ea61a",
      "name": "vs1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/6d8e8870-8753-11eb-8d86-0050568ea61a"
        }
      }
    },
    "name": "TEST",
    "path": "/",
    "comment": "HR Department Share",
    "home_directory": false,
    "oplocks": true,
    "access_based_enumeration": false,
    "change_notify": true,
    "encryption": false,
    "unix_symlink": "local",
    "acls": [
      {
        "user_or_group": "Everyone",
        "type": "windows",
        "permission": "full_control"
      },
      {
        "user_or_group": "root",
        "type": "unix_user",
        "permission": "no_access"
      }
    ],
    "volume": {
      "name": "vol1",
      "uuid": "6f4fb33a-8753-11eb-8d86-0050568ea61a"
    },
    "no_strict_security": true,
    "show_snapshot": true,
    "cache_attribute": true,
    "continuously_available": false,
    "namespace_caching": true,
```

```
    "file_umask": 25,
    "dir_umask": 26,
    "offline_files": "documents",
    "vscan_profile": "standard",
    "force_group_for_create": "root",
    "_links": {
      "self": {
        "href": "/api/protocols/cifs/shares/6d8e8870-8753-11eb-8d86-
0050568ea61a/TEST"
      }
    }
  }
],
"num_records": 3,
"_links": {
  "self": {
    "href":
"/api/protocols/cifs/shares?fields=*&return_records=true&return_timeout=15
"
  }
}
}
```

Retrieving all CIFS Shares for all SVMs in the cluster for which the acls are configured for a "root" user

```
# The API:
GET /api/protocols/cifs/shares

# The call:
curl -X GET "https://<mgmt-
ip>/api/protocols/cifs/shares?acls.user_or_group=root&fields=*&return_reco
rds=true&return_timeout=15" -H "accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "6d8e8870-8753-11eb-8d86-0050568ea61a",
      "name": "vs1"
    },
    "name": "TEST",
```

```
    "path": "/",
    "comment": "HR Department Share",
    "home_directory": false,
    "oplocks": true,
    "access_based_enumeration": false,
    "change_notify": true,
    "encryption": false,
    "unix_symlink": "local",
    "acls": [
      {
        "user_or_group": "Everyone",
        "type": "windows",
        "permission": "full_control"
      },
      {
        "user_or_group": "root",
        "type": "unix_user",
        "permission": "no_access"
      }
    ],
    "volume": {
      "name": "vol1",
      "uuid": "6f4fb33a-8753-11eb-8d86-0050568ea61a"
    },
    "no_strict_security": true,
    "show_snapshot": true,
    "cache_attribute": true,
    "continuously_available": false,
    "namespace_caching": true,
    "file_umask": 25,
    "dir_umask": 26,
    "offline_files": "documents",
    "vscan_profile": "standard",
    "force_group_for_create": "root"
  }
],
"num_records": 1
}
```


Retrieving a specific CIFS share configuration for an SVM

The configuration being returned is identified by the UUID of its SVM and the name of the share.

```
# The API:
GET /api/protocols/cifs/shares/{svm.uuid}/{name}
```

```
# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/shares/6d8e8870-8753-
11eb-8d86-0050568ea61a/TEST" -H "accept: application/json"

# The response:
{
"svm": {
  "uuid": "6d8e8870-8753-11eb-8d86-0050568ea61a",
  "name": "vs1"
},
"name": "TEST",
"path": "/",
"comment": "HR Department Share",
"home_directory": false,
"oplocks": true,
"access_based_enumeration": false,
"change_notify": true,
"encryption": false,
"unix_symlink": "local",
"acls": [
  {
    "user_or_group": "Everyone",
    "type": "windows",
    "permission": "full_control"
  },
  {
    "user_or_group": "root",
    "type": "unix_user",
    "permission": "no_access"
  }
],
"volume": {
  "name": "vol1",
  "uuid": "6f4fb33a-8753-11eb-8d86-0050568ea61a"
},
"no_strict_security": true,
"show_snapshot": true,
"cache_attribute": true,
"continuously_available": false,
"namespace_caching": true,
"file_umask": 25,
"dir_umask": 26,
"offline_files": "documents",
"vscan_profile": "standard",
"force_group_for_create": "root"
}
```

Updating a specific CIFS share for an SVM

The CIFS share being modified is identified by the UUID of its SVM and the CIFS share name. The CIFS share ACLs cannot be modified with this API.

```
# The API:
PATCH /api/protocols/cifs/shares/{svm.uuid}/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/cifs/shares/6d8e8870-8753-
11eb-8d86-0050568ea61a/TEST" -H "accept: application/json" -H "Content-
Type: application/json" -d "{ \"access_based_enumeration\": true,
\"change_notify\": true, \"comment\": \"HR Department Share\",
\"encryption\": false, \"oplocks\": true, \"no_strict_security\": true,
\"path\": \"/\", \"unix_symlink\": \"widelink\", \"show_snapshot\":
\"false\", \"continuously_available\": \"true\", \"namespace_caching\":
\"false\", \"file_umask\": \"022\", \"dir_umask\": \"022\",
\"offline_files\": \"programs\", \"vscan_profile\": \"no_scan\",
\"force_group_for_create\": \"root\"}"
```

Removing a specific CIFS share for an SVM

The CIFS share being removed is identified by the UUID of its SVM and the CIFS share name.

```
# The API:
DELETE /api/protocols/cifs/shares/{svm.uuid}/{name}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/cifs/shares/6d8e8870-8753-
11eb-8d86-0050568ea61a/test" -H "accept: application/json"
```

Retrieve CIFS shares

GET `/protocols/cifs/shares`

Introduced In: 9.6

Retrieves CIFS shares.

Related ONTAP commands

- `vserver cifs share show`
- `vserver cifs share properties show`

Learn more

- DOC /protocols/cifs/shares

Parameters

Name	Type	In	Required	Description
vscan_profile	string	query	False	Filter by vscan_profile • Introduced in: 9.10
unix_symlink	string	query	False	Filter by unix_symlink
path	string	query	False	Filter by path
home_directory	boolean	query	False	Filter by home_directory
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
access_based_enumeration	boolean	query	False	Filter by access_based_enumeration
force_group_for_create	string	query	False	Filter by force_group_for_create • Introduced in: 9.10
file_umask	integer	query	False	Filter by file_umask • Introduced in: 9.10
offline_files	string	query	False	Filter by offline_files • Introduced in: 9.10

Name	Type	In	Required	Description
continuously_available	boolean	query	False	Filter by continuously_available • Introduced in: 9.10
show_snapshot	boolean	query	False	Filter by show_snapshot • Introduced in: 9.10
namespace_caching	boolean	query	False	Filter by namespace_caching • Introduced in: 9.10
encryption	boolean	query	False	Filter by encryption
change_notify	boolean	query	False	Filter by change_notify
comment	string	query	False	Filter by comment
oplocks	boolean	query	False	Filter by oplocks
no_strict_security	boolean	query	False	Filter by no_strict_security • Introduced in: 9.9
volume.uuid	string	query	False	Filter by volume.uuid
volume.name	string	query	False	Filter by volume.name
name	string	query	False	Filter by name
acls.user_or_group	string	query	False	Filter by acls.user_or_group
acls.type	string	query	False	Filter by acls.type

Name	Type	In	Required	Description
acls.permission	string	query	False	Filter by acls.permission
dir_umask	integer	query	False	Filter by dir_umask • Introduced in: 9.10
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[cifs_share]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "acls": [
        {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "permission": "string",
          "type": "string",
          "user_or_group": "ENGDOMAIN\\ad_user"
        }
      ],
      "comment": "HR Department Share",
      "dir_umask": 22,
      "file_umask": 22,
      "force_group_for_create": "string",
      "name": "HR_SHARE",
      "offline_files": "string",
      "path": "/volume_1/eng_vol/",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
```

```
      "unix_symlink": "string",
      "volume": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "volume1",
        "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
      },
      "vscan_profile": "string"
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

acls

The permissions that users and groups have on a CIFS share.

Name	Type	Description
_links	_links	
permission	string	Specifies the access rights that a user or group has on the defined CIFS Share. The following values are allowed: • no_access - User does not have CIFS share access • read - User has only read access • change - User has change access • full_control - User has full_control access

Name	Type	Description
type	string	Specifies the type of the user or group to add to the access control list of a CIFS share. The following values are allowed: • windows - Windows user or group • unix_user - UNIX user • unix_group - UNIX group
user_or_group	string	Specifies the user or group name to add to the access control list of a CIFS share.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volume

Name	Type	Description
_links	_links	
name	string	The name of the volume.
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

cifs_share

CIFS share is a named access point in a volume. Before users and applications can access data on the CIFS server over SMB, a CIFS share must be created with sufficient share permission. CIFS shares are tied to the CIFS server on the SVM. When a CIFS share is created, ONTAP creates a default ACL for the share with Full Control permissions for Everyone.

Name	Type	Description
_links	_links	
access_based_enumeration	boolean	If enabled, all folders inside this share are visible to a user based on that individual user access right; prevents the display of folders or other shared resources that the user does not have access to.
acls	array[acls]	
change_notify	boolean	Specifies whether CIFS clients can request for change notifications for directories on this share.
comment	string	Specify the CIFS share descriptions.
continuously_available	boolean	Specifies whether or not the clients connecting to this share can open files in a persistent manner. Files opened in this way are protected from disruptive events, such as, failover and giveback.
dir_umask	integer	Directory Mode Creation Mask to be viewed as an octal number.
encryption	boolean	Specifies that SMB encryption must be used when accessing this share. Clients that do not support encryption are not able to access this share.
file_umask	integer	File Mode Creation Mask to be viewed as an octal number.

Name	Type	Description
force_group_for_create	string	Specifies that all files that CIFS users create in a specific share belong to the same group (also called the "force-group"). The "force-group" must be a predefined group in the UNIX group database. This setting has no effect unless the security style of the volume is UNIX or mixed security style.
home_directory	boolean	Specifies whether or not the share is a home directory share, where the share and path names are dynamic. ONTAP home directory functionality automatically offer each user a dynamic share to their home directory without creating an individual SMB share for each user. The ONTAP CIFS home directory feature enable us to configure a share that maps to different directories based on the user that connects to it. Instead of creating a separate shares for each user, a single share with a home directory parameters can be created. In a home directory share, ONTAP dynamically generates the share-name and share-path by substituting %w, %u, and %d variables with the corresponding Windows user name, UNIX user name, and domain name, respectively. • Default value: • Introduced in: 9.6 • readCreate: 1

Name	Type	Description
name	string	Specifies the name of the CIFS share that you want to create. If this is a home directory share then the share name includes the pattern as %w (Windows user name), %u (UNIX user name) and %d (Windows domain name) variables in any combination with this parameter to generate shares dynamically.
namespace_caching	boolean	Specifies whether or not the SMB clients connecting to this share can cache the directory enumeration results returned by the CIFS servers.
no_strict_security	boolean	Specifies whether or not CIFS clients can follow a unix symlinks outside the share boundaries.
offline_files	string	Offline Files The supported values are: • none - Clients are not permitted to cache files for offline access. • manual - Clients may cache files that are explicitly selected by the user for offline access. • documents - Clients may automatically cache files that are used by the user for offline access. • programs - Clients may automatically cache files that are used by the user for offline access and may use those files in an offline mode even if the share is available.
oplocks	boolean	Specify whether opportunistic locks are enabled on this share. "Oplocks" allow clients to lock files and cache content locally, which can increase performance for file operations.

Name	Type	Description
path	string	The fully-qualified pathname in the owning SVM namespace that is shared through this share. If this is a home directory share then the path should be dynamic by specifying the pattern %w (Windows user name), %u (UNIX user name), or %d (domain name) variables in any combination. ONTAP generates the path dynamically for the connected user and this path is appended to each search path to find the full Home Directory path. • example: /volume_1/eng_vol/ • maxLength: 256 • minLength: 1 • Introduced in: 9.6
show_snapshot	boolean	Specifies whether or not the Snapshot copies can be viewed and traversed by clients.
svm	svm	
unix_symlink	string	Controls the access of UNIX symbolic links to CIFS clients. The supported values are: • local - Enables only local symbolic links which is within the same CIFS share. • widelink - Enables both local symlinks and widelinks. • disable - Disables local symlinks and widelinks.
volume	volume	

Name	Type	Description
vscan_profile	string	Vscan File-Operations Profile The supported values are: • no_scan - Virus scans are never triggered for accesses to this share. • standard - Virus scans can be triggered by open, close, and rename operations. • strict - Virus scans can be triggered by open, read, close, and rename operations. • writes_only - Virus scans can be triggered only when a file that has been modified is closed.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Create a CIFS share

POST `/protocols/cifs/shares`

Introduced In: 9.6

Creates a CIFS share.

Required properties

- `svm.uuid` or `svm.name` - Existing SVM in which to create the CIFS share.
- `name` - Name of the CIFS share.
- `path` - Path in the owning SVM namespace that is shared through this share.

Recommended optional properties

- `comment` - Optionally choose to add a text comment of up to 256 characters about the CIFS share.
- `acls` - Optionally choose to add share permissions that users and groups have on the CIFS share.

Default property values

If not specified in POST, the following default property values are assigned:

- `home_directory` - *false*
- `oplocks` - *true*
- `access_based_enumeration` - *false*
- `change_notify` - *true*
- `encryption` - *false*
- `unix_symlink` - *local*

Related ONTAP commands

- `vserver cifs share create`
- `vserver cifs share properties add`
- `vserver cifs share access-control create`

Learn more

- DOC /protocols/cifs/shares

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:

Request Body

Name	Type	Description
access_based_enumeration	boolean	If enabled, all folders inside this share are visible to a user based on that individual user access right; prevents the display of folders or other shared resources that the user does not have access to.
acls	array[acls]	
change_notify	boolean	Specifies whether CIFS clients can request for change notifications for directories on this share.
comment	string	Specify the CIFS share descriptions.
continuously_available	boolean	Specifies whether or not the clients connecting to this share can open files in a persistent manner. Files opened in this way are protected from disruptive events, such as, failover and giveback.
dir_umask	integer	Directory Mode Creation Mask to be viewed as an octal number.
encryption	boolean	Specifies that SMB encryption must be used when accessing this share. Clients that do not support encryption are not able to access this share.
file_umask	integer	File Mode Creation Mask to be viewed as an octal number.
force_group_for_create	string	Specifies that all files that CIFS users create in a specific share belong to the same group (also called the "force-group"). The "force-group" must be a predefined group in the UNIX group database. This setting has no effect unless the security style of the volume is UNIX or mixed security style.

Name	Type	Description
home_directory	boolean	Specifies whether or not the share is a home directory share, where the share and path names are dynamic. ONTAP home directory functionality automatically offer each user a dynamic share to their home directory without creating an individual SMB share for each user. The ONTAP CIFS home directory feature enable us to configure a share that maps to different directories based on the user that connects to it. Instead of creating a separate shares for each user, a single share with a home directory parameters can be created. In a home directory share, ONTAP dynamically generates the share-name and share-path by substituting %w, %u, and %d variables with the corresponding Windows user name, UNIX user name, and domain name, respectively. • Default value: 1 • Introduced in: 9.6 • readCreate: 1
name	string	Specifies the name of the CIFS share that you want to create. If this is a home directory share then the share name includes the pattern as %w (Windows user name), %u (UNIX user name) and %d (Windows domain name) variables in any combination with this parameter to generate shares dynamically.
namespace_caching	boolean	Specifies whether or not the SMB clients connecting to this share can cache the directory enumeration results returned by the CIFS servers.
no_strict_security	boolean	Specifies whether or not CIFS clients can follow a unix symlinks outside the share boundaries.

Name	Type	Description
offline_files	string	Offline Files The supported values are: • none - Clients are not permitted to cache files for offline access. • manual - Clients may cache files that are explicitly selected by the user for offline access. • documents - Clients may automatically cache files that are used by the user for offline access. • programs - Clients may automatically cache files that are used by the user for offline access and may use those files in an offline mode even if the share is available.
oplocks	boolean	Specify whether opportunistic locks are enabled on this share. "Oplocks" allow clients to lock files and cache content locally, which can increase performance for file operations.
path	string	The fully-qualified pathname in the owning SVM namespace that is shared through this share. If this is a home directory share then the path should be dynamic by specifying the pattern %w (Windows user name), %u (UNIX user name), or %d (domain name) variables in any combination. ONTAP generates the path dynamically for the connected user and this path is appended to each search path to find the full Home Directory path. • example: /volume_1/eng_vol/ • maxLength: 256 • minLength: 1 • Introduced in: 9.6

Name	Type	Description
show_snapshot	boolean	Specifies whether or not the Snapshot copies can be viewed and traversed by clients.
svm	svm	
unix_symlink	string	Controls the access of UNIX symbolic links to CIFS clients. The supported values are: • local - Enables only local symbolic links which is within the same CIFS share. • widelink - Enables both local symlinks and widelinks. • disable - Disables local symlinks and widelinks.
volume	volume	
vscan_profile	string	Vscan File-Operations Profile The supported values are: • no_scan - Virus scans are never triggered for accesses to this share. • standard - Virus scans can be triggered by open, close, and rename operations. • strict - Virus scans can be triggered by open, read, close, and rename operations. • writes_only - Virus scans can be triggered only when a file that has been modified is closed.

Example request

```
{
  "acls": [
    {
      "permission": "string",
      "type": "string",
      "user_or_group": "ENGDOMAIN\\ad_user"
    }
  ],
  "comment": "HR Department Share",
  "dir_umask": 22,
  "file_umask": 22,
  "force_group_for_create": "string",
  "name": "HR_SHARE",
  "offline_files": "string",
  "path": "/volume_1/eng_vol/",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "unix_symlink": "string",
  "volume": {
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  },
  "vscan_profile": "string"
}
```

Response

```
Status: 201, Created
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655628	CIFS Share Creation with property 'SMB_ENCRYPTION' failed because the CIFS server does not support SMB3.0
655551	CIFS Share Creation failed because the specified path does not exist
655577	The CIFS share name cannot be more than 80 characters long
655399	Failed to create CIFS share. The CIFS server does not exist for specified SVM
656422	Failed to create the home directory share because the directory shares must specify a path relative to one or more home directory search paths
656423	Failed to create CIFS share. The Shares must define an absolute share path
656424	Failed to create CIFS the administrator share 'c$' because you are not permitted to created any admin shares
655625	Failed to create CIFS share. The Shares path is not a valid file-type for CIFS share
656426	CIFS Share Creation failed because the share name is invalid
655655	no-strict-security should be set to true only if unix_symlink is configured as "local" or "widelink"
655394	Failed to create CIFS share because share cannot be made continuously available unless running SMB3 or later.
4849678	Failed to create CIFS share because the specified UNIX group does not exist

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

acls

The permissions that users and groups have on a CIFS share.

Name	Type	Description
permission	string	Specifies the access rights that a user or group has on the defined CIFS Share. The following values are allowed: • no_access - User does not have CIFS share access • read - User has only read access • change - User has change access • full_control - User has full_control access
type	string	Specifies the type of the user or group to add to the access control list of a CIFS share. The following values are allowed: • windows - Windows user or group • unix_user - UNIX user • unix_group - UNIX group
user_or_group	string	Specifies the user or group name to add to the access control list of a CIFS share.

svm

Name	Type	Description
name	string	The name of the SVM.

Name	Type	Description
uuid	string	The unique identifier of the SVM.

volume

Name	Type	Description
name	string	The name of the volume.
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

cifs_share

CIFS share is a named access point in a volume. Before users and applications can access data on the CIFS server over SMB, a CIFS share must be created with sufficient share permission. CIFS shares are tied to the CIFS server on the SVM. When a CIFS share is created, ONTAP creates a default ACL for the share with Full Control permissions for Everyone.

Name	Type	Description
access_based_enumeration	boolean	If enabled, all folders inside this share are visible to a user based on that individual user access right; prevents the display of folders or other shared resources that the user does not have access to.
acls	array[acls]	
change_notify	boolean	Specifies whether CIFS clients can request for change notifications for directories on this share.
comment	string	Specify the CIFS share descriptions.

Name	Type	Description
continuously_available	boolean	Specifies whether or not the clients connecting to this share can open files in a persistent manner. Files opened in this way are protected from disruptive events, such as, failover and giveback.
dir_umask	integer	Directory Mode Creation Mask to be viewed as an octal number.
encryption	boolean	Specifies that SMB encryption must be used when accessing this share. Clients that do not support encryption are not able to access this share.
file_umask	integer	File Mode Creation Mask to be viewed as an octal number.
force_group_for_create	string	Specifies that all files that CIFS users create in a specific share belong to the same group (also called the "force-group"). The "force-group" must be a predefined group in the UNIX group database. This setting has no effect unless the security style of the volume is UNIX or mixed security style.

Name	Type	Description
home_directory	boolean	Specifies whether or not the share is a home directory share, where the share and path names are dynamic. ONTAP home directory functionality automatically offer each user a dynamic share to their home directory without creating an individual SMB share for each user. The ONTAP CIFS home directory feature enable us to configure a share that maps to different directories based on the user that connects to it. Instead of creating a separate shares for each user, a single share with a home directory parameters can be created. In a home directory share, ONTAP dynamically generates the share-name and share-path by substituting %w, %u, and %d variables with the corresponding Windows user name, UNIX user name, and domain name, respectively. • Default value: 1 • Introduced in: 9.6 • readCreate: 1
name	string	Specifies the name of the CIFS share that you want to create. If this is a home directory share then the share name includes the pattern as %w (Windows user name), %u (UNIX user name) and %d (Windows domain name) variables in any combination with this parameter to generate shares dynamically.
namespace_caching	boolean	Specifies whether or not the SMB clients connecting to this share can cache the directory enumeration results returned by the CIFS servers.

Name	Type	Description
no_strict_security	boolean	Specifies whether or not CIFS clients can follow a unix symlinks outside the share boundaries.
offline_files	string	Offline Files The supported values are: • none - Clients are not permitted to cache files for offline access. • manual - Clients may cache files that are explicitly selected by the user for offline access. • documents - Clients may automatically cache files that are used by the user for offline access. • programs - Clients may automatically cache files that are used by the user for offline access and may use those files in an offline mode even if the share is available.
oplocks	boolean	Specify whether opportunistic locks are enabled on this share. "Oplocks" allow clients to lock files and cache content locally, which can increase performance for file operations.

Name	Type	Description
path	string	The fully-qualified pathname in the owning SVM namespace that is shared through this share. If this is a home directory share then the path should be dynamic by specifying the pattern %w (Windows user name), %u (UNIX user name), or %d (domain name) variables in any combination. ONTAP generates the path dynamically for the connected user and this path is appended to each search path to find the full Home Directory path. • example: /volume_1/eng_vol/ • maxLength: 256 • minLength: 1 • Introduced in: 9.6
show_snapshot	boolean	Specifies whether or not the Snapshot copies can be viewed and traversed by clients.
svm	svm	
unix_symlink	string	Controls the access of UNIX symbolic links to CIFS clients. The supported values are: • local - Enables only local symbolic links which is within the same CIFS share. • widelink - Enables both local symlinks and widelinks. • disable - Disables local symlinks and widelinks.
volume	volume	

Name	Type	Description
vscan_profile	string	Vscan File-Operations Profile The supported values are: • no_scan - Virus scans are never triggered for accesses to this share. • standard - Virus scans can be triggered by open, close, and rename operations. • strict - Virus scans can be triggered by open, read, close, and rename operations. • writes_only - Virus scans can be triggered only when a file that has been modified is closed.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete a CIFS share

DELETE `/protocols/cifs/shares/{svm.uuid}/{name}`

Introduced In: 9.6

Deletes a CIFS share.

Related ONTAP commands

- `vserver cifs share delete`

Learn more

- DOC /protocols/cifs/shares

Parameters

Name	Type	In	Required	Description
name	string	path	True	Share Name
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655393	Standard admin shares cannot be removed

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve a CIFS share

GET `/protocols/cifs/shares/{svm.uuid}/{name}`

Introduced In: 9.6

Retrieves a CIFS share.

Related ONTAP commands

- `vserver cifs share show`
- `vserver cifs share properties show`

Learn more

- DOC /protocols/cifs/shares

Parameters

Name	Type	In	Required	Description
name	string	path	True	Share Name
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
access_based_enumeration	boolean	If enabled, all folders inside this share are visible to a user based on that individual user access right; prevents the display of folders or other shared resources that the user does not have access to.
acls	array[acls]	
change_notify	boolean	Specifies whether CIFS clients can request for change notifications for directories on this share.
comment	string	Specify the CIFS share descriptions.

Name	Type	Description
continuously_available	boolean	Specifies whether or not the clients connecting to this share can open files in a persistent manner. Files opened in this way are protected from disruptive events, such as, failover and giveback.
dir_umask	integer	Directory Mode Creation Mask to be viewed as an octal number.
encryption	boolean	Specifies that SMB encryption must be used when accessing this share. Clients that do not support encryption are not able to access this share.
file_umask	integer	File Mode Creation Mask to be viewed as an octal number.
force_group_for_create	string	Specifies that all files that CIFS users create in a specific share belong to the same group (also called the "force-group"). The "force-group" must be a predefined group in the UNIX group database. This setting has no effect unless the security style of the volume is UNIX or mixed security style.

Name	Type	Description
home_directory	boolean	Specifies whether or not the share is a home directory share, where the share and path names are dynamic. ONTAP home directory functionality automatically offer each user a dynamic share to their home directory without creating an individual SMB share for each user. The ONTAP CIFS home directory feature enable us to configure a share that maps to different directories based on the user that connects to it. Instead of creating a separate shares for each user, a single share with a home directory parameters can be created. In a home directory share, ONTAP dynamically generates the share-name and share-path by substituting %w, %u, and %d variables with the corresponding Windows user name, UNIX user name, and domain name, respectively. • Default value: 1 • Introduced in: 9.6 • readCreate: 1
name	string	Specifies the name of the CIFS share that you want to create. If this is a home directory share then the share name includes the pattern as %w (Windows user name), %u (UNIX user name) and %d (Windows domain name) variables in any combination with this parameter to generate shares dynamically.
namespace_caching	boolean	Specifies whether or not the SMB clients connecting to this share can cache the directory enumeration results returned by the CIFS servers.
no_strict_security	boolean	Specifies whether or not CIFS clients can follow a unix symlinks outside the share boundaries.

Name	Type	Description
offline_files	string	Offline Files The supported values are: • none - Clients are not permitted to cache files for offline access. • manual - Clients may cache files that are explicitly selected by the user for offline access. • documents - Clients may automatically cache files that are used by the user for offline access. • programs - Clients may automatically cache files that are used by the user for offline access and may use those files in an offline mode even if the share is available.
oplocks	boolean	Specify whether opportunistic locks are enabled on this share. "Oplocks" allow clients to lock files and cache content locally, which can increase performance for file operations.
path	string	The fully-qualified pathname in the owning SVM namespace that is shared through this share. If this is a home directory share then the path should be dynamic by specifying the pattern %w (Windows user name), %u (UNIX user name), or %d (domain name) variables in any combination. ONTAP generates the path dynamically for the connected user and this path is appended to each search path to find the full Home Directory path. • example: /volume_1/eng_vol/ • maxLength: 256 • minLength: 1 • Introduced in: 9.6

Name	Type	Description
show_snapshot	boolean	Specifies whether or not the Snapshot copies can be viewed and traversed by clients.
svm	svm	
unix_symlink	string	Controls the access of UNIX symbolic links to CIFS clients. The supported values are: • local - Enables only local symbolic links which is within the same CIFS share. • widelink - Enables both local symlinks and widelinks. • disable - Disables local symlinks and widelinks.
volume	volume	
vscan_profile	string	Vscan File-Operations Profile The supported values are: • no_scan - Virus scans are never triggered for accesses to this share. • standard - Virus scans can be triggered by open, close, and rename operations. • strict - Virus scans can be triggered by open, read, close, and rename operations. • writes_only - Virus scans can be triggered only when a file that has been modified is closed.

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "acls": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "permission": "string",
      "type": "string",
      "user_or_group": "ENGDOMAIN\\ad_user"
    }
  ],
  "comment": "HR Department Share",
  "dir_umask": 22,
  "file_umask": 22,
  "force_group_for_create": "string",
  "name": "HR_SHARE",
  "offline_files": "string",
  "path": "/volume_1/eng_vol/",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "unix_symlink": "string",
  "volume": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  },
```

```
  "vscan_profile": "string"
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

acls

The permissions that users and groups have on a CIFS share.

Name	Type	Description
_links	_links	
permission	string	Specifies the access rights that a user or group has on the defined CIFS Share. The following values are allowed: • no_access - User does not have CIFS share access • read - User has only read access • change - User has change access • full_control - User has full_control access
type	string	Specifies the type of the user or group to add to the access control list of a CIFS share. The following values are allowed: • windows - Windows user or group • unix_user - UNIX user • unix_group - UNIX group
user_or_group	string	Specifies the user or group name to add to the access control list of a CIFS share.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volume

Name	Type	Description
_links	_links	
name	string	The name of the volume.
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update a CIFS share

PATCH `/protocols/cifs/shares/{svm.uuid}/{name}`

Introduced In: 9.6

Updates a CIFS share.

Related ONTAP commands

- `vserver cifs share modify`
- `vserver cifs share properties add`
- `vserver cifs share properties remove`

Learn more

- DOC /protocols/cifs/shares

Parameters

Name	Type	In	Required	Description
name	string	path	True	Share Name
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
access_based_enumeration	boolean	If enabled, all folders inside this share are visible to a user based on that individual user access right; prevents the display of folders or other shared resources that the user does not have access to.
change_notify	boolean	Specifies whether CIFS clients can request for change notifications for directories on this share.
comment	string	Specify the CIFS share descriptions.

Name	Type	Description
continuously_available	boolean	Specifies whether or not the clients connecting to this share can open files in a persistent manner. Files opened in this way are protected from disruptive events, such as, failover and giveback.
dir_umask	integer	Directory Mode Creation Mask to be viewed as an octal number.
encryption	boolean	Specifies that SMB encryption must be used when accessing this share. Clients that do not support encryption are not able to access this share.
file_umask	integer	File Mode Creation Mask to be viewed as an octal number.
force_group_for_create	string	Specifies that all files that CIFS users create in a specific share belong to the same group (also called the "force-group"). The "force-group" must be a predefined group in the UNIX group database. This setting has no effect unless the security style of the volume is UNIX or mixed security style.
namespace_caching	boolean	Specifies whether or not the SMB clients connecting to this share can cache the directory enumeration results returned by the CIFS servers.
no_strict_security	boolean	Specifies whether or not CIFS clients can follow a unix symlinks outside the share boundaries.

Name	Type	Description
offline_files	string	Offline Files The supported values are: • none - Clients are not permitted to cache files for offline access. • manual - Clients may cache files that are explicitly selected by the user for offline access. • documents - Clients may automatically cache files that are used by the user for offline access. • programs - Clients may automatically cache files that are used by the user for offline access and may use those files in an offline mode even if the share is available.
oplocks	boolean	Specify whether opportunistic locks are enabled on this share. "Oplocks" allow clients to lock files and cache content locally, which can increase performance for file operations.
path	string	The fully-qualified pathname in the owning SVM namespace that is shared through this share. If this is a home directory share then the path should be dynamic by specifying the pattern %w (Windows user name), %u (UNIX user name), or %d (domain name) variables in any combination. ONTAP generates the path dynamically for the connected user and this path is appended to each search path to find the full Home Directory path. • example: /volume_1/eng_vol/ • maxLength: 256 • minLength: 1 • Introduced in: 9.6

Name	Type	Description
show_snapshot	boolean	Specifies whether or not the Snapshot copies can be viewed and traversed by clients.
svm	svm	
unix_symlink	string	Controls the access of UNIX symbolic links to CIFS clients. The supported values are: • local - Enables only local symbolic links which is within the same CIFS share. • widelink - Enables both local symlinks and widelinks. • disable - Disables local symlinks and widelinks.
volume	volume	
vscan_profile	string	Vscan File-Operations Profile The supported values are: • no_scan - Virus scans are never triggered for accesses to this share. • standard - Virus scans can be triggered by open, close, and rename operations. • strict - Virus scans can be triggered by open, read, close, and rename operations. • writes_only - Virus scans can be triggered only when a file that has been modified is closed.

Example request


```
{
  "comment": "HR Department Share",
  "dir_umask": 22,
  "file_umask": 22,
  "force_group_for_create": "string",
  "home_directory": null,
  "offline_files": "string",
  "path": "/volume_1/eng_vol/",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "unix_symlink": "string",
  "volume": {
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  },
  "vscan_profile": "string"
}
```


Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655628	'SMB_ENCRYPTION' property cannot be set on CIFS share because the CIFS server does not support SMB3.0
655551	CIFS Share modification failed because the specified path does not exist
655620	Cannot set symlink properties for admin shares
656420	Cannot modify the standard share ipc$
656421	Cannot modify the standard share admin$

Error Code	Description
656422	Failed to modify the home directory share because the directory shares must specify a path relative to one or more home directory search paths
656423	Failed to modify CIFS share. The Shares must define an absolute share path
656425	Failed to modify the CIFS share because the path for an administrative share cannot be modified
655395	Failed to modify the CIFS share because share cannot be made continuously available unless running SMB3 or later.
4849678	Failed to modify the CIFS share because the specified UNIX group does not exist

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

acls

The permissions that users and groups have on a CIFS share.

Name	Type	Description
permission	string	Specifies the access rights that a user or group has on the defined CIFS Share. The following values are allowed: • no_access - User does not have CIFS share access • read - User has only read access • change - User has change access • full_control - User has full_control access

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volume

Name	Type	Description
name	string	The name of the volume.

Name	Type	Description
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

cifs_share

CIFS share is a named access point in a volume. Before users and applications can access data on the CIFS server over SMB, a CIFS share must be created with sufficient share permission. CIFS shares are tied to the CIFS server on the SVM. When a CIFS share is created, ONTAP creates a default ACL for the share with Full Control permissions for Everyone.

Name	Type	Description
access_based_enumeration	boolean	If enabled, all folders inside this share are visible to a user based on that individual user access right; prevents the display of folders or other shared resources that the user does not have access to.
change_notify	boolean	Specifies whether CIFS clients can request for change notifications for directories on this share.
comment	string	Specify the CIFS share descriptions.
continuously_available	boolean	Specifies whether or not the clients connecting to this share can open files in a persistent manner. Files opened in this way are protected from disruptive events, such as, failover and giveback.
dir_umask	integer	Directory Mode Creation Mask to be viewed as an octal number.

Name	Type	Description
encryption	boolean	Specifies that SMB encryption must be used when accessing this share. Clients that do not support encryption are not able to access this share.
file_umask	integer	File Mode Creation Mask to be viewed as an octal number.
force_group_for_create	string	Specifies that all files that CIFS users create in a specific share belong to the same group (also called the "force-group"). The "force-group" must be a predefined group in the UNIX group database. This setting has no effect unless the security style of the volume is UNIX or mixed security style.
namespace_caching	boolean	Specifies whether or not the SMB clients connecting to this share can cache the directory enumeration results returned by the CIFS servers.
no_strict_security	boolean	Specifies whether or not CIFS clients can follow a unix symlinks outside the share boundaries.

Name	Type	Description
offline_files	string	Offline Files The supported values are: • none - Clients are not permitted to cache files for offline access. • manual - Clients may cache files that are explicitly selected by the user for offline access. • documents - Clients may automatically cache files that are used by the user for offline access. • programs - Clients may automatically cache files that are used by the user for offline access and may use those files in an offline mode even if the share is available.
oplocks	boolean	Specify whether opportunistic locks are enabled on this share. "Oplocks" allow clients to lock files and cache content locally, which can increase performance for file operations.
path	string	The fully-qualified pathname in the owning SVM namespace that is shared through this share. If this is a home directory share then the path should be dynamic by specifying the pattern %w (Windows user name), %u (UNIX user name), or %d (domain name) variables in any combination. ONTAP generates the path dynamically for the connected user and this path is appended to each search path to find the full Home Directory path. • example: /volume_1/eng_vol/ • maxLength: 256 • minLength: 1 • Introduced in: 9.6

Name	Type	Description
show_snapshot	boolean	Specifies whether or not the Snapshot copies can be viewed and traversed by clients.
svm	svm	
unix_symlink	string	Controls the access of UNIX symbolic links to CIFS clients. The supported values are: • local - Enables only local symbolic links which is within the same CIFS share. • widelink - Enables both local symlinks and widelinks. • disable - Disables local symlinks and widelinks.
volume	volume	
vscan_profile	string	Vscan File-Operations Profile The supported values are: • no_scan - Virus scans are never triggered for accesses to this share. • standard - Virus scans can be triggered by open, close, and rename operations. • strict - Virus scans can be triggered by open, read, close, and rename operations. • writes_only - Virus scans can be triggered only when a file that has been modified is closed.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Manage share-level ACL

Protocols CIFS shares svm.uuid share acls endpoint overview

Overview

Access to files and folders can be secured over a network by configuring share access control lists (ACLs) on CIFS shares. Share-level ACLs can be configured by using either Windows users and groups or UNIX users and groups. A share-level ACL consists of a list of access control entries (ACEs). Each ACE contains a user or group name and a set of permissions that determines user or group access to the share, regardless of the security style of the volume or qtree containing the share.

When an SMB user tries to access a share, ONTAP checks the share-level ACL to determine whether access should be granted. A share-level ACL only restricts access to files in the share; it never grants more access than the file level ACLs.

Examples

Creating a CIFS share ACL

To create a share ACL for a CIFS share, use the following API. Note the *return_records=true* query parameter used to obtain the newly created entry in the response.

```
# The API:
POST /api/protocols/cifs/shares{svm.uuid}/{share}/acls

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/cifs/shares/000c5cd2-ebdf-
11e8-a96e-0050568ea3cb/sh1/acls?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{
\"permission\": \"no_access\", \"type\": \"windows\", \"user_or_group\":
\"root\"}"

# The response:
{
"num_records": 1,
"records": [
  {
    "svm": {
      "name": "vs1"
    },
    "user_or_group": "root",
    "type": "windows",
    "permission": "no_access"
  }
]
}
```

Retrieving all CIFS shares ACLs for a specific CIFS share for a specific SVM in the cluster

```
# The API:
GET /api/protocols/cifs/shares/{svm.uuid}/{share}/acls

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/shares/000c5cd2-ebdf-
11e8-a96e-
0050568ea3cb/sh1/acls?fields=*&return_records=true&return_timeout=15" -H
"accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "000c5cd2-ebdf-11e8-a96e-0050568ea3cb",
      "name": "vs1"
    },
    "share": "sh1",
    "user_or_group": "Everyone",
    "type": "windows",
    "permission": "full_control"
  },
  {
    "svm": {
      "uuid": "000c5cd2-ebdf-11e8-a96e-0050568ea3cb",
      "name": "vs1"
    },
    "share": "sh1",
    "user_or_group": "root",
    "type": "windows",
    "permission": "no_access"
  }
],
"num_records": 2
}
```

Retrieving a CIFS share ACLs for a user or a group of type Windows or type UNIX on a CIFS share for a specific SVM

```
# The API:
GET
/api/protocols/cifs/shares/{svm.uuid}/{share}/acls/{user_or_group}/{type}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/shares/000c5cd2-ebdf-
11e8-a96e-0050568ea3cb/sh1/acls/everyone/windows" -H "accept:
application/json"

# The response:
{
"svm": {
  "uuid": "000c5cd2-ebdf-11e8-a96e-0050568ea3cb",
  "name": "vs1"
},
"share": "sh1",
"user_or_group": "everyone",
"type": "windows",
"permission": "full_control"
}
```

Updating a CIFS share ACLs of a user or group on a CIFS share for a specific SVM

The CIFS share ACL being modified is identified by the UUID of its SVM, the CIFS share name, user or group name and the type of the user or group.

```
# The API:
PATCH
/api/protocols/cifs/shares/{svm.uuid}/{share}/acls/{user_or_group}/{type}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/cifs/shares/000c5cd2-ebdf-
11e8-a96e-0050568ea3cb/sh1/acls/everyone/windows" -H "accept:
application/json" -H "Content-Type: application/json" -d "{
\"permission\": \"no_access\"}"
```

Removing a CIFS share ACLs of a user or group on a CIFS Share for a specific SVM

The CIFS share ACL being removed is identified by the UUID of its SVM, the CIFS share name, user or group name and the type of the user or group.

```
# The API:
DELETE
/api/protocols/cifs/shares/{svm.uuid}/{share}/acls/{user_or_group}/{type}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/cifs/shares/000c5cd2-ebdf-
11e8-a96e-0050568ea3cb/sh1/acls/everyone/windows" -H "accept:
application/json"
```

Retrieve a share-level ACL on a CIFS share

GET `/protocols/cifs/shares/{svm.uuid}/{share}/acls`

Introduced In: 9.6

Retrieves the share-level ACL on a CIFS share.

Related ONTAP commands

- `vserver cifs share access-control show`

Learn more

- DOC /protocols/cifs/shares/{svm.uuid}/{share}/acls

Parameters

Name	Type	In	Required	Description
share	string	path	True	CIFS Share Name
type	string	query	False	Filter by type
user_or_group	string	query	False	Filter by user_or_group
permission	string	query	False	Filter by permission
svm.name	string	query	False	Filter by svm.name • Introduced in: 9.9
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Name	Type	In	Required	Description
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[cifs_share_acl]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "permission": "string",
      "share": "string",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "type": "string",
      "user_or_group": "ENGDOMAIN\\ad_user"
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

cifs_share_acl

The permissions that users and groups have on a CIFS share.

Name	Type	Description
_links	_links	

Name	Type	Description
permission	string	Specifies the access rights that a user or group has on the defined CIFS Share. The following values are allowed: • no_access - User does not have CIFS share access • read - User has only read access • change - User has change access • full_control - User has full_control access
share	string	CIFS share name
svm	svm	
type	string	Specifies the type of the user or group to add to the access control list of a CIFS share. The following values are allowed: • windows - Windows user or group • unix_user - UNIX user • unix_group - UNIX group
user_or_group	string	Specifies the user or group name to add to the access control list of a CIFS share.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments

Name	Type	Description
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Create a share-level ACL on a CIFS share

POST `/protocols/cifs/shares/{svm.uuid}/{share}/acls`

Introduced In: 9.6

Creates a share-level ACL on a CIFS share.

Required properties

- `svm.uuid` or `svm.name` - Existing SVM in which to create the share acl.
- `share` - Existing CIFS share in which to create the share acl.
- `user_or_group` - Existing user or group name for which the acl is added on the CIFS share.
- `permission` - Access rights that a user or group has on the defined CIFS share.

Default property values

- `type` - *windows*

Related ONTAP commands

- `vserver cifs share access-control create`

Learn more

- DOC /protocols/cifs/shares/{svm.uuid}/{share}/acls

Parameters

Name	Type	In	Required	Description
share	string	path	True	CIFS Share Name
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:

Name	Type	In	Required	Description
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
permission	string	Specifies the access rights that a user or group has on the defined CIFS Share. The following values are allowed: • no_access - User does not have CIFS share access • read - User has only read access • change - User has change access • full_control - User has full_control access
share	string	CIFS share name
svm	svm	
type	string	Specifies the type of the user or group to add to the access control list of a CIFS share. The following values are allowed: • windows - Windows user or group • unix_user - UNIX user • unix_group - UNIX group
user_or_group	string	Specifies the user or group name to add to the access control list of a CIFS share.

Example request

```
{
  "permission": "string",
  "share": "string",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "type": "string",
  "user_or_group": "ENGDOMAIN\\ad_user"
}
```

Response

```
Status: 201, Created
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655470	Failed to create share ACL because the share does not exist
655446	Failed to create share ACL because the specified Windows user/group does not exist
4849678	Failed to create share ACL because the specified UNIX user/group does not exist

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

cifs_share_acl

The permissions that users and groups have on a CIFS share.

Name	Type	Description
permission	string	Specifies the access rights that a user or group has on the defined CIFS Share. The following values are allowed: • no_access - User does not have CIFS share access • read - User has only read access • change - User has change access • full_control - User has full_control access
share	string	CIFS share name
svm	svm	

Name	Type	Description
type	string	Specifies the type of the user or group to add to the access control list of a CIFS share. The following values are allowed: • windows - Windows user or group • unix_user - UNIX user • unix_group - UNIX group
user_or_group	string	Specifies the user or group name to add to the access control list of a CIFS share.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete a share-level ACL on a CIFS share

DELETE `/protocols/cifs/shares/{svm.uuid}/{share}/acls/{user_or_group}/{type}`

Introduced In: 9.6

Deletes a share-level ACL on a CIFS share.

Related ONTAP commands

- `vserver cifs share access-control delete`

Learn more

- DOC /protocols/cifs/shares/{svm.uuid}/{share}/acls

Parameters

Name	Type	In	Required	Description
share	string	path	True	Share name
user_or_group	string	path	True	User or group name
type	string	path	True	User or group type
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 200, Ok
```

Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve a share-level ACL on a CIFS share for a user or group

GET `/protocols/cifs/shares/{svm.uuid}/{share}/acls/{user_or_group}/{type}`

Introduced In: 9.6

Retrieves the share-level ACL on CIFS share for a specified user or group.

Related ONTAP commands

- `vserver cifs share access-control show`

Learn more

- DOC /protocols/cifs/shares/{svm.uuid}/{share}/acls

Parameters

Name	Type	In	Required	Description
share	string	path	True	Share name
user_or_group	string	path	True	User or group name
type	string	path	True	User or group type
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	

Name	Type	Description
permission	string	Specifies the access rights that a user or group has on the defined CIFS Share. The following values are allowed: • no_access - User does not have CIFS share access • read - User has only read access • change - User has change access • full_control - User has full_control access
share	string	CIFS share name
svm	svm	
type	string	Specifies the type of the user or group to add to the access control list of a CIFS share. The following values are allowed: • windows - Windows user or group • unix_user - UNIX user • unix_group - UNIX group
user_or_group	string	Specifies the user or group name to add to the access control list of a CIFS share.

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "permission": "string",
  "share": "string",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "type": "string",
  "user_or_group": "ENGDOMAIN\\ad_user"
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update a share-level ACL on a CIFS share

PATCH `/protocols/cifs/shares/{svm.uuid}/{share}/acls/{user_or_group}/{type}`

Introduced In: 9.6

Updates a share-level ACL on a CIFS share.

Related ONTAP commands

- `vserver cifs share access-control modify`

Learn more

- DOC /protocols/cifs/shares/{svm.uuid}/{share}/acls

Parameters

Name	Type	In	Required	Description
share	string	path	True	Share name
user_or_group	string	path	True	User or group name
type	string	path	True	User or group type
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
permission	string	Specifies the access rights that a user or group has on the defined CIFS Share. The following values are allowed: • no_access - User does not have CIFS share access • read - User has only read access • change - User has change access • full_control - User has full_control access
share	string	CIFS share name
svm	svm	

Example request


```
{
  "permission": "string",
  "share": "string",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```


Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655516	The share ACL does not exist for given user and share

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

cifs_share_acl

The permissions that users and groups have on a CIFS share.

Name	Type	Description
permission	string	Specifies the access rights that a user or group has on the defined CIFS Share. The following values are allowed: • no_access - User does not have CIFS share access • read - User has only read access • change - User has change access • full_control - User has full_control access
share	string	CIFS share name
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Manage CIFS UNIX symlink mapping

Protocols CIFS unix-symlink-mapping endpoint overview

Overview

ONTAP allows both CIFS and NFS to access the same datastore. This datastore can contain symbolic links which are files, created by UNIX clients. It contains a reference to another file or directory. If an SMB client accesses a symbolic link, it is redirected to the target file or directory that the symbolic link refers to. The symbolic links can point to files within the volume that contain the share, or to files that are contained in other volumes on the Storage Virtual Machine (SVM), or even to volumes contained on other SVMs.

There are two types of symbolic links:

Relative A relative symbolic link contains a reference to the file or directory relative to its parent directory. Therefore, the path of the file it is referring to should not begin with a backslash (/). If you enable symbolic links on a share, relative symbolic links work without UNIX symlink mapping.

Absolute An absolute symbolic link contains a reference to a file or directory in the form of an absolute path. Therefore, the path of the file it is referring to should begin with a backslash (/). An absolute symbolic link can refer to a file or directory within or outside of the file system of the symbolic link. If the target is not in the same local file system, the symbolic link is called a "widelink". If the symbolic link is enabled on a share and absolute symbolic links do not work right away, the mapping between the UNIX path of the symbolic link to the destination CIFS path must be created. When creating absolute symbolic link mappings, locality could be either "local" or "widelink" and it must be specified. If UNIX symlink mapping is created for a file or directory which is outside of the local share but the locality is set to "local", ONTAP does not allow access to the target.

A UNIX symbolic link support could be added to SMB shares by specifying the *unix_symlink* property during the creation of SMB shares or at any time by modifying the existing SMB *unix_symlink* property. UNIX symbolic link support is enabled by default.

Examples

Creating a UNIX symlink mapping for CIFS shares

To create UNIX symlink mappings for SMB shares, use the following API. Note the *return_records=true* query parameter used to obtain the newly created entry in the response.

```
# The API:
POST /api/protocols/cifs/unix-symlink-mapping

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/cifs/unix-symlink-
mapping?return_records=true" -H "accept: application/json" -H "Content-
Type: application/json" -d "{ \"svm\": { \"name\": \"vs1\", \"uuid\":
\"000c5cd2-ebdf-11e8-a96e-0050568ea3cb\" }, \"target\": {
\"home_directory\": false, \"locality\": \"local\", \"path\":
\"/dir1/dir2/\", \"server\": \"cifs123\", \"share\": \"sh1\" },
\"unix_path\": \"/mnt/eng_volume/\"}"

# The response:
{
"num_records": 1,
"records": [
  {
    "svm": {
      "uuid": "000c5cd2-ebdf-11e8-a96e-0050568ea3cb",
      "name": "vs1"
    },
    "unix_path": "/mnt/eng_volume/",
    "target": {
      "share": "sh1",
      "path": "/dir1/dir2/",
      "server": "cifs123",
      "locality": "local",
      "home_directory": false
    }
  }
]
}
```

Retrieving UNIX symlink mappings for all SVMs in the cluster

```
# The API:
GET /api/protocols/cifs/unix-symlink-mapping

# The call:
```

```
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/unix-symlink-
mapping?fields=*&return_records=true&return_timeout=15" -H "accept:
application/hal+json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "000c5cd2-ebdf-11e8-a96e-0050568ea3cb",
      "name": "vs1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/000c5cd2-ebdf-11e8-a96e-0050568ea3cb"
        }
      }
    },
    "unix_path": "/mnt/eng_volume/",
    "target": {
      "share": "sh1",
      "path": "/dir1/dir2/",
      "server": "CIFS123",
      "locality": "local",
      "home_directory": false
    },
    "_links": {
      "self": {
        "href": "/api/protocols/cifs/unix-symlink-mapping/000c5cd2-ebdf-
11e8-a96e-0050568ea3cb/%2Fmnt%2Feng_volume%2F"
      }
    }
  },
  {
    "svm": {
      "uuid": "1d30d1b1-ebdf-11e8-a96e-0050568ea3cb",
      "name": "vs2",
      "_links": {
        "self": {
          "href": "/api/svm/svms/1d30d1b1-ebdf-11e8-a96e-0050568ea3cb"
        }
      }
    },
    "unix_path": "/mnt/eng_volume/",
    "target": {
      "share": "ENG_SHARE",
      "path": "/dir1/dir2/",
```

```
      "server": "ENGCIFS",
      "locality": "widelink",
      "home_directory": false
    },
    "_links": {
      "self": {
        "href": "/api/protocols/cifs/unix-symlink-mapping/1d30d1b1-ebdf-
11e8-a96e-0050568ea3cb/%2Fmnt%2Feng_volume%2F"
      }
    }
  }
],
"num_records": 2,
"_links": {
  "self": {
    "href": "/api/protocols/cifs/unix-symlink-
mapping?fields=*&return_records=true&return_timeout=15"
  }
}
}
```

Retrieving a specific UNIX symlink mapping for an SVM

The mapping being returned is identified by the UUID of its SVM and the unix-path.

```
# The API:
GET /api/protocols/cifs/unix-symlink-mapping/{svm.uuid}/{unix_path}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/unix-symlink-
mapping/000c5cd2-ebdf-11e8-a96e-0050568ea3cb/%2Fmnt%2Feng_volume%2F" -H
"accept: application/json"

# The response:
{
"svm": {
  "uuid": "000c5cd2-ebdf-11e8-a96e-0050568ea3cb",
 "name": "vs1"
},
"unix_path": "/mnt/eng_volume/",
"target": {
  "share": "sh1",
  "path": "/dir1/dir2/",
  "server": "CIFS123",
  "locality": "local",
  "home_directory": false
}
}
```

Updating a specific UNIX symlink mapping for an SVM

The mapping being modified is identified by the UUID of its SVM and the unix-path.

```
# The API:
PATCH /api/protocols/cifs/unix-symlink-mapping/{svm.uuid}/{unix_path}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/cifs/unix-symlink-
mapping/000c5cd2-ebdf-11e8-a96e-0050568ea3cb/%2Fmnt%2Feng_volume%2F" -H
"accept: application/json" -H "Content-Type: application/json" -d "{
\"target\": { \"home_directory\": true, \"locality\": \"widelink\",
\"path\": \"/new_path/\", \"server\": \"HR_SERVER\", \"share\": \"sh2\"
}}"
```

Removing a specific UNIX symlink mapping for an SVM

The mapping being removed is identified by the UUID of its SVM and the unix-path.

```
# The API:
DELETE /api/protocols/cifs/unix-symlink-mapping/{svm.uuid}/{unix_path}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/cifs/unix-symlink-
mapping/000c5cd2-ebdf-11e8-a96e-0050568ea3cb/%2Fmnt%2Feng_volume%2F" -H
"accept: application/json"
```

Retrieve UNIX symbolic link mappings for CIFS clients

GET `/protocols/cifs/unix-symlink-mapping`

Introduced In: 9.6

Retrieves UNIX symbolic link mappings for CIFS clients.

Related ONTAP commands

- `vserver cifs symlink show`

Learn more

- DOC /protocols/cifs/unix-symlink-mapping

Parameters

Name	Type	In	Required	Description
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
unix_path	string	query	False	Filter by unix_path
target.share	string	query	False	Filter by target.share
target.home_directory	boolean	query	False	Filter by target.home_directory
target.path	string	query	False	Filter by target.path
target.server	string	query	False	Filter by target.server
target.locality	string	query	False	Filter by target.locality

Name	Type	In	Required	Description
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[cifs_symlink_mapping]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "target": {
        "locality": "string",
        "path": "/dir1/dir2/",
        "server": "ENGCIFS",
        "share": "ENG_SHARE"
      },
      "unix_path": "/mnt/eng_volume/"
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

cifs_target

Name	Type	Description
home_directory	boolean	Specify if the destination share is a home directory.
locality	string	Specifies whether the CIFS symbolic link is a local link or wide link. The following values are supported: • local - Local symbolic link maps only to the same CIFS share. • widelink - Wide symbolic link maps to any CIFS share on the network.

Name	Type	Description
path	string	Specifies the CIFS path on the destination to which the symbolic link maps. The final path is generated by concatenating the CIFS server name, the share name, the cifs-path and the remaining path in the symbolic link left after the prefix match. This value is specified by using a UNIX-style path name. The trailing forward slash is required for the full path name to be properly interpreted.
server	string	Specifies the destination CIFS server where the UNIX symbolic link is pointing. This field is mandatory if the locality of the symbolic link is 'widelink'. You can specify the value in any of the following formats: • DNS name of the CIFS server. • IP address of the CIFS server. • NetBIOS name of the CIFS server.
share	string	Specifies the CIFS share name on the destination CIFS server to which the UNIX symbolic link is pointing.

cifs_symlink_mapping

ONTAP allows for both CIFS and NFS access to the same datastore. This datastore can contain symbolic links created by UNIX clients which can point anywhere from the perspective of the UNIX client. To Access such UNIX symlink from CIFS share, we need to create a CIFS symbolic link path mapping from a UNIX symlink and target it as a CIFS path.

Name	Type	Description
_links	_links	
svm	svm	
target	cifs_target	

Name	Type	Description
unix_path	string	Specifies the UNIX path prefix to be matched for the mapping.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Create a UNIX symbolic link mapping for a CIFS client

POST `/protocols/cifs/unix-symlink-mapping`

Introduced In: 9.6

Creates a UNIX symbolic link mapping for a CIFS client.

Required properties

- `svm.uuid` or `svm.name` - Existing SVM in which to create the CIFS unix-symlink-mapping.
- `unix_path` - UNIX path to which the CIFS symlink mapping to be created.
- `target.share` - CIFS share name on the destination CIFS server to which the UNIX symbolic link is pointing.
- `target.path` - CIFS path on the destination to which the symbolic link maps.

Default property values

- `target.server` - *Local_NetBIOS_Server_Name*
- `locality` - *local*

- `home_directory` - *false*

Related ONTAP commands

- `vserver cifs symlink create`

Learn more

- DOC /protocols/cifs/unix-symlink-mapping

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:

Request Body

Name	Type	Description
svm	svm	
target	cifs_target	
unix_path	string	Specifies the UNIX path prefix to be matched for the mapping.

Example request

```
{
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "target": {
    "locality": "string",
    "path": "/dir1/dir2/",
    "server": "ENGCIFS",
    "share": "ENG_SHARE"
  },
  "unix_path": "/mnt/eng_volume/"
}
```

Response

```
Status: 201, Created
```

Name	Type	Description
num_records	integer	Number of records
records	array[cifs_symlink_mapping]	

Example response


```
{
  "records": [
    {
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "target": {
        "locality": "string",
        "path": "/dir1/dir2/",
        "server": "ENGCIFS",
        "share": "ENG_SHARE"
      },
      "unix_path": "/mnt/eng_volume/"
    }
  ]
}
```


Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655654	Must specify the target CIFS share while creating path mapping entries with localities "local" or "widelink"
655572	The target path contains illegal characters or is too long

Error Code	Description
655574	The target server contains illegal characters or is too long
655436	If the locality is "local", the target server must be blank or must match the CIFS NetBIOS name for given SVM
655439	The Specified target server is local CIFS server for given SVM but the locality is specified as "widelink"
655546	Failed to create symlink mapping becasue administrative share cannot be used as target share
655437	Failed to create the symlink mapping with locality "local" because the target share does not exist for specified SVM
655429	UNIX path must begin and end with a "/"
655430	Target path must begin and end with a "/"
655399	Failed to get the CIFS server for specified SVM

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

cifs_target

Name	Type	Description
home_directory	boolean	Specify if the destination share is a home directory.
locality	string	Specifies whether the CIFS symbolic link is a local link or wide link. The following values are supported: • local - Local symbolic link maps only to the same CIFS share. • widelink - Wide symbolic link maps to any CIFS share on the network.
path	string	Specifies the CIFS path on the destination to which the symbolic link maps. The final path is generated by concatenating the CIFS server name, the share name, the cifs-path and the remaining path in the symbolic link left after the prefix match. This value is specified by using a UNIX-style path name. The trailing forward slash is required for the full path name to be properly interpreted.

Name	Type	Description
server	string	Specifies the destination CIFS server where the UNIX symbolic link is pointing. This field is mandatory if the locality of the symbolic link is 'widelink'. You can specify the value in any of the following formats: • DNS name of the CIFS server. • IP address of the CIFS server. • NetBIOS name of the CIFS server.
share	string	Specifies the CIFS share name on the destination CIFS server to which the UNIX symbolic link is pointing.

cifs_symlink_mapping

ONTAP allows for both CIFS and NFS access to the same datastore. This datastore can contain symbolic links created by UNIX clients which can point anywhere from the perspective of the UNIX client. To Access such UNIX symlink from CIFS share, we need to create a CIFS symbolic link path mapping from a UNIX symlink and target it as a CIFS path.

Name	Type	Description
svm	svm	
target	cifs_target	
unix_path	string	Specifies the UNIX path prefix to be matched for the mapping.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete a UNIX symbolic link mapping for CIFS clients

DELETE `/protocols/cifs/unix-symlink-mapping/{svm.uuid}/{unix_path}`

Introduced In: 9.6

Deletes the UNIX symbolic link mapping for CIFS clients.

Related ONTAP commands

- `vserver cifs symlink delete`

Learn more

- DOC /protocols/cifs/unix-symlink-mapping

Parameters

Name	Type	In	Required	Description
unix_path	string	path	True	UNIX symbolic link path
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 200, Ok
```

Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve a UNIX symbolic link mapping for CIFS clients

GET `/protocols/cifs/unix-symlink-mapping/{svm.uuid}/{unix_path}`

Introduced In: 9.6

Retrieves a UNIX symbolic link mapping for CIFS clients.

Related ONTAP commands

- `vserver cifs symlink show`

Learn more

- DOC /protocols/cifs/unix-symlink-mapping

Parameters

Name	Type	In	Required	Description
unix_path	string	path	True	UNIX symbolic link path
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
svm	svm	
target	cifs_target	
unix_path	string	Specifies the UNIX path prefix to be matched for the mapping.

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "target": {
    "locality": "string",
    "path": "/dir1/dir2/",
    "server": "ENGCIFS",
    "share": "ENG_SHARE"
  },
  "unix_path": "/mnt/eng_volume/"
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

cifs_target

Name	Type	Description
home_directory	boolean	Specify if the destination share is a home directory.
locality	string	Specifies whether the CIFS symbolic link is a local link or wide link. The following values are supported: • local - Local symbolic link maps only to the same CIFS share. • widelink - Wide symbolic link maps to any CIFS share on the network.

Name	Type	Description
path	string	Specifies the CIFS path on the destination to which the symbolic link maps. The final path is generated by concatenating the CIFS server name, the share name, the cifs-path and the remaining path in the symbolic link left after the prefix match. This value is specified by using a UNIX-style path name. The trailing forward slash is required for the full path name to be properly interpreted.
server	string	Specifies the destination CIFS server where the UNIX symbolic link is pointing. This field is mandatory if the locality of the symbolic link is 'widelink'. You can specify the value in any of the following formats: • DNS name of the CIFS server. • IP address of the CIFS server. • NetBIOS name of the CIFS server.
share	string	Specifies the CIFS share name on the destination CIFS server to which the UNIX symbolic link is pointing.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments

Name	Type	Description
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update a UNIX symbolic link mapping for CIFS clients

PATCH `/protocols/cifs/unix-symlink-mapping/{svm.uuid}/{unix_path}`

Introduced In: 9.6

Updates the UNIX symbolic link mapping for CIFS clients.

Related ONTAP commands

- `vserver cifs symlink modify`

Learn more

- DOC /protocols/cifs/unix-symlink-mapping

Parameters

Name	Type	In	Required	Description
unix_path	string	path	True	UNIX symbolic link path
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
svm	svm	
target	cifs_target	

Example request

```
{
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "target": {
    "locality": "string",
    "path": "/dir1/dir2/",
    "server": "ENGCIFS",
    "share": "ENG_SHARE"
  }
}
```

Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655573	Failed to modify the symlink mapping to target path because it contains illegal characters or is too long
655575	Failed to modify the symlink mapping to target server because it contains illegal characters or is too long
655547	Failed to modify symlink mapping becasue administrative share cannot be used as target share

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

cifs_target

Name	Type	Description
home_directory	boolean	Specify if the destination share is a home directory.
locality	string	Specifies whether the CIFS symbolic link is a local link or wide link. The following values are supported: • local - Local symbolic link maps only to the same CIFS share. • widelink - Wide symbolic link maps to any CIFS share on the network.
path	string	Specifies the CIFS path on the destination to which the symbolic link maps. The final path is generated by concatenating the CIFS server name, the share name, the cifs-path and the remaining path in the symbolic link left after the prefix match. This value is specified by using a UNIX-style path name. The trailing forward slash is required for the full path name to be properly interpreted.

Name	Type	Description
server	string	Specifies the destination CIFS server where the UNIX symbolic link is pointing. This field is mandatory if the locality of the symbolic link is 'widelink'. You can specify the value in any of the following formats: • DNS name of the CIFS server. • IP address of the CIFS server. • NetBIOS name of the CIFS server.
share	string	Specifies the CIFS share name on the destination CIFS server to which the UNIX symbolic link is pointing.

cifs_symlink_mapping

ONTAP allows for both CIFS and NFS access to the same datastore. This datastore can contain symbolic links created by UNIX clients which can point anywhere from the perspective of the UNIX client. To Access such UNIX symlink from CIFS share, we need to create a CIFS symbolic link path mapping from a UNIX symlink and target it as a CIFS path.

Name	Type	Description
svm	svm	
target	cifs_target	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code

Name	Type	Description
message	string	Error message
target	string	The target parameter that caused the error.

Manage CIFS user group privileges

Protocols CIFS users-and-groups privileges endpoint overview

Overview

Privileges associated with local or Active Directory users or groups defines the permissions for the specified user or group. You can use this API to display and/or control privileges of local or Active Directory users or groups.

Retrieving the privileges of a specific local or Active Directory user or group and an SVM

The users and groups privileges GET endpoint retrieves privileges of the specified local or Active Directory user or group and the SVM.

Examples

Retrieving the privileges of all of the users or groups of data SVMs.

```
# The API:
/api/protocols/cifs/users-and-groups/privileges

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/users-and-
groups/privileges?fields=*" -H "accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "25b363a6-2971-11eb-88e1-0050568eefd4",
      "name": "vs1"
    },
    "name": "VS1.CIFS\\user1",
    "privileges": [
      "SeChangeNotifyPrivilege",
      "SeTakeOwnershipPrivilege"
```

```
    ]
  },
  {
    "svm": {
      "uuid": "25b363a6-2971-11eb-88e1-0050568eefd4",
      "name": "vs1"
    },
    "name": "ACTIVE_DIRECTORY\\user",
    "privileges": [
      "SeBackupPrivilege",
      "SeTakeOwnershipPrivilege"
    ]
  },
  {
    "svm": {
      "uuid": "0ac79c37-3867-11eb-bece-0050568ed0a2",
      "name": "vs2"
    },
    "name": "VS2.CIFS\\group1",
    "privileges": [
      "SeSecurityPrivilege",
      "SeBackupPrivilege",
      "SeRestorePrivilege"
    ]
  }
]
}
```

Retrieving the privileges of the specific SVM and user or group

```
# The API:
/api/protocols/cifs/users-and-groups/{svm.uuid}/{name}/privileges

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/cifs/users-and-
groups/privileges/25b363a6-2971-11eb-88e1-0050568eefd4/user1" -H "accept:
application/json"

# The response:
{
"svm": {
  "uuid": "25b363a6-2971-11eb-88e1-0050568eefd4",
  "name": "vs1"
},
"name": "VS1.CIFS\\user1",
"privileges": [
  "SeChangeNotifyPrivilege",
  "SeTakeOwnershipPrivilege"
]
}
```

Adding privileges to the local or Active Directory user or group

The users and groups privileges POST endpoint adds privileges to the specified local or Active Directory user or group and the SVM.

Adding the privileges to the local user 'user1'

```
# The API:
/api/protocols/cifs/users-and-groups/privileges/{svm.uuid}/{name}

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/cifs/users-and-
groups/privileges/179d3c85-7053-11e8-b9b8-005056b41bd1/user1" -H "accept:
application/json" -H "Content-Type: application/json" -d '{ "privileges":
[ "SeSecurityPrivilege", "SeBackupPrivilege", "SeRestorePrivilege"] }'
```

Updating the privileges of the local or Active Directory user or group of a specific SVM

Example

Updating the privileges of local user 'user1' in SVM 'vs1' to 'SeRestorePrivilege' and 'SeSecurityPrivilege'

```
# The API:
/api/protocols/cifs/users-and-groups/privileges/{svm.uuid}/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/cifs/users-and-
groups/privileges/179d3c85-7053-11e8-b9b8-005056b41bd1/user1" -H "accept:
application/json" -d '{ "privileges": [ "SeRestorePrivilege",
"SeSecurityPrivilege"] }'
```

Reset all the privileges associated with the local user 'user1' in SVM 'vs1'

```
# The API:
/api/protocols/cifs/users-and-groups/privileges/{svm.uuid}/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/cifs/users-and-
groups/privileges/179d3c85-7053-11e8-b9b8-005056b41bd1/user1" -H "accept:
application/json" -d '{ "privileges": [ ] }'
```

Retrieve privileges for all local, or Active Directory users or groups and SVMs

GET `/protocols/cifs/users-and-groups/privileges`

Introduced In: 9.9

Retrieves privileges of the specified local or Active Directory user or group and SVM.

Related ONTAP commands

- `vserver cifs users-and-groups privilege show`

Learn more

- DOC /protocols/cifs/users-and-groups/privileges

Parameters

Name	Type	In	Required	Description
privileges	string	query	False	Filter by privileges
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
name	string	query	False	Filter by name

Name	Type	In	Required	Description
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	Number of local or Active Directory user or group records.

Name	Type	Description
records	array[user_group_privileges]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "user1",
      "privileges": [
        "string"
      ],
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

user_group_privileges

Name	Type	Description
_links	_links	
name	string	Local or Active Directory user or group name.

Name	Type	Description
privileges	array[string]	An array of privileges associated with the local or Active Directory user or group. The available values are: • SeTcbPrivilege - Allows user to act as part of the operating system • SeBackupPrivilege - Allows user to back up files and directories, overriding any ACLs • SeRestorePrivilege - Allows user to restore files and directories, overriding any ACLs • SeTakeOwnershipPrivilege - Allows user to take ownership of files or other objects • SeSecurityPrivilege - Allows user to manage auditing and viewing/dumping/clearing the security log • SeChangeNotifyPrivilege - Allows user to bypass traverse checking
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message

Name	Type	Description
target	string	The target parameter that caused the error.

Add privileges to a local, or Active Directory user or group and SVM

POST `/protocols/cifs/users-and-groups/privileges`

Introduced In: 9.9

Adds privileges to the specified local or Active Directory user or group and SVM.

Important note

- Specified privileges are appended to the existing list of privileges.

Required properties

- `svm.uuid` or `svm.name` - Existing SVM for which privileges are added to user or group.
- `name` - Exising local or Active Directory user or group for which privileges are to be added.
- `privileges` - List of privileges to be added to a user or group.

Related ONTAP commands

- `vserver cifs users-and-groups privilege add-privilege`

Learn more

- DOC /protocols/cifs/users-and-groups/privileges

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:

Request Body

Name	Type	Description
name	string	Local or Active Directory user or group name.

Name	Type	Description
privileges	array[string]	An array of privileges associated with the local or Active Directory user or group. The available values are: • SeTcbPrivilege - Allows user to act as part of the operating system • SeBackupPrivilege - Allows user to back up files and directories, overriding any ACLs • SeRestorePrivilege - Allows user to restore files and directories, overriding any ACLs • SeTakeOwnershipPrivilege - Allows user to take ownership of files or other objects • SeSecurityPrivilege - Allows user to manage auditing and viewing/dumping/clearing the security log • SeChangeNotifyPrivilege - Allows user to bypass traverse checking
svm	svm	

Example request

```
{
  "name": "user1",
  "privileges": [
    "string"
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

```
Status: 201, Created
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655660	The operation is allowed only on data SVMs.
655673	Failed to resolve the user or group.
655730	The specified local user to which privileges are to be associated to does not exist.

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

user_group_privileges

Name	Type	Description
name	string	Local or Active Directory user or group name.

Name	Type	Description
privileges	array[string]	An array of privileges associated with the local or Active Directory user or group. The available values are: • SeTcbPrivilege - Allows user to act as part of the operating system • SeBackupPrivilege - Allows user to back up files and directories, overriding any ACLs • SeRestorePrivilege - Allows user to restore files and directories, overriding any ACLs • SeTakeOwnershipPrivilege - Allows user to take ownership of files or other objects • SeSecurityPrivilege - Allows user to manage auditing and viewing/dumping/clearing the security log • SeChangeNotifyPrivilege - Allows user to bypass traverse checking
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message

Name	Type	Description
target	string	The target parameter that caused the error.

Retrieve privileges for a local, or Active Directory user or group and SVM

GET `/protocols/cifs/users-and-groups/privileges/{svm.uuid}/{name}`

Introduced In: 9.9

Retrieves privileges of the specified local or Active Directory user or group and SVM.

Related ONTAP commands

- `vserver cifs users-and-groups privilege show`

Learn more

- DOC /protocols/cifs/users-and-groups/privileges

Parameters

Name	Type	In	Required	Description
name	string	path	True	Local or Active Directory user or group name.
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
name	string	Local or Active Directory user or group name.

Name	Type	Description
privileges	array[string]	An array of privileges associated with the local or Active Directory user or group. The available values are: • SeTcbPrivilege - Allows user to act as part of the operating system • SeBackupPrivilege - Allows user to back up files and directories, overriding any ACLs • SeRestorePrivilege - Allows user to restore files and directories, overriding any ACLs • SeTakeOwnershipPrivilege - Allows user to take ownership of files or other objects • SeSecurityPrivilege - Allows user to manage auditing and viewing/dumping/clearing the security log • SeChangeNotifyPrivilege - Allows user to bypass traverse checking
svm	svm	

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "user1",
  "privileges": [
    "string"
  ],
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update privileges for a local, or Active Directory user or group and SVM

PATCH `/protocols/cifs/users-and-groups/privileges/{svm.uuid}/{name}`

Introduced In: 9.9

Updates privileges of the specified local or Active Directory user or group and SVM.

Important note

- Specified privileges will replace all the existing privileges associated with the user or group.
- To reset privileges associated with the user or group, specify the privileges list as empty.

Related ONTAP commands

- `vserver cifs users-and-groups privilege reset-privilege`

Learn more

- DOC /protocols/cifs/users-and-groups/privileges

Parameters

Name	Type	In	Required	Description
name	string	path	True	Local or Active Directory user or group name.
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
privileges	array[string]	An array of privileges associated with the local or Active Directory user or group. The available values are: • SeTcbPrivilege - Allows user to act as part of the operating system • SeBackupPrivilege - Allows user to back up files and directories, overriding any ACLs • SeRestorePrivilege - Allows user to restore files and directories, overriding any ACLs • SeTakeOwnershipPrivilege - Allows user to take ownership of files or other objects • SeSecurityPrivilege - Allows user to manage auditing and viewing/dumping/clearing the security log • SeChangeNotifyPrivilege - Allows user to bypass traverse checking
svm	svm	

Example request

```
{
  "privileges": [
    "string"
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655673	Failed to resolve the user or group.
655730	The specified local user to which privileges are to be associated to does not exist.

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

user_group_privileges

Name	Type	Description
privileges	array[string]	An array of privileges associated with the local or Active Directory user or group. The available values are: • SeTcbPrivilege - Allows user to act as part of the operating system • SeBackupPrivilege - Allows user to back up files and directories, overriding any ACLs • SeRestorePrivilege - Allows user to restore files and directories, overriding any ACLs • SeTakeOwnershipPrivilege - Allows user to take ownership of files or other objects • SeSecurityPrivilege - Allows user to manage auditing and viewing/dumping/clearing the security log • SeChangeNotifyPrivilege - Allows user to bypass traverse checking
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve trace results for access allowed or denied events

GET `/protocols/file-access-tracing/events`

Introduced In: 9.8

Retrieves the trace results for access allowed or denied events.

Related ONTAP commands

- `vserver security trace trace-result show`

Parameters

Name	Type	In	Required	Description
node.uuid	string	query	False	Filter by node.uuid
node.name	string	query	False	Filter by node.name
volume.uuid	string	query	False	Filter by volume.uuid
volume.name	string	query	False	Filter by volume.name

Name	Type	In	Required	Description
create_time	string	query	False	Filter by create_time
index	integer	query	False	Filter by index
reason.message	string	query	False	Filter by reason.message
share.name	string	query	False	Filter by share.name
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
session_id	integer	query	False	Filter by session_id
filter.svm.uuid	string	query	False	Filter by filter.svm.uuid
filter.svm.name	string	query	False	Filter by filter.svm.name
filter.protocol	string	query	False	Filter by filter.protocol
filter.index	integer	query	False	Filter by filter.index
filter.windows_user	string	query	False	Filter by filter.windows_user
filter.enabled	boolean	query	False	Filter by filter.enabled
filter.client_ip	string	query	False	Filter by filter.client_ip
filter.trace_allowed_ops	boolean	query	False	Filter by filter.trace_allowed_ops
filter.unix_user	string	query	False	Filter by filter.unix_user
filter.path	string	query	False	Filter by filter.path

Name	Type	In	Required	Description
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	collection_links	
num_records	integer	Number of records
records	array[file_access_event]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "create_time": "2018-06-04T19:00:00Z",
      "filter": {
        "client_ip": "10.140.68.143",
        "index": 1,
        "path": "/dir1/dir2",
        "protocol": "string",
        "svm": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "svm1",
          "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
        },
        "unix_user": "root",
        "windows_user": "cifs1/administrator"
      },
      "index": 1,
      "node": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "node1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
```

```
      "reason": {
        "message": "Access is allowed because the operation is trusted
and no security is configured."
      },
      "session_id": 2628976282477527056,
      "share": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "sh1"
      },
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "volume": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "volume1",
        "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

collection_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

svm_reference

SVM, applies only to SVM-scoped objects.

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

file_access_filter

ONTAP allows creation of filters for file access tracing for both CIFS and NFS. These filters have protocols, path, username and client IP based on which file access operations are logged.

Name	Type	Description
client_ip	string	Specifies the IP address from which the client accesses the file or directory.
enabled	boolean	Specifies whether to enable or disable the filter. Filters are enabled by default and are deleted after 60 mins.
index	integer	Position of the file access tracing filter.

Name	Type	Description
path	string	Specifies the path for which permission tracing can be applied. The value can be complete path from root of CIFS share or root of volume for NFS.
protocol	string	Specifies the protocol for which permission trace is required.
svm	svm_reference	SVM, applies only to SVM-scoped objects.
trace_allowed_ops	boolean	Specifies if the filter can trace file access denied and allowed events. The value of trace-allow is false by default, and it traces access denied events. The value is set to true for tracing access allowed events.
unix_user	string	Specifies the UNIX username whose access requests you want to trace. The filter would match only if the request is received with this user.
windows_user	string	Specifies the Windows username whose access requests you want to trace. The filter would match only if the request is received with this user.

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

reason

Displays the allowed or denied reason for the file access tracing events that are generated.

Name	Type	Description
message	string	The error message.

share

Name	Type	Description
_links	_links	
name	string	Share name

volume

Name	Type	Description
_links	_links	
name	string	The name of the volume.
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

file_access_event

ONTAP generates the list of file access tracing records stored on the cluster. These records are generated in response to security trace filters applied. The list of trace events recorded depends on the parameters configured for the filter.

Name	Type	Description
_links	_links	
create_time	string	Specifies the time at which the trace event entry was generated.
filter	file_access_filter	ONTAP allows creation of filters for file access tracing for both CIFS and NFS. These filters have protocols, path, username and client IP based on which file access operations are logged. • Introduced in: 9.8
index	integer	Specifies the sequence number of the security trace event.
node	node	

Name	Type	Description
reason	reason	Displays the allowed or denied reason for the file access tracing events that are generated.
session_id	integer	Specifies the CIFS session ID for the file access trace event, this is generated only for CIFS file accesses.
share	share	
svm	svm_reference	SVM, applies only to SVM-scoped objects.
volume	volume	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete trace results

DELETE `/protocols/file-access-tracing/events/{node.uuid}/{svm.uuid}/{index}`

Introduced In: 9.8

Deletes trace results.

Related ONTAP commands

- `vserver security trace result delete`

Parameters

Name	Type	In	Required	Description
node.uuid	string	path	True	Node UUID.
index	integer	path	True	Sequence number of traced event.
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 200, Ok
```

Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve trace results for a sequence number

GET `/protocols/file-access-tracing/events/{node.uuid}/{svm.uuid}/{index}`

Introduced In: 9.8

Retrieves trace results for the specified sequence number.

Related ONTAP commands

- `vserver security trace trace-result show`

Parameters

Name	Type	In	Required	Description
node.uuid	string	path	True	Node UUID.
index	integer	path	True	Sequence number of traced event.
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
create_time	string	Specifies the time at which the trace event entry was generated.
filter	file_access_filter	ONTAP allows creation of filters for file access tracing for both CIFS and NFS. These filters have protocols, path, username and client IP based on which file access operations are logged. • Introduced in: 9.8

Name	Type	Description
index	integer	Specifies the sequence number of the security trace event.
node	node	
reason	reason	Displays the allowed or denied reason for the file access tracing events that are generated.
session_id	integer	Specifies the CIFS session ID for the file access trace event, this is generated only for CIFS file accesses.
share	share	
svm	svm_reference	SVM, applies only to SVM-scoped objects.
volume	volume	

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "create_time": "2018-06-04T19:00:00Z",
  "filter": {
    "client_ip": "10.140.68.143",
    "index": 1,
    "path": "/dir1/dir2",
    "protocol": "string",
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "unix_user": "root",
    "windows_user": "cifs1/administrator"
  },
  "index": 1,
  "node": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "reason": {
    "message": "Access is allowed because the operation is trusted and
no security is configured."
  },
  "session_id": 2628976282477527056,
  "share": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
```

```
    },
    "name": "sh1"
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "volume": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  }
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

svm_reference

SVM, applies only to SVM-scoped objects.

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

file_access_filter

ONTAP allows creation of filters for file access tracing for both CIFS and NFS. These filters have protocols, path, username and client IP based on which file access operations are logged.

Name	Type	Description
client_ip	string	Specifies the IP address from which the client accesses the file or directory.
enabled	boolean	Specifies whether to enable or disable the filter. Filters are enabled by default and are deleted after 60 mins.
index	integer	Position of the file access tracing filter.
path	string	Specifies the path for which permission tracing can be applied. The value can be complete path from root of CIFS share or root of volume for NFS.

Name	Type	Description
protocol	string	Specifies the protocol for which permission trace is required.
svm	svm_reference	SVM, applies only to SVM-scoped objects.
trace_allowed_ops	boolean	Specifies if the filter can trace file access denied and allowed events. The value of trace-allow is false by default, and it traces access denied events. The value is set to true for tracing access allowed events.
unix_user	string	Specifies the UNIX username whose access requests you want to trace. The filter would match only if the request is received with this user.
windows_user	string	Specifies the Windows username whose access requests you want to trace. The filter would match only if the request is received with this user.

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

reason

Displays the allowed or denied reason for the file access tracing events that are generated.

Name	Type	Description
message	string	The error message.

share

Name	Type	Description
_links	_links	

Name	Type	Description
name	string	Share name

volume

Name	Type	Description
_links	_links	
name	string	The name of the volume.
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve information about security trace filter entries

GET `/protocols/file-access-tracing/filters`

Introduced In: 9.8

Retrieves information about security trace filter entries.

Related ONTAP commands

- `vserver security trace filter show`

Parameters

Name	Type	In	Required	Description
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
protocol	string	query	False	Filter by protocol
index	integer	query	False	Filter by index
windows_user	string	query	False	Filter by windows_user
enabled	boolean	query	False	Filter by enabled
client_ip	string	query	False	Filter by client_ip
trace_allowed_ops	boolean	query	False	Filter by trace_allowed_ops
unix_user	string	query	False	Filter by unix_user
path	string	query	False	Filter by path
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	collection_links	
num_records	integer	Number of records
records	array[file_access_filter]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "client_ip": "10.140.68.143",
      "index": 1,
      "path": "/dir1/dir2",
      "protocol": "string",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "unix_user": "root",
      "windows_user": "cifs1/administrator"
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

collection_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

svm_reference

SVM, applies only to SVM-scoped objects.

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

file_access_filter

ONTAP allows creation of filters for file access tracing for both CIFS and NFS. These filters have protocols, path, username and client IP based on which file access operations are logged.

Name	Type	Description
client_ip	string	Specifies the IP address from which the client accesses the file or directory.
enabled	boolean	Specifies whether to enable or disable the filter. Filters are enabled by default and are deleted after 60 mins.
index	integer	Position of the file access tracing filter.

Name	Type	Description
path	string	Specifies the path for which permission tracing can be applied. The value can be complete path from root of CIFS share or root of volume for NFS.
protocol	string	Specifies the protocol for which permission trace is required.
svm	svm_reference	SVM, applies only to SVM-scoped objects.
trace_allowed_ops	boolean	Specifies if the filter can trace file access denied and allowed events. The value of trace-allow is false by default, and it traces access denied events. The value is set to true for tracing access allowed events.
unix_user	string	Specifies the UNIX username whose access requests you want to trace. The filter would match only if the request is received with this user.
windows_user	string	Specifies the Windows username whose access requests you want to trace. The filter would match only if the request is received with this user.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code

Name	Type	Description
message	string	Error message
target	string	The target parameter that caused the error.

Creates security trace filter entries

POST `/protocols/file-access-tracing/filters`

Introduced In: 9.8

Creates security trace filter entries.

Related ONTAP commands

- `vserver security trace filter create`

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:

Request Body

Name	Type	Description
client_ip	string	Specifies the IP address from which the client accesses the file or directory.
enabled	boolean	Specifies whether to enable or disable the filter. Filters are enabled by default and are deleted after 60 mins.
index	integer	Position of the file access tracing filter.

Name	Type	Description
path	string	Specifies the path for which permission tracing can be applied. The value can be complete path from root of CIFS share or root of volume for NFS.
protocol	string	Specifies the protocol for which permission trace is required.
svm	svm_reference	SVM, applies only to SVM-scoped objects.
trace_allowed_ops	boolean	Specifies if the filter can trace file access denied and allowed events. The value of trace-allow is false by default, and it traces access denied events. The value is set to true for tracing access allowed events.
unix_user	string	Specifies the UNIX username whose access requests you want to trace. The filter would match only if the request is received with this user.
windows_user	string	Specifies the Windows username whose access requests you want to trace. The filter would match only if the request is received with this user.

Example request

```
{
  "client_ip": "10.140.68.143",
  "index": 1,
  "path": "/dir1/dir2",
  "protocol": "string",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "unix_user": "root",
  "windows_user": "cifs1/administrator"
}
```

Response

```
Status: 201, Created
```

Name	Type	Description
num_records	integer	Number of records
records	array[file_access_filter]	

Example response


```
{
  "records": [
    {
      "client_ip": "10.140.68.143",
      "index": 1,
      "path": "/dir1/dir2",
      "protocol": "string",
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "unix_user": "root",
      "windows_user": "cifs1/administrator"
    }
  ]
}
```


Error

```
Status: Default, Error
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

svm_reference

SVM, applies only to SVM-scoped objects.

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

file_access_filter

ONTAP allows creation of filters for file access tracing for both CIFS and NFS. These filters have protocols, path, username and client IP based on which file access operations are logged.

Name	Type	Description
client_ip	string	Specifies the IP address from which the client accesses the file or directory.
enabled	boolean	Specifies whether to enable or disable the filter. Filters are enabled by default and are deleted after 60 mins.
index	integer	Position of the file access tracing filter.
path	string	Specifies the path for which permission tracing can be applied. The value can be complete path from root of CIFS share or root of volume for NFS.
protocol	string	Specifies the protocol for which permission trace is required.
svm	svm_reference	SVM, applies only to SVM-scoped objects.

Name	Type	Description
trace_allowed_ops	boolean	Specifies if the filter can trace file access denied and allowed events. The value of trace-allow is false by default, and it traces access denied events. The value is set to true for tracing access allowed events.
unix_user	string	Specifies the UNIX username whose access requests you want to trace. The filter would match only if the request is received with this user.
windows_user	string	Specifies the Windows username whose access requests you want to trace. The filter would match only if the request is received with this user.

collection_links

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete security trace filters

DELETE `/protocols/file-access-tracing/filters/{svm.uuid}/{index}`

Introduced In: 9.8

Deletes security trace filters.

Related ONTAP commands

- `vserver security trace filter delete`

Parameters

Name	Type	In	Required	Description
index	integer	path	True	Filter index.
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 200, Ok
```

Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve information about security trace filter entries for an SVM

GET `/protocols/file-access-tracing/filters/{svm.uuid}/{index}`

Introduced In: 9.8

Retrieves information about security trace filter entries.

Related ONTAP commands

- `vserver security trace filter show`

Parameters

Name	Type	In	Required	Description
index	integer	path	True	
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
client_ip	string	Specifies the IP address from which the client accesses the file or directory.
enabled	boolean	Specifies whether to enable or disable the filter. Filters are enabled by default and are deleted after 60 mins.
index	integer	Position of the file access tracing filter.

Name	Type	Description
path	string	Specifies the path for which permission tracing can be applied. The value can be complete path from root of CIFS share or root of volume for NFS.
protocol	string	Specifies the protocol for which permission trace is required.
svm	svm_reference	SVM, applies only to SVM-scoped objects.
trace_allowed_ops	boolean	Specifies if the filter can trace file access denied and allowed events. The value of trace-allow is false by default, and it traces access denied events. The value is set to true for tracing access allowed events.
unix_user	string	Specifies the UNIX username whose access requests you want to trace. The filter would match only if the request is received with this user.
windows_user	string	Specifies the Windows username whose access requests you want to trace. The filter would match only if the request is received with this user.

Example response


```
{
  "client_ip": "10.140.68.143",
  "index": 1,
  "path": "/dir1/dir2",
  "protocol": "string",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "unix_user": "root",
  "windows_user": "cifs1/administrator"
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

svm_reference

SVM, applies only to SVM-scoped objects.

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update security trace filter entries

PATCH `/protocols/file-access-tracing/filters/{svm.uuid}/{index}`

Introduced In: 9.8

Updates security trace filter entries.

Related ONTAP commands

- `vserver security trace filter modify`

Parameters

Name	Type	In	Required	Description
index	integer	path	True	Filter index.
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
client_ip	string	Specifies the IP address from which the client accesses the file or directory.
enabled	boolean	Specifies whether to enable or disable the filter. Filters are enabled by default and are deleted after 60 mins.
index	integer	Position of the file access tracing filter.
path	string	Specifies the path for which permission tracing can be applied. The value can be complete path from root of CIFS share or root of volume for NFS.
protocol	string	Specifies the protocol for which permission trace is required.

Name	Type	Description
trace_allowed_ops	boolean	Specifies if the filter can trace file access denied and allowed events. The value of trace-allow is false by default, and it traces access denied events. The value is set to true for tracing access allowed events.
unix_user	string	Specifies the UNIX username whose access requests you want to trace. The filter would match only if the request is received with this user.
windows_user	string	Specifies the Windows username whose access requests you want to trace. The filter would match only if the request is received with this user.

Example request


```
{
  "client_ip": "10.140.68.143",
  "index": 1,
  "path": "/dir1/dir2",
  "protocol": "string",
  "unix_user": "root",
  "windows_user": "cifs1/administrator"
}
```


Response

```
Status: 200, Ok
```

Error

```
Status: Default, Error
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

svm_reference

SVM, applies only to SVM-scoped objects.

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

file_access_filter

ONTAP allows creation of filters for file access tracing for both CIFS and NFS. These filters have protocols, path, username and client IP based on which file access operations are logged.

Name	Type	Description
client_ip	string	Specifies the IP address from which the client accesses the file or directory.
enabled	boolean	Specifies whether to enable or disable the filter. Filters are enabled by default and are deleted after 60 mins.
index	integer	Position of the file access tracing filter.
path	string	Specifies the path for which permission tracing can be applied. The value can be complete path from root of CIFS share or root of volume for NFS.
protocol	string	Specifies the protocol for which permission trace is required.

Name	Type	Description
trace_allowed_ops	boolean	Specifies if the filter can trace file access denied and allowed events. The value of trace-allow is false by default, and it traces access denied events. The value is set to true for tracing access allowed events.
unix_user	string	Specifies the UNIX username whose access requests you want to trace. The filter would match only if the request is received with this user.
windows_user	string	Specifies the Windows username whose access requests you want to trace. The filter would match only if the request is received with this user.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

View file security permissions

Protocols file-security effective-permissions svm.uuid path endpoint overview

Overview

This API displays the effective permission granted to a Windows or UNIX user on the specified file or folder path.

Examples

Retrieving the effective permission for the specified Windows user on the specified path of an SVM.

```
= The API:

curl -X GET "https://10.63.26.252/api/protocols/file-security/effective-
permissions/cf5f271a-1beb-11ea-8fad-
005056bb645e/administrator/windows/%2F?share.name=sh1&return_records=true"
-H "accept: application/json" -H "authorization: Basic
YWRtaW46bmV0YXBwMSE="

= The response:

{
"svm": {
  "uuid": "cf5f271a-1beb-11ea-8fad-005056bb645e",
  "name": "vs1"
},
"user": "administrator",
"type": "windows",
"path": "/",
"share": {
  "path": "/"
},
"file_permission": [
  "read",
  "write",
  "append",
  "read_ea",
  "write_ea",
  "execute",
  "delete_child",
  "read_attributes",
  "write_attributes",
  "delete",
  "read_control",
  "write_dac",
  "write_owner",
  "synchronize",
```

```
  "system_security"
],
"share_permission": [
  "read",
  "read_ea",
  "execute",
  "read_attributes",
  "read_control",
  "synchronize"
]
}
```

```
[[ID1c28a1a762b4803b4f8080874d532b89]]
= Retrieve effective security permissions on a file

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/file-security/effective-permissions/{svm.uuid}/{path}`#

*Introduced In:* 9.8

Retrieves effective security permissions on a file.

== Related ONTAP commands

* `vserver security file-directory show-effective-permissions`


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|path
|string
|path
|True
a|File Path
```

```
|user
|string
|query
|True
a|User_Name


|share.name
|string
|query
|False
a|Share Name


|type
|string
|query
|False
a|User Type


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
```

```
|Description

|file_permissions
|array[string]
a|Specifies the effective permission granted to a user on the specified
file or folder path.


|path
|string
a|Specifies the path of the file or the folder for which you want to
display effective permissions.
The path is relative to the SVM root volume. If "-share-name" is specified
then path will be relative to the share path.


|share
|link:#share[share]
a|

|share_permissions
|array[string]
a|Specifies the effective permission granted to a user on the specified
file or folder path.


|svm
|link:#svm_reference[svm_reference]
a|SVM, applies only to SVM-scoped objects.


|type
|string
a|Specifies the user type. The following values are allowed:

* windows  - Windows user
* unix     - UNIX user


|user
|string
a|Specifies the user for which effective permission needs to be displayed
for the specified path.


|===
```

```
.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "file_permissions": [
    "string"
  ],
  "path": "/dir1/dir2",
  "share": {
    "name": "string",
    "path": "string"
  },
  "share_permissions": [
    "string"
  ],
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "type": "string",
  "user": "cifs1/administrator"
}
====

== Error
```

Status: Default, Ontap error response codes | error code | description | | ---------- | ---------- | | 655865 | the specified path cannot be used, if the file does not exist.|

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|
```

```
|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#share]
[.api-collapsible-fifth-title]
share

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|Displays the file or directory effective permission for the mentioned
user, only for files and directories contained where the
specified path is relative to the root of the specified share. If this
parameter is not specified, the SVM root volume is
taken as the default. If this parameter is specified, the effective share
```

```
permission of the user is also displayed.
Wildcard query characters are not supported.


|path
|string
a|Displays the CIFS share path.


|===


[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#svm_reference]
```

```
[.api-collapsible-fifth-title]
svm_reference

SVM, applies only to SVM-scoped objects.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument
```

```
|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



:leveloffset: -1


= Manage file security permissions and audit policies
```

```
:leveloffset: +1


[[ID98439704c4d7d97bf423a791cbe4f69e]]
= Protocols file-security permissions svm.uuid path endpoint overview



== Overview

Using this API, You can manage NTFS file security and audit policies of
file or directory without the need of a client. It works similar to what
you could do with a cacls in windows client. It will create an NTFS
security descriptor(SD) to which you can add access control entries (ACEs)
to the discretionary access control list (DACL) and the system access
control list (SACL). Generally, an SD contains following information:

** Security identifiers (SIDs) for the owner and primary group of an
object. A security identifier (SID) is a unique value of variable length
used to identify a trustee. Each account has a unique SID issued by an
authority, such as a Windows domain controller, and is stored in a
security database.

** A DACL  identifies the trustees that are allowed or denied access to a
securable object. When a process tries to access a securable object, the
system checks the ACEs in the object's DACL to determine whether to grant
access to it.

** A SACL  enables administrators to log attempts to access a secured
object. Each ACE specifies the types of access attempts by a specified
trustee that cause the system to generate a record in the security event
log. An ACE in a SACL can generate audit records when an access attempt
fails, when it succeeds, or both.

** A set of control bits that qualify the meaning of a SD or its
individual members.

Currently, in ONTAP CLI, creating and applying NTFS ACLs is a 5-step
process:

** Create an SD.

** Add DACLs and SACLs to the NTFS SD. If you want to audit file and
directory events, you must configure auditing on the Vserver, in addition,
to adding a SACL to the SD.
```

```
** Create a file/directory security policy. This step associates the
policy with a SVM.

** Create a policy task. A policy task refers to a single operation to
apply to a file (or folder) or to a set of files (or folders). Among other
things, the task defines which SD to apply to a path.

** Apply a policy to the associated SVM.

This REST API to set the DACL/SACL is similar to the windows GUI. The
approach used here has been simplified by combining all steps into a
single step. The REST API uses only minimal and mandatory parameters to
create access control entries (ACEs), which can be added to the
discretionary access control list (DACL) and the system access control
list (SACL). Based on information provided, SD is created and  applied on
the target path.

From 9.10.1, SLAG (Storage-Level Access Guard) ACLs can also be configured
through these endpoints. SLAG is designed to be set on a volume or qtree.
Storage-level security cannot be revoked from a client, not even by a
system (Windows or UNIX) administrator. It is designed to be modified by
storage administrators only, which precedes the share/export permission
and the Windows ACLs or UNIX mode bits. Similiar to configuring file-
directory ACLs, configuring SLAG ACLs is also simplified by combining all
steps into a single step.

== Examples

=== Creating a new SD

Use this endpoint to apply a fresh set of SACLs and DACLs. A new SD is
created based on the input parameters and it replaces the old SD for the
given target path:

'''

----

# The API:
POST /protocols/file-security/permissions/{svm.uuid}/{path}

# The call:
curl -X POST "https://10.140.101.39/api/protocols/file-
security/permissions/9479099d-5b9f-11eb-9c4e-
0050568e8682/%2Fparent?return_timeout=0" -H "accept: application/json" -H
"authorization: Basic YWRtaW46bmV0YXBwMSE=" -H "Content-Type:
application/json" -d "{ \"acls\": [ { \"access\": \"access_allow\",
```

```
\"advanced_rights\": { \"append_data\": true, \"delete\": true,
\"delete_child\": true, \"execute_file\": true, \"full_control\": true,
\"read_attr\": true, \"read_data\": true, \"read_ea\": true,
\"read_perm\": true, \"write_attr\": true, \"write_data\": true,
\"write_ea\": true, \"write_owner\": true, \"write_perm\": true },
\"apply_to\": { \"files\": true, \"sub_folders\": true, \"this_folder\":
true }, \"user\": \"administrator\" } ], \"control_flags\": \"32788\",
\"group\": \"S-1-5-21-2233347455-2266964949-1780268902-69700\",
\"ignore_paths\": [ \"/parent/child2\" ], \"owner\": \"S-1-5-21-
2233347455-2266964949-1780268902-69304\", \"propagation_mode\":
\"propagate\"}"

# The response:
{
"job": {
  "uuid": "3015c294-5bbc-11eb-9c4e-0050568e8682",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/3015c294-5bbc-11eb-9c4e-0050568e8682"
    }
  }
}
}
----

'''

=== Configuring a new set of SLAG DACLs and SACLs

Use this endpoint to apply a fresh set of SLAG DACLs and SACLs. A new SD
is created based on the input parameters and it replaces the old SLAG
pemissions for the given target path:

'''


----

# The API:
POST /protocols/file-security/permissions/{svm.uuid}/{path}

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/file-
security/permissions/9f738ac5-c502-11eb-b82c-
0050568e5902/%2Ftest_vol?return_timeout=0" -H  "accept: application/json"
-H  "Content-Type: application/json" -d "{  \"access_control\": \"slag\",
\"acls\": [    {      \"access\": \"access_allow\",
```

```
\"advanced_rights\": {        \"append_data\": true,        \"delete\":
true,        \"delete_child\": true,        \"execute_file\": true,
\"full_control\": true,        \"read_attr\": true,        \"read_data\":
true,        \"read_ea\": true,        \"read_perm\": true,
\"write_attr\": true,        \"write_data\": true,        \"write_ea\":
true,        \"write_owner\": true,        \"write_perm\": true      },
\"apply_to\": {        \"files\": true,        \"sub_folders\": true,
\"this_folder\": true      },      \"user\": \"user1\"    },{
\"access\": \"audit_success\",      \"advanced_rights\": {
\"append_data\": true,        \"delete\": true,        \"delete_child\":
true,        \"execute_file\": true,        \"full_control\": true,
\"read_attr\": true,        \"read_data\": true,        \"read_ea\": true,
\"read_perm\": true,        \"write_attr\": true,        \"write_data\":
true,        \"write_ea\": true,        \"write_owner\": true,
\"write_perm\": true      },      \"apply_to\": {        \"files\": true,
\"sub_folders\": true,        \"this_folder\": true      },      \"user\":
\"user2\"    }  ]}"

# The response:
{
"job": {
  "uuid": "9938d743-d566-11eb-ad60-0050568e5902",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/9938d743-d566-11eb-ad60-0050568e5902"
    }
  }
}
}
----

'''

=== Retrieving file permissions

Use this endpoint to retrieve all the security and auditing information of
a directory or file:

'''

----

# The API:
GET /protocols/file-security/permissions/{svm.uuid}/{path}

# The call:
```

```
curl -X GET "https://10.140.101.39/api/protocols/file-
security/permissions/9479099d-5b9f-11eb-9c4e-0050568e8682/%2Fparent" -H
"accept: application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE="

# The response:
{
"svm": {
  "uuid": "9479099d-5b9f-11eb-9c4e-0050568e8682",
  "name": "vs1"
},
"path": "/parent",
"owner": "BUILTIN\\Administrators",
"group": "BUILTIN\\Administrators",
"control_flags": "0x8014",
"acls": [
  {
    "user": "BUILTIN\\Administrators",
    "access": "access_allow",
    "apply_to": {
      "files": true,
      "sub_folders": true,
      "this_folder": true
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "file_directory"
  },
  {
    "user": "BUILTIN\\Users",
    "access": "access_allow",
    "apply_to": {
```

```
      "files": true,
      "sub_folders": true,
      "this_folder": true
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "file_directory"
  },
  {
    "user": "CREATOR OWNER",
    "access": "access_allow",
    "apply_to": {
      "files": true,
      "sub_folders": true,
      "this_folder": true
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
```

```
      "write_perm": true
    },
    "access_control": "file_directory"
  },
  {
    "user": "Everyone",
    "access": "access_allow",
    "apply_to": {
      "files": true,
      "sub_folders": true,
      "this_folder": true
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "file_directory"
  },
  {
    "user": "NT AUTHORITY\\SYSTEM",
    "access": "access_allow",
    "apply_to": {
      "files": true,
      "sub_folders": true,
      "this_folder": true
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
```

```
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "file_directory"
  },
  {
    "user": "user1",
    "access": "access_allow",
    "apply_to": {
      "sub_folders": true,
      "this_folder": true
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "slag"
  },
  {
    "user": "user1",
    "access": "access_allow",
    "apply_to": {
      "files": true,
    },
    "advanced_rights": {
      "append_data": true,
```

```
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "slag"
  },
  {
    "user": "user2",
    "access": "audit_success",
    "apply_to": {
      "sub_folders": true,
      "this_folder": true
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "slag"
  },
  {
    "user": "user2",
    "access": "audit_success",
```

```
    "apply_to": {
      "files": true,
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "slag"
  }
],
"inode": 64,
"security_style": "mixed",
"effective_style": "ntfs",
"dos_attributes": "10",
"text_dos_attr": "----D---",
"user_id": "0",
"group_id": "0",
"mode_bits": 777,
"text_mode_bits": "rwxrwxrwx"
}
----

'''

=== Updating SD-specific information

Use this end point to update the following information:

** Primary owner of the file/directory.

** Primary group of the file/directory.

** Control flags associated with with SD of the file/directory.
```

```
'''

----

# The API:
PATCH /protocols/file-security/permissions/{svm.uuid}/{path}

# The call:
curl -X PATCH "https://10.140.101.39/api/protocols/file-
security/permissions/9479099d-5b9f-11eb-9c4e-
0050568e8682/%2Fparent?return_timeout=0" -H "accept: application/json" -H
"authorization: Basic YWRtaW46bmV0YXBwMSE=" -H "Content-Type:
application/json" -d "{ \"control_flags\": \"32788\", \"group\":
\"everyone\", \"owner\": \"user1\"}"

# The Response:
{
"job": {
  "uuid": "6f89e612-5bbd-11eb-9c4e-0050568e8682",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/6f89e612-5bbd-11eb-9c4e-0050568e8682"
    }
  }
}
}
----

'''

=== Removing all SLAG ACLs

Use this end point to remove all SLAG ACLs.

'''

----

# The API:
DELETE /protocols/file-security/permissions/{svm.uuid}/{path}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/file-
security/permissions/713f569f-d4bc-11eb-b24a-
005056ac6ce1/%2Ftest_vol?access_control=slag"
----
```

```
'''

=== Adding a single file-directory DACL/SACL ACE

Use this endpoint to add a single SACL/DACL ACE for a new user or for an
existing user with a different access type (allow or deny). The given ACE
is merged with an existing SACL/DACL and based on the type of
"`propagation-mode`", it is reflected to the child object:

'''

----

# The API:
POST /protocols/file-security/permissions/{svm.uuid}/{path}/acl

# The call:
curl -X POST "https://10.140.101.39/api/protocols/file-
security/permissions/9479099d-5b9f-11eb-9c4e-
0050568e8682/%2Fparent/acl?return_timeout=0&return_records=false" -H
"accept: application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE="
-H "Content-Type: application/json" -d "{ \"access\": \"access_allow\",
\"apply_to\": { \"files\": true, \"sub_folders\": true, \"this_folder\":
true }, \"ignore_paths\": [ \"/parent/child2\" ], \"propagation_mode\":
\"propagate\", \"rights\": \"read\", \"user\": \"himanshu\"}"

# The Response:
{
"job": {
  "uuid": "26185a2f-5bbe-11eb-9c4e-0050568e8682",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/26185a2f-5bbe-11eb-9c4e-0050568e8682"
    }
  }
}
}
----

'''

=== Adding a single SLAG DACL/SACL ACE

Use this endpoint to add a single SLAG SACL/DACL ACE to an existing set of
ACLs for a user or for an existing user with a different access type
(allow or deny).
```

```
'''

----

# The API:
POST /protocols/file-security/permissions/{svm.uuid}/{path}/acl

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/file-
security/permissions/713f569f-d4bc-11eb-b24a-
005056ac6ce1/%2Ftest_vol/acl?return_timeout=0&return_records=false" -H
"accept: application/json" -H  "authorization: Basic YWRtaW46bmV0YXBwMSE="
-H  "Content-Type: application/json" -d "{  \"access\": \"access_allow\",
\"access_control\": \"slag\",  \"advanced_rights\": {    \"append_data\":
true,    \"delete\": true,    \"delete_child\": true,    \"execute_file\":
true,    \"full_control\": true,    \"read_attr\": true,    \"read_data\":
true,    \"read_ea\": true,    \"read_perm\": true,    \"write_attr\":
true,    \"write_data\": true,    \"write_ea\": true,    \"write_owner\":
true,    \"write_perm\": true  },  \"apply_to\": {    \"files\": true,
\"sub_folders\": true,    \"this_folder\": true  },  \"user\": \"user1\"}"

# The Response:
{
"job": {
  "uuid": "7fa5f53f-d570-11eb-b24a-005056ac6ce1",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/7fa5f53f-d570-11eb-b24a-005056ac6ce1"
    }
  }
}
}
----

'''

=== Updating existing SACL/DACL ACE

Use this endpoint to update the rights/advanced rights for an existing
user, for a specified path. You cannot update the access type using this
end point. Based on the type of  "`propagation-mode`", it is reflected to
the child object:

'''

----
```

```
# The API:
PATCH /protocols/file-security/permissions/{svm.uuid}/{path}/acl/{user}
The Call:
curl -X PATCH "https://10.140.101.39/api/protocols/file-
security/permissions/9479099d-5b9f-11eb-9c4e-
0050568e8682/%2Fparent/acl/himanshu?return_timeout=0" -H "accept:
application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE=" -H
"Content-Type: application/json" -d "{ \"access\": \"access_allow\",
\"advanced_rights\": { \"append_data\": true, \"delete\": true,
\"delete_child\": true, \"execute_file\": true, \"full_control\": true,
\"read_attr\": false, \"read_data\": false, \"read_ea\": false,
\"read_perm\": false, \"write_attr\": true, \"write_data\": true,
\"write_ea\": true, \"write_owner\": true, \"write_perm\": true },
\"apply_to\": { \"files\": true, \"sub_folders\": true, \"this_folder\":
true }, \"ignore_paths\": [ \"/parent/child2\" ], \"propagation_mode\":
\"propagate\"}"
The Response:
{
"job": {
  "uuid": "72067401-5bbf-11eb-9c4e-0050568e8682",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/72067401-5bbf-11eb-9c4e-0050568e8682"
    }
  }
}
}
----

'''

=== Updating an existing SLG SACL/DACL ACE

Use this endpoint to update the SLAG rights/advanced rights for an
existing user, for a specified path. You cannot update the access type
using this end point.

'''

----

# The API:
PATCH /protocols/file-security/permissions/{svm.uuid}/{path}/acl/{user}
The Call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/file-
security/permissions/713f569f-d4bc-11eb-b24a-
```

```
005056ac6ce1/%2Ftest_vol/acl/user1?return_records=false&return_timeout=0"
-H  "accept: application/json" -H  "authorization: Basic
YWRtaW46bmV0YXBwMSE=" -H  "Content-Type: application/json" -d "{
\"access\": \"access_allow\",  \"access_control\": \"slag\",
\"apply_to\": {    \"files\": true,    \"sub_folders\": true,
\"this_folder\": true  },  \"rights\": \"read\"}"
The Response:
{
"job": {
  "uuid": "3d21abcd-d571-11eb-b24a-005056ac6ce1",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/3d21abcd-d571-11eb-b24a-005056ac6ce1"
    }
  }
}
}
----

'''

=== Deleting an existing SACL/DACL ACE

Use this endpoint to delete any of the existing rights/advanced_rights for
a user. Based on the type of "`propagation-mode`", it is reflected to the
child object:

'''

----

# The API:
DELETE /protocols/file-security/permissions/{svm.uuid}/{path}/acl/{user}

# The call:
curl -X DELETE "https://10.140.101.39/api/protocols/file-
security/permissions/9479099d-5b9f-11eb-9c4e-
0050568e8682/%2Fparent/acl/himanshu?return_timeout=0" -H "accept:
application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE=" -H
"Content-Type: application/json" -d "{ \"access\": \"access_allow\",
\"apply_to\": { \"files\": true, \"sub_folders\": true, \"this_folder\":
true }, \"ignore_paths\": [ \"/parent/child2\" ], \"propagation_mode\":
\"propagate\"}"

# The response:
{
```

```
"job": {
  "uuid": "e5683b61-5bbf-11eb-9c4e-0050568e8682",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/e5683b61-5bbf-11eb-9c4e-0050568e8682"
    }
  }
}
}
----

'''

=== Deleting an existing SLAG SACL/DACL ACE

Use this endpoint to delete any SLAG ACE for a user.

'''

----

# The API:
DELETE /protocols/file-security/permissions/{svm.uuid}/{path}/acl/{user}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/file-
security/permissions/713f569f-d4bc-11eb-b24a-
005056ac6ce1/%2Ftest_vol/acl/user1?return_records=false&return_timeout=0"
-H  "accept: application/json" -H  "authorization: Basic
YWRtaW46bmV0YXBwMSE=" -H  "Content-Type: application/json" -d "{
\"access\": \"access_allow\",  \"access_control\": \"slag\",
\"apply_to\": {    \"files\": true,    \"sub_folders\": true,
\"this_folder\": true  }}"

# The response:
{
"job": {
  "uuid": "10c29534-d572-11eb-b24a-005056ac6ce1",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/10c29534-d572-11eb-b24a-005056ac6ce1"
    }
  }
}
}
----
```

```
'''



[[ID18471786460728ea969d93e64b3e803d]]
= Remove all SLAG ACLs for a path

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/protocols/file-security/permissions/{svm.uuid}/{path}`#

*Introduced In:* 9.10

:doctype: book

Remove all SLAG ACLs for specified path. Bulk deletion is supported only
for SLAG

= Related ONTAP Commands

* `vserver security file-directory remove-slag`


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|path
|string
|path
|True
a|target path


|access_control
|string
|query
|False
a|Remove all SLAG ACLs. Currently bulk deletion of file-directory ACLs is
```

```
not supported.

* enum: ["slag"]


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===
```

```
== Response
```

Status: 200, Ok

```
== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
```

```
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDa1ee9687ea33b254a15c9d4188add78f]]
= Retrieve file permissions

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/file-security/permissions/{svm.uuid}/{path}`#

*Introduced In:* 9.9

Retrieves  file permissions

== Related ONTAP commands

* `vserver security file-directory show`


== Parameters

[cols=5*,options=header]
```

```
|===

|Name
|Type
|In
|Required
|Description

|path
|string
|path
|True
a|target path


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|acls
|array[link:#acl[acl]]
a|A discretionary access security list (DACL) identifies the trustees that
are allowed or denied access
to a securable object. When a process tries to access a securable
object, the system checks the access control entries (ACEs) in the
```

```
object's DACL to determine whether to grant access to it.


|control_flags
|string
a|Specifies the control flags in the SD. It is a Hexadecimal Value.


|dos_attributes
|string
a|Specifies the file attributes on this file or directory.


|effective_style
|string
a|Specifies the effective style of the SD. The following values are
supported:

* unix - UNIX style
* ntfs - NTFS style
* mixed - Mixed style
* unified - Unified style


|group
|string
a|Specifies the owner's primary group.
You can specify the owner group using either a group name or SID.


|group_id
|string
a|Specifies group ID on this file or directory.


|inode
|integer
a|Specifies the File Inode number.


|mode_bits
|integer
a|Specifies the mode bits on this file or directory.


|owner
|string
```

```
a|Specifies the owner of the SD.
You can specify the owner using either a user name or security identifier
(SID).
The owner of the SD can modify the permissions on the
file (or folder) or files (or folders) to which the SD
is applied and can give other users the right to take ownership
of the object or objects to which the SD is applied.


|security_style
|string
a|Specifies the security style of the SD. The following values are
supported:

* unix - UNIX style
* ntfs - NTFS style
* mixed - Mixed style
* unified - Unified style


|text_dos_attr
|string
a|Specifies the textual format of file attributes on this file or
directory.


|text_mode_bits
|string
a|Specifies the textual format of mode bits on this file or directory.


|user_id
|string
a|Specifies user ID of this file or directory.


|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "acls": [
    {
      "access": "access_allow",
```

```
      "access_control": "file_directory",
      "inherited": 1,
      "rights": "full_control",
      "user": "S-1-5-21-2233347455-2266964949-1780268902-69304"
    }
  ],
  "control_flags": "8014",
  "dos_attributes": "10",
  "effective_style": "mixed",
  "group": "S-1-5-21-2233347455-2266964949-1780268902-69700",
  "group_id": "2",
  "inode": 64,
  "mode_bits": 777,
  "owner": "S-1-5-21-2233347455-2266964949-1780268902-69304",
  "security_style": "ntfs",
  "text_dos_attr": "---A----",
  "text_mode_bits": "rwxrwxrwx",
  "user_id": "10"
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
```

```
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#advanced_rights]
[.api-collapsible-fifth-title]
advanced_rights

Specifies the advanced access right controlled by the ACE for the account
specified.
 You can specify more than one "advanced-rights" value by using a comma-
delimited list.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|append_data
|boolean
a|Append DAta


|delete
|boolean
a|Delete


|delete_child
|boolean
```

```
a|Delete Child


|execute_file
|boolean
a|Execute File


|full_control
|boolean
a|Full Control


|read_attr
|boolean
a|Read Attributes


|read_data
|boolean
a|Read Data


|read_ea
|boolean
a|Read Extended Attributes


|read_perm
|boolean
a|Read Permissions


|synchronize
|boolean
a|Synchronize


|write_attr
|boolean
a|Write Attributes


|write_data
|boolean
a|Write Data
```

```
|write_ea
|boolean
a|Write Extended Attributes


|write_owner
|boolean
a|Write Owner


|write_perm
|boolean
a|Write Permission


|===


[#apply_to]
[.api-collapsible-fifth-title]
apply_to

Specifies where to apply the DACL or SACL entries.
You can specify more than one value by using a comma-delimited list.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|files
|boolean
a|Apply to Files


|sub_folders
|boolean
a|Apply to all sub-folders


|this_folder
|boolean
a|Apply only to this folder
```

```
|===


[#acl]
[.api-collapsible-fifth-title]
acl

An ACE is an element in an access control list (ACL).
An ACL can have zero or more ACEs. Each ACE controls or monitors access to
an object by a specified trustee.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|access
|string
a|Specifies whether the ACL is for DACL or SACL.
The available values are:

* access_allow                    - DACL for allow access
* access_deny                     - DACL for deny access
* access_allowed_callback         - CALLBACK for allowed access
* access_denied_callback          - CALLBACK for denied access
* access_allowed_callback_object  - CALLBACK OBJECT for allowed access
* access_denied_callback_object   - CALLBACK OBJECT for denied access
* system_audit_callback           - SYSTEM Audit Callback ace
* system_audit_callback_object    - SYSTEM Audit Callback Object ace
* system_resource_attribute       - SYSTEM Resource Attribute
* system_scoped_policy_id         - SYSTEM Scope Policy ID
* audit_success                   - SACL for success access
* audit_failure                   - SACL for failure access
* audit_success_and_failure       - SACL for both success and failure
access


|access_control
|string
a|An Access Control Level specifies the access control of the task to be
applied. Valid values
are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used
to apply the
```

```
specified security descriptors with the task for the volume or qtree.
Otherwise, the security
descriptors are applied on files and directories at the specified path.
The value slag is not
supported on FlexGroups volumes. The default value is "file-directory".


|advanced_rights
|link:#advanced_rights[advanced_rights]
a|Specifies the advanced access right controlled by the ACE for the
account specified.
 You can specify more than one "advanced-rights" value by using a comma-
delimited list.


|inherited
|boolean
a|Indicates whether or not the ACE flag is inherited.


|rights
|string
a|Specifies the access right controlled by the ACE for the account
specified.
The "rights" parameter is mutually exclusive with the "advanced_rights"
parameter. If you specify the "rights" parameter, you can specify one
of the following "rights" values:


|user
|string
a|Specifies the account to which the ACE applies.
You can specify either name or SID.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===
```

```
//end collapsible .Definitions block
====



[[IDacffc1cd5c74a8531afb3d96d94654fb]]
= Update the SD information

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#`/protocols/file-security/permissions/{svm.uuid}/{path}`#

*Introduced In:* 9.9

Updates SD specific Information. For example, owner, group and control-
flags. SD specific information of SLAG ACLs is not modifiable.

== Related ONTAP commands

* `vserver security file-directory ntfs modify`


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|path
|string
|path
|True
a|target path


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When doing a POST, PATCH, or DELETE operation on a single record, the
default is 0 seconds.  This means that if an asynchronous operation is
started, the server immediately returns HTTP code 202 (Accepted) along
```

```
with a link to the job.  If a non-zero value is specified for POST, PATCH,
or DELETE operations, ONTAP waits that length of time to see if the job
completes so it can return something other than 202.

* Default value: 1
* Max value: 120
* Min value: 0


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|control_flags
|string
a|Specifies the control flags in the SD. It is a Hexadecimal Value.


|dos_attributes
|string
a|Specifies the file attributes on this file or directory.


|effective_style
|string
a|Specifies the effective style of the SD. The following values are
supported:

* unix - UNIX style
* ntfs - NTFS style
* mixed - Mixed style
* unified - Unified style
```

```
|group
|string
a|Specifies the owner's primary group.
You can specify the owner group using either a group name or SID.


|group_id
|string
a|Specifies group ID on this file or directory.


|inode
|integer
a|Specifies the File Inode number.


|mode_bits
|integer
a|Specifies the mode bits on this file or directory.


|owner
|string
a|Specifies the owner of the SD.
You can specify the owner using either a user name or security identifier
(SID).
The owner of the SD can modify the permissions on the
file (or folder) or files (or folders) to which the SD
is applied and can give other users the right to take ownership
of the object or objects to which the SD is applied.


|security_style
|string
a|Specifies the security style of the SD. The following values are
supported:

* unix - UNIX style
* ntfs - NTFS style
* mixed - Mixed style
* unified - Unified style


|text_dos_attr
|string
a|Specifies the textual format of file attributes on this file or
```

```
directory.


|text_mode_bits
|string
a|Specifies the textual format of mode bits on this file or directory.


|user_id
|string
a|Specifies user ID of this file or directory.


|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "control_flags": "8014",
  "dos_attributes": "10",
  "effective_style": "mixed",
  "group": "S-1-5-21-2233347455-2266964949-1780268902-69700",
  "group_id": "2",
  "inode": 64,
  "mode_bits": 777,
  "owner": "S-1-5-21-2233347455-2266964949-1780268902-69304",
  "security_style": "ntfs",
  "text_dos_attr": "---A----",
  "text_mode_bits": "rwxrwxrwx",
  "user_id": "10"
}
====

== Response
```

Status: 202, Accepted

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|job
|link:#job_link[job_link]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "job": {
    "uuid": "string"
  }
}
====

== Error
```

Status: Default, Error

```
== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#advanced_rights]
[.api-collapsible-fifth-title]
advanced_rights

Specifies the advanced access right controlled by the ACE for the account
specified.
 You can specify more than one "advanced-rights" value by using a comma-
delimited list.
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|append_data
|boolean
a|Append DAta


|delete
|boolean
a|Delete


|delete_child
|boolean
a|Delete Child


|execute_file
|boolean
a|Execute File


|full_control
|boolean
a|Full Control


|read_attr
|boolean
a|Read Attributes


|read_data
|boolean
a|Read Data


|read_ea
|boolean
a|Read Extended Attributes


|read_perm
```

```
|boolean
a|Read Permissions


|synchronize
|boolean
a|Synchronize


|write_attr
|boolean
a|Write Attributes


|write_data
|boolean
a|Write Data


|write_ea
|boolean
a|Write Extended Attributes


|write_owner
|boolean
a|Write Owner


|write_perm
|boolean
a|Write Permission


|===


[#apply_to]
[.api-collapsible-fifth-title]
apply_to

Specifies where to apply the DACL or SACL entries.
You can specify more than one value by using a comma-delimited list.


[cols=3*,options=header]
|===
```

```
|Name
|Type
|Description

|files
|boolean
a|Apply to Files


|sub_folders
|boolean
a|Apply to all sub-folders


|this_folder
|boolean
a|Apply only to this folder


|===


[#acl]
[.api-collapsible-fifth-title]
acl

An ACE is an element in an access control list (ACL).
An ACL can have zero or more ACEs. Each ACE controls or monitors access to
an object by a specified trustee.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|access
|string
a|Specifies whether the ACL is for DACL or SACL.
The available values are:

* access_allow                    - DACL for allow access
* access_deny                     - DACL for deny access
* access_allowed_callback         - CALLBACK for allowed access
* access_denied_callback          - CALLBACK for denied access
* access_allowed_callback_object  - CALLBACK OBJECT for allowed access
```

```
* access_denied_callback_object    - CALLBACK OBJECT for denied access
* system_audit_callback            - SYSTEM Audit Callback ace
* system_audit_callback_object     - SYSTEM Audit Callback Object ace
* system_resource_attribute        - SYSTEM Resource Attribute
* system_scoped_policy_id          - SYSTEM Scope Policy ID
* audit_success                    - SACL for success access
* audit_failure                    - SACL for failure access
* audit_success_and_failure        - SACL for both success and failure
access


|access_control
|string
a|An Access Control Level specifies the access control of the task to be
applied. Valid values
are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used
to apply the
specified security descriptors with the task for the volume or qtree.
Otherwise, the security
descriptors are applied on files and directories at the specified path.
The value slag is not
supported on FlexGroups volumes. The default value is "file-directory".


|advanced_rights
|link:#advanced_rights[advanced_rights]
a|Specifies the advanced access right controlled by the ACE for the
account specified.
 You can specify more than one "advanced-rights" value by using a comma-
delimited list.


|apply_to
|link:#apply_to[apply_to]
a|Specifies where to apply the DACL or SACL entries.
You can specify more than one value by using a comma-delimited list.


|inherited
|boolean
a|Indicates whether or not the ACE flag is inherited.


|rights
|string
a|Specifies the access right controlled by the ACE for the account
specified.
```

```
The "rights" parameter is mutually exclusive with the "advanced_rights"
parameter. If you specify the "rights" parameter, you can specify one
of the following "rights" values:


|===


[#file_directory_security]
[.api-collapsible-fifth-title]
file_directory_security

Manages New Technology File System (NTFS) security and NTFS audit
policies.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|control_flags
|string
a|Specifies the control flags in the SD. It is a Hexadecimal Value.


|dos_attributes
|string
a|Specifies the file attributes on this file or directory.


|effective_style
|string
a|Specifies the effective style of the SD. The following values are
supported:

* unix - UNIX style
* ntfs - NTFS style
* mixed - Mixed style
* unified - Unified style


|group
|string
a|Specifies the owner's primary group.
You can specify the owner group using either a group name or SID.
```

```
|group_id
|string
a|Specifies group ID on this file or directory.


|inode
|integer
a|Specifies the File Inode number.


|mode_bits
|integer
a|Specifies the mode bits on this file or directory.


|owner
|string
a|Specifies the owner of the SD.
You can specify the owner using either a user name or security identifier
(SID).
The owner of the SD can modify the permissions on the
file (or folder) or files (or folders) to which the SD
is applied and can give other users the right to take ownership
of the object or objects to which the SD is applied.


|security_style
|string
a|Specifies the security style of the SD. The following values are
supported:

* unix - UNIX style
* ntfs - NTFS style
* mixed - Mixed style
* unified - Unified style


|text_dos_attr
|string
a|Specifies the textual format of file attributes on this file or
directory.


|text_mode_bits
|string
```

```
a|Specifies the textual format of mode bits on this file or directory.


|user_id
|string
a|Specifies user ID of this file or directory.


|===


[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#job_link]
[.api-collapsible-fifth-title]
job_link

[cols=3*,options=header]
|===
|Name
|Type
|Description

|uuid
|string
a|The UUID of the asynchronous job that is triggered by a POST, PATCH, or
DELETE operation.
```

```
|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
```

```
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDd8608dd3ab739a0fffa6a1e0e0cbbc7f]]
= Apply an SD to a path

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/protocols/file-security/permissions/{svm.uuid}/{path}`#

*Introduced In:* 9.9

Applies an SD  to the given path.
You must keep the following points in mind while using these endpoints:

* Either SLAG ACL/s or file-directory ACL/s can be configured in one API
call. Both cannot be configured in the same API call.
* SLAG applies to all files and/or directories in a volume hence,
inheritance is not required to be propagated.
* Set access_control field to slag while configuring SLAG ACLs.
* Set access_control field to file_directory while configuring file-
directory ACLs. By Default access_control field is set to file_directory.
* For SLAG, valid apply_to combinations are "this-folder, sub-folders",
"files", "this-folder, sub-folders, files".

== Related ONTAP commands

* `vserver security file-directory ntfs create`
* `vserver security file-directory ntfs dacl add`
* `vserver security file-directory ntfs sacl add`
* `vserver security file-directory policy create`
* `vserver security file-directory policy task add`
* `vserver security file-directory apply`
```

```
== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|path
|string
|path
|True
a|target path


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When doing a POST, PATCH, or DELETE operation on a single record, the
default is 0 seconds.  This means that if an asynchronous operation is
started, the server immediately returns HTTP code 202 (Accepted) along
with a link to the job.  If a non-zero value is specified for POST, PATCH,
or DELETE operations, ONTAP waits that length of time to see if the job
completes so it can return something other than 202.

* Default value: 1
* Max value: 120
* Min value: 0


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Request Body
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|access_control
|string
a|An Access Control Level specifies the access control of the task to be
applied. Valid values
are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used
to apply the
specified security descriptors with the task for the volume or qtree.
Otherwise, the
security descriptors are applied on files and directories at the specified
path.
The value slag is not supported on FlexGroups volumes. The default value
is "file-directory".


|acls
|array[link:#acl[acl]]
a|A discretionary access security list (DACL) identifies the trustees that
are allowed or denied access
to a securable object. When a process tries to access a securable
object, the system checks the access control entries (ACEs) in the
object's DACL to determine whether to grant access to it.


|control_flags
|string
a|Specifies the control flags in the SD. It is a Hexadecimal Value.


|dos_attributes
|string
a|Specifies the file attributes on this file or directory.


|effective_style
|string
a|Specifies the effective style of the SD. The following values are
supported:

* unix - UNIX style
* ntfs - NTFS style
```

```
* mixed - Mixed style
* unified - Unified style


|group
|string
a|Specifies the owner's primary group.
You can specify the owner group using either a group name or SID.


|group_id
|string
a|Specifies group ID on this file or directory.


|ignore_paths
|array[string]
a|Specifies that permissions on this file or directory cannot be replaced.


|inode
|integer
a|Specifies the File Inode number.


|mode_bits
|integer
a|Specifies the mode bits on this file or directory.


|owner
|string
a|Specifies the owner of the SD.
You can specify the owner using either a user name or security identifier
(SID).
The owner of the SD can modify the permissions on the
file (or folder) or files (or folders) to which the SD
is applied and can give other users the right to take ownership
of the object or objects to which the SD is applied.


|propagation_mode
|string
a|Specifies how to propagate security settings to child subfolders and
files.
This setting determines how child files/folders contained within a parent
folder inherit access control and audit information from the parent
```

```
folder.
The available values are:

* propogate    - propagate inheritable permissions to all subfolders and
files
* replace      - replace existing permissions on all subfolders and files
with inheritable permissions


|security_style
|string
a|Specifies the security style of the SD. The following values are
supported:

* unix - UNIX style
* ntfs - NTFS style
* mixed - Mixed style
* unified - Unified style


|text_dos_attr
|string
a|Specifies the textual format of file attributes on this file or
directory.


|text_mode_bits
|string
a|Specifies the textual format of mode bits on this file or directory.


|user_id
|string
a|Specifies user ID of this file or directory.


|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "access_control": "file_directory",
  "acls": [
    {
```

```
      "access": "access_allow",
      "access_control": "file_directory",
      "inherited": 1,
      "rights": "full_control",
      "user": "S-1-5-21-2233347455-2266964949-1780268902-69304"
    }
  ],
  "control_flags": "8014",
  "dos_attributes": "10",
  "effective_style": "mixed",
  "group": "S-1-5-21-2233347455-2266964949-1780268902-69700",
  "group_id": "2",
  "ignore_paths": [
    "/dir1/dir2/",
    "/parent/dir3"
  ],
  "inode": 64,
  "mode_bits": 777,
  "owner": "S-1-5-21-2233347455-2266964949-1780268902-69304",
  "propagation_mode": "propagate",
  "security_style": "ntfs",
  "text_dos_attr": "---A----",
  "text_mode_bits": "rwxrwxrwx",
  "user_id": "10"
}
====

== Response
```

Status: 202, Accepted

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|job
|link:#job_link[job_link]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "job": {
    "uuid": "string"
  }
}
====

== Error
```

Status: Default, Error

```
== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#advanced_rights]
[.api-collapsible-fifth-title]
advanced_rights

Specifies the advanced access right controlled by the ACE for the account
specified.
 You can specify more than one "advanced-rights" value by using a comma-
delimited list.
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|append_data
|boolean
a|Append DAta


|delete
|boolean
a|Delete


|delete_child
|boolean
a|Delete Child


|execute_file
|boolean
a|Execute File


|full_control
|boolean
a|Full Control


|read_attr
|boolean
a|Read Attributes


|read_data
|boolean
a|Read Data


|read_ea
|boolean
a|Read Extended Attributes


|read_perm
```

```
|boolean
a|Read Permissions


|synchronize
|boolean
a|Synchronize


|write_attr
|boolean
a|Write Attributes


|write_data
|boolean
a|Write Data


|write_ea
|boolean
a|Write Extended Attributes


|write_owner
|boolean
a|Write Owner


|write_perm
|boolean
a|Write Permission


|===


[#apply_to]
[.api-collapsible-fifth-title]
apply_to

Specifies where to apply the DACL or SACL entries.
You can specify more than one value by using a comma-delimited list.


[cols=3*,options=header]
|===
```

```
|Name
|Type
|Description

|files
|boolean
a|Apply to Files


|sub_folders
|boolean
a|Apply to all sub-folders


|this_folder
|boolean
a|Apply only to this folder


|===


[#acl]
[.api-collapsible-fifth-title]
acl

An ACE is an element in an access control list (ACL).
An ACL can have zero or more ACEs. Each ACE controls or monitors access to
an object by a specified trustee.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|access
|string
a|Specifies whether the ACL is for DACL or SACL.
The available values are:

* access_allow                    - DACL for allow access
* access_deny                     - DACL for deny access
* access_allowed_callback         - CALLBACK for allowed access
* access_denied_callback          - CALLBACK for denied access
* access_allowed_callback_object  - CALLBACK OBJECT for allowed access
```

```
* access_denied_callback_object    - CALLBACK OBJECT for denied access
* system_audit_callback            - SYSTEM Audit Callback ace
* system_audit_callback_object     - SYSTEM Audit Callback Object ace
* system_resource_attribute        - SYSTEM Resource Attribute
* system_scoped_policy_id          - SYSTEM Scope Policy ID
* audit_success                    - SACL for success access
* audit_failure                    - SACL for failure access
* audit_success_and_failure        - SACL for both success and failure
access


|access_control
|string
a|An Access Control Level specifies the access control of the task to be
applied. Valid values
are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used
to apply the
specified security descriptors with the task for the volume or qtree.
Otherwise, the security
descriptors are applied on files and directories at the specified path.
The value slag is not
supported on FlexGroups volumes. The default value is "file-directory".


|advanced_rights
|link:#advanced_rights[advanced_rights]
a|Specifies the advanced access right controlled by the ACE for the
account specified.
 You can specify more than one "advanced-rights" value by using a comma-
delimited list.


|apply_to
|link:#apply_to[apply_to]
a|Specifies where to apply the DACL or SACL entries.
You can specify more than one value by using a comma-delimited list.


|inherited
|boolean
a|Indicates whether or not the ACE flag is inherited.


|rights
|string
a|Specifies the access right controlled by the ACE for the account
specified.
```

```
The "rights" parameter is mutually exclusive with the "advanced_rights"
parameter. If you specify the "rights" parameter, you can specify one
of the following "rights" values:


|user
|string
a|Specifies the account to which the ACE applies.
You can specify either name or SID.


|===


[#file_directory_security]
[.api-collapsible-fifth-title]
file_directory_security

Manages New Technology File System (NTFS) security and NTFS audit
policies.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|access_control
|string
a|An Access Control Level specifies the access control of the task to be
applied. Valid values
are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used
to apply the
specified security descriptors with the task for the volume or qtree.
Otherwise, the
security descriptors are applied on files and directories at the specified
path.
The value slag is not supported on FlexGroups volumes. The default value
is "file-directory".


|acls
|array[link:#acl[acl]]
a|A discretionary access security list (DACL) identifies the trustees that
are allowed or denied access
to a securable object. When a process tries to access a securable
```

```
object, the system checks the access control entries (ACEs) in the
object's DACL to determine whether to grant access to it.


|control_flags
|string
a|Specifies the control flags in the SD. It is a Hexadecimal Value.


|dos_attributes
|string
a|Specifies the file attributes on this file or directory.


|effective_style
|string
a|Specifies the effective style of the SD. The following values are
supported:

* unix - UNIX style
* ntfs - NTFS style
* mixed - Mixed style
* unified - Unified style


|group
|string
a|Specifies the owner's primary group.
You can specify the owner group using either a group name or SID.


|group_id
|string
a|Specifies group ID on this file or directory.


|ignore_paths
|array[string]
a|Specifies that permissions on this file or directory cannot be replaced.


|inode
|integer
a|Specifies the File Inode number.


|mode_bits
```

```
|integer
a|Specifies the mode bits on this file or directory.


|owner
|string
a|Specifies the owner of the SD.
You can specify the owner using either a user name or security identifier
(SID).
The owner of the SD can modify the permissions on the
file (or folder) or files (or folders) to which the SD
is applied and can give other users the right to take ownership
of the object or objects to which the SD is applied.


|propagation_mode
|string
a|Specifies how to propagate security settings to child subfolders and
files.
This setting determines how child files/folders contained within a parent
folder inherit access control and audit information from the parent
folder.
The available values are:

* propogate    - propagate inheritable permissions to all subfolders and
files
* replace      - replace existing permissions on all subfolders and files
with inheritable permissions


|security_style
|string
a|Specifies the security style of the SD. The following values are
supported:

* unix - UNIX style
* ntfs - NTFS style
* mixed - Mixed style
* unified - Unified style


|text_dos_attr
|string
a|Specifies the textual format of file attributes on this file or
directory.
```

```
|text_mode_bits
|string
a|Specifies the textual format of mode bits on this file or directory.


|user_id
|string
a|Specifies user ID of this file or directory.


|===


[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#job_link]
[.api-collapsible-fifth-title]
job_link

[cols=3*,options=header]
|===
|Name
|Type
|Description

|uuid
|string
a|The UUID of the asynchronous job that is triggered by a POST, PATCH, or
DELETE operation.
```

```
|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code
```

```
|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID9ccc1e985c2a882249f6e994a11e6441]]
= Add a new SACL or DACL ACE

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/protocols/file-security/permissions/{svm.uuid}/{path}/acl`#

*Introduced In:* 9.9

Adds the new SACL/DACL ACE.
You must keep the following points in mind while using these endpoints:

* SLAG applies to all files and/or directories in a volume hence,
inheritance is not required to be propagated.
* Set access_control field to slag while adding SLAG ACE.
* Set access_control field to file_directory while adding file-directory
ACE. By Default access_control field is set to file_directory.
* For SLAG, valid apply_to combinations are "this-folder, sub-folders",
"files", "this-folder, sub-folders, files".

== Related ONTAP commands

* `vserver security file-directory ntfs dacl add`
* `vserver security file-directory ntfs sacl add`


== Parameters

[cols=5*,options=header]
```

```
|===

|Name
|Type
|In
|Required
|Description

|path
|string
|path
|True
a|path


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When doing a POST, PATCH, or DELETE operation on a single record, the
default is 0 seconds.  This means that if an asynchronous operation is
started, the server immediately returns HTTP code 202 (Accepted) along
with a link to the job.  If a non-zero value is specified for POST, PATCH,
or DELETE operations, ONTAP waits that length of time to see if the job
completes so it can return something other than 202.

* Default value: 1
* Max value: 120
* Min value: 0


|return_records
|boolean
|query
|False
a|The default is false.  If set to true, the records are returned.

* Default value:


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.
```

```
|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|access
|string
a|Specifies whether the ACL is for DACL or SACL.
The available values are:

* access_allow                    - DACL for allow access
* access_deny                     - DACL for deny access
* audit_success                   - SACL for success access
* audit_failure                   - SACL for failure access


|access_control
|string
a|Access Control Level specifies the access control of the task to be
applied. Valid values
are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used
to apply the
specified security descriptors with the task for the volume or qtree.
Otherwise, the
security descriptors are applied on files and directories at the specified
path. The
value slag is not supported on FlexGroups volumes. The default value is
"file-directory".


|advanced_rights
|link:#advanced_rights[advanced_rights]
a|Specifies the advanced access right controlled by the ACE for the
account specified.
 You can specify more than one "advanced-rights" value by using a comma-
delimited list.


|apply_to
|link:#apply_to[apply_to]
```

```
a|Specifies where to apply the DACL or SACL entries.
You can specify more than one value by using a comma-delimited list.


|ignore_paths
|array[string]
a|Specifies that permissions on this file or directory cannot be replaced.


|propagation_mode
|string
a|Specifies how to propagate security settings to child subfolders and
files.
This setting determines how child files/folders contained within a parent
folder inherit access control and audit information from the parent
folder.
The available values are:

* propogate    - propagate inheritable permissions to all subfolders and
files
* replace      - replace existing permissions on all subfolders and files
with inheritable permissions


|rights
|string
a|Specifies the access right controlled by the ACE for the account
specified.
The "rights" parameter is mutually exclusive with the "advanced_rights"
parameter. If you specify the "rights" parameter, you can specify one
of the following "rights" values:


|user
|string
a|Specifies the account to which the ACE applies.
You can specify either name or SID.


|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
```

```
  "access": "access_allow",
  "access_control": "file_directory",
  "ignore_paths": [
    "/dir1/dir2/",
    "/parent/dir3"
  ],
  "propagation_mode": "string",
  "rights": "full_control",
  "user": "S-1-5-21-2233347455-2266964949-1780268902-69304"
}
====

== Response
```

Status: 202, Accepted

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|job
|link:#job_link[job_link]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "job": {
    "uuid": "string"
  }
}
====

== Error
```

Status: Default, Error

```
== Definitions
```

```
[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#advanced_rights]
[.api-collapsible-fifth-title]
advanced_rights

Specifies the advanced access right controlled by the ACE for the account
specified.
 You can specify more than one "advanced-rights" value by using a comma-
delimited list.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|append_data
|boolean
a|Append DAta


|delete
|boolean
a|Delete


|delete_child
|boolean
a|Delete Child


|execute_file
|boolean
a|Execute File


|full_control
|boolean
a|Full Control
```

```
|read_attr
|boolean
a|Read Attributes


|read_data
|boolean
a|Read Data


|read_ea
|boolean
a|Read Extended Attributes


|read_perm
|boolean
a|Read Permissions


|synchronize
|boolean
a|Synchronize


|write_attr
|boolean
a|Write Attributes


|write_data
|boolean
a|Write Data


|write_ea
|boolean
a|Write Extended Attributes


|write_owner
|boolean
a|Write Owner


|write_perm
|boolean
```

```
a|Write Permission


|===


[#apply_to]
[.api-collapsible-fifth-title]
apply_to

Specifies where to apply the DACL or SACL entries.
You can specify more than one value by using a comma-delimited list.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|files
|boolean
a|Apply to Files


|sub_folders
|boolean
a|Apply to all sub-folders


|this_folder
|boolean
a|Apply only to this folder


|===


[#file_directory_security_acl]
[.api-collapsible-fifth-title]
file_directory_security_acl

Manages the DACLS or SACLS.


[cols=3*,options=header]
|===
```

```
|Name
|Type
|Description

|access
|string
a|Specifies whether the ACL is for DACL or SACL.
The available values are:

* access_allow                    - DACL for allow access
* access_deny                     - DACL for deny access
* audit_success                   - SACL for success access
* audit_failure                   - SACL for failure access


|access_control
|string
a|Access Control Level specifies the access control of the task to be
applied. Valid values
are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used
to apply the
specified security descriptors with the task for the volume or qtree.
Otherwise, the
security descriptors are applied on files and directories at the specified
path. The
value slag is not supported on FlexGroups volumes. The default value is
"file-directory".


|advanced_rights
|link:#advanced_rights[advanced_rights]
a|Specifies the advanced access right controlled by the ACE for the
account specified.
 You can specify more than one "advanced-rights" value by using a comma-
delimited list.


|apply_to
|link:#apply_to[apply_to]
a|Specifies where to apply the DACL or SACL entries.
You can specify more than one value by using a comma-delimited list.


|ignore_paths
|array[string]
a|Specifies that permissions on this file or directory cannot be replaced.
```

```
|propagation_mode
|string
a|Specifies how to propagate security settings to child subfolders and
files.
This setting determines how child files/folders contained within a parent
folder inherit access control and audit information from the parent
folder.
The available values are:

* propogate    - propagate inheritable permissions to all subfolders and
files
* replace      - replace existing permissions on all subfolders and files
with inheritable permissions


|rights
|string
a|Specifies the access right controlled by the ACE for the account
specified.
The "rights" parameter is mutually exclusive with the "advanced_rights"
parameter. If you specify the "rights" parameter, you can specify one
of the following "rights" values:


|user
|string
a|Specifies the account to which the ACE applies.
You can specify either name or SID.


|===


[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|
```

```
|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#job_link]
[.api-collapsible-fifth-title]
job_link

[cols=3*,options=header]
|===
|Name
|Type
|Description

|uuid
|string
a|The UUID of the asynchronous job that is triggered by a POST, PATCH, or
DELETE operation.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===
```

```
[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID8174e1cf85dd91dece6d1d40c045398b]]
= Delete a SACL or DACL ACL

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/protocols/file-
security/permissions/{svm.uuid}/{path}/acl/{user}`#
```

```
*Introduced In:* 9.9

Deletes the SACL/DACL ACL
You must keep the following points in mind while using these endpoints:

* SLAG applies to all files and/or directories in a volume hence,
inheritance is not required to be propagated.
* Set access_control field to slag while deleting SLAG ACE.
* Set access_control field to file_directory while deleting file-directory
ACE. By Default access_control field is set to file_directory.
* For SLAG, valid apply_to combinations are "this-folder, sub-folders",
"files", "this-folder, sub-folders, files".

== Related ONTAP commands

* `vserver security file-directory ntfs dacl remove`
* `vserver security file-directory ntfs sacl remove`


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|path
|string
|path
|True
a|path


|user
|string
|path
|True
a|User Name


|return_records
|boolean
|query
```

```
|False
a|The default is false.  If set to true, the records are returned.

* Default value:


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When doing a POST, PATCH, or DELETE operation on a single record, the
default is 0 seconds.  This means that if an asynchronous operation is
started, the server immediately returns HTTP code 202 (Accepted) along
with a link to the job.  If a non-zero value is specified for POST, PATCH,
or DELETE operations, ONTAP waits that length of time to see if the job
completes so it can return something other than 202.

* Default value: 1
* Max value: 120
* Min value: 0


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|access
|string
a|Specifies whether the ACL is for DACL or SACL.
The available values are:

* access_allow                     - DACL for allow access
```

```
* access_deny                       - DACL for deny access
* audit_success                     - SACL for success access
* audit_failure                     - SACL for failure access


|access_control
|string
a|An Access Control Level specifies the access control of the task to be
applied. Valid values
are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used
to apply the
specified security descriptors with the task for the volume or qtree.
Otherwise, the
security descriptors are applied on files and directories at the specified
path.
The value slag is not supported on FlexGroups volumes. The default value
is "file-directory".


|apply_to
|link:#apply_to[apply_to]
a|Specifies where to apply the DACL or SACL entries.
You can specify more than one value by using a comma-delimited list.


|ignore_paths
|array[string]
a|Specifies that permissions on this file or directory cannot be replaced.


|propagation_mode
|string
a|Specifies how to propagate security settings to child subfolders and
files.
This setting determines how child files/folders contained within a parent
folder inherit access control and audit information from the parent
folder.
The available values are:

* propogate    - propagate inheritable permissions to all subfolders and
files
* replace      - replace existing permissions on all subfolders and files
with inheritable permissions


|===
```

```
.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "access": "access_allow",
  "access_control": "file_directory",
  "ignore_paths": [
    "/dir1/dir2/",
    "/parent/dir3"
  ],
  "propagation_mode": "string"
}
====

== Response
```

Status: 202, Accepted

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|job
|link:#job_link[job_link]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "job": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uuid": "string"
  }
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===
```

```
.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#apply_to]
[.api-collapsible-fifth-title]
apply_to

Specifies where to apply the DACL or SACL entries.
You can specify more than one value by using a comma-delimited list.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|files
|boolean
a|Apply to Files
```

```
|sub_folders
|boolean
a|Apply to all sub-folders


|this_folder
|boolean
a|Apply only to this folder


|===


[#acl_delete]
[.api-collapsible-fifth-title]
acl_delete

Manages the DACLS or SACLS.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|access
|string
a|Specifies whether the ACL is for DACL or SACL.
The available values are:

* access_allow                    - DACL for allow access
* access_deny                     - DACL for deny access
* audit_success                   - SACL for success access
* audit_failure                   - SACL for failure access


|access_control
|string
a|An Access Control Level specifies the access control of the task to be
applied. Valid values
are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used
to apply the
specified security descriptors with the task for the volume or qtree.
Otherwise, the
security descriptors are applied on files and directories at the specified
path.
```

```
The value slag is not supported on FlexGroups volumes. The default value
is "file-directory".


|apply_to
|link:#apply_to[apply_to]
a|Specifies where to apply the DACL or SACL entries.
You can specify more than one value by using a comma-delimited list.


|ignore_paths
|array[string]
a|Specifies that permissions on this file or directory cannot be replaced.


|propagation_mode
|string
a|Specifies how to propagate security settings to child subfolders and
files.
This setting determines how child files/folders contained within a parent
folder inherit access control and audit information from the parent
folder.
The available values are:

* propogate    - propagate inheritable permissions to all subfolders and
files
* replace      - replace existing permissions on all subfolders and files
with inheritable permissions


|===


[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|
```

```
|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#job_link]
[.api-collapsible-fifth-title]
job_link

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|uuid
|string
a|The UUID of the asynchronous job that is triggered by a POST, PATCH, or
DELETE operation.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.
```

```
|===


//end collapsible .Definitions block
====



[[ID6a267279407dcf0c1fb408b3da1a2f84]]
= Update SACLs or DACLs

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#`/protocols/file-
security/permissions/{svm.uuid}/{path}/acl/{user}`#

*Introduced In:* 9.9

Updates the SACLs/DACLs
You must keep the following points in mind while using these endpoints:

* SLAG applies to all files and/or directories in a volume hence,
inheritance is not required to be propagated.
* Set access_control field to slag while updating SLAG ACE.
* Set access_control field to file_directory while updating file-directory
ACE. By Default access_control field is set to file_directory.
* For SLAG, valid apply_to combinations are "this-folder, sub-folders",
"files", "this-folder, sub-folders, files".

== Related ONTAP commands

* `vserver security file-directory ntfs dacl modify`
* `vserver security file-directory ntfs sacl modify`


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description
```

```
|path
|string
|path
|True
a|path


|user
|string
|path
|True
a|User Name


|return_records
|boolean
|query
|False
a|The default is false.  If set to true, the records are returned.

* Default value:


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When doing a POST, PATCH, or DELETE operation on a single record, the
default is 0 seconds.  This means that if an asynchronous operation is
started, the server immediately returns HTTP code 202 (Accepted) along
with a link to the job.  If a non-zero value is specified for POST, PATCH,
or DELETE operations, ONTAP waits that length of time to see if the job
completes so it can return something other than 202.

* Default value: 1
* Max value: 120
* Min value: 0


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===
```

```
== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|access
|string
a|Specifies whether the ACL is for DACL or SACL.
The available values are:

* access_allow                    - DACL for allow access
* access_deny                     - DACL for deny access
* audit_success                   - SACL for success access
* audit_failure                   - SACL for failure access


|access_control
|string
a|Access Control Level specifies the access control of the task to be
applied. Valid values
are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used
to apply the
specified security descriptors with the task for the volume or qtree.
Otherwise, the
security descriptors are applied on files and directories at the specified
path. The
value slag is not supported on FlexGroups volumes. The default value is
"file-directory".


|advanced_rights
|link:#advanced_rights[advanced_rights]
a|Specifies the advanced access right controlled by the ACE for the
account specified.
 You can specify more than one "advanced-rights" value by using a comma-
delimited list.


|apply_to
|link:#apply_to[apply_to]
a|Specifies where to apply the DACL or SACL entries.
```

```
You can specify more than one value by using a comma-delimited list.


|ignore_paths
|array[string]
a|Specifies that permissions on this file or directory cannot be replaced.


|propagation_mode
|string
a|Specifies how to propagate security settings to child subfolders and
files.
This setting determines how child files/folders contained within a parent
folder inherit access control and audit information from the parent
folder.
The available values are:

* propogate    - propagate inheritable permissions to all subfolders and
files
* replace      - replace existing permissions on all subfolders and files
with inheritable permissions


|rights
|string
a|Specifies the access right controlled by the ACE for the account
specified.
The "rights" parameter is mutually exclusive with the "advanced_rights"
parameter. If you specify the "rights" parameter, you can specify one
of the following "rights" values:


|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "access": "access_allow",
  "access_control": "file_directory",
  "ignore_paths": [
    "/dir1/dir2/",
    "/parent/dir3"
  ],
  "propagation_mode": "string",
```

```
  "rights": "full_control"
}
====

== Response
```

Status: 202, Accepted

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|job
|link:#job_link[job_link]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "job": {
    "uuid": "string"
  }
}
====

== Error
```

Status: Default, Error

```
== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#advanced_rights]
[.api-collapsible-fifth-title]
```

```
advanced_rights

Specifies the advanced access right controlled by the ACE for the account
specified.
 You can specify more than one "advanced-rights" value by using a comma-
delimited list.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|append_data
|boolean
a|Append DAta


|delete
|boolean
a|Delete


|delete_child
|boolean
a|Delete Child


|execute_file
|boolean
a|Execute File


|full_control
|boolean
a|Full Control


|read_attr
|boolean
a|Read Attributes


|read_data
|boolean
a|Read Data
```

```
|read_ea
|boolean
a|Read Extended Attributes


|read_perm
|boolean
a|Read Permissions


|synchronize
|boolean
a|Synchronize


|write_attr
|boolean
a|Write Attributes


|write_data
|boolean
a|Write Data


|write_ea
|boolean
a|Write Extended Attributes


|write_owner
|boolean
a|Write Owner


|write_perm
|boolean
a|Write Permission


|===


[#apply_to]
[.api-collapsible-fifth-title]
```

```
apply_to

Specifies where to apply the DACL or SACL entries.
You can specify more than one value by using a comma-delimited list.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|files
|boolean
a|Apply to Files


|sub_folders
|boolean
a|Apply to all sub-folders


|this_folder
|boolean
a|Apply only to this folder


|===


[#file_directory_security_acl]
[.api-collapsible-fifth-title]
file_directory_security_acl

Manages the DACLS or SACLS.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|access
|string
a|Specifies whether the ACL is for DACL or SACL.
The available values are:
```

```
* access_allow                    - DACL for allow access
* access_deny                     - DACL for deny access
* audit_success                   - SACL for success access
* audit_failure                   - SACL for failure access


|access_control
|string
a|Access Control Level specifies the access control of the task to be
applied. Valid values
are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used
to apply the
specified security descriptors with the task for the volume or qtree.
Otherwise, the
security descriptors are applied on files and directories at the specified
path. The
value slag is not supported on FlexGroups volumes. The default value is
"file-directory".


|advanced_rights
|link:#advanced_rights[advanced_rights]
a|Specifies the advanced access right controlled by the ACE for the
account specified.
 You can specify more than one "advanced-rights" value by using a comma-
delimited list.


|apply_to
|link:#apply_to[apply_to]
a|Specifies where to apply the DACL or SACL entries.
You can specify more than one value by using a comma-delimited list.


|ignore_paths
|array[string]
a|Specifies that permissions on this file or directory cannot be replaced.


|propagation_mode
|string
a|Specifies how to propagate security settings to child subfolders and
files.
This setting determines how child files/folders contained within a parent
folder inherit access control and audit information from the parent
folder.
```

```
The available values are:

* propogate    - propagate inheritable permissions to all subfolders and
files
* replace      - replace existing permissions on all subfolders and files
with inheritable permissions


|rights
|string
a|Specifies the access right controlled by the ACE for the account
specified.
The "rights" parameter is mutually exclusive with the "advanced_rights"
parameter. If you specify the "rights" parameter, you can specify one
of the following "rights" values:


|===


[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#job_link]
[.api-collapsible-fifth-title]
job_link

[cols=3*,options=header]
|===
|Name
```

```
|Type
|Description

|uuid
|string
a|The UUID of the asynchronous job that is triggered by a POST, PATCH, or
DELETE operation.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
```

```
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



:leveloffset: -1


= Manage FPolicy configuration

:leveloffset: +1


[[IDf8d81513f0b0a8f6d7427f4d04f06e6c]]
= Protocols fpolicy endpoint overview



== Overview

FPolicy is an infrastructure component of ONTAP that enables partner
applications to connect to ONTAP in order to monitor and set file access
permissions. Every time a client accesses a file from a storage system,
based on the configuration of FPolicy, the partner application is notified
about file access. This enables partners to set restrictions on files that
are created or accessed on the storage system. FPolicy also allows you to
```

```
create file policies that specify file operation permissions according to
file type. For example, you can restrict certain file types, such as .jpeg
and .mp3 files, from being stored on the storage system. FPolicy can
monitor file access from CIFS and NFS clients.

As part of FPolicy configuration, you can specify an FPolicy engine which
defines the external FPolicy server, FPolicy events, which defines the
protocol and file operations to monitor and the FPolicy policy that acts
as a container for the FPolicy engine and FPolicy events. It provides a
way for policy management functions, such as policy enabling and
disabling.

== Examples

=== Creating an FPolicy configuration

To create an FPolicy for an SVM use the following API. Note that the
_return_records=true_ query parameter is used to obtain the newly created
entry in the response.

----

# The API:
POST /protocols/fpolicy/

#The call:
curl -X POST "https://<mgmt-ip>/api/protocols/fpolicy?return_records=tre"
-H "accept: application/json" -H "Content-Type: application/json" -d "{
\"engines\": [ { \"name\": \"engine1\", \"port\": 9876,
\"primary_servers\": [ \"10.132.145.22\", \"10.140.101.109\" ],
\"secondary_servers\": [ \"10.132.145.20\", \"10.132.145.21\" ], \"type\":
\"synchronous\" } ], \"events\": [ { \"file_operations\": { \"read\":
true, \"write\": true }, \"filters\": { \"monitor_ads\": true }, \"name\":
\"event_cifs\", \"protocol\": \"cifs\", \"volume_monitoring\": true } ],
\"policies\": [ { \"engine\": { \"name\": \"engine1\" }, \"events\": [ {
\"name\": \"event_cifs\" } ], \"mandatory\": true, \"name\": \"pol0\",
\"priority\": 1, \"scope\": { \"include_volumes\": [ \"vol1\" ] } } ],
\"svm\": { \"name\": \"vs1\", \"uuid\": \"b34f5e3d-01d0-11e9-8f63-
0050568ea311\" }}"

# The response:
{
"num_records": 1,
"records": [
  {
    "svm": {
```

```
      "uuid": "b34f5e3d-01d0-11e9-8f63-0050568ea311",
      "name": "vs1"
    },
    "engines": [
      {
        "name": "engine1",
        "primary_servers": [
          "10.132.145.22",
          "10.140.101.109"
        ],
        "secondary_servers": [
          "10.132.145.20",
          "10.132.145.21"
        ],
        "type": "synchronous",
        "port": 9876
      }
    ],
      "events": [
      {
        "name": "event_cifs",
        "protocol": "cifs",
        "volume_monitoring": true,
        "file_operations": {
          "read": true,
          "write": true
        },
        "filters": {
          "monitor_ads": true
        }
      }
    ],
    "policies": [
      {
        "name": "pol0",
        "priority": 1,
        "events": [
          {
            "name": "event_cifs"
          }
        ],
        "engine": {
          "name": "engine1"
        },
        "scope": {
          "include_volumes": [
```

```
            "vol1"
          ]
        },
        "mandatory": true
      }
    ]
  }
]
}
----

'''

=== Retrieving the FPolicy configuration for all the SVMs in the cluster

'''

----

# The API:
GET /protocols/fpolicy

# The call:
curl -X GET "https://<mgmt-
ip>/api/protocols/fpolicy?fields=*&return_records=true&return_timeout=15"
-H "accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "b34f5e3d-01d0-11e9-8f63-0050568ea311",
      "name": "vs1"
    },
    "engines": [
      {
        "name": "engine1",
        "primary_servers": [
          "10.132.145.22",
          "10.140.101.109"
        ],
        "secondary_servers": [
          "10.132.145.20",
          "10.132.145.21"
        ],
```

```
        "type": "synchronous",
        "port": 9876
      }
    ],
    "events": [
      {
        "name": "event_cifs",
        "protocol": "cifs",
        "volume_monitoring": true,
        "file_operations": {
          "close": false,
          "create": false,
          "create_dir": false,
          "delete": false,
          "delete_dir": false,
          "getattr": false,
          "link": false,
          "lookup": false,
          "open": false,
          "read": true,
          "write": true,
          "rename": false,
          "rename_dir": false,
          "setattr": false,
          "symlink": false
        },
        "filters": {
          "monitor_ads": true,
          "close_with_modification": false,
          "close_without_modification": false,
          "close_with_read": false,
          "first_read": false,
          "first_write": false,
          "offline_bit": false,
          "open_with_delete_intent": false,
          "open_with_write_intent": false,
          "write_with_size_change": false,
          "setattr_with_owner_change": false,
          "setattr_with_group_change": false,
          "setattr_with_sacl_change": false,
          "setattr_with_dacl_change": false,
          "setattr_with_modify_time_change": false,
          "setattr_with_access_time_change": false,
          "setattr_with_creation_time_change": false,
          "setattr_with_mode_change": false,
          "setattr_with_size_change": false,
```

```
          "setattr_with_allocation_size_change": false,
          "exclude_directory": false
        }
      }
    ],
    "policies": [
      {
        "name": "pol0",
        "enabled": true,
        "priority": 1,
        "events": [
          {
            "name": "event_cifs"
          }
        ],
        "engine": {
          "name": "engine1"
        },
        "scope": {
          "include_volumes": [
            "vol1"
          ]
        },
        "mandatory": true,
        "passthrough_read": false
      }
    ]
  }
],
"num_records": 1
}
----

'''

=== Retrieving an FPolicy configuration for a particular SVM

'''

----

# The API:
GET /protocols/fpolicy/{svm.uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/fpolicy/b34f5e3d-01d0-11e9-
```

```
8f63-0050568ea311?fields=*&return_records=true&return_timeout=15" -H
"accept: application/json"

# The response:
{
"svm": {
  "uuid": "b34f5e3d-01d0-11e9-8f63-0050568ea311",
  "name": "vs1"
},
"engines": [
  {
    "name": "engine1",
    "primary_servers": [
      "10.132.145.22",
      "10.140.101.109"
    ],
    "secondary_servers": [
      "10.132.145.20",
      "10.132.145.21"
    ],
    "type": "synchronous",
    "port": 9876
  }
],
"events": [
  {
    "name": "event_cifs",
    "protocol": "cifs",
    "volume_monitoring": true,
    "file_operations": {
      "close": false,
      "create": false,
      "create_dir": false,
      "delete": false,
      "delete_dir": false,
      "getattr": false,
      "link": false,
      "lookup": false,
      "open": false,
      "read": true,
      "write": true,
      "rename": false,
      "rename_dir": false,
      "setattr": false,
      "symlink": false
    },
```

```
    "filters": {
      "monitor_ads": true,
      "close_with_modification": false,
      "close_without_modification": false,
      "close_with_read": false,
      "first_read": false,
      "first_write": false,
      "offline_bit": false,
      "open_with_delete_intent": false,
      "open_with_write_intent": false,
      "write_with_size_change": false,
      "setattr_with_owner_change": false,
      "setattr_with_group_change": false,
      "setattr_with_sacl_change": false,
      "setattr_with_dacl_change": false,
      "setattr_with_modify_time_change": false,
      "setattr_with_access_time_change": false,
      "setattr_with_creation_time_change": false,
      "setattr_with_mode_change": false,
      "setattr_with_size_change": false,
      "setattr_with_allocation_size_change": false,
      "exclude_directory": false
    }
  }
],
"policies": [
  {
    "name": "pol0",
    "enabled": true,
    "priority": 1,
    "events": [
      {
        "name": "event_cifs"
      }
    ],
    "engine": {
      "name": "engine1"
    },
    "scope": {
      "include_volumes": [
        "vol1"
      ]
    },
    "mandatory": true,
    "passthrough_read": false
  }
```

```
]
}
----

'''

=== Deleting an FPolicy configuration for a particular SVM

'''

----

# The API:
DELETE /protocols/fpolicy/{svm.uuid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/fpolicy/b34f5e3d-01d0-
11e9-8f63-0050568ea311" -H "accept: application/json"
----

'''




[[ID0df57e4d92242fb80de6d2a467912be0]]
= Retrieve an FPolicy configuration

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/fpolicy`#

*Introduced In:* 9.6

Retrieves an FPolicy configuration.

== Related ONTAP commands

* `fpolicy show`
* `fpolicy policy show`
* `fpolicy policy scope show`
* `fpolicy policy event show`
* `fpolicy policy external-engine show`

== Learn more

* xref:{relative_path}protocols_fpolicy_endpoint_overview.html[DOC
```

```
/protocols/fpolicy]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|engines.secondary_servers
|string
|query
|False
a|Filter by engines.secondary_servers


|engines.name
|string
|query
|False
a|Filter by engines.name


|engines.port
|integer
|query
|False
a|Filter by engines.port


|engines.primary_servers
|string
|query
|False
a|Filter by engines.primary_servers


|engines.type
|string
|query
|False
a|Filter by engines.type
```

```
|policies.events.name
|string
|query
|False
a|Filter by policies.events.name


|policies.name
|string
|query
|False
a|Filter by policies.name


|policies.engine.name
|string
|query
|False
a|Filter by policies.engine.name


|policies.scope.include_shares
|string
|query
|False
a|Filter by policies.scope.include_shares


|policies.scope.exclude_extension
|string
|query
|False
a|Filter by policies.scope.exclude_extension


|policies.scope.exclude_shares
|string
|query
|False
a|Filter by policies.scope.exclude_shares


|policies.scope.exclude_volumes
|string
|query
```

```
|False
a|Filter by policies.scope.exclude_volumes


|policies.scope.exclude_export_policies
|string
|query
|False
a|Filter by policies.scope.exclude_export_policies


|policies.scope.include_extension
|string
|query
|False
a|Filter by policies.scope.include_extension


|policies.scope.include_volumes
|string
|query
|False
a|Filter by policies.scope.include_volumes


|policies.scope.include_export_policies
|string
|query
|False
a|Filter by policies.scope.include_export_policies


|policies.mandatory
|boolean
|query
|False
a|Filter by policies.mandatory


|policies.enabled
|boolean
|query
|False
a|Filter by policies.enabled


|policies.priority
```

```
|integer
|query
|False
a|Filter by policies.priority


|svm.uuid
|string
|query
|False
a|Filter by svm.uuid


|svm.name
|string
|query
|False
a|Filter by svm.name


|events.volume_monitoring
|boolean
|query
|False
a|Filter by events.volume_monitoring


|events.protocol
|string
|query
|False
a|Filter by events.protocol


|events.name
|string
|query
|False
a|Filter by events.name


|events.filters.setattr_with_group_change
|boolean
|query
|False
a|Filter by events.filters.setattr_with_group_change
```

```
|events.filters.setattr_with_size_change
|boolean
|query
|False
a|Filter by events.filters.setattr_with_size_change


|events.filters.first_read
|boolean
|query
|False
a|Filter by events.filters.first_read


|events.filters.close_with_read
|boolean
|query
|False
a|Filter by events.filters.close_with_read


|events.filters.setattr_with_owner_change
|boolean
|query
|False
a|Filter by events.filters.setattr_with_owner_change


|events.filters.open_with_write_intent
|boolean
|query
|False
a|Filter by events.filters.open_with_write_intent


|events.filters.setattr_with_modify_time_change
|boolean
|query
|False
a|Filter by events.filters.setattr_with_modify_time_change


|events.filters.setattr_with_allocation_size_change
|boolean
|query
|False
```

```
a|Filter by events.filters.setattr_with_allocation_size_change


|events.filters.write_with_size_change
|boolean
|query
|False
a|Filter by events.filters.write_with_size_change


|events.filters.close_without_modification
|boolean
|query
|False
a|Filter by events.filters.close_without_modification


|events.filters.setattr_with_mode_change
|boolean
|query
|False
a|Filter by events.filters.setattr_with_mode_change


|events.filters.close_with_modification
|boolean
|query
|False
a|Filter by events.filters.close_with_modification


|events.filters.exclude_directory
|boolean
|query
|False
a|Filter by events.filters.exclude_directory


|events.filters.offline_bit
|boolean
|query
|False
a|Filter by events.filters.offline_bit


|events.filters.setattr_with_dacl_change
|boolean
```

```
|query
|False
a|Filter by events.filters.setattr_with_dacl_change


|events.filters.setattr_with_access_time_change
|boolean
|query
|False
a|Filter by events.filters.setattr_with_access_time_change


|events.filters.setattr_with_sacl_change
|boolean
|query
|False
a|Filter by events.filters.setattr_with_sacl_change


|events.filters.open_with_delete_intent
|boolean
|query
|False
a|Filter by events.filters.open_with_delete_intent


|events.filters.monitor_ads
|boolean
|query
|False
a|Filter by events.filters.monitor_ads


|events.filters.first_write
|boolean
|query
|False
a|Filter by events.filters.first_write


|events.filters.setattr_with_creation_time_change
|boolean
|query
|False
a|Filter by events.filters.setattr_with_creation_time_change
```

```
|events.file_operations.link
|boolean
|query
|False
a|Filter by events.file_operations.link


|events.file_operations.write
|boolean
|query
|False
a|Filter by events.file_operations.write


|events.file_operations.rename
|boolean
|query
|False
a|Filter by events.file_operations.rename


|events.file_operations.delete_dir
|boolean
|query
|False
a|Filter by events.file_operations.delete_dir


|events.file_operations.delete
|boolean
|query
|False
a|Filter by events.file_operations.delete


|events.file_operations.setattr
|boolean
|query
|False
a|Filter by events.file_operations.setattr


|events.file_operations.close
|boolean
|query
|False
a|Filter by events.file_operations.close
```

```
|events.file_operations.open
|boolean
|query
|False
a|Filter by events.file_operations.open


|events.file_operations.create_dir
|boolean
|query
|False
a|Filter by events.file_operations.create_dir


|events.file_operations.rename_dir
|boolean
|query
|False
a|Filter by events.file_operations.rename_dir


|events.file_operations.create
|boolean
|query
|False
a|Filter by events.file_operations.create


|events.file_operations.read
|boolean
|query
|False
a|Filter by events.file_operations.read


|events.file_operations.getattr
|boolean
|query
|False
a|Filter by events.file_operations.getattr


|events.file_operations.lookup
|boolean
|query
```

```
|False
a|Filter by events.file_operations.lookup


|events.file_operations.symlink
|boolean
|query
|False
a|Filter by events.file_operations.symlink


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0
```

```
|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of records


|records
|array[link:#fpolicy[fpolicy]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
```

```
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "engines": [
        {
          "name": "fp_ex_eng",
          "port": 9876,
          "primary_servers": [
            "10.132.145.20",
            "10.140.101.109"
          ],
          "secondary_servers": [
            "10.132.145.20",
            "10.132.145.21"
          ],
          "type": "string"
        }
      ],
      "events": [
        {
          "name": "event_nfs_close",
          "protocol": "string"
        }
      ],
      "policies": [
        {
          "engine": {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
            },
            "name": "string"
          },
          "events": [
            "event_nfs_close",
            "event_open"
          ],
```

```
          "name": "fp_policy_1",
          "scope": {
            "exclude_export_policies": [
              "string"
            ],
            "exclude_extension": [
              "string"
            ],
            "exclude_shares": [
              "string"
            ],
            "exclude_volumes": [
              "vol1",
              "vol_svm1",
              "*"
            ],
            "include_export_policies": [
              "string"
            ],
            "include_extension": [
              "string"
            ],
            "include_shares": [
              "sh1",
              "share_cifs"
            ],
            "include_volumes": [
              "vol1",
              "vol_svm1"
            ]
          }
        }
      ],
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====
```

```
== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
```

```
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
```

```
|link:#href[href]
a|

|===


[#fpolicy_engines]
[.api-collapsible-fifth-title]
fpolicy_engines

The engine defines how ONTAP makes and manages connections to external
FPolicy servers.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|Specifies the name to assign to the external server configuration.


|port
|integer
a|Port number of the FPolicy server application.


|primary_servers
|array[string]
a|

|secondary_servers
|array[string]
a|

|type
|string
a|The notification mode determines what ONTAP does after sending
notifications to FPolicy servers.
The possible values are:

***** synchronous  - After sending a notification, wait for a response
from the FPolicy server.
```

```
***** asynchronous - After sending a notification, file request processing
continues.

* Default value: 1
* enum: ["synchronous", "asynchronous"]
* Introduced in: 9.10


|===


[#file_operations]
[.api-collapsible-fifth-title]
file_operations

Specifies the file operations for the FPolicy event. You must specify a
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|close
|boolean
a|File close operations


|create
|boolean
a|File create operations


|create_dir
|boolean
a|Directory create operations


|delete
|boolean
a|File delete operations
```

```
|delete_dir
|boolean
a|Directory delete operations


|getattr
|boolean
a|Get attribute operations


|link
|boolean
a|Link operations


|lookup
|boolean
a|Lookup operations


|open
|boolean
a|File open operations


|read
|boolean
a|File read operations


|rename
|boolean
a|File rename operations


|rename_dir
|boolean
a|Directory rename operations


|setattr
|boolean
a|Set attribute operations


|symlink
|boolean
```

```
a|Symbolic link operations


|write
|boolean
a|File write operations


|===


[#filters]
[.api-collapsible-fifth-title]
filters

Specifies the list of filters for a given file operation for the specified
protocol.
When you specify the filters, you must specify the valid protocols and a
valid file operations.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|close_with_modification
|boolean
a|Filter the client request for close with modification.


|close_with_read
|boolean
a|Filter the client request for close with read.


|close_without_modification
|boolean
a|Filter the client request for close without modification.


|exclude_directory
|boolean
a|Filter the client requests for directory operations. When this filter is
specified directory operations are not monitored.
```

```
|first_read
|boolean
a|Filter the client requests for the first-read.


|first_write
|boolean
a|Filter the client requests for the first-write.


|monitor_ads
|boolean
a|Filter the client request for alternate data stream.


|offline_bit
|boolean
a|Filter the client request for offline bit set. FPolicy server receives
notification only when offline files are accessed.


|open_with_delete_intent
|boolean
a|Filter the client request for open with delete intent.


|open_with_write_intent
|boolean
a|Filter the client request for open with write intent.


|setattr_with_access_time_change
|boolean
a|Filter the client setattr requests for changing the access time of a
file or directory.


|setattr_with_allocation_size_change
|boolean
a|Filter the client setattr requests for changing the allocation size of a
file.


|setattr_with_creation_time_change
|boolean
a|Filter the client setattr requests for changing the creation time of a
```

```
file or directory.


|setattr_with_dacl_change
|boolean
a|Filter the client setattr requests for changing dacl on a file or
directory.


|setattr_with_group_change
|boolean
a|Filter the client setattr requests for changing group of a file or
directory.


|setattr_with_mode_change
|boolean
a|Filter the client setattr requests for changing the mode bits on a file
or directory.


|setattr_with_modify_time_change
|boolean
a|Filter the client setattr requests for changing the modification time of
a file or directory.


|setattr_with_owner_change
|boolean
a|Filter the client setattr requests for changing owner of a file or
directory.


|setattr_with_sacl_change
|boolean
a|Filter the client setattr requests for changing sacl on a file or
directory.


|setattr_with_size_change
|boolean
a|Filter the client setattr requests for changing the size of a file.


|write_with_size_change
|boolean
a|Filter the client request for write with size change.
```

```
|===


[#fpolicy_events]
[.api-collapsible-fifth-title]
fpolicy_events

The information that a FPolicy process needs to determine what file access
operations to monitor and for which of the monitored events notifications
should be sent to the external FPolicy server.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|file_operations
|link:#file_operations[file_operations]
a|Specifies the file operations for the FPolicy event. You must specify a
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


|filters
|link:#filters[filters]
a|Specifies the list of filters for a given file operation for the
specified protocol.
When you specify the filters, you must specify the valid protocols and a
valid file operations.


|name
|string
a|Specifies the name of the FPolicy event.


|protocol
|string
a|Protocol for which event is created. If you specify protocol, then you
must also specify a valid value for the file operation parameters.
The value of this parameter must be one of the following:
```

```
***** cifs  - for the CIFS protocol.

***** nfsv3 - for the NFSv3 protocol.

***** nfsv4 - for the NFSv4 protocol.


|volume_monitoring
|boolean
a|Specifies whether volume operation monitoring is required.


|===


[#fpolicy_engine_reference]
[.api-collapsible-fifth-title]
fpolicy_engine_reference

FPolicy external engine


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the FPolicy external engine.


|===


[#fpolicy_event_reference]
[.api-collapsible-fifth-title]
fpolicy_event_reference

FPolicy events
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|

|===


[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_export_policies
|array[string]
a|

|exclude_extension
|array[string]
a|

|exclude_shares
|array[string]
a|

|exclude_volumes
|array[string]
a|

|include_export_policies
|array[string]
a|
```

```
|include_extension
|array[string]
a|

|include_shares
|array[string]
a|

|include_volumes
|array[string]
a|

|===


[#fpolicy_policies]
[.api-collapsible-fifth-title]
fpolicy_policies

[cols=3*,options=header]
|===
|Name
|Type
|Description

|enabled
|boolean
a|Specifies if the policy is enabled on the SVM or not. If no value is
mentioned for this field but priority is set, then this policy will be
enabled.


|engine
|link:#fpolicy_engine_reference[fpolicy_engine_reference]
a|FPolicy external engine


|events
|array[link:#fpolicy_event_reference[fpolicy_event_reference]]
a|

|mandatory
|boolean
a|Specifies what action to take on a file access event in a case when all
primary and secondary servers are down or no response is received from the
FPolicy servers within a given timeout period. When this parameter is set
to true, file access events will be denied under these circumstances.
```

```
|name
|string
a|Specifies the name of the policy.


|priority
|integer
a|Specifies the priority that is assigned to this policy.


|scope
|link:#scope[scope]
a|

|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#fpolicy]
```

```
[.api-collapsible-fifth-title]
fpolicy

FPolicy is an infrastructure component of ONTAP that enables partner
applications connected to your storage systems to monitor and set file
access permissions. Every time a client accesses a file from a storage
system, based on the configuration of FPolicy, the partner application is
notified about file access.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|engines
|array[link:#fpolicy_engines[fpolicy_engines]]
a|

|events
|array[link:#fpolicy_events[fpolicy_events]]
a|

|policies
|array[link:#fpolicy_policies[fpolicy_policies]]
a|

|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
```

```
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===
```

```
//end collapsible .Definitions block
====



[[ID9fe982ff39348887f707608fbca0a519]]
= Create an FPolicy configuration

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/protocols/fpolicy`#

*Introduced In:* 9.6

Creates an FPolicy configuration.

== Required properties

* `svm.uuid` or `svm.name` - Existing SVM in which to create the FPolicy
configuration.

== Recommended optional properties

* `engines` -  External server to which the notifications will be sent.
* `events` - File operations to monitor.
* `policies` - Policy configuration which acts as a container for FPolicy
event and FPolicy engine.
* `scope` - Scope of the policy. Can be limited to exports, volumes,
shares or file extensions.

== Default property values

If not specified in POST, the following default property values are
assigned:

* `engines.type` - _synchronous_
* `policies.engine` - _native_
* `policies.mandatory` -  _true_
* `events.volume_monitoring` - _false_
* `events.file_operations.+*+` - _false_
* `events.filters.+*+` - _false_

== Related ONTAP commands

* `fpolicy policy event create`
* `fpolicy policy external-engine create`
* `fpolicy policy create`
```

```
* `fpolicy policy scope create`
* `fpolicy enable`

== Learn more

* xref:{relative_path}protocols_fpolicy_endpoint_overview.html[DOC
/protocols/fpolicy]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|return_records
|boolean
|query
|False
a|The default is false.  If set to true, the records are returned.

* Default value:

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|engines
|array[link:#fpolicy_engines[fpolicy_engines]]
a|

|events
|array[link:#fpolicy_events[fpolicy_events]]
a|
```

```
|policies
|array[link:#fpolicy_policies[fpolicy_policies]]
a|

|svm
|link:#svm[svm]
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "engines": [
    {
      "name": "fp_ex_eng",
      "port": 9876,
      "primary_servers": [
        "10.132.145.20",
        "10.140.101.109"
      ],
      "secondary_servers": [
        "10.132.145.20",
        "10.132.145.21"
      ],
      "type": "string"
    }
  ],
  "events": [
    {
      "name": "event_nfs_close",
      "protocol": "string"
    }
  ],
  "policies": [
    {
      "enabled": null,
      "engine": {
        "name": "string"
      },
      "events": [
        "event_nfs_close",
```

```
        "event_open"
      ],
      "name": "fp_policy_1",
      "scope": {
        "exclude_export_policies": [
          "string"
        ],
        "exclude_extension": [
          "string"
        ],
        "exclude_shares": [
          "string"
        ],
        "exclude_volumes": [
          "vol1",
          "vol_svm1",
          "*"
        ],
        "include_export_policies": [
          "string"
        ],
        "include_extension": [
          "string"
        ],
        "include_shares": [
          "sh1",
          "share_cifs"
        ],
        "include_volumes": [
          "vol1",
          "vol_svm1"
        ]
      }
    }
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Response
```

Status: 201, Created

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|num_records
|integer
a|Number of records


|records
|array[link:#fpolicy[fpolicy]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "records": [
    {
      "engines": [
        {
          "name": "fp_ex_eng",
          "port": 9876,
          "primary_servers": [
            "10.132.145.20",
            "10.140.101.109"
          ],
          "secondary_servers": [
            "10.132.145.20",
            "10.132.145.21"
          ],
          "type": "string"
        }
      ],
      "events": [
        {
          "name": "event_nfs_close",
          "protocol": "string"
        }
      ],
```

```
      "policies": [
        {
          "enabled": null,
          "engine": {
            "name": "string"
          },
          "events": [
            "event_nfs_close",
            "event_open"
          ],
          "name": "fp_policy_1",
          "scope": {
            "exclude_export_policies": [
              "string"
            ],
            "exclude_extension": [
              "string"
            ],
            "exclude_shares": [
              "string"
            ],
            "exclude_volumes": [
              "vol1",
              "vol_svm1",
              "*"
            ],
            "include_export_policies": [
              "string"
            ],
            "include_extension": [
              "string"
            ],
            "include_shares": [
              "sh1",
              "share_cifs"
            ],
            "include_volumes": [
              "vol1",
              "vol_svm1"
            ]
          }
        }
      ],
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
```

```
      }
    }
  ]
}
====

== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 9765032
| The FPolicy engine, FPolicy event or FPolicy policy specified already
exists

| 9765031
| If any of the FPolicy engine, FPolicy event, or FPolicy policy creation
fails due to a systematic error or hardware failure, the cause of the
failure is detailed in the error message

| 2621706
| The SVM UUID specified belongs to different SVM

| 2621462
| The SVM name specified does not exist
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
```

```
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#fpolicy_engines]
[.api-collapsible-fifth-title]
fpolicy_engines

The engine defines how ONTAP makes and manages connections to external
FPolicy servers.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|Specifies the name to assign to the external server configuration.


|port
|integer
a|Port number of the FPolicy server application.


|primary_servers
|array[string]
a|

|secondary_servers
|array[string]
a|

|type
|string
```

```
a|The notification mode determines what ONTAP does after sending
notifications to FPolicy servers.
The possible values are:

***** synchronous  - After sending a notification, wait for a response
from the FPolicy server.

***** asynchronous - After sending a notification, file request processing
continues.

* Default value: 1
* enum: ["synchronous", "asynchronous"]
* Introduced in: 9.10


|===


[#file_operations]
[.api-collapsible-fifth-title]
file_operations

Specifies the file operations for the FPolicy event. You must specify a
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|close
|boolean
a|File close operations


|create
|boolean
a|File create operations


|create_dir
|boolean
a|Directory create operations
```

```
|delete
|boolean
a|File delete operations


|delete_dir
|boolean
a|Directory delete operations


|getattr
|boolean
a|Get attribute operations


|link
|boolean
a|Link operations


|lookup
|boolean
a|Lookup operations


|open
|boolean
a|File open operations


|read
|boolean
a|File read operations


|rename
|boolean
a|File rename operations


|rename_dir
|boolean
a|Directory rename operations
```

```
|setattr
|boolean
a|Set attribute operations


|symlink
|boolean
a|Symbolic link operations


|write
|boolean
a|File write operations


|===


[#filters]
[.api-collapsible-fifth-title]
filters

Specifies the list of filters for a given file operation for the specified
protocol.
When you specify the filters, you must specify the valid protocols and a
valid file operations.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|close_with_modification
|boolean
a|Filter the client request for close with modification.


|close_with_read
|boolean
a|Filter the client request for close with read.


|close_without_modification
|boolean
a|Filter the client request for close without modification.
```

```
|exclude_directory
|boolean
a|Filter the client requests for directory operations. When this filter is
specified directory operations are not monitored.


|first_read
|boolean
a|Filter the client requests for the first-read.


|first_write
|boolean
a|Filter the client requests for the first-write.


|monitor_ads
|boolean
a|Filter the client request for alternate data stream.


|offline_bit
|boolean
a|Filter the client request for offline bit set. FPolicy server receives
notification only when offline files are accessed.


|open_with_delete_intent
|boolean
a|Filter the client request for open with delete intent.


|open_with_write_intent
|boolean
a|Filter the client request for open with write intent.


|setattr_with_access_time_change
|boolean
a|Filter the client setattr requests for changing the access time of a
file or directory.


|setattr_with_allocation_size_change
|boolean
```

```
a|Filter the client setattr requests for changing the allocation size of a
file.


|setattr_with_creation_time_change
|boolean
a|Filter the client setattr requests for changing the creation time of a
file or directory.


|setattr_with_dacl_change
|boolean
a|Filter the client setattr requests for changing dacl on a file or
directory.


|setattr_with_group_change
|boolean
a|Filter the client setattr requests for changing group of a file or
directory.


|setattr_with_mode_change
|boolean
a|Filter the client setattr requests for changing the mode bits on a file
or directory.


|setattr_with_modify_time_change
|boolean
a|Filter the client setattr requests for changing the modification time of
a file or directory.


|setattr_with_owner_change
|boolean
a|Filter the client setattr requests for changing owner of a file or
directory.


|setattr_with_sacl_change
|boolean
a|Filter the client setattr requests for changing sacl on a file or
directory.


|setattr_with_size_change
```

```
|boolean
a|Filter the client setattr requests for changing the size of a file.


|write_with_size_change
|boolean
a|Filter the client request for write with size change.


|===


[#fpolicy_events]
[.api-collapsible-fifth-title]
fpolicy_events

The information that a FPolicy process needs to determine what file access
operations to monitor and for which of the monitored events notifications
should be sent to the external FPolicy server.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|file_operations
|link:#file_operations[file_operations]
a|Specifies the file operations for the FPolicy event. You must specify a
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


|filters
|link:#filters[filters]
a|Specifies the list of filters for a given file operation for the
specified protocol.
When you specify the filters, you must specify the valid protocols and a
valid file operations.


|name
|string
a|Specifies the name of the FPolicy event.
```

```
|protocol
|string
a|Protocol for which event is created. If you specify protocol, then you
must also specify a valid value for the file operation parameters.
The value of this parameter must be one of the following:

***** cifs  - for the CIFS protocol.

***** nfsv3 - for the NFSv3 protocol.

***** nfsv4 - for the NFSv4 protocol.


|volume_monitoring
|boolean
a|Specifies whether volume operation monitoring is required.


|===


[#fpolicy_engine_reference]
[.api-collapsible-fifth-title]
fpolicy_engine_reference

FPolicy external engine


[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the FPolicy external engine.


|===


[#fpolicy_event_reference]
[.api-collapsible-fifth-title]
fpolicy_event_reference
```

```
FPolicy events


[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|

|===


[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_export_policies
|array[string]
a|

|exclude_extension
|array[string]
a|

|exclude_shares
|array[string]
a|

|exclude_volumes
|array[string]
a|

|include_export_policies
|array[string]
a|

|include_extension
```

```
|array[string]
a|

|include_shares
|array[string]
a|

|include_volumes
|array[string]
a|

|===


[#fpolicy_policies]
[.api-collapsible-fifth-title]
fpolicy_policies

[cols=3*,options=header]
|===
|Name
|Type
|Description

|engine
|link:#fpolicy_engine_reference[fpolicy_engine_reference]
a|FPolicy external engine


|events
|array[link:#fpolicy_event_reference[fpolicy_event_reference]]
a|

|mandatory
|boolean
a|Specifies what action to take on a file access event in a case when all
primary and secondary servers are down or no response is received from the
FPolicy servers within a given timeout period. When this parameter is set
to true, file access events will be denied under these circumstances.


|name
|string
a|Specifies the name of the policy.


|priority
```

```
|integer
a|Specifies the priority that is assigned to this policy.


|scope
|link:#scope[scope]
a|

|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#fpolicy]
[.api-collapsible-fifth-title]
fpolicy

FPolicy is an infrastructure component of ONTAP that enables partner
applications connected to your storage systems to monitor and set file
access permissions. Every time a client accesses a file from a storage
system, based on the configuration of FPolicy, the partner application is
notified about file access.


[cols=3*,options=header]
|===
```

```
|Name
|Type
|Description

|engines
|array[link:#fpolicy_engines[fpolicy_engines]]
a|

|events
|array[link:#fpolicy_events[fpolicy_events]]
a|

|policies
|array[link:#fpolicy_policies[fpolicy_policies]]
a|

|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
```

```
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID006c57d9b16142cbebf5c79f4f64fb1f]]
= Delete the FPolicy configuration for an SVM

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}`#

*Introduced In:* 9.6

Deletes the FPolicy configuration for the specified SVM. Before deleting
the FPolicy configuration, ensure that all policies belonging to the SVM
```

```
are disabled.

== Related ONTAP commands

* `fpolicy delete`
* `fpolicy policy scope delete`
* `fpolicy policy delete`
* `fpolicy policy event delete`
* `fpolicy policy external-engine delete`

== Learn more

* xref:{relative_path}protocols_fpolicy_endpoint_overview.html[DOC
/protocols/fpolicy]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes
```

```
|===
| Error Code | Description

| 9765030
| Cannot delete an FPolicy configuration if any of the policy is enabled

| 9765031
| If any of the FPolicy engine, FPolicy event or FPolicy policy deletion
fails due to a systemic error or hardware failure, the cause of the
failure is detailed in the error message.
|===



[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions
```

```
[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code
```

```
|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDf7be1db2faf714686e2c68f113452498]]
= Retrieve the FPolicy configuration for an SVM

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}`#

*Introduced In:* 9.6

Retrieves an FPolicy configuration of an SVM.

== Related ONTAP commands

* `fpolicy show`
* `fpolicy policy show`
* `fpolicy policy scope show`
* `fpolicy policy event show`
* `fpolicy policy external-engine show`

== Learn more

* xref:{relative_path}protocols_fpolicy_endpoint_overview.html[DOC
/protocols/fpolicy]


== Parameters

[cols=5*,options=header]
```

```
|===

|Name
|Type
|In
|Required
|Description

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|engines
|array[link:#fpolicy_engines[fpolicy_engines]]
a|

|events
|array[link:#fpolicy_events[fpolicy_events]]
a|

|policies
```

```
|array[link:#fpolicy_policies[fpolicy_policies]]
a|

|svm
|link:#svm[svm]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "engines": [
    {
      "name": "fp_ex_eng",
      "port": 9876,
      "primary_servers": [
        "10.132.145.20",
        "10.140.101.109"
      ],
      "secondary_servers": [
        "10.132.145.20",
        "10.132.145.21"
      ],
      "type": "string"
    }
  ],
  "events": [
    {
      "name": "event_nfs_close",
      "protocol": "string"
    }
  ],
  "policies": [
    {
      "engine": {
        "_links": {
          "self": {
```

```
            "href": "/api/resourcelink"
          }
        },
        "name": "string"
      },
      "events": [
        "event_nfs_close",
        "event_open"
      ],
      "name": "fp_policy_1",
      "scope": {
        "exclude_export_policies": [
          "string"
        ],
        "exclude_extension": [
          "string"
        ],
        "exclude_shares": [
          "string"
        ],
        "exclude_volumes": [
          "vol1",
          "vol_svm1",
          "*"
        ],
        "include_export_policies": [
          "string"
        ],
        "include_extension": [
          "string"
        ],
        "include_shares": [
          "sh1",
          "share_cifs"
        ],
        "include_volumes": [
          "vol1",
          "vol_svm1"
        ]
      }
    }
  ],
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
```

```
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions
```

```
[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#fpolicy_engines]
[.api-collapsible-fifth-title]
fpolicy_engines

The engine defines how ONTAP makes and manages connections to external
FPolicy servers.
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|Specifies the name to assign to the external server configuration.


|port
|integer
a|Port number of the FPolicy server application.


|primary_servers
|array[string]
a|

|secondary_servers
|array[string]
a|

|type
|string
a|The notification mode determines what ONTAP does after sending
notifications to FPolicy servers.
The possible values are:

***** synchronous  - After sending a notification, wait for a response
from the FPolicy server.

***** asynchronous - After sending a notification, file request processing
continues.

* Default value: 1
* enum: ["synchronous", "asynchronous"]
* Introduced in: 9.10


|===


[#file_operations]
[.api-collapsible-fifth-title]
file_operations
```

```
Specifies the file operations for the FPolicy event. You must specify a
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|close
|boolean
a|File close operations


|create
|boolean
a|File create operations


|create_dir
|boolean
a|Directory create operations


|delete
|boolean
a|File delete operations


|delete_dir
|boolean
a|Directory delete operations


|getattr
|boolean
a|Get attribute operations


|link
|boolean
a|Link operations
```

```
|lookup
|boolean
a|Lookup operations


|open
|boolean
a|File open operations


|read
|boolean
a|File read operations


|rename
|boolean
a|File rename operations


|rename_dir
|boolean
a|Directory rename operations


|setattr
|boolean
a|Set attribute operations


|symlink
|boolean
a|Symbolic link operations


|write
|boolean
a|File write operations


|===


[#filters]
[.api-collapsible-fifth-title]
filters
```

```
Specifies the list of filters for a given file operation for the specified
protocol.
When you specify the filters, you must specify the valid protocols and a
valid file operations.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|close_with_modification
|boolean
a|Filter the client request for close with modification.


|close_with_read
|boolean
a|Filter the client request for close with read.


|close_without_modification
|boolean
a|Filter the client request for close without modification.


|exclude_directory
|boolean
a|Filter the client requests for directory operations. When this filter is
specified directory operations are not monitored.


|first_read
|boolean
a|Filter the client requests for the first-read.


|first_write
|boolean
a|Filter the client requests for the first-write.


|monitor_ads
|boolean
a|Filter the client request for alternate data stream.
```

```
|offline_bit
|boolean
a|Filter the client request for offline bit set. FPolicy server receives
notification only when offline files are accessed.


|open_with_delete_intent
|boolean
a|Filter the client request for open with delete intent.


|open_with_write_intent
|boolean
a|Filter the client request for open with write intent.


|setattr_with_access_time_change
|boolean
a|Filter the client setattr requests for changing the access time of a
file or directory.


|setattr_with_allocation_size_change
|boolean
a|Filter the client setattr requests for changing the allocation size of a
file.


|setattr_with_creation_time_change
|boolean
a|Filter the client setattr requests for changing the creation time of a
file or directory.


|setattr_with_dacl_change
|boolean
a|Filter the client setattr requests for changing dacl on a file or
directory.


|setattr_with_group_change
|boolean
a|Filter the client setattr requests for changing group of a file or
directory.
```

```
|setattr_with_mode_change
|boolean
a|Filter the client setattr requests for changing the mode bits on a file
or directory.


|setattr_with_modify_time_change
|boolean
a|Filter the client setattr requests for changing the modification time of
a file or directory.


|setattr_with_owner_change
|boolean
a|Filter the client setattr requests for changing owner of a file or
directory.


|setattr_with_sacl_change
|boolean
a|Filter the client setattr requests for changing sacl on a file or
directory.


|setattr_with_size_change
|boolean
a|Filter the client setattr requests for changing the size of a file.


|write_with_size_change
|boolean
a|Filter the client request for write with size change.


|===


[#fpolicy_events]
[.api-collapsible-fifth-title]
fpolicy_events

The information that a FPolicy process needs to determine what file access
operations to monitor and for which of the monitored events notifications
should be sent to the external FPolicy server.
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|file_operations
|link:#file_operations[file_operations]
a|Specifies the file operations for the FPolicy event. You must specify a
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


|filters
|link:#filters[filters]
a|Specifies the list of filters for a given file operation for the
specified protocol.
When you specify the filters, you must specify the valid protocols and a
valid file operations.


|name
|string
a|Specifies the name of the FPolicy event.


|protocol
|string
a|Protocol for which event is created. If you specify protocol, then you
must also specify a valid value for the file operation parameters.
The value of this parameter must be one of the following:

***** cifs  - for the CIFS protocol.

***** nfsv3 - for the NFSv3 protocol.

***** nfsv4 - for the NFSv4 protocol.


|volume_monitoring
|boolean
a|Specifies whether volume operation monitoring is required.


|===
```

```
[#fpolicy_engine_reference]
[.api-collapsible-fifth-title]
fpolicy_engine_reference

FPolicy external engine


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the FPolicy external engine.


|===


[#fpolicy_event_reference]
[.api-collapsible-fifth-title]
fpolicy_event_reference

FPolicy events


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|
```

```
|===


[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_export_policies
|array[string]
a|

|exclude_extension
|array[string]
a|

|exclude_shares
|array[string]
a|

|exclude_volumes
|array[string]
a|

|include_export_policies
|array[string]
a|

|include_extension
|array[string]
a|

|include_shares
|array[string]
a|

|include_volumes
|array[string]
a|

|===
```

```
[#fpolicy_policies]
[.api-collapsible-fifth-title]
fpolicy_policies

[cols=3*,options=header]
|===
|Name
|Type
|Description

|enabled
|boolean
a|Specifies if the policy is enabled on the SVM or not. If no value is
mentioned for this field but priority is set, then this policy will be
enabled.


|engine
|link:#fpolicy_engine_reference[fpolicy_engine_reference]
a|FPolicy external engine


|events
|array[link:#fpolicy_event_reference[fpolicy_event_reference]]
a|

|mandatory
|boolean
a|Specifies what action to take on a file access event in a case when all
primary and secondary servers are down or no response is received from the
FPolicy servers within a given timeout period. When this parameter is set
to true, file access events will be denied under these circumstances.


|name
|string
a|Specifies the name of the policy.


|priority
|integer
a|Specifies the priority that is assigned to this policy.


|scope
|link:#scope[scope]
```

```
a|

|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code
```

```
|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



:leveloffset: -1
```

```
= View and update FPolicy server configuration

:leveloffset: +1


[[IDca54b2cddcdceb237b64b8738c5539f5]]
= Protocols fpolicy svm.uuid connections endpoint overview



== Overview

This API is used to display and update connection status information for
external FPolicy servers.
You must keep the following in mind while using these endpoints:

* If the passthrough_read field is set to true in a GET collection call,
only Fpolicy passthrough-read connections are returned.
* If the passthrough_read field is not provided or set to false in a GET
collection call, only FPolicy server connections are returned.

== Examples

=== Retrieving the FPolicy server connections for all SVMs in the cluster

'''

----

# The API:
GET /protocols/fpolicy/{svm.uuid}/connections

# The call:
curl -X GET "https://<mgmt-
ip>/api/protocols/fpolicy/*/connections?passthrough_read=false&fields=*&re
turn_records=true" -H  "accept: application/json"

# The Response:
{
"records": [
  {
    "node": {
      "uuid": "8ca36b68-c501-11eb-b82c-0050568e5902",
      "name": "hsaraswa-vsim4"
    },
```

```
    "svm": {
      "uuid": "9f738ac5-c502-11eb-b82c-0050568e5902",
      "name": "vs1"
    },
    "policy": {
      "name": "p1"
    },
    "server": "192.168.137.78",
    "state": "disconnected",
    "update_time": "2021-06-17T16:05:15+05:30",
    "disconnected_reason": {
      "message": "No local lif present to connect to FPolicy server.",
      "code": 9305
    },
    "type": "primary"
  },
  {
    "node": {
      "uuid": "8ca36b68-c501-11eb-b82c-0050568e5902",
      "name": "hsaraswa-vsim4"
    },
    "svm": {
      "uuid": "9f738ac5-c502-11eb-b82c-0050568e5902",
      "name": "vs1"
    },
    "policy": {
      "name": "p2"
    },
    "server": "192.168.136.38",
    "state": "disconnected",
    "update_time": "2021-06-17T16:05:15+05:30",
    "disconnected_reason": {
      "message": "No local lif present to connect to FPolicy server.",
      "code": 9305
    },
    "type": "primary"
  },
  {
    "node": {
      "uuid": "8ca36b68-c501-11eb-b82c-0050568e5902",
      "name": "hsaraswa-vsim4"
    },
    "svm": {
      "uuid": "b6df362b-c502-11eb-b82c-0050568e5902",
      "name": "vs2"
    },
```

```
    "policy": {
      "name": "pol1"
    },
    "server": "192.168.129.146",
    "state": "disconnected",
    "update_time": "2021-06-17T16:05:15+05:30",
    "disconnected_reason": {
      "message": "No local lif present to connect to FPolicy server.",
      "code": 9305
    },
    "type": "primary"
  }
],
"num_records": 3
}
----

'''

=== Retrieving all FPolicy passthrough read connections for all SVMs in
the cluster

'''

----

# The API:
GET /protocols/fpolicy/{svm.uuid}/connections

# The Call:
curl-X GET "https://<mgmt-
ip>/api/protocols/fpolicy/*/connections?passthrough_read=true&fields=*&ret
urn_records=true&return_timeout=15"

# The Response:
{
"records": [
  {
    "node": {
      "uuid": "55693090-c7c8-11eb-a07a-0050568ebc01",
      "name": "chiragm-vsim3",
    },
    "svm": {
      "uuid": "a69e938d-c7ca-11eb-a07a-0050568ebc01",
      "name": "vs2",
    },
```

```
    "policy": {
      "name": "pol1",
    },
    "server": "192.168.129.146",
    "session_uuid": "2410d348-c7cb-11eb-a07a-0050568ebc01",
    "state": "connected",
  },
  {
    "node": {
      "uuid": "55693090-c7c8-11eb-a07a-0050568ebc01",
      "name": "chiragm-vsim3",
    },
    "svm": {
      "uuid": "a69e938d-c7ca-11eb-a07a-0050568ebc01",
      "name": "vs2",
    },
    "policy": {
      "name": "pol2",
    },
    "server": "192.168.129.146",
    "session_uuid": "288f7002-c7cb-11eb-a07a-0050568ebc01",
    "state": "connected",
  }
],
"num_records": 2,
}
----

'''

=== Retrieving the FPolicy server connections for a specific SVM

'''

----

# The API:
GET /protocols/fpolicy/{svm.uuid}/connections

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/fpolicy/9f738ac5-c502-11eb-
b82c-
0050568e5902/connections?passthrough_read=false&fields=*&return_records=tr
ue" -H  "accept: application/json"

# The Response:
```

```
{
"records": [
  {
    "node": {
      "uuid": "8ca36b68-c501-11eb-b82c-0050568e5902",
      "name": "hsaraswa-vsim4"
    },
    "svm": {
      "uuid": "9f738ac5-c502-11eb-b82c-0050568e5902",
      "name": "vs1"
    },
    "policy": {
      "name": "p1"
    },
    "server": "192.168.137.78",
    "state": "disconnected",
    "update_time": "2021-06-17T16:05:15+05:30",
    "disconnected_reason": {
      "message": "No local lif present to connect to FPolicy server.",
      "code": 9305
    },
    "type": "primary"
  },
  {
    "node": {
      "uuid": "8ca36b68-c501-11eb-b82c-0050568e5902",
      "name": "hsaraswa-vsim4"
    },
    "svm": {
      "uuid": "9f738ac5-c502-11eb-b82c-0050568e5902",
      "name": "vs1"
    },
    "policy": {
      "name": "p2"
    },
    "server": "192.168.136.38",
    "state": "disconnected",
    "update_time": "2021-06-17T16:05:15+05:30",
    "disconnected_reason": {
      "message": "No local lif present to connect to FPolicy server.",
      "code": 9305
    },
    "type": "primary"
  },
],
"num_records": 2
```

```
}
----

'''

=== Retrieving a specific FPolicy server connection

'''

----

# The API:
GET
/protocols/fpolicy/{svm.uuid}/connections/{node.uuid}/{policy.name}/{serve
r}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/fpolicy/9f738ac5-c502-11eb-
b82c-0050568e5902/connections/8ca36b68-c501-11eb-b82c-
0050568e5902/p1/192.168.137.78" -H  "accept: application/json"

# The Response:
{
"node": {
  "uuid": "8ca36b68-c501-11eb-b82c-0050568e5902",
  "name": "hsaraswa-vsim4"
},
"svm": {
  "uuid": "9f738ac5-c502-11eb-b82c-0050568e5902",
  "name": "vs1"
},
"policy": {
  "name": "p1"
},
"server": "192.168.137.78",
"state": "disconnected",
"update_time": "2021-06-17T16:05:15+05:30",
"disconnected_reason": {
  "message": "No local lif present to connect to FPolicy server.",
  "code": 9305
},
"type": "primary"
}
----

'''
```

```
=== Updating the FPolicy server connection

'''

----

# The API:
PATCH
/protocols/fpolicy/{svm.uuid}/connections/{node.uuid}/{policy.name}/{serve
r}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/fpolicy/9f738ac5-c502-11eb-
b82c-0050568e5902/connections/8ca36b68-c501-11eb-b82c-
0050568e5902/p1/192.168.137.78" -H  "accept: application/json"
----

'''




[[ID74f36f514cb31fe7b0eaee93c1bcaa45]]
= Retrieve the status of FPolicy servers

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/connections`#

*Introduced In:* 9.10

Retrieves the statuses of FPolicy servers.

== Related ONTAP commands

* `vserver fpolicy show-engine`
* `vserver fpolicy show-passthrough-read-connection`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_connections_endpoint_overvi
ew.html[DOC /protocols/fpolicy/{svm.uuid}/connections]


== Parameters
```

```
[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|passthrough_read
|boolean
|query
|False
a|Whether to view only passthrough-read connections


|node.uuid
|string
|query
|False
a|Filter by node.uuid


|node.name
|string
|query
|False
a|Filter by node.name


|state
|string
|query
|False
a|Filter by state


|policy.name
|string
|query
|False
a|Filter by policy.name


|server
|string
|query
```

```
|False
a|Filter by server


|type
|string
|query
|False
a|Filter by type


|svm.name
|string
|query
|False
a|Filter by svm.name


|update_time
|string
|query
|False
a|Filter by update_time


|disconnected_reason.code
|integer
|query
|False
a|Filter by disconnected_reason.code


|disconnected_reason.message
|string
|query
|False
a|Filter by disconnected_reason.message


|session_uuid
|string
|query
|False
a|Filter by session_uuid


|max_records
```

```
|integer
|query
|False
a|Limit the number of records returned.


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0


|order_by
|array[string]
|query
```

```
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of records


|records
|array[link:#fpolicy_connection[fpolicy_connection]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
```

```
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "disconnected_reason": {
        "code": 9370,
        "message": "TCP Connection to FPolicy server failed."
      },
      "node": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "node1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "policy": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "string"
      },
      "server": "10.132.145.20",
      "session_uuid": "5224ec64-b336-11eb-841c-0050568e14c2",
      "state": "connected",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "type": "primary",
      "update_time": "2019-06-12T11:00:16-04:00"
    }
  ]
}
====
```

```
== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
```

```
a|

|===


[#disconnected_reason]
[.api-collapsible-fifth-title]
disconnected_reason

Indicates the reason for FPolicy server disconnection.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|integer
a|Reason ID for the FPolicy Server disconnection.


|message
|string
a|FPolicy server reason for disconnection message.


|===


[#node]
[.api-collapsible-fifth-title]
node

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
```

```
a|

|uuid
|string
a|

|===


[#self_link]
[.api-collapsible-fifth-title]
self_link

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#fpolicy_policy_reference]
[.api-collapsible-fifth-title]
fpolicy_policy_reference

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#self_link[self_link]
a|

|name
|string
a|The name of the FPolicy Policy name.


|===
```

```
[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#fpolicy_connection]
[.api-collapsible-fifth-title]
fpolicy_connection

Displays the connection status information of the FPolicy server.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|disconnected_reason
|link:#disconnected_reason[disconnected_reason]
```

```
a|Indicates the reason for FPolicy server disconnection.


|node
|link:#node[node]
a|

|policy
|link:#fpolicy_policy_reference[fpolicy_policy_reference]
a|

|server
|string
a|IP address of the FPolicy server.


|session_uuid
|string
a|Unique session ID associated with each connection to the FPolicy server
and it can be used to identify
the established connection.


|state
|string
a|Specifies the FPolicy server connection state indicating if it is in the
connected or disconnected state.
The following is a list of the possible states:

* connected                 - Connected
* disconnected              - Disconnected


|svm
|link:#svm[svm]
a|

|type
|string
a|FPolicy server type. The possible values are:

*** primary - Primary server

*** secondary  - Secondary server


|update_time
```

```
|string
a|Specifies the time at which FPolicy server is connected or disconnected.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
```

```
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID11a9a4651af96d7a7af80ead11852c53]]
= Retrieve the status of an FPolicy server

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/connections/{node.uuid}/{policy.name
}/{server}`#

*Introduced In:* 9.10

Retrieves the status of an FPolicy server.

== Related ONTAP commands

* `vserver fpolicy show-engine`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_connections_endpoint_overvi
ew.html[DOC /protocols/fpolicy/{svm.uuid}/connections]


== Parameters

[cols=5*,options=header]
|===
```

```
|Name
|Type
|In
|Required
|Description

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|node.uuid
|string
|path
|True
a|Node UUID.


|policy.name
|string
|path
|True
a|Policy name


|server
|string
|path
|True
a|FPolicy Server IP address

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|_links
|link:#_links[_links]
a|

|disconnected_reason
|link:#disconnected_reason[disconnected_reason]
a|Indicates the reason for FPolicy server disconnection.


|node
|link:#node[node]
a|

|policy
|link:#fpolicy_policy_reference[fpolicy_policy_reference]
a|

|server
|string
a|IP address of the FPolicy server.


|session_uuid
|string
a|Unique session ID associated with each connection to the FPolicy server
and it can be used to identify
the established connection.


|state
|string
a|Specifies the FPolicy server connection state indicating if it is in the
connected or disconnected state.
The following is a list of the possible states:

* connected                 - Connected
* disconnected              - Disconnected


|svm
|link:#svm[svm]
a|

|type
|string
a|FPolicy server type. The possible values are:
```

```
*** primary - Primary server

*** secondary  - Secondary server


|update_time
|string
a|Specifies the time at which FPolicy server is connected or disconnected.


|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "disconnected_reason": {
    "code": 9370,
    "message": "TCP Connection to FPolicy server failed."
  },
  "node": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "string"
  },
  "server": "10.132.145.20",
  "session_uuid": "5224ec64-b336-11eb-841c-0050568e14c2",
```

```
  "state": "connected",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "type": "primary",
  "update_time": "2019-06-12T11:00:16-04:00"
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
```

```
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===
```

```
[#disconnected_reason]
[.api-collapsible-fifth-title]
disconnected_reason

Indicates the reason for FPolicy server disconnection.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|integer
a|Reason ID for the FPolicy Server disconnection.


|message
|string
a|FPolicy server reason for disconnection message.


|===


[#node]
[.api-collapsible-fifth-title]
node

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|

|uuid
|string
a|
```

```
|===


[#self_link]
[.api-collapsible-fifth-title]
self_link

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#fpolicy_policy_reference]
[.api-collapsible-fifth-title]
fpolicy_policy_reference

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#self_link[self_link]
a|

|name
|string
a|The name of the FPolicy Policy name.


|===


[#svm]
[.api-collapsible-fifth-title]
svm
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
```

```
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID878cf33c709fead41fd14654b20544d9]]
= Update the FPolicy server status

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/connections/{node.uuid}/{policy.name
}/{server}`#

*Introduced In:* 9.10

Updates the status of an FPolicy server.
```

```
== Related ONTAP commands

* `vserver fpolicy engine-connect`
* `vserver fpolicy engine-disconnect`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_connections_endpoint_overvi
ew.html[DOC /protocols/fpolicy/{svm.uuid}/connections]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|node.uuid
|string
|path
|True
a|Node UUID.


|policy.name
|string
|path
|True
a|Policy name


|server
|string
```

```
|path
|True
a|FPolicy Server IP address

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|disconnected_reason
|link:#disconnected_reason[disconnected_reason]
a|Indicates the reason for FPolicy server disconnection.


|node
|link:#node[node]
a|

|server
|string
a|IP address of the FPolicy server.


|session_uuid
|string
a|Unique session ID associated with each connection to the FPolicy server
and it can be used to identify
the established connection.


|state
|string
a|Specifies the FPolicy server connection state indicating if it is in the
connected or disconnected state.
The following is a list of the possible states:

* connected                 - Connected
* disconnected              - Disconnected
```

```
|svm
|link:#svm[svm]
a|

|type
|string
a|FPolicy server type. The possible values are:

*** primary - Primary server

*** secondary  - Secondary server


|update_time
|string
a|Specifies the time at which FPolicy server is connected or disconnected.


|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "disconnected_reason": {
    "code": 9370,
    "message": "TCP Connection to FPolicy server failed."
  },
  "node": {
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "server": "10.132.145.20",
  "session_uuid": "5224ec64-b336-11eb-841c-0050568e14c2",
  "state": "connected",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "type": "primary",
  "update_time": "2019-06-12T11:00:16-04:00"
}
====

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 9764954
| The specified policy does not exist

| 9764911
| Failed to connect to the FPolicy server. Reason: The specified entry
does not exist

| 9764948
| The specified policy is disabled. Using a disabled policy with this
command is not supported. Use the 'fpolicy enable' command to enable the
policy

| 9764912
| Failed to disconnect the FPolicy server. Reason: The specified entry
does not exist
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#disconnected_reason]
[.api-collapsible-fifth-title]
disconnected_reason

Indicates the reason for FPolicy server disconnection.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|integer
a|Reason ID for the FPolicy Server disconnection.


|message
|string
a|FPolicy server reason for disconnection message.


|===


[#node]
[.api-collapsible-fifth-title]
node

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|name
|string
a|

|uuid
|string
a|

|===


[#self_link]
[.api-collapsible-fifth-title]
self_link
[#fpolicy_policy_reference]
[.api-collapsible-fifth-title]
fpolicy_policy_reference

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the FPolicy Policy name.


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.
```

```
|uuid
|string
a|The unique identifier of the SVM.


|===


[#fpolicy_connection]
[.api-collapsible-fifth-title]
fpolicy_connection

Displays the connection status information of the FPolicy server.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|disconnected_reason
|link:#disconnected_reason[disconnected_reason]
a|Indicates the reason for FPolicy server disconnection.


|node
|link:#node[node]
a|

|server
|string
a|IP address of the FPolicy server.


|session_uuid
|string
a|Unique session ID associated with each connection to the FPolicy server
and it can be used to identify
the established connection.


|state
|string
a|Specifies the FPolicy server connection state indicating if it is in the
connected or disconnected state.
The following is a list of the possible states:
```

```
* connected                  - Connected
* disconnected               - Disconnected


|svm
|link:#svm[svm]
a|

|type
|string
a|FPolicy server type. The possible values are:

*** primary - Primary server

*** secondary  - Secondary server


|update_time
|string
a|Specifies the time at which FPolicy server is connected or disconnected.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===
```

```
[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



:leveloffset: -1


= Manage FPolicy engine configuration

:leveloffset: +1
```

```
[[ID209676ac7c5bc4f041adba6c4a7b1444]]
= Protocols fpolicy svm.uuid engines endpoint overview



== Overview

The FPolicy engine allows you to configure the external servers to which
the file access notifications are sent. As part of FPolicy engine
configuration, you can configure the server(s) to which the notification
is sent, an optional set of secondary server(s) to which the notification
is sent in the case of the primary server(s) failure, the port number for
FPolicy application and the type of the engine, synchronous or
asynchronous.

For the synchronous engine, ONTAP will wait for a response from the
FPolicy application before it allows the operation. With an asynchronous
engine, ONTAP proceeds with the operation processing after sending the
notification to the FPolicy application. An engine can belong to multiple
FPolicy policies.

== Examples

=== Creating an FPolicy engine

'''

----

# The API:
POST /protocols/fpolicy/{svm.uuid}/engines

#The call:
curl -X POST "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-
ae49-0050568e2c1e/engines/" -H "accept: application/json" -H "Content-
Type: application/json" -d "{ \"name\": \"engine0\", \"port\": 9876,
\"primary_servers\": [ \"10.132.145.22\", \"10.140.101.109\" ],
\"secondary_servers\": [ \"10.132.145.20\", \"10.132.145.21\" ], \"type\":
\"synchronous\"}"

# The response:
{
"num_records": 1,
"records": [
  {
    "name": "engine0",
```

```
    "primary_servers": [
      "10.132.145.22",
      "10.140.101.109"
    ],
    "secondary_servers": [
      "10.132.145.20",
      "10.132.145.21"
    ],
    "port": 9876,
    "type": "synchronous"
  }
]
}
----

'''

=== Creating an FPolicy engine with the minimum required fields

'''

----

# The API:
POST /protocols/fpolicy/{svm.uuid}/engines

#The call:
curl -X POST "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-
ae49-0050568e2c1e/engines/" -H "accept: application/json" -H "Content-
Type: application/json" -d "{ \"name\": \"engine0\", \"port\": 9876,
\"primary_servers\": [ \"10.132.145.22\", \"10.140.101.109\" ], \"type\":
\"synchronous\"}"

# The response:
{
"num_records": 1,
"records": [
  {
    "name": "engine0",
    "primary_servers": [
      "10.132.145.22",
      "10.140.101.109"
    ],
    "port": 9876,
    "type": "synchronous"
  }
```

```
]
}
----

'''

=== Retrieving an FPolicy engine configuration for a particular SVM

'''

----

# The API:
GET /protocols/fpolicy/{svm.uuid}/engines

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-
ae49-0050568e2c1e/engines/?fields=*&return_records=true&return_timeout=15"
-H "accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "4f643fb4-fd21-11e8-ae49-0050568e2c1e"
    },
    "name": "cifs",
    "primary_servers": [
      "10.20.20.10"
    ],
    "port": 9876,
    "type": "synchronous"
  },
  {
    "svm": {
      "uuid": "4f643fb4-fd21-11e8-ae49-0050568e2c1e"
    },
    "name": "nfs",
    "primary_servers": [
      "10.23.140.64",
      "10.140.101.109"
    ],
    "secondary_servers": [
      "10.132.145.20",
      "10.132.145.22"
```

```
    ],
    "port": 9876,
    "type": "synchronous"
  }
],
"num_records": 2
}
----

'''

=== Retrieving a specific FPolicy engine configuration for an SVM

'''

----

# The Api:
GET /protocols/fpolicy/{svm.uuid}/engines/{name}

#The call:
curl -X GET "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-
ae49-0050568e2c1e/engines/cifs?fields=*" -H "accept: application/json"

# The response:
{
"svm": {
  "uuid": "4f643fb4-fd21-11e8-ae49-0050568e2c1e"
 },
 "name": "cifs",
 "primary_servers": [
   "10.20.20.10"
 ],
 "port": 9876,
 "type": "synchronous"
}
----

'''

=== Updating an FPolicy engine for an SVM

'''

----

# The API:
```

```
PATCH /protocols/fpolicy/{svm.uuid}/engines/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-
ae49-0050568e2c1e/engines/cifs" -H "accept: application/json" -H "Content-
Type: application/json" -d "{ \"port\": 6666, \"secondary_servers\": [
\"10.132.145.20\", \"10.132.145.21\" ], \"type\": \"synchronous\"}"
----

'''

=== Updating all the attributes of a specific FPolicy engine for an SVM

'''

----

# The API:
PATCH /protocols/fpolicy/{svm.uuid}/engines/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-
ae49-0050568e2c1e/engines/cifs" -H "accept: application/json" -H "Content-
Type: application/json" -d "{ \"port\": 9876, \"primary_servers\": [
\"10.132.145.20\", \"10.140.101.109\" ], \"secondary_servers\": [
\"10.132.145.23\", \"10.132.145.21\" ], \"type\": \"synchronous\"}"
----

'''

=== Deleting a specific FPolicy engine for an SVM

'''

----

# The API:
DELETE /protocols/fpolicy/{svm.uuid}/engines/{name}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-
11e8-ae49-0050568e2c1e/events/cifs" -H "accept: application/json"
----

'''
```

```
[[IDcf1f85ed44aa50efcf6a651ed34775c7]]
= Retrieve the FPolicy engine configuration for all engines of an SVM

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/engines`#

*Introduced In:* 9.6

Retrieves FPolicy engine configurations of all the engines for a specified
SVM. ONTAP allows creation of cluster-level FPolicy engines that act as a
template for all the SVMs belonging to the cluster. These cluster-level
FPolicy engines are also retrieved for the specified SVM.

== Related ONTAP commands

* `fpolicy policy external-engine show`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_engines_endpoint_overview.h
tml[DOC /protocols/fpolicy/{svm.uuid}/engines]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|primary_servers
|string
|query
|False
a|Filter by primary_servers


|type
|string
```

```
|query
|False
a|Filter by type


|secondary_servers
|string
|query
|False
a|Filter by secondary_servers


|name
|string
|query
|False
a|Filter by name


|port
|integer
|query
|False
a|Filter by port


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.
```

```
|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0


|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|
```

```
|num_records
|integer
a|Number of records


|records
|array[link:#fpolicy_engine[fpolicy_engine]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "name": "fp_ex_eng",
      "port": 9876,
      "primary_servers": [
        "10.132.145.20",
        "10.140.101.109"
      ],
      "secondary_servers": [
        "10.132.145.20",
        "10.132.145.21"
      ],
      "svm": {
        "uuid": "string"
      },
      "type": "string"
    }
  ]
}
====
```

```
== Error
```

Status: Default,

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|uuid
|string
```

```
a|SVM UUID


|===


[#fpolicy_engine]
[.api-collapsible-fifth-title]
fpolicy_engine

The engine defines how ONTAP makes and manages connections to external
FPolicy servers.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|Specifies the name to assign to the external server configuration.


|port
|integer
a|Port number of the FPolicy server application.


|primary_servers
|array[string]
a|

|secondary_servers
|array[string]
a|

|svm
|link:#svm[svm]
a|

|type
|string
a|The notification mode determines what ONTAP does after sending
notifications to FPolicy servers.
The possible values are:
```

```
***** synchronous  - After sending a notification, wait for a response
from the FPolicy server.

***** asynchronous - After sending a notification, file request processing
continues.

* Default value: 1
* enum: ["synchronous", "asynchronous"]
* Introduced in: 9.6


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDe9bf6a062f15ab8a828a0b3246ce7baa]]
= Create the FPolicy engine configuration for an SVM

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/engines`#

*Introduced In:* 9.6

Creates an FPolicy engine configuration for a specified SVM. FPolicy
engine creation is allowed only on data SVMs.

== Required properties

* `svm.uuid` - Existing SVM in which to create the FPolicy engine.
* `name` - Name of external engine.
* `port` - Port number of the FPolicy server application.
* `primary_servers` - List of primary FPolicy servers to which the node
will send notifications.
```

```
== Recommended optional properties

* `secondary_servers` - It is recommended to configure secondary FPolicy
server to which the node will send notifications when the primary server
is down.

== Default property values

* `type` - _synchronous_

== Related ONTAP commands

* `fpolicy policy external-engine create`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_engines_endpoint_overview.h
tml[DOC /protocols/fpolicy/{svm.uuid}/engines]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|return_records
|boolean
|query
|False
a|The default is false.  If set to true, the records are returned.

* Default value:


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.
```

```
|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|Specifies the name to assign to the external server configuration.


|port
|integer
a|Port number of the FPolicy server application.


|primary_servers
|array[string]
a|

|secondary_servers
|array[string]
a|

|svm
|link:#svm[svm]
a|

|type
|string
a|The notification mode determines what ONTAP does after sending
notifications to FPolicy servers.
The possible values are:

***** synchronous  - After sending a notification, wait for a response
from the FPolicy server.

***** asynchronous - After sending a notification, file request processing
continues.
```

```
* Default value: 1
* enum: ["synchronous", "asynchronous"]
* Introduced in: 9.6


|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "name": "fp_ex_eng",
  "port": 9876,
  "primary_servers": [
    "10.132.145.20",
    "10.140.101.109"
  ],
  "secondary_servers": [
    "10.132.145.20",
    "10.132.145.21"
  ],
  "svm": {
    "uuid": "string"
  },
  "type": "string"
}
====

== Response
```

Status: 201, Created

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|num_records
|integer
a|Number of records


|records
|array[link:#fpolicy_engine[fpolicy_engine]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "records": [
    {
      "name": "fp_ex_eng",
      "port": 9876,
      "primary_servers": [
        "10.132.145.20",
        "10.140.101.109"
      ],
      "secondary_servers": [
        "10.132.145.20",
        "10.132.145.21"
      ],
      "svm": {
        "uuid": "string"
      },
      "type": "string"
    }
  ]
}
====

== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 9764885
| The primary secondary server has a redundant IP address

| 9764953
| The name of the FPolicy engine is "native" which is reserved by the
system
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|uuid
|string
a|SVM UUID


|===


[#fpolicy_engine]
[.api-collapsible-fifth-title]
fpolicy_engine

The engine defines how ONTAP makes and manages connections to external
```

```
FPolicy servers.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|Specifies the name to assign to the external server configuration.


|port
|integer
a|Port number of the FPolicy server application.


|primary_servers
|array[string]
a|

|secondary_servers
|array[string]
a|

|svm
|link:#svm[svm]
a|

|type
|string
a|The notification mode determines what ONTAP does after sending
notifications to FPolicy servers.
The possible values are:

***** synchronous  - After sending a notification, wait for a response
from the FPolicy server.

***** asynchronous - After sending a notification, file request processing
continues.

* Default value: 1
* enum: ["synchronous", "asynchronous"]
* Introduced in: 9.6
```

```
|===


[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===
```

```
[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDd3f53bf5dc0e37c246977e2d43413299]]
= Delete the FPolicy external engine configuration

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/engines/{name}`#

*Introduced In:* 9.6

Deletes the FPolicy external engine configuration. Deletion of an FPolicy
```

```
engine that is attached to one or more FPolicy policies is not allowed.

== Related ONTAP commands

* `fpolicy policy external-engine modify`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_engines_endpoint_overview.h
tml[DOC /protocols/fpolicy/{svm.uuid}/engines]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 9764940
| At least one FPolicy policy is using the FPolicy engine

| 9764887
| The FPolicy engine is a cluster level FPolicy engine
|===



[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====
```

```
== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
```

```
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDab3098a026a44eabe09e6d9ceb95d174]]
= Retrieve a particular FPolicy engine configuration for an SVM

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/engines/{name}`#

*Introduced In:* 9.6

Retrieves a particular FPolicy engine configuration of a specifed SVM. A
cluster-level FPolicy engine configuration cannot be retrieved for a data
SVM.

== Related ONTAP commands

* `fpolicy policy external-engine show`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_engines_endpoint_overview.h
tml[DOC /protocols/fpolicy/{svm.uuid}/engines]


== Parameters

[cols=5*,options=header]
```

```
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|Specifies the name to assign to the external server configuration.


|port
|integer
```

```
a|Port number of the FPolicy server application.


|primary_servers
|array[string]
a|

|secondary_servers
|array[string]
a|

|svm
|link:#svm[svm]
a|

|type
|string
a|The notification mode determines what ONTAP does after sending
notifications to FPolicy servers.
The possible values are:

***** synchronous  - After sending a notification, wait for a response
from the FPolicy server.

***** asynchronous - After sending a notification, file request processing
continues.

* Default value: 1
* enum: ["synchronous", "asynchronous"]
* Introduced in: 9.6


|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "name": "fp_ex_eng",
  "port": 9876,
  "primary_servers": [
    "10.132.145.20",
    "10.140.101.109"
  ],
  "secondary_servers": [
```

```
    "10.132.145.20",
    "10.132.145.21"
  ],
  "svm": {
    "uuid": "string"
  },
  "type": "string"
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====
```

```
== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|uuid
|string
a|SVM UUID


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===
```

```
[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDbee83767ce05e6cd8ba2a913e98453e1]]
= Update a specific FPolicy engine configuration for an SVM

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/engines/{name}`#

*Introduced In:* 9.6
```

```
Updates a specific FPolicy engine configuration of an SVM. Modification of
an FPolicy engine that is attached to one or more enabled FPolicy policies
is not allowed.

== Related ONTAP commands

* `fpolicy policy external-engine modify`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_engines_endpoint_overview.h
tml[DOC /protocols/fpolicy/{svm.uuid}/engines]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Request Body



[cols=3*,options=header]
|===
|Name
```

```
|Type
|Description

|port
|integer
a|Port number of the FPolicy server application.


|primary_servers
|array[string]
a|

|secondary_servers
|array[string]
a|

|svm
|link:#svm[svm]
a|

|type
|string
a|The notification mode determines what ONTAP does after sending
notifications to FPolicy servers.
The possible values are:

***** synchronous  - After sending a notification, wait for a response
from the FPolicy server.

***** asynchronous - After sending a notification, file request processing
continues.

* Default value: 1
* enum: ["synchronous", "asynchronous"]
* Introduced in: 9.6


|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "port": 9876,
  "primary_servers": [
```

```
    "10.132.145.20",
    "10.140.101.109"
  ],
  "secondary_servers": [
    "10.132.145.20",
    "10.132.145.21"
  ],
  "svm": {
    "uuid": "string"
  },
  "type": "string"
}
====

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 9764922
| The primary and secondary server has a redundant IP address

| 9764942
| At least one FPolicy policy is using the FPolicy engine

| 9764886
| FPolicy engine is a cluster-level FPolicy engine
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
```

```
[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|uuid
|string
a|SVM UUID


|===


[#fpolicy_engine]
[.api-collapsible-fifth-title]
fpolicy_engine

The engine defines how ONTAP makes and manages connections to external
FPolicy servers.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|port
|integer
a|Port number of the FPolicy server application.


|primary_servers
|array[string]
a|

|secondary_servers
|array[string]
a|

|svm
|link:#svm[svm]
```

```
a|

|type
|string
a|The notification mode determines what ONTAP does after sending
notifications to FPolicy servers.
The possible values are:

***** synchronous  - After sending a notification, wait for a response
from the FPolicy server.

***** asynchronous - After sending a notification, file request processing
continues.

* Default value: 1
* enum: ["synchronous", "asynchronous"]
* Introduced in: 9.6


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
```

```
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



:leveloffset: -1


= Manage FPolicy event configuration

:leveloffset: +1


[[ID8635f8bb561f96cbcb3cce469c60f283]]
= Protocols fpolicy svm.uuid events endpoint overview
```

```
== Overview

FPolicy events configurations allow you to specify which file access is
monitored. As part of an FPolicy event, you can configure the SVM for
which the events are generated, the name of the event configuration, the
protocol (cifs, nfsv3/nfsv4) for which the events are generated, the file
operations which are monitored, and filters that can be used to filter the
unwanted notification generation for a specified protocol and file
operation.

Each protocol has a set of supported file operations and filters. An SVM
can have multiple events. A single FPolicy policy can have multiple
FPolicy events.

== Examples

=== Creating an FPolicy event for a CIFS protocol with all the supported
file operations and filters

'''

----

# The API:
POST /protocols/fpolicy/{svm.uuid}/events

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-
ae49-0050568e2c1e/events?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{
\"file_operations\": { \"close\": true, \"create\": true, \"create_dir\":
true, \"delete\": true, \"delete_dir\": true, \"getattr\": true, \"open\":
true, \"read\": true, \"rename\": true, \"rename_dir\": true, \"setattr\":
true, \"write\": true }, \"filters\": { \"close_with_modification\": true,
\"close_with_read\": true, \"close_without_modification\": true,
\"first_read\": true, \"first_write\": true, \"monitor_ads\": true,
\"offline_bit\": true, \"open_with_delete_intent\": true,
\"open_with_write_intent\": true, \"write_with_size_change\": true },
\"name\": \"event_cifs\", \"protocol\": \"cifs\", \"volume_monitoring\":
true}"

# The response:
{
"num_records": 1,
  "records": [
```

```
    {
      "name": "event_cifs",
      "protocol": "cifs",
      "volume_monitoring": true,
      "file_operations": {
        "close": true,
        "create": true,
        "create_dir": true,
        "delete": true,
        "delete_dir": true,
        "getattr": true,
        "open": true,
        "read": true,
        "write": true,
        "rename": true,
        "rename_dir": true,
        "setattr": true
      },
      "filters": {
        "monitor_ads": true,
        "close_with_modification": true,
        "close_without_modification": true,
        "close_with_read": true,
        "first_read": true,
        "first_write": true,
        "offline_bit": true,
        "open_with_delete_intent": true,
        "open_with_write_intent": true,
        "write_with_size_change": true
      }
    }
  ]
}
----

'''

=== Creating an FPolicy event for an NFS protocol with all the supported
file operations and filters

'''

----

# The API:
post /protocols/fpolicy/{svm.uuid}/events
```

```
# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-
ae49-0050568e2c1e/events?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{
\"file_operations\": { \"create\": true, \"create_dir\": true, \"delete\":
true, \"delete_dir\": true, \"link\": true, \"lookup\": true, \"read\":
true, \"rename\": true, \"rename_dir\": true, \"setattr\": true,
\"symlink\": true, \"write\": true }, \"filters\": { \"offline_bit\":
true, \"write_with_size_change\": true }, \"name\": \"event_nfsv3\",
\"protocol\": \"nfsv3\", \"volume_monitoring\": false}"

# The response:
{
"num_records": 1,
"records": [
  {
    "name": "event_nfsv3",
    "protocol": "nfsv3",
    "volume_monitoring": false,
    "file_operations": {
      "create": true,
      "create_dir": true,
      "delete": true,
      "delete_dir": true,
      "link": true,
      "lookup": true,
      "read": true,
      "write": true,
      "rename": true,
      "rename_dir": true,
      "setattr": true,
      "symlink": true
    },
    "filters": {
    "offline_bit": true,
    "write_with_size_change": true
    }
  }
]
}
----

'''

=== Retrieving all of the FPolicy event configurations for a specified SVM
```

```
'''

----

# The API:
GET /protocols/fpolicy/{svm.uuid}/events

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-
ae49-0050568e2c1e/events/?fields=*&return_records=true&return_timeout=15"
-H "accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "4f643fb4-fd21-11e8-ae49-0050568e2c1e"
    },
    "name": "cluster",
    "protocol": "cifs",
    "volume_monitoring": false,
    "file_operations": {
      "close": true,
      "create": false,
      "create_dir": false,
      "delete": false,
      "delete_dir": false,
      "getattr": false,
      "link": false,
      "lookup": false,
      "open": false,
      "read": false,
      "write": false,
      "rename": false,
      "rename_dir": false,
      "setattr": false,
      "symlink": false
    },
    "filters": {
      "monitor_ads": false,
      "close_with_modification": false,
      "close_without_modification": false,
      "close_with_read": true,
      "first_read": false,
      "first_write": false,
```

```
      "offline_bit": false,
      "open_with_delete_intent": false,
      "open_with_write_intent": false,
      "write_with_size_change": false,
      "setattr_with_owner_change": false,
      "setattr_with_group_change": false,
      "setattr_with_sacl_change": false,
      "setattr_with_dacl_change": false,
      "setattr_with_modify_time_change": false,
      "setattr_with_access_time_change": false,
      "setattr_with_creation_time_change": false,
      "setattr_with_mode_change": false,
      "setattr_with_size_change": false,
      "setattr_with_allocation_size_change": false,
      "exclude_directory": false
    }
  },
  {
    "svm": {
      "uuid": "4f643fb4-fd21-11e8-ae49-0050568e2c1e"
    },
    "name": "event_cifs",
    "protocol": "cifs",
    "volume_monitoring": true,
    "file_operations": {
      "close": true,
      "create": true,
      "create_dir": true,
      "delete": true,
      "delete_dir": true,
      "getattr": true,
      "link": false,
      "lookup": false,
      "open": true,
      "read": true,
      "write": true,
      "rename": true,
      "rename_dir": true,
      "setattr": true,
      "symlink": false
    },
    "filters": {
      "monitor_ads": true,
      "close_with_modification": true,
      "close_without_modification": true,
      "close_with_read": true,
```

```
      "first_read": true,
      "first_write": true,
      "offline_bit": true,
      "open_with_delete_intent": true,
      "open_with_write_intent": true,
      "write_with_size_change": true,
      "setattr_with_owner_change": false,
      "setattr_with_group_change": false,
      "setattr_with_sacl_change": false,
      "setattr_with_dacl_change": false,
      "setattr_with_modify_time_change": false,
      "setattr_with_access_time_change": false,
      "setattr_with_creation_time_change": false,
      "setattr_with_mode_change": false,
      "setattr_with_size_change": false,
      "setattr_with_allocation_size_change": false,
      "exclude_directory": false
    }
  }
],
"num_records": 2
}
----

'''

=== Retrieving a specific FPolicy event configuration for an SVM

'''

----

# The API:
GET /protocols/fpolicy/{svm.uuid}/events/{name}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-
ae49-
0050568e2c1e/events/event_cifs?fields=*&return_records=true&return_timeout
=15" -H "accept: application/json"

# The response:
{
"svm": {
  "uuid": "4f643fb4-fd21-11e8-ae49-0050568e2c1e"
},
```

```
"name": "event_cifs",
"protocol": "cifs",
"volume_monitoring": true,
"file_operations": {
  "close": true,
  "create": true,
  "create_dir": true,
  "delete": true,
  "delete_dir": true,
  "getattr": true,
  "link": false,
  "lookup": false,
  "open": true,
  "read": true,
  "write": true,
  "rename": true,
  "rename_dir": true,
  "setattr": true,
  "symlink": false
},
"filters": {
  "monitor_ads": true,
  "close_with_modification": true,
  "close_without_modification": true,
  "close_with_read": true,
  "first_read": true,
  "first_write": true,
  "offline_bit": true,
  "open_with_delete_intent": true,
  "open_with_write_intent": true,
  "write_with_size_change": true,
  "setattr_with_owner_change": false,
  "setattr_with_group_change": false,
  "setattr_with_sacl_change": false,
  "setattr_with_dacl_change": false,
  "setattr_with_modify_time_change": false,
  "setattr_with_access_time_change": false,
  "setattr_with_creation_time_change": false,
  "setattr_with_mode_change": false,
  "setattr_with_size_change": false,
  "setattr_with_allocation_size_change": false,
  "exclude_directory": false
}
}
----
```

```
'''

=== Updating a specific FPolicy event configuration for a specified SVM

'''

----

# The API:
PATCH /protocols/fpolicy/{svm.uuid}/events/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-11e8-
ae49-0050568e2c1e/events/event_cifs" -H "accept: application/json" -H
"Content-Type: application/json" -d "{ \"file_operations\": { \"close\":
false, \"create\": false, \"read\": true }, \"filters\": {
\"close_with_modification\": false, \"close_with_read\": false,
\"close_without_modification\": false }, \"protocol\": \"cifs\",
\"volume_monitoring\": false}"
----

'''

=== Deleting a specific FPolicy event configuration for a specific SVM

'''

----

# The API:
DELETE /protocols/fpolicy/{svm.uuid}/events/{name}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/fpolicy/4f643fb4-fd21-
11e8-ae49-0050568e2c1e/events/event_cifs" -H "accept: application/json"
----

'''




[[ID6e4c636d49517eef3b9899dd1fecb8d5]]
= Retrieve the FPolicy event configuration for all events for an SVM

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
```

```
block]#`/protocols/fpolicy/{svm.uuid}/events`#

*Introduced In:* 9.6

Retrieves FPolicy event configurations for all events for a specified SVM.
ONTAP allows the creation of cluster-level FPolicy events that act as a
template for all the data SVMs belonging to the cluster. These cluster-
level FPolicy events are also retrieved for the specified SVM.

== Related ONTAP commands

* `fpolicy policy event show`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_events_endpoint_overview.ht
ml[DOC /protocols/fpolicy/{svm.uuid}/events]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|file_operations.link
|boolean
|query
|False
a|Filter by file_operations.link


|file_operations.write
|boolean
|query
|False
a|Filter by file_operations.write


|file_operations.rename
|boolean
```

```
|query
|False
a|Filter by file_operations.rename


|file_operations.delete_dir
|boolean
|query
|False
a|Filter by file_operations.delete_dir


|file_operations.delete
|boolean
|query
|False
a|Filter by file_operations.delete


|file_operations.setattr
|boolean
|query
|False
a|Filter by file_operations.setattr


|file_operations.close
|boolean
|query
|False
a|Filter by file_operations.close


|file_operations.create_dir
|boolean
|query
|False
a|Filter by file_operations.create_dir


|file_operations.open
|boolean
|query
|False
a|Filter by file_operations.open
```

```
|file_operations.rename_dir
|boolean
|query
|False
a|Filter by file_operations.rename_dir


|file_operations.create
|boolean
|query
|False
a|Filter by file_operations.create


|file_operations.getattr
|boolean
|query
|False
a|Filter by file_operations.getattr


|file_operations.read
|boolean
|query
|False
a|Filter by file_operations.read


|file_operations.symlink
|boolean
|query
|False
a|Filter by file_operations.symlink


|file_operations.lookup
|boolean
|query
|False
a|Filter by file_operations.lookup


|filters.setattr_with_dacl_change
|boolean
|query
|False
a|Filter by filters.setattr_with_dacl_change
```

```
|filters.setattr_with_access_time_change
|boolean
|query
|False
a|Filter by filters.setattr_with_access_time_change


|filters.setattr_with_sacl_change
|boolean
|query
|False
a|Filter by filters.setattr_with_sacl_change


|filters.setattr_with_mode_change
|boolean
|query
|False
a|Filter by filters.setattr_with_mode_change


|filters.close_with_modification
|boolean
|query
|False
a|Filter by filters.close_with_modification


|filters.offline_bit
|boolean
|query
|False
a|Filter by filters.offline_bit


|filters.exclude_directory
|boolean
|query
|False
a|Filter by filters.exclude_directory


|filters.setattr_with_creation_time_change
|boolean
|query
```

```
|False
a|Filter by filters.setattr_with_creation_time_change


|filters.open_with_delete_intent
|boolean
|query
|False
a|Filter by filters.open_with_delete_intent


|filters.first_write
|boolean
|query
|False
a|Filter by filters.first_write


|filters.monitor_ads
|boolean
|query
|False
a|Filter by filters.monitor_ads


|filters.close_with_read
|boolean
|query
|False
a|Filter by filters.close_with_read


|filters.setattr_with_group_change
|boolean
|query
|False
a|Filter by filters.setattr_with_group_change


|filters.setattr_with_size_change
|boolean
|query
|False
a|Filter by filters.setattr_with_size_change


|filters.first_read
```

```
|boolean
|query
|False
a|Filter by filters.first_read


|filters.setattr_with_modify_time_change
|boolean
|query
|False
a|Filter by filters.setattr_with_modify_time_change


|filters.setattr_with_allocation_size_change
|boolean
|query
|False
a|Filter by filters.setattr_with_allocation_size_change


|filters.write_with_size_change
|boolean
|query
|False
a|Filter by filters.write_with_size_change


|filters.close_without_modification
|boolean
|query
|False
a|Filter by filters.close_without_modification


|filters.setattr_with_owner_change
|boolean
|query
|False
a|Filter by filters.setattr_with_owner_change


|filters.open_with_write_intent
|boolean
|query
|False
a|Filter by filters.open_with_write_intent
```

```
|name
|string
|query
|False
a|Filter by name


|protocol
|string
|query
|False
a|Filter by protocol


|volume_monitoring
|boolean
|query
|False
a|Filter by volume_monitoring


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|return_records
|boolean
|query
|False
```

```
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0


|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of records
```

```
|records
|array[link:#fpolicy_event[fpolicy_event]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "name": "event_nfs_close",
      "protocol": "string",
      "svm": {
        "uuid": "string"
      }
    }
  ]
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
```

```
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===
```

```
[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===


[#file_operations]
[.api-collapsible-fifth-title]
file_operations

Specifies the file operations for the FPolicy event. You must specify a
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|close
|boolean
a|File close operations


|create
|boolean
a|File create operations
```

```
|create_dir
|boolean
a|Directory create operations


|delete
|boolean
a|File delete operations


|delete_dir
|boolean
a|Directory delete operations


|getattr
|boolean
a|Get attribute operations


|link
|boolean
a|Link operations


|lookup
|boolean
a|Lookup operations


|open
|boolean
a|File open operations


|read
|boolean
a|File read operations


|rename
|boolean
a|File rename operations


|rename_dir
```

```
|boolean
a|Directory rename operations


|setattr
|boolean
a|Set attribute operations


|symlink
|boolean
a|Symbolic link operations


|write
|boolean
a|File write operations


|===


[#filters]
[.api-collapsible-fifth-title]
filters

Specifies the list of filters for a given file operation for the specified
protocol.
When you specify the filters, you must specify the valid protocols and a
valid file operations.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|close_with_modification
|boolean
a|Filter the client request for close with modification.


|close_with_read
|boolean
a|Filter the client request for close with read.
```

```
|close_without_modification
|boolean
a|Filter the client request for close without modification.


|exclude_directory
|boolean
a|Filter the client requests for directory operations. When this filter is
specified directory operations are not monitored.


|first_read
|boolean
a|Filter the client requests for the first-read.


|first_write
|boolean
a|Filter the client requests for the first-write.


|monitor_ads
|boolean
a|Filter the client request for alternate data stream.


|offline_bit
|boolean
a|Filter the client request for offline bit set. FPolicy server receives
notification only when offline files are accessed.


|open_with_delete_intent
|boolean
a|Filter the client request for open with delete intent.


|open_with_write_intent
|boolean
a|Filter the client request for open with write intent.


|setattr_with_access_time_change
|boolean
a|Filter the client setattr requests for changing the access time of a
file or directory.
```

```
|setattr_with_allocation_size_change
|boolean
a|Filter the client setattr requests for changing the allocation size of a
file.


|setattr_with_creation_time_change
|boolean
a|Filter the client setattr requests for changing the creation time of a
file or directory.


|setattr_with_dacl_change
|boolean
a|Filter the client setattr requests for changing dacl on a file or
directory.


|setattr_with_group_change
|boolean
a|Filter the client setattr requests for changing group of a file or
directory.


|setattr_with_mode_change
|boolean
a|Filter the client setattr requests for changing the mode bits on a file
or directory.


|setattr_with_modify_time_change
|boolean
a|Filter the client setattr requests for changing the modification time of
a file or directory.


|setattr_with_owner_change
|boolean
a|Filter the client setattr requests for changing owner of a file or
directory.


|setattr_with_sacl_change
|boolean
a|Filter the client setattr requests for changing sacl on a file or
```

```
directory.


|setattr_with_size_change
|boolean
a|Filter the client setattr requests for changing the size of a file.


|write_with_size_change
|boolean
a|Filter the client request for write with size change.


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|uuid
|string
a|SVM UUID


|===


[#fpolicy_event]
[.api-collapsible-fifth-title]
fpolicy_event

The information that a FPolicy process needs to determine what file access
operations to monitor and for which of the monitored events notifications
should be sent to the external FPolicy server.


[cols=3*,options=header]
|===
|Name
|Type
```

```
|Description

|file_operations
|link:#file_operations[file_operations]
a|Specifies the file operations for the FPolicy event. You must specify a
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


|filters
|link:#filters[filters]
a|Specifies the list of filters for a given file operation for the
specified protocol.
When you specify the filters, you must specify the valid protocols and a
valid file operations.


|name
|string
a|Specifies the name of the FPolicy event.


|protocol
|string
a|Protocol for which event is created. If you specify protocol, then you
must also specify a valid value for the file operation parameters.
The value of this parameter must be one of the following:

***** cifs  - for the CIFS protocol.

***** nfsv3 - for the NFSv3 protocol.

***** nfsv4 - for the NFSv4 protocol.


|svm
|link:#svm[svm]
a|

|volume_monitoring
|boolean
a|Specifies whether volume operation monitoring is required.


|===
```

```
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message
```

```
|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID9cd93a800460641967d9fde15e0261bd]]
= Create the FPolicy event configuration for an SVM

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/events`#

*Introduced In:* 9.6

Creates an FPolicy event configuration for a specified SVM. FPolicy event
creation is allowed only on data SVMs. When a protocol is specified, you
must specify a file operation or a file operation and filters.

== Required properties

* `svm.uuid` - Existing SVM in which to create the FPolicy event.
* `name` - Name of the FPolicy event.

== Recommended optional properties

* `file-operations` - List of file operations to monitor.
* `protocol` - Protocol for which the file operations should be monitored.
* `filters` - List of filters for the specified file operations.

== Default property values

If not specified in POST, the following default property values are
assigned:

* `file_operations.+*+` - _false_
* `filters.+*+` - _false_
* `volume-monitoring` - _false_
```

```
== Related ONTAP commands

* `fpolicy policy event create`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_events_endpoint_overview.ht
ml[DOC /protocols/fpolicy/{svm.uuid}/events]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|return_records
|boolean
|query
|False
a|The default is false.  If set to true, the records are returned.

* Default value:


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
```

```
|Description

|file_operations
|link:#file_operations[file_operations]
a|Specifies the file operations for the FPolicy event. You must specify a
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


|filters
|link:#filters[filters]
a|Specifies the list of filters for a given file operation for the
specified protocol.
When you specify the filters, you must specify the valid protocols and a
valid file operations.


|name
|string
a|Specifies the name of the FPolicy event.


|protocol
|string
a|Protocol for which event is created. If you specify protocol, then you
must also specify a valid value for the file operation parameters.
The value of this parameter must be one of the following:

***** cifs  - for the CIFS protocol.

***** nfsv3 - for the NFSv3 protocol.

***** nfsv4 - for the NFSv4 protocol.


|svm
|link:#svm[svm]
a|

|volume_monitoring
|boolean
a|Specifies whether volume operation monitoring is required.


|===
```

```
.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "name": "event_nfs_close",
  "protocol": "string",
  "svm": {
    "uuid": "string"
  }
}
====

== Response
```

Status: 201, Created

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|num_records
|integer
a|Number of records


|records
|array[link:#fpolicy_event[fpolicy_event]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "records": [
    {
      "name": "event_nfs_close",
      "protocol": "string",
      "svm": {
        "uuid": "string"
      }
    }
  ]
}
====

== Error
```

Status: Default

```
|===
| Error Code | Description

| 9764929
| The file operation is not supported by the protocol
```

```
| 9764955
| The filter is not supported by the protocol

| 9764930
| The filter is not supported by any of the file operations

| 9764946
| The protocol is specifed without a file operation or a file operation
and filter pair
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#file_operations]
[.api-collapsible-fifth-title]
file_operations

Specifies the file operations for the FPolicy event. You must specify a
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|close
|boolean
a|File close operations


|create
|boolean
a|File create operations


|create_dir
|boolean
```

```
a|Directory create operations


|delete
|boolean
a|File delete operations


|delete_dir
|boolean
a|Directory delete operations


|getattr
|boolean
a|Get attribute operations


|link
|boolean
a|Link operations


|lookup
|boolean
a|Lookup operations


|open
|boolean
a|File open operations


|read
|boolean
a|File read operations


|rename
|boolean
a|File rename operations


|rename_dir
|boolean
a|Directory rename operations
```

```
|setattr
|boolean
a|Set attribute operations


|symlink
|boolean
a|Symbolic link operations


|write
|boolean
a|File write operations


|===


[#filters]
[.api-collapsible-fifth-title]
filters

Specifies the list of filters for a given file operation for the specified
protocol.
When you specify the filters, you must specify the valid protocols and a
valid file operations.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|close_with_modification
|boolean
a|Filter the client request for close with modification.


|close_with_read
|boolean
a|Filter the client request for close with read.


|close_without_modification
|boolean
```

```
a|Filter the client request for close without modification.


|exclude_directory
|boolean
a|Filter the client requests for directory operations. When this filter is
specified directory operations are not monitored.


|first_read
|boolean
a|Filter the client requests for the first-read.


|first_write
|boolean
a|Filter the client requests for the first-write.


|monitor_ads
|boolean
a|Filter the client request for alternate data stream.


|offline_bit
|boolean
a|Filter the client request for offline bit set. FPolicy server receives
notification only when offline files are accessed.


|open_with_delete_intent
|boolean
a|Filter the client request for open with delete intent.


|open_with_write_intent
|boolean
a|Filter the client request for open with write intent.


|setattr_with_access_time_change
|boolean
a|Filter the client setattr requests for changing the access time of a
file or directory.


|setattr_with_allocation_size_change
```

```
|boolean
a|Filter the client setattr requests for changing the allocation size of a
file.


|setattr_with_creation_time_change
|boolean
a|Filter the client setattr requests for changing the creation time of a
file or directory.


|setattr_with_dacl_change
|boolean
a|Filter the client setattr requests for changing dacl on a file or
directory.


|setattr_with_group_change
|boolean
a|Filter the client setattr requests for changing group of a file or
directory.


|setattr_with_mode_change
|boolean
a|Filter the client setattr requests for changing the mode bits on a file
or directory.


|setattr_with_modify_time_change
|boolean
a|Filter the client setattr requests for changing the modification time of
a file or directory.


|setattr_with_owner_change
|boolean
a|Filter the client setattr requests for changing owner of a file or
directory.


|setattr_with_sacl_change
|boolean
a|Filter the client setattr requests for changing sacl on a file or
directory.
```

```
|setattr_with_size_change
|boolean
a|Filter the client setattr requests for changing the size of a file.


|write_with_size_change
|boolean
a|Filter the client request for write with size change.


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|uuid
|string
a|SVM UUID


|===


[#fpolicy_event]
[.api-collapsible-fifth-title]
fpolicy_event

The information that a FPolicy process needs to determine what file access
operations to monitor and for which of the monitored events notifications
should be sent to the external FPolicy server.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|file_operations
```

```
|link:#file_operations[file_operations]
a|Specifies the file operations for the FPolicy event. You must specify a
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


|filters
|link:#filters[filters]
a|Specifies the list of filters for a given file operation for the
specified protocol.
When you specify the filters, you must specify the valid protocols and a
valid file operations.


|name
|string
a|Specifies the name of the FPolicy event.


|protocol
|string
a|Protocol for which event is created. If you specify protocol, then you
must also specify a valid value for the file operation parameters.
The value of this parameter must be one of the following:

***** cifs  - for the CIFS protocol.

***** nfsv3 - for the NFSv3 protocol.

***** nfsv4 - for the NFSv4 protocol.


|svm
|link:#svm[svm]
a|

|volume_monitoring
|boolean
a|Specifies whether volume operation monitoring is required.


|===


[#href]
[.api-collapsible-fifth-title]
```

```
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
```

```
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDb0d42ae94444f2a62eff2e8802ee04c6]]
= Delete a specific FPolicy event configuration for an SVM

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/events/{name}`#

*Introduced In:* 9.6

Deletes a specific FPolicy event configuration for an SVM. A cluster-level
FPolicy event configuration cannot be modified for a data SVM through
REST. An FPolicy event that is attached to an FPolicy policy cannot be
deleted.

== Related ONTAP commands
```

```
* `fpolicy policy event delete`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_events_endpoint_overview.ht
ml[DOC /protocols/fpolicy/{svm.uuid}/events]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
|===
| Error Code | Description
```

```
| 9764874
| The FPolicy event is a cluster event

| 9764947
| The FPolicy event is attached to an FPolicy policy
|===



[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
```

```
====
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message
```

```
|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID3112309403a163dd22c0b249f0995a24]]
= Retrieve a specific FPolicy event configuration for an SVM

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/events/{name}`#

*Introduced In:* 9.6

Retrieves a specific FPolicy event configuration for an SVM. A cluster-
level FPolicy event configuration cannot be retrieved for a data SVM
through a REST API.

== Related ONTAP commands

* `fpolicy policy event show`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_events_endpoint_overview.ht
ml[DOC /protocols/fpolicy/{svm.uuid}/events]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
```

```
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|file_operations
|link:#file_operations[file_operations]
a|Specifies the file operations for the FPolicy event. You must specify a
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


|filters
|link:#filters[filters]
a|Specifies the list of filters for a given file operation for the
specified protocol.
When you specify the filters, you must specify the valid protocols and a
```

```
valid file operations.


|name
|string
a|Specifies the name of the FPolicy event.


|protocol
|string
a|Protocol for which event is created. If you specify protocol, then you
must also specify a valid value for the file operation parameters.
The value of this parameter must be one of the following:

***** cifs  - for the CIFS protocol.

***** nfsv3 - for the NFSv3 protocol.

***** nfsv4 - for the NFSv4 protocol.


|svm
|link:#svm[svm]
a|

|volume_monitoring
|boolean
a|Specifies whether volume operation monitoring is required.


|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "name": "event_nfs_close",
  "protocol": "string",
  "svm": {
    "uuid": "string"
  }
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#file_operations]
[.api-collapsible-fifth-title]
file_operations

Specifies the file operations for the FPolicy event. You must specify a
```

```
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|close
|boolean
a|File close operations


|create
|boolean
a|File create operations


|create_dir
|boolean
a|Directory create operations


|delete
|boolean
a|File delete operations


|delete_dir
|boolean
a|Directory delete operations


|getattr
|boolean
a|Get attribute operations


|link
|boolean
a|Link operations


|lookup
```

```
|boolean
a|Lookup operations


|open
|boolean
a|File open operations


|read
|boolean
a|File read operations


|rename
|boolean
a|File rename operations


|rename_dir
|boolean
a|Directory rename operations


|setattr
|boolean
a|Set attribute operations


|symlink
|boolean
a|Symbolic link operations


|write
|boolean
a|File write operations


|===


[#filters]
[.api-collapsible-fifth-title]
filters

Specifies the list of filters for a given file operation for the specified
```

```
protocol.
When you specify the filters, you must specify the valid protocols and a
valid file operations.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|close_with_modification
|boolean
a|Filter the client request for close with modification.


|close_with_read
|boolean
a|Filter the client request for close with read.


|close_without_modification
|boolean
a|Filter the client request for close without modification.


|exclude_directory
|boolean
a|Filter the client requests for directory operations. When this filter is
specified directory operations are not monitored.


|first_read
|boolean
a|Filter the client requests for the first-read.


|first_write
|boolean
a|Filter the client requests for the first-write.


|monitor_ads
|boolean
a|Filter the client request for alternate data stream.
```

```
|offline_bit
|boolean
a|Filter the client request for offline bit set. FPolicy server receives
notification only when offline files are accessed.


|open_with_delete_intent
|boolean
a|Filter the client request for open with delete intent.


|open_with_write_intent
|boolean
a|Filter the client request for open with write intent.


|setattr_with_access_time_change
|boolean
a|Filter the client setattr requests for changing the access time of a
file or directory.


|setattr_with_allocation_size_change
|boolean
a|Filter the client setattr requests for changing the allocation size of a
file.


|setattr_with_creation_time_change
|boolean
a|Filter the client setattr requests for changing the creation time of a
file or directory.


|setattr_with_dacl_change
|boolean
a|Filter the client setattr requests for changing dacl on a file or
directory.


|setattr_with_group_change
|boolean
a|Filter the client setattr requests for changing group of a file or
directory.


|setattr_with_mode_change
```

```
|boolean
a|Filter the client setattr requests for changing the mode bits on a file
or directory.


|setattr_with_modify_time_change
|boolean
a|Filter the client setattr requests for changing the modification time of
a file or directory.


|setattr_with_owner_change
|boolean
a|Filter the client setattr requests for changing owner of a file or
directory.


|setattr_with_sacl_change
|boolean
a|Filter the client setattr requests for changing sacl on a file or
directory.


|setattr_with_size_change
|boolean
a|Filter the client setattr requests for changing the size of a file.


|write_with_size_change
|boolean
a|Filter the client request for write with size change.


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|uuid
```

```
|string
a|SVM UUID


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
```

```
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDe6a96f51b4e911607a1d0da1a66deed9]]
= Update a specific FPolicy event configuration for an SVM

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/events/{name}`#

*Introduced In:* 9.6

Updates a specific FPolicy event configuration for an SVM. A cluster-level
FPolicy event configuration cannot be modified for a data SVM through
REST. When the file operations and filters fields are modified, the
previous values are retained and new values are added to the list of
previous values. To remove a particular file operation or filter, set its
value to false in the request.

== Related ONTAP commands

* `fpolicy policy event modify`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_events_endpoint_overview.ht
ml[DOC /protocols/fpolicy/{svm.uuid}/events]
```

```
== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|file_operations
|link:#file_operations[file_operations]
a|Specifies the file operations for the FPolicy event. You must specify a
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


|filters
|link:#filters[filters]
a|Specifies the list of filters for a given file operation for the
specified protocol.
```

```
When you specify the filters, you must specify the valid protocols and a
valid file operations.


|protocol
|string
a|Protocol for which event is created. If you specify protocol, then you
must also specify a valid value for the file operation parameters.
The value of this parameter must be one of the following:

***** cifs  - for the CIFS protocol.

***** nfsv3 - for the NFSv3 protocol.

***** nfsv4 - for the NFSv4 protocol.


|svm
|link:#svm[svm]
a|

|volume_monitoring
|boolean
a|Specifies whether volume operation monitoring is required.


|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "protocol": "string",
  "svm": {
    "uuid": "string"
  }
}
====

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
|===
| Error Code | Description

| 9764873
| The event is a cluster event

| 9764929
| The file operation is not supported by the protocol

| 9764955
| The filter is not supported by the protocol

| 9764930
| The filter is not supported by any of the file operations

| 9764946
| The protocol is specifed without file operation or a file operation and
filter pair
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#file_operations]
[.api-collapsible-fifth-title]
file_operations

Specifies the file operations for the FPolicy event. You must specify a
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


[cols=3*,options=header]
|===
|Name
```

```
|Type
|Description

|close
|boolean
a|File close operations


|create
|boolean
a|File create operations


|create_dir
|boolean
a|Directory create operations


|delete
|boolean
a|File delete operations


|delete_dir
|boolean
a|Directory delete operations


|getattr
|boolean
a|Get attribute operations


|link
|boolean
a|Link operations


|lookup
|boolean
a|Lookup operations


|open
|boolean
a|File open operations
```

```
|read
|boolean
a|File read operations


|rename
|boolean
a|File rename operations


|rename_dir
|boolean
a|Directory rename operations


|setattr
|boolean
a|Set attribute operations


|symlink
|boolean
a|Symbolic link operations


|write
|boolean
a|File write operations


|===


[#filters]
[.api-collapsible-fifth-title]
filters

Specifies the list of filters for a given file operation for the specified
protocol.
When you specify the filters, you must specify the valid protocols and a
valid file operations.


[cols=3*,options=header]
|===
|Name
```

```
|Type
|Description

|close_with_modification
|boolean
a|Filter the client request for close with modification.


|close_with_read
|boolean
a|Filter the client request for close with read.


|close_without_modification
|boolean
a|Filter the client request for close without modification.


|exclude_directory
|boolean
a|Filter the client requests for directory operations. When this filter is
specified directory operations are not monitored.


|first_read
|boolean
a|Filter the client requests for the first-read.


|first_write
|boolean
a|Filter the client requests for the first-write.


|monitor_ads
|boolean
a|Filter the client request for alternate data stream.


|offline_bit
|boolean
a|Filter the client request for offline bit set. FPolicy server receives
notification only when offline files are accessed.


|open_with_delete_intent
|boolean
```

```
a|Filter the client request for open with delete intent.


|open_with_write_intent
|boolean
a|Filter the client request for open with write intent.


|setattr_with_access_time_change
|boolean
a|Filter the client setattr requests for changing the access time of a
file or directory.


|setattr_with_allocation_size_change
|boolean
a|Filter the client setattr requests for changing the allocation size of a
file.


|setattr_with_creation_time_change
|boolean
a|Filter the client setattr requests for changing the creation time of a
file or directory.


|setattr_with_dacl_change
|boolean
a|Filter the client setattr requests for changing dacl on a file or
directory.


|setattr_with_group_change
|boolean
a|Filter the client setattr requests for changing group of a file or
directory.


|setattr_with_mode_change
|boolean
a|Filter the client setattr requests for changing the mode bits on a file
or directory.


|setattr_with_modify_time_change
|boolean
a|Filter the client setattr requests for changing the modification time of
```

```
a file or directory.


|setattr_with_owner_change
|boolean
a|Filter the client setattr requests for changing owner of a file or
directory.


|setattr_with_sacl_change
|boolean
a|Filter the client setattr requests for changing sacl on a file or
directory.


|setattr_with_size_change
|boolean
a|Filter the client setattr requests for changing the size of a file.


|write_with_size_change
|boolean
a|Filter the client request for write with size change.


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|uuid
|string
a|SVM UUID


|===


[#fpolicy_event]
```

```
[.api-collapsible-fifth-title]
fpolicy_event

The information that a FPolicy process needs to determine what file access
operations to monitor and for which of the monitored events notifications
should be sent to the external FPolicy server.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|file_operations
|link:#file_operations[file_operations]
a|Specifies the file operations for the FPolicy event. You must specify a
valid protocol in the protocol parameter.
The event will check the operations specified from all client requests
using the protocol.


|filters
|link:#filters[filters]
a|Specifies the list of filters for a given file operation for the
specified protocol.
When you specify the filters, you must specify the valid protocols and a
valid file operations.


|protocol
|string
a|Protocol for which event is created. If you specify protocol, then you
must also specify a valid value for the file operation parameters.
The value of this parameter must be one of the following:

***** cifs  - for the CIFS protocol.

***** nfsv3 - for the NFSv3 protocol.

***** nfsv4 - for the NFSv4 protocol.


|svm
|link:#svm[svm]
a|
```

```
|volume_monitoring
|boolean
a|Specifies whether volume operation monitoring is required.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
```

```
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



:leveloffset: -1


= Manage SVM FPolicy configuration

:leveloffset: +1


[[IDd3780c0648b5f50e9713847a103ee9c9]]
= Protocols fpolicy svm.uuid policies endpoint overview



== Overview

The FPolicy policy acts as a container for different constituents of the
FPolicy such as FPolicy events and the FPolicy engine. It also provides a
platform for policy management functions, such as policy enabling and
disabling. As part of FPolicy policy configuration, you can specifiy the
name of policy, the SVM to which it belongs, the FPolicy events to
monitor, the FPolicy engine to which the generated notifications are sent
and the policy priority. FPolicy policy configuration also allows to you
to configure the file access behaviour when the primary and secondary
servers are down. Under such circumstances, if the "mandatory" field is
set to true, file access is denied.
```

```
Each FPolicy policy is associated with a scope which allows you to
restrain the scope of the policy to specified storage objects such as
volume, shares and export or to a set of file extensions such as .txt,
.jpeg. An FPolicy policy can be configured to send notifications, to the
FPolicy server or for native file blocking which uses the file extension
specified in the policy scope. An SVM can have multiple FPolicy policies
which can be enabled or disabled independently of each other.

== Examples

=== Creating an FPolicy policy

Use the following API to create an FPolicy policy configuration. Note that
the _return_records=true_ query parameter used to obtain the newly created
entry in the response.

'''

----

# The API:
POST /protocols/fpolicy/{svm.uuid}/policies

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/fpolicy/a00fac5d-0164-11e9-
b64a-0050568eeb34/policies?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"engine\": {
\"name\": \"engine1\" }, \"events\": [ { \"name\": \"cifs\" }, { \"name\":
\"nfs\" } ], \"mandatory\": true, \"name\": \"FPolicy_policy_0\",
\"passthrough_read\": true, \"privileged_user\": \"mydomain\\\\testuser\",
\"scope\": { \"exclude_export_policies\": [ \"export_pol1\" ],
\"exclude_extension\": [ \"txt\", \"png\" ], \"exclude_shares\": [ \"sh1\"
], \"exclude_volumes\": [ \"vol0\" ], \"include_export_policies\": [
\"export_pol10\" ], \"include_extension\": [ \"pdf\" ],
\"include_shares\": [ \"sh2\", \"sh3\" ], \"include_volumes\": [ \"vol1\",
\"vol2\" ] }}"

# The response:
{
"num_records": 1,
"records": [
  {
    "name": "FPolicy_policy_0",
    "events": [
      {
```

```
        "name": "cifs"
      },
      {
        "name": "nfs"
      }
      ],
    "engine": {
      "name": "engine1"
    },
    "scope": {
      "include_shares": [
        "sh2",
        "sh3"
      ],
      "exclude_shares": [
        "sh1"
      ],
      "include_volumes": [
        "vol1",
        "vol2"
      ],
      "exclude_volumes": [
        "vol0"
      ],
      "include_export_policies": [
        "export_pol10"
      ],
      "exclude_export_policies": [
        "export_pol1"
      ],
      "include_extension": [
        "pdf"
      ],
      "exclude_extension": [
        "txt",
        "png"
      ]
    },
    "mandatory": true,
    "privileged_user": "mydomain\\testuser",
    "passthrough_read": true
  }
]
}
----
```

```
'''

=== Creating and enable an FPolicy policy

'''

----

# The API:
POST /protocols/fpolicy/{svm.uuid}/policies

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/fpolicy/a00fac5d-0164-11e9-
b64a-0050568eeb34/policies?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"priority\":
1, \"engine\": { \"name\": \"engine1\" }, \"events\": [ { \"name\":
\"cifs\" }, { \"name\": \"nfs\" } ], \"mandatory\": true, \"name\":
\"FPolicy_policy_on\", \"passthrough_read\": false, \"scope\": {
\"exclude_export_policies\": [ \"export_pol1\" ], \"exclude_extension\": [
\"txt\", \"png\" ], \"exclude_shares\": [ \"sh1\" ], \"exclude_volumes\":
[ \"vol0\" ], \"include_export_policies\": [ \"export_pol10\" ],
\"include_extension\": [ \"pdf\" ], \"include_shares\": [ \"sh2\", \"sh3\"
], \"include_volumes\": [ \"vol1\", \"vol2\" ] }}"

# The response:
{
"num_records": 1,
"records": [
  {
   "name": "FPolicy_policy_0",
   "priority": 1,
   "events": [
     {
       "name": "cifs"
     },
     {
       "name": "nfs"
     }
   ],
   "engine": {
     "name": "engine1"
   },
   "scope": {
     "include_shares": [
       "sh2",
       "sh3"
```

```
      ],
      "exclude_shares": [
        "sh1"
      ],
      "include_volumes": [
        "vol1",
        "vol2"
      ],
      "exclude_volumes": [
        "vol0"
      ],
      "include_export_policies": [
        "export_pol10"
      ],
      "exclude_export_policies": [
        "export_pol1"
      ],
      "include_extension": [
        "pdf"
      ],
      "exclude_extension": [
        "txt",
        "png"
      ]
    },
    "mandatory": true,
    "privileged_user": "mydomain\\testuser",
    "passthrough_read": true
  }
  ]
}
----

'''

=== Creating an FPolicy policy with the minimum required fields and a
native engine

'''

----

# The API:
POST /protocols/fpolicy/{svm.uuid}/policies

# The call:
```

```
curl -X POST "https://<mgmt-ip>/api/protocols/fpolicy/a00fac5d-0164-11e9-
b64a-0050568eeb34/policies?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"events\": [
{ \"name\": \"cifs\" }, { \"name\": \"nfs\" } ], \"name\":
\"pol_minimum_fields\", \"scope\": { \"include_volumes\": [ \"vol1\",
\"vol2\" ] }}"

# The response:
{
"num_records": 1,
"records": [
  {
    "name": "pol_minimum_fields",
    "events": [
      {
        "name": "cifs"
      },
      {
        "name": "nfs"
      }
    ],
    "scope": {
      "include_volumes": [
        "vol1",
        "vol2"
      ]
    }
  }
]
}
----

'''

=== Retrieving all the FPolicy policy configurations for an SVM

'''

----

# The API:
GET /protocols/fpolicy/{svm.uuid}/policies

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/fpolicy/a00fac5d-0164-11e9-
b64a-0050568eeb34/policies?fields=*&return_records=true&return_timeout=15"
```

```
-H "accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "a00fac5d-0164-11e9-b64a-0050568eeb34"
    },
    "name": "pol0",
    "enabled": false,
    "events": [
      {
        "name": "cifs"
      },
      {
        "name": "nfs"
      }
    ],
    "engine": {
      "name": "engine1"
    },
    "scope": {
      "include_shares": [
        "sh2",
        "sh3"
      ],
      "exclude_shares": [
        "sh1"
      ],
      "include_volumes": [
        "vol1",
        "vol2"
      ],
      "exclude_volumes": [
        "vol0"
      ],
      "include_export_policies": [
        "export_pol10"
      ],
      "exclude_export_policies": [
        "export_pol1"
      ],
      "include_extension": [
        "pdf"
      ],
```

```
      "exclude_extension": [
        "txt",
        "png"
      ]
    },
    "mandatory": true,
    "passthrough_read": false
  },
  {
    "svm": {
      "uuid": "a00fac5d-0164-11e9-b64a-0050568eeb34"
    },
    "name": "FPolicy_policy_on",
    "enabled": true,
    "priority": 1,
    "events": [
      {
        "name": "cifs"
      },
      {
        "name": "nfs"
      }
    ],
    "engine": {
      "name": "engine1"
    },
     "scope": {
      "include_shares": [
        "sh2",
        "sh3"
      ],
      "exclude_shares": [
        "sh1"
      ],
      "include_volumes": [
        "vol1",
        "vol2"
      ],
      "exclude_volumes": [
        "vol0"
      ],
      "include_export_policies": [
        "export_pol10"
      ],
      "exclude_export_policies": [
        "export_pol1"
```

```
      ],
      "include_extension": [
        "pdf"
      ],
      "exclude_extension": [
        "txt",
        "png"
      ]
    },
    "mandatory": true,
    "passthrough_read": false
  },
  {
    "svm": {
      "uuid": "a00fac5d-0164-11e9-b64a-0050568eeb34"
    },
    "name": "cluster_pol",
    "enabled": false,
    "events": [
      {
        "name": "cluster"
      }
    ],
    "engine": {
      "name": "native"
    },
    "mandatory": true,
    "passthrough_read": false
  },
  {
    "svm": {
      "uuid": "a00fac5d-0164-11e9-b64a-0050568eeb34"
    },
    "name": "pol_minimum_fields",
    "enabled": false,
    "events": [
      {
        "name": "cifs"
      },
      {
        "name": "nfs"
      }
    ],
    "engine": {
      "name": "native"
    },
```

```
    "scope": {
      "include_volumes": [
        "vol1",
        "vol2"
      ]
    },
    "mandatory": true,
    "passthrough_read": false
  }
],
"num_records": 4
}
----

'''

=== Retrieving all of the FPolicy policy configurations for the FPolicy
engine "engine1" for an SVM

'''

----

# The API:
GET /protocols/fpolicy/{svm.uuid}/policies/{name}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/fpolicy/a00fac5d-0164-11e9-
b64a-
0050568eeb34/policies?engine.name=engine1&fields=*&return_records=true&ret
urn_timeout=15" -H "accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "a00fac5d-0164-11e9-b64a-0050568eeb34"
    },
    "name": "pol0",
    "enabled": false,
    "events": [
      {
        "name": "cifs"
      },
      {
```

```
        "name": "nfs"
      }
    ],
    "engine": {
      "name": "engine1"
    },
    "scope": {
      "include_export_policies": [
        "export_pol10"
      ],
      "exclude_export_policies": [
        "export_pol1"
      ],
      "include_extension": [
        "pdf"
      ],
      "exclude_extension": [
        "txt",
        "png"
      ]
    },
    "mandatory": true,
    "passthrough_read": false
  },
  {
    "svm": {
      "uuid": "a00fac5d-0164-11e9-b64a-0050568eeb34"
    },
    "name": "FPolicy_policy_on",
    "enabled": true,
    "priority": 1,
    "events": [
      {
        "name": "cifs"
      },
      {
        "name": "nfs"
      }
    ],
    "engine": {
      "name": "engine1"
    },
    "scope": {
      "include_shares": [
        "sh2",
        "sh3"
```

```
      ],
      "exclude_shares": [
        "sh1"
      ],
      "include_volumes": [
        "vol1",
        "vol2"
      ],
      "exclude_volumes": [
        "vol0"
      ],
      "include_export_policies": [
        "export_pol10"
      ],
      "exclude_export_policies": [
        "export_pol1"
      ],
      "include_extension": [
        "pdf"
      ],
      "exclude_extension": [
        "txt",
        "png"
      ]
    },
    "mandatory": true,
    "passthrough_read": false
  }
],
"num_records": 2
}
----

'''

=== Retrieving a particular FPolicy policy configuration for an SVM

'''

----

# The API:
GET /protocols/fpolicy/{svm.uuid}/policies/{name}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/fpolicy/a00fac5d-0164-11e9-
```

```
b64a-0050568eeb34/policies/pol0" -H "accept: application/json"

# The response:
{
"svm": {
  "uuid": "a00fac5d-0164-11e9-b64a-0050568eeb34"
},
"name": "pol0",
"enabled": false,
"events": [
  {
    "name": "cifs"
  },
  {
    "name": "nfs"
  }
],
"engine": {
  "name": "engine1"
},
"scope": {
  "include_shares": [
    "sh2",
    "sh3"
  ],
  "exclude_shares": [
    "sh1"
  ],
  "include_volumes": [
    "vol1",
    "vol2"
  ],
  "exclude_volumes": [
    "vol0"
  ],
  "include_export_policies": [
    "export_pol10"
  ],
  "exclude_export_policies": [
    "export_pol1"
  ],
  "include_extension": [
     "pdf"
  ],
  "exclude_extension": [
    "txt",
```

```
    "png"
  ]
},
"mandatory": true,
"passthrough_read": false
}
----

'''

=== Updating a particular FPolicy policy

'''

----

# The API:
PATCH /protocols/fpolicy/{svm.uuid}/policies/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/fpolicy/a00fac5d-0164-11e9-
b64a-0050568eeb34/policies/pol0" -H "accept: application/json" -H
"Content-Type: application/json" -d "{ \"engine\": { \"name\": \"native\"
}, \"events\": [ { \"name\": \"cifs\" } ], \"mandatory\": false,
\"scope\": { \"include_volumes\": [ \"*\" ] }}"
----

'''

=== Enabling a particular FPolicy policy

'''

----

# The API:
PATCH /protocols/fpolicy/{svm.uuid}/policies/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/fpolicy/a00fac5d-0164-11e9-
b64a-0050568eeb34/policies/pol0" -H "accept: application/json" -H
"Content-Type: application/json" -d "{ \"enabled\": true, \"priority\":
3}"
----

'''
```

```
=== Disabling a particular FPolicy policy

'''

----

# The API:
PATCH /protocols/fpolicy/{svm.uuid}/policies/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/fpolicy/a00fac5d-0164-11e9-
b64a-0050568eeb34/policies/pol0" -H "accept: application/json" -H
"Content-Type: application/json" -d "{ \"enabled\": true }"
----

'''




[[IDd38aa235ee926bef1b2bf2f7ba36fd53]]
= Retrieve the FPolicy configuration for an SVM

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/policies`#

*Introduced In:* 9.6

Retrieves the FPolicy policy configuration of an SVM. ONTAP allows the
creation of a cluster level FPolicy policy that acts as a template for all
the data SVMs belonging to the cluster. This cluster level FPolicy policy
is also retrieved for the specified SVM.

== Related ONTAP commands

* `fpolicy policy show`
* `fpolicy policy scope show`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_policies_endpoint_overview.
html[DOC /protocols/fpolicy/{svm.uuid}/policies]


== Parameters
```

```
[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|engine.name
|string
|query
|False
a|Filter by engine.name


|mandatory
|boolean
|query
|False
a|Filter by mandatory


|enabled
|boolean
|query
|False
a|Filter by enabled


|passthrough_read
|boolean
|query
|False
a|Filter by passthrough_read

* Introduced in: 9.10


|events.name
|string
|query
|False
a|Filter by events.name
```

```
|name
|string
|query
|False
a|Filter by name


|scope.exclude_extension
|string
|query
|False
a|Filter by scope.exclude_extension


|scope.include_shares
|string
|query
|False
a|Filter by scope.include_shares


|scope.exclude_volumes
|string
|query
|False
a|Filter by scope.exclude_volumes


|scope.exclude_shares
|string
|query
|False
a|Filter by scope.exclude_shares


|scope.include_extension
|string
|query
|False
a|Filter by scope.include_extension


|scope.exclude_export_policies
|string
|query
|False
a|Filter by scope.exclude_export_policies
```

```
|scope.include_volumes
|string
|query
|False
a|Filter by scope.include_volumes


|scope.include_export_policies
|string
|query
|False
a|Filter by scope.include_export_policies


|privileged_user
|string
|query
|False
a|Filter by privileged_user

* Introduced in: 9.10


|priority
|integer
|query
|False
a|Filter by priority


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
```

```
|integer
|query
|False
a|Limit the number of records returned.


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0


|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
```

```
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of Records


|records
|array[link:#fpolicy_policy[fpolicy_policy]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "engine": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "string"
      },
      "events": [
        "event_nfs_close",
        "event_open"
      ],
```

```
      "name": "fp_policy_1",
      "privileged_user": "mydomain\\testuser",
      "scope": {
        "exclude_export_policies": [
          "string"
        ],
        "exclude_extension": [
          "string"
        ],
        "exclude_shares": [
          "string"
        ],
        "exclude_volumes": [
          "vol1",
          "vol_svm1",
          "*"
        ],
        "include_export_policies": [
          "string"
        ],
        "include_extension": [
          "string"
        ],
        "include_shares": [
          "sh1",
          "share_cifs"
        ],
        "include_volumes": [
          "vol1",
          "vol_svm1"
        ]
      },
      "svm": {
        "uuid": "string"
      }
    }
  ]
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
```

```
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
```

```
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===
```

```
[#fpolicy_engine_reference]
[.api-collapsible-fifth-title]
fpolicy_engine_reference

FPolicy external engine


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the FPolicy external engine.


|===


[#fpolicy_event_reference]
[.api-collapsible-fifth-title]
fpolicy_event_reference

FPolicy events


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|

|===
```

```
[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_export_policies
|array[string]
a|

|exclude_extension
|array[string]
a|

|exclude_shares
|array[string]
a|

|exclude_volumes
|array[string]
a|

|include_export_policies
|array[string]
a|

|include_extension
|array[string]
a|

|include_shares
|array[string]
a|

|include_volumes
|array[string]
a|

|===
```

```
[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|uuid
|string
a|SVM UUID


|===


[#fpolicy_policy]
[.api-collapsible-fifth-title]
fpolicy_policy

[cols=3*,options=header]
|===
|Name
|Type
|Description

|enabled
|boolean
a|Specifies if the policy is enabled on the SVM or not. If no value is
mentioned for this field but priority is set, then this policy will be
enabled.


|engine
|link:#fpolicy_engine_reference[fpolicy_engine_reference]
a|FPolicy external engine


|events
|array[link:#fpolicy_event_reference[fpolicy_event_reference]]
a|

|mandatory
|boolean
a|Specifies what action to take on a file access event in a case when all
```

```
primary and secondary servers are down or no response is received from the
FPolicy servers within a given timeout period. When this parameter is set
to true, file access events will be denied under these circumstances.


|name
|string
a|Specifies the name of the policy.


|passthrough_read
|boolean
a|Specifies whether passthrough-read should be allowed for FPolicy servers
registered for the policy. Passthrough-read is a way to read data for
offline files without restoring the files to primary storage. Offline
files are files that have been moved to secondary storage.


|priority
|integer
a|Specifies the priority that is assigned to this policy.


|privileged_user
|string
a|Specifies the privileged user name for accessing files on the cluster
using a separate data channel with privileged access. The input for
this field should be in "domain\username" format.


|scope
|link:#scope[scope]
a|

|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
```

```
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.
```

```
|===


//end collapsible .Definitions block
====



[[ID918d13abfbc073e65f73024ec75c761b]]
= Create the FPolicy configuration for an SVM

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/policies`#

*Introduced In:* 9.6

Creates an FPolicy policy configuration for the specified SVM. To create
an FPolicy policy, you must specify the policy scope and the FPolicy
events to be monitored.

Important notes:

* A single policy can monitor multiple events.
* An FPolicy engine is an optional field whose default value is set to
native. A native engine can be used to simply block the file access based
on the file extensions specified in the policy scope.
* To enable a policy, the policy priority  must be specified. If the
priority is not specified, the policy is created but it is not enabled.
* The "mandatory" field, if set to true, blocks the file access when the
primary or secondary FPolicy servers are down.

== Required properties

* `svm.uuid` - Existing SVM in which to create the FPolicy policy.
* `events` - Name of the events to monitior.
* `name` - Name of the FPolicy policy.
* `scope` - Scope of the policy. Can be limited to exports, volumes,
shares or file extensions.
* `priority`- Priority of the policy (ranging from 1 to 10).

== Default property values

* `mandatory` - _true_
* `engine` - _native_

== Related ONTAP commands
```

```
* `fpolicy policy scope create`
* `fpolicy policy create`
* `fpolicy enable`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_policies_endpoint_overview.
html[DOC /protocols/fpolicy/{svm.uuid}/policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|return_records
|boolean
|query
|False
a|The default is false.  If set to true, the records are returned.

* Default value:


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
```

```
|Description

|engine
|link:#fpolicy_engine_reference[fpolicy_engine_reference]
a|FPolicy external engine


|events
|array[link:#fpolicy_event_reference[fpolicy_event_reference]]
a|

|mandatory
|boolean
a|Specifies what action to take on a file access event in a case when all
primary and secondary servers are down or no response is received from the
FPolicy servers within a given timeout period. When this parameter is set
to true, file access events will be denied under these circumstances.


|name
|string
a|Specifies the name of the policy.


|passthrough_read
|boolean
a|Specifies whether passthrough-read should be allowed for FPolicy servers
registered for the policy. Passthrough-read is a way to read data for
offline files without restoring the files to primary storage. Offline
files are files that have been moved to secondary storage.


|priority
|integer
a|Specifies the priority that is assigned to this policy.


|privileged_user
|string
a|Specifies the privileged user name for accessing files on the cluster
using a separate data channel with privileged access. The input for
this field should be in "domain\username" format.


|scope
|link:#scope[scope]
a|
```

```
|svm
|link:#svm[svm]
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "enabled": null,
  "engine": {
    "name": "string"
  },
  "events": [
    "event_nfs_close",
    "event_open"
  ],
  "name": "fp_policy_1",
  "privileged_user": "mydomain\\testuser",
  "scope": {
    "exclude_export_policies": [
      "string"
    ],
    "exclude_extension": [
      "string"
    ],
    "exclude_shares": [
      "string"
    ],
    "exclude_volumes": [
      "vol1",
      "vol_svm1",
      "*"
    ],
    "include_export_policies": [
      "string"
    ],
    "include_extension": [
      "string"
    ],
    "include_shares": [
      "sh1",
```

```
      "share_cifs"
    ],
    "include_volumes": [
      "vol1",
      "vol_svm1"
    ]
  },
  "svm": {
    "uuid": "string"
  }
}
====

== Response
```

Status: 201, Created

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|num_records
|integer
a|Number of Records


|records
|array[link:#fpolicy_policy[fpolicy_policy]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "records": [
    {
      "enabled": null,
      "engine": {
        "name": "string"
      },
```

```
      "events": [
        "event_nfs_close",
        "event_open"
      ],
      "name": "fp_policy_1",
      "privileged_user": "mydomain\\testuser",
      "scope": {
        "exclude_export_policies": [
          "string"
        ],
        "exclude_extension": [
          "string"
        ],
        "exclude_shares": [
          "string"
        ],
        "exclude_volumes": [
          "vol1",
          "vol_svm1",
          "*"
        ],
        "include_export_policies": [
          "string"
        ],
        "include_extension": [
          "string"
        ],
        "include_shares": [
          "sh1",
          "share_cifs"
        ],
        "include_volumes": [
          "vol1",
          "vol_svm1"
        ]
      },
      "svm": {
        "uuid": "string"
      }
    }
  ]
}
====

== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 9765027
| FPolicy creation is successful but it cannot be enabled as the priority
is already in use by another policy

| 9764898
| An FPolicy policy cannot be created without defining its scope

| 9765037
| FPolicy creation failed as passthrough-read cannot be enabled for policy
without privileged user
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
```

```
_links
[#fpolicy_engine_reference]
[.api-collapsible-fifth-title]
fpolicy_engine_reference

FPolicy external engine


[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the FPolicy external engine.


|===


[#fpolicy_event_reference]
[.api-collapsible-fifth-title]
fpolicy_event_reference

FPolicy events


[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|

|===


[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
```

```
|===
|Name
|Type
|Description

|exclude_export_policies
|array[string]
a|

|exclude_extension
|array[string]
a|

|exclude_shares
|array[string]
a|

|exclude_volumes
|array[string]
a|

|include_export_policies
|array[string]
a|

|include_extension
|array[string]
a|

|include_shares
|array[string]
a|

|include_volumes
|array[string]
a|

|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
```

```
|Type
|Description

|uuid
|string
a|SVM UUID


|===


[#fpolicy_policy]
[.api-collapsible-fifth-title]
fpolicy_policy

[cols=3*,options=header]
|===
|Name
|Type
|Description

|engine
|link:#fpolicy_engine_reference[fpolicy_engine_reference]
a|FPolicy external engine


|events
|array[link:#fpolicy_event_reference[fpolicy_event_reference]]
a|

|mandatory
|boolean
a|Specifies what action to take on a file access event in a case when all
primary and secondary servers are down or no response is received from the
FPolicy servers within a given timeout period. When this parameter is set
to true, file access events will be denied under these circumstances.


|name
|string
a|Specifies the name of the policy.


|passthrough_read
|boolean
a|Specifies whether passthrough-read should be allowed for FPolicy servers
registered for the policy. Passthrough-read is a way to read data for
```

```
offline files without restoring the files to primary storage. Offline
files are files that have been moved to secondary storage.


|priority
|integer
a|Specifies the priority that is assigned to this policy.


|privileged_user
|string
a|Specifies the privileged user name for accessing files on the cluster
using a separate data channel with privileged access. The input for
this field should be in "domain\username" format.


|scope
|link:#scope[scope]
a|

|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument
```

```
|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID830251a5ba9a5ca1faf36822e3460fd3]]
= Delete an FPolicy configuration for an SVM

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/policies/{name}`#
```

```
*Introduced In:* 9.6

Deletes a particular FPolicy policy configuration for a specified SVM. To
delete a policy, you must first disable the policy.

== Related ONTAP commands

* `fpolicy policy scope delete`
* `fpolicy policy delete`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_policies_endpoint_overview.
html[DOC /protocols/fpolicy/{svm.uuid}/policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 9764900
| Deletion of a cluster level FPolicy policy is not supported

| 9764941
| Cannot delete an enabled FPolicy policy
|===



[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
```

```
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
```

```
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID90e8fda9624bdc0fb950c0613bc60c02]]
= Retrieve an FPolicy configuration for an SVM

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/policies/{name}`#

*Introduced In:* 9.6

Retrieves a particular FPolicy policy configuration for a specified SVM.
Cluster-level FPolicy policy configuration details cannot be retrieved for
a data SVM.

== Related ONTAP commands

* `fpolicy policy show`
* `fpolicy policy scope show`
* `fpolicy show`

== Learn more

*
```

```
xref:{relative_path}protocols_fpolicy_svm.uuid_policies_endpoint_overview.
html[DOC /protocols/fpolicy/{svm.uuid}/policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|enabled
|boolean
a|Specifies if the policy is enabled on the SVM or not. If no value is
mentioned for this field but priority is set, then this policy will be
enabled.


|engine
|link:#fpolicy_engine_reference[fpolicy_engine_reference]
a|FPolicy external engine


|events
|array[link:#fpolicy_event_reference[fpolicy_event_reference]]
a|

|mandatory
|boolean
a|Specifies what action to take on a file access event in a case when all
primary and secondary servers are down or no response is received from the
FPolicy servers within a given timeout period. When this parameter is set
to true, file access events will be denied under these circumstances.


|name
|string
a|Specifies the name of the policy.


|passthrough_read
|boolean
a|Specifies whether passthrough-read should be allowed for FPolicy servers
registered for the policy. Passthrough-read is a way to read data for
offline files without restoring the files to primary storage. Offline
files are files that have been moved to secondary storage.


|priority
|integer
a|Specifies the priority that is assigned to this policy.


|privileged_user
|string
a|Specifies the privileged user name for accessing files on the cluster
using a separate data channel with privileged access. The input for
this field should be in "domain\username" format.
```

```
|scope
|link:#scope[scope]
a|

|svm
|link:#svm[svm]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "engine": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "string"
  },
  "events": [
    "event_nfs_close",
    "event_open"
  ],
  "name": "fp_policy_1",
  "privileged_user": "mydomain\\testuser",
  "scope": {
    "exclude_export_policies": [
      "string"
    ],
    "exclude_extension": [
      "string"
    ],
    "exclude_shares": [
      "string"
    ],
    "exclude_volumes": [
      "vol1",
      "vol_svm1",
      "*"
```

```
    ],
    "include_export_policies": [
      "string"
    ],
    "include_extension": [
      "string"
    ],
    "include_shares": [
      "sh1",
      "share_cifs"
    ],
    "include_volumes": [
      "vol1",
      "vol_svm1"
    ]
  },
  "svm": {
    "uuid": "string"
  }
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
```

```
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|self
|link:#href[href]
a|

|===


[#fpolicy_engine_reference]
[.api-collapsible-fifth-title]
fpolicy_engine_reference

FPolicy external engine


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the FPolicy external engine.


|===


[#fpolicy_event_reference]
[.api-collapsible-fifth-title]
fpolicy_event_reference

FPolicy events


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
```

```
a|

|name
|string
a|

|===


[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_export_policies
|array[string]
a|

|exclude_extension
|array[string]
a|

|exclude_shares
|array[string]
a|

|exclude_volumes
|array[string]
a|

|include_export_policies
|array[string]
a|

|include_extension
|array[string]
a|

|include_shares
|array[string]
a|
```

```
|include_volumes
|array[string]
a|

|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|uuid
|string
a|SVM UUID


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===
```

```
[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID448761ea196dc2610c59ba98e423d306]]
= Update an FPolicy configuration for an SVM

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#`/protocols/fpolicy/{svm.uuid}/policies/{name}`#

*Introduced In:* 9.6
```

```
Updates a particular FPolicy policy configuration for a specified SVM.
PATCH can be used to enable or disable the policy. When enabling a policy,
you must specify the policy priority. The policy priority of the policy is
not required when disabling the policy. If the policy is enabled, the
FPolicy policy engine cannot be modified.

== Related ONTAP commands

* `fpolicy policy modify`
* `fpolicy policy scope modify`
* `fpolicy enable`
* `fpolicy disable`

== Learn more

*
xref:{relative_path}protocols_fpolicy_svm.uuid_policies_endpoint_overview.
html[DOC /protocols/fpolicy/{svm.uuid}/policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Request Body
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|enabled
|boolean
a|Specifies if the policy is enabled on the SVM or not. If no value is
mentioned for this field but priority is set, then this policy will be
enabled.


|engine
|link:#fpolicy_engine_reference[fpolicy_engine_reference]
a|FPolicy external engine


|events
|array[link:#fpolicy_event_reference[fpolicy_event_reference]]
a|

|mandatory
|boolean
a|Specifies what action to take on a file access event in a case when all
primary and secondary servers are down or no response is received from the
FPolicy servers within a given timeout period. When this parameter is set
to true, file access events will be denied under these circumstances.


|passthrough_read
|boolean
a|Specifies whether passthrough-read should be allowed for FPolicy servers
registered for the policy. Passthrough-read is a way to read data for
offline files without restoring the files to primary storage. Offline
files are files that have been moved to secondary storage.


|priority
|integer
a|Specifies the priority that is assigned to this policy.


|privileged_user
|string
```

```
a|Specifies the privileged user name for accessing files on the cluster
using a separate data channel with privileged access. The input for
this field should be in "domain\username" format.


|scope
|link:#scope[scope]
a|

|svm
|link:#svm[svm]
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "engine": {
    "name": "string"
  },
  "events": [
    "event_nfs_close",
    "event_open"
  ],
  "privileged_user": "mydomain\\testuser",
  "scope": {
    "exclude_export_policies": [
      "string"
    ],
    "exclude_extension": [
      "string"
    ],
    "exclude_shares": [
      "string"
    ],
    "exclude_volumes": [
      "vol1",
      "vol_svm1",
      "*"
    ],
    "include_export_policies": [
      "string"
```

```
    ],
    "include_extension": [
      "string"
    ],
    "include_shares": [
      "sh1",
      "share_cifs"
    ],
    "include_volumes": [
      "vol1",
      "vol_svm1"
    ]
  },
  "svm": {
    "uuid": "string"
  }
}
====

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 9765026
| The priority must be specified when enabling the FPolicy policy

| 9765025
| Cannot disable an FPolicy policy when the priority is specified

| 9764899
| Cannot modify an FPolicy engine when the policy is enabled

| 9764899
| Deletion of a cluster policy is not supported

| 9764908
```

```
| An FPolicy policy is already enabled

| 9764907
| An FPolicy policy is already disabled

| 9765029
| An FPolicy was modified but disable/enable failed as the policy is
already disabled/enabled

| 9765036
| Cannot modify an FPolicy policy as passthrough-read policies are not
supported without privileged user

| 9765038
| Passthrough-read policies are not supported with an external engine of
type "asynchronous"

| 9765039
| Passthrough-read policies are not supported with native engine

| 9765040
| Cannot modify an FPolicy policy as passthrough-read could not be
enabled/disabled when the policy is enabled
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|
```

```
|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#fpolicy_engine_reference]
[.api-collapsible-fifth-title]
fpolicy_engine_reference

FPolicy external engine


[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the FPolicy external engine.


|===


[#fpolicy_event_reference]
[.api-collapsible-fifth-title]
fpolicy_event_reference

FPolicy events


[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|

|===
```

```
[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_export_policies
|array[string]
a|

|exclude_extension
|array[string]
a|

|exclude_shares
|array[string]
a|

|exclude_volumes
|array[string]
a|

|include_export_policies
|array[string]
a|

|include_extension
|array[string]
a|

|include_shares
|array[string]
a|

|include_volumes
|array[string]
a|

|===


[#svm]
[.api-collapsible-fifth-title]
```

```
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|uuid
|string
a|SVM UUID


|===


[#fpolicy_policy]
[.api-collapsible-fifth-title]
fpolicy_policy

[cols=3*,options=header]
|===
|Name
|Type
|Description

|enabled
|boolean
a|Specifies if the policy is enabled on the SVM or not. If no value is
mentioned for this field but priority is set, then this policy will be
enabled.


|engine
|link:#fpolicy_engine_reference[fpolicy_engine_reference]
a|FPolicy external engine


|events
|array[link:#fpolicy_event_reference[fpolicy_event_reference]]
a|

|mandatory
|boolean
a|Specifies what action to take on a file access event in a case when all
primary and secondary servers are down or no response is received from the
FPolicy servers within a given timeout period. When this parameter is set
```

```
to true, file access events will be denied under these circumstances.


|passthrough_read
|boolean
a|Specifies whether passthrough-read should be allowed for FPolicy servers
registered for the policy. Passthrough-read is a way to read data for
offline files without restoring the files to primary storage. Offline
files are files that have been moved to secondary storage.


|priority
|integer
a|Specifies the priority that is assigned to this policy.


|privileged_user
|string
a|Specifies the privileged user name for accessing files on the cluster
using a separate data channel with privileged access. The input for
this field should be in "domain\username" format.


|scope
|link:#scope[scope]
a|

|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code
```

```
|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====
```

```
:leveloffset: -1


= View lock details

:leveloffset: +1


[[IDd758d39affaf9e3332f7a7a0a35b005c]]
= Protocols locks endpoint overview



== Overview

A lock is a synchronization mechanism for enforcing limits on concurrent
access to files where many clients can be
accessing the same file at the same time. Locks can be viewed or broken
according to a wide range of query fields
that are presented in the lock information definition.

It is recommended that you provide as many fields as possible to optimize
query processing.

== Examples

=== Retrieving locks with all fields for all SVMs

'''

----

# The API:
GET /protocols/locks

# The call:
curl -X GET "https://<mgmt-
ip>/api/protocols/locks?return_records=true&return_timeout=15&fields=*" -H
"accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "5b4b6847-9ae4-11eb-8597-0050568ec154",
```

```
      "name": "vs1"
    },
    "volume": {
      "uuid": "429dcc79-9af2-11eb-b313-0050568ec154",
      "name": "test_vol1"
    },
    "interface": {
      "name": "vs1.data",
      "uuid": "6bf26e25-9ae4-11eb-8597-0050568ec154",
      "ip": {
        "address": "10.140.115.95"
      }
    },
    "path": "/test_vol1/Demo406.TXT",
    "uuid": "bf03d8b4-e145-498a-902d-b9fe5d546d18",
    "constituent": false,
    "protocol": "cifs",
    "client_address": "10.74.7.22",
    "owner_id": "feff-
020600000002000000020400000000000000000000000ffff0a4a07161053010001000000
030000006c00000000000000",
    "share_lock": {
      "mode": "read_write_deny_write_delete",
      "soft": false
    },
    "smb": {
      "connect_state": "connected",
      "open_group_id":
"71756e2325a7eb11843f005056a4731c101068450bcdffff1c2c000000000000",
      "open_type": "durable"
    },
    "state": "granted",
    "type": "share_level",
    "node": {
      "name": "bshalini-vsim3",
      "uuid": "1f29b875-9ae3-11eb-8597-0050568ec154"
    }
  },
  {
    "svm": {
      "uuid": "5b4b6847-9ae4-11eb-8597-0050568ec154",
      "name": "vs1"
    },
    "volume": {
      "uuid": "429dcc79-9af2-11eb-b313-0050568ec154",
      "name": "test_vol1"
```

```
    },
    "interface": {
      "name": "vs1.data",
      "uuid": "6bf26e25-9ae4-11eb-8597-0050568ec154",
      "ip": {
        "address": "10.140.115.95"
      }
    },
    "path": "/test_vol1/Demo406.TXT",
    "uuid": "0c33d18d-dcbc-492a-81b3-4c5740c46172",
    "constituent": false,
    "protocol": "cifs",
    "client_address": "10.74.7.22",
    "oplock_level": "batch",
    "owner_id": "feff-
020600000002000000020400000000000000000000000ffff0a4a07161053010001000000
030000006c00000000000000",
    "smb": {
      "connect_state": "connected",
      "open_group_id":
"71756e2325a7eb11843f005056a4731c101068450bcdffff1c2c000000000000"
    },
    "state": "granted",
    "type": "op_lock",
    "node": {
      "name": "bshalini-vsim3",
      "uuid": "1f29b875-9ae3-11eb-8597-0050568ec154"
    }
  }
],
"num_records": 2
}
----

'''

=== Retrieving locks of a specific volume

'''

----

# The API:
GET /protocols/locks

# The call:
```

```
curl -X GET "https://<mgmt-ip>/api/protocols/locks?volume.uuid=429dcc79-
9af2-11eb-b313-
0050568ec154&return_records=true&return_timeout=15&fields=*" -H "accept:
application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "5b4b6847-9ae4-11eb-8597-0050568ec154",
      "name": "vs1"
    },
    "volume": {
      "uuid": "429dcc79-9af2-11eb-b313-0050568ec154",
      "name": "test_vol1"
    },
    "interface": {
      "name": "vs1.data",
      "uuid": "6bf26e25-9ae4-11eb-8597-0050568ec154"
    },
    "path": "/test_vol1/Demo408.TXT",
    "uuid": "be1cdf00-37f1-4477-b6d0-bba8c4fa8c67"
  },
  {
    "svm": {
      "uuid": "5b4b6847-9ae4-11eb-8597-0050568ec154",
      "name": "vs1"
    },
    "volume": {
      "uuid": "429dcc79-9af2-11eb-b313-0050568ec154",
      "name": "test_vol1"
    },
    "interface": {
      "name": "vs1.data",
      "uuid": "6bf26e25-9ae4-11eb-8597-0050568ec154"
    },
    "path": "/test_vol1/Demo408.TXT",
    "uuid": "393cc06e-8b37-4f49-b09a-74d1eef79368"
  }
],
"num_records": 2
}
----

'''
```

```
=== Retrieving the lock for a specific UUID

'''

----

# The API:
GET /protocols/locks/{uuid}

# The call:
curl  -X GET "https://<mgmt-ip>/api/protocols/locks/be1cdf00-37f1-4477-
b6d0-bba8c4fa8c67" -H "accept: application/json"

# The response:
{
"svm": {
  "uuid": "5b4b6847-9ae4-11eb-8597-0050568ec154",
  "name": "vs1"
},
"volume": {
  "uuid": "429dcc79-9af2-11eb-b313-0050568ec154",
  "name": "test_vol1"
},
"interface": {
  "name": "vs1.data",
  "uuid": "6bf26e25-9ae4-11eb-8597-0050568ec154",
  "ip": {
    "address": "10.140.115.95"
  }
},
"path": "/test_vol1/Demo406.TXT",
"uuid": "be1cdf00-37f1-4477-b6d0-bba8c4fa8c67",
"constituent": false,
"protocol": "cifs",
"client_address": "10.74.7.22",
"owner_id": "feff-
020600000002000000020400000000000000000000000ffff0a4a07161053010001000000
030000006c00000000000000",
"share_lock": {
  "mode": "read_write_deny_write_delete",
  "soft": false
},
"smb": {
  "connect_state": "connected",
  "open_group_id":
```

```
"71756e2325a7eb11843f005056a4731c101068450bcdffff1c2c000000000000",
  "open_type": "durable"
},
"state": "granted",
"type": "share_level",
"node": {
  "name": "bshalini-vsim3",
  "uuid": "1f29b875-9ae3-11eb-8597-0050568ec154"
}
}
----

'''

=== Deleting the lock for a specific UUID

'''

----

# The API:
DELETE /protocols/locks/{uuid}

# The call:
curl  -X DELETE "https://<mgmt-ip>/api/protocols/locks/be1cdf00-37f1-4477-
b6d0-bba8c4fa8c67" -H "accept: application/json"
----

'''

=== Deleting all locks for a specific protocol

'''

----

# The API:
DELETE /protocols/locks/{uuid}

# The call:
curl  -X DELETE "https://<mgmt-ip>/api/protocols/locks?protocol=cifs" -H
"accept: application/json"
----

'''
```

```
[[IDcb2c12d104b3d47abcb23d099821b822]]
= Retrieve lock details

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/locks`#

*Introduced In:* 9.10

Retrieves locks details.

== Related ONTAP commands

* `vserver locks  show`


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|smb.open_group_id
|string
|query
|False
a|Filter by smb.open_group_id


|smb.connect_state
|string
|query
|False
a|Filter by smb.connect_state


|smb.open_type
|string
|query
|False
```

```
a|Filter by smb.open_type


|delegation
|string
|query
|False
a|Filter by delegation


|node.uuid
|string
|query
|False
a|Filter by node.uuid


|node.name
|string
|query
|False
a|Filter by node.name


|volume.uuid
|string
|query
|False
a|Filter by volume.uuid


|volume.name
|string
|query
|False
a|Filter by volume.name


|uuid
|string
|query
|False
a|Filter by uuid


|owner_id
|string
```

```
|query
|False
a|Filter by owner_id


|byte_lock.offset
|integer
|query
|False
a|Filter by byte_lock.offset


|byte_lock.super
|boolean
|query
|False
a|Filter by byte_lock.super


|byte_lock.length
|integer
|query
|False
a|Filter by byte_lock.length


|byte_lock.mandatory
|boolean
|query
|False
a|Filter by byte_lock.mandatory


|byte_lock.soft
|boolean
|query
|False
a|Filter by byte_lock.soft


|byte_lock.exclusive
|boolean
|query
|False
a|Filter by byte_lock.exclusive
```

```
|interface.ip.address
|string
|query
|False
a|Filter by interface.ip.address


|interface.name
|string
|query
|False
a|Filter by interface.name


|interface.uuid
|string
|query
|False
a|Filter by interface.uuid


|protocol
|string
|query
|False
a|Filter by protocol


|share_lock.soft
|boolean
|query
|False
a|Filter by share_lock.soft


|share_lock.mode
|string
|query
|False
a|Filter by share_lock.mode


|state
|string
|query
|False
a|Filter by state
```

```
|oplock_level
|string
|query
|False
a|Filter by oplock_level


|path
|string
|query
|False
a|Filter by path


|constituent
|boolean
|query
|False
a|Filter by constituent


|client_address
|string
|query
|False
a|Filter by client_address


|svm.uuid
|string
|query
|False
a|Filter by svm.uuid


|svm.name
|string
|query
|False
a|Filter by svm.name


|type
|string
|query
```

```
|False
a|Filter by type


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0


|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.


|fields
|array[string]
|query
|False
```

```
a|Specify the fields to return.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#collection_links[collection_links]
a|

|num_records
|integer
a|Number of records.


|records
|array[link:#client_lock[client_lock]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "byte_lock": {
```

```
      "length": 10,
      "offset": 100
    },
    "client_address": "0.0.0.0",
    "delegation": "string",
    "interface": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "ip": {
        "address": "10.10.10.7"
      },
      "name": "lif1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "node": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "node1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "oplock_level": "string",
    "owner_id": "string",
    "path": "string",
    "protocol": "string",
    "share_lock": {
      "mode": "string"
    },
    "smb": {
      "connect_state": "string",
      "open_group_id": "string",
      "open_type": "string"
    },
    "state": "string",
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
```

```
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "type": "string",
      "uuid": "ceeac1b4-8646-4c76-a054-1c96e87594aa",
      "volume": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "volume1",
        "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default, Unexpected error_response

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
```

```
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#collection_links]
[.api-collapsible-fifth-title]
collection_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|
```

```
|self
|link:#href[href]
a|

|===


[#byte_lock]
[.api-collapsible-fifth-title]
byte_lock

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclusive
|boolean
a|Indicates whether it is an exclusive bytelock.


|length
|integer
a|Length of the bytelock starting from the offset.


|mandatory
|boolean
a|Indicates whether or not the bytelock is mandatory.


|offset
|integer
a|Starting offset for a bytelock.


|soft
|boolean
a|Indicates whether it is a soft bytelock.


|super
|boolean
a|Indicates whether it is a super bytelock.
```

```
|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#ip]
[.api-collapsible-fifth-title]
ip

IP information


[cols=3*,options=header]
|===
|Name
|Type
|Description

|address
|string
a|IPv4 or IPv6 address


|===


[#interface]
[.api-collapsible-fifth-title]
interface

[cols=3*,options=header]
|===
```

```
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|ip
|link:#ip[ip]
a|IP information


|name
|string
a|The name of the interface.


|uuid
|string
a|The UUID that uniquely identifies the interface.


|===


[#node]
[.api-collapsible-fifth-title]
node

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|

|uuid
|string
a|
```

```
|===


[#share_lock]
[.api-collapsible-fifth-title]
share_lock

[cols=3*,options=header]
|===
|Name
|Type
|Description

|mode
|string
a|Types of share lock modes.


|soft
|boolean
a|Indicates whether it is a soft share lock.


|===


[#smb]
[.api-collapsible-fifth-title]
smb

[cols=3*,options=header]
|===
|Name
|Type
|Description

|connect_state
|string
a|SMB connection state.


|open_group_id
|string
a|SMB open group ID.
```

```
|open_type
|string
a|SMB open type.


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#volume]
[.api-collapsible-fifth-title]
volume

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
```

```
a|

|name
|string
a|The name of the volume.


|uuid
|string
a|Unique identifier for the volume. This corresponds to the instance-uuid
that is exposed in the CLI and ONTAPI. It does not change due to a volume
move.

* example: 028baa66-41bd-11e9-81d5-00a0986138f7
* Introduced in: 9.6


|===


[#client_lock]
[.api-collapsible-fifth-title]
client_lock

This object represents locks on a volume.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|byte_lock
|link:#byte_lock[byte_lock]
a|

|client_address
|string
a|IP address of the client holding the lock.


|constituent
|boolean
a|Indicate if volume is contituent or not.
```

```
|delegation
|string
a|Type of delegation.


|interface
|link:#interface[interface]
a|

|node
|link:#node[node]
a|

|oplock_level
|string
a|The oplock level determines which operations the client may cache
locally.


|owner_id
|string
a|Owner ID.


|path
|string
a|Object path


|protocol
|string
a|Type of lock protocol.


|share_lock
|link:#share_lock[share_lock]
a|

|smb
|link:#smb[smb]
a|

|state
|string
a|State of lock.
```

```
|svm
|link:#svm[svm]
a|

|type
|string
a|Type of lock.


|uuid
|string
a|Lock UUID


|volume
|link:#volume[volume]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID5e5bc32b1142180c9689f2533e5a9263]]
= Delete locks for a parameter

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/protocols/locks/{uuid}`#

*Introduced In:* 9.10

Deletes locks of given parameter.

== Related ONTAP commands
```

```
* `vserver locks break`


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|uuid
|string
|path
|True
a|Lock ID

|===

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
```

```
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===
```

```
[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID22c05d5373cfcc66a3285ea4e0855db2]]
= Retrieve the lock for a specific UUID

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/locks/{uuid}`#

*Introduced In:* 9.10

Retrieves the lock for a specific UUID.
```

```
== Related ONTAP commands

* `vserver locks show`


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|uuid
|string
|path
|True
a|Lock ID


|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|byte_lock
|link:#byte_lock[byte_lock]
a|
```

```
|client_address
|string
a|IP address of the client holding the lock.


|constituent
|boolean
a|Indicate if volume is contituent or not.


|delegation
|string
a|Type of delegation.


|interface
|link:#interface[interface]
a|

|node
|link:#node[node]
a|

|oplock_level
|string
a|The oplock level determines which operations the client may cache
locally.


|owner_id
|string
a|Owner ID.


|path
|string
a|Object path


|protocol
|string
a|Type of lock protocol.


|share_lock
|link:#share_lock[share_lock]
a|
```

```
|smb
|link:#smb[smb]
a|

|state
|string
a|State of lock.


|svm
|link:#svm[svm]
a|

|type
|string
a|Type of lock.


|uuid
|string
a|Lock UUID


|volume
|link:#volume[volume]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "byte_lock": {
    "length": 10,
    "offset": 100
  },
  "client_address": "0.0.0.0",
  "delegation": "string",
  "interface": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
```

```
    },
    "ip": {
      "address": "10.10.10.7"
    },
    "name": "lif1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "node": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "oplock_level": "string",
  "owner_id": "string",
  "path": "string",
  "protocol": "string",
  "share_lock": {
    "mode": "string"
  },
  "smb": {
    "connect_state": "string",
    "open_group_id": "string",
    "open_type": "string"
  },
  "state": "string",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "type": "string",
  "uuid": "ceeac1b4-8646-4c76-a054-1c96e87594aa",
  "volume": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
```

```
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  }
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
```

```
[%collapsible%closed]
//Start collapsible Definitions block
====
[#byte_lock]
[.api-collapsible-fifth-title]
byte_lock

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclusive
|boolean
a|Indicates whether it is an exclusive bytelock.


|length
|integer
a|Length of the bytelock starting from the offset.


|mandatory
|boolean
a|Indicates whether or not the bytelock is mandatory.


|offset
|integer
a|Starting offset for a bytelock.


|soft
|boolean
a|Indicates whether it is a soft bytelock.


|super
|boolean
a|Indicates whether it is a super bytelock.


|===


[#href]
```

```
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#ip]
[.api-collapsible-fifth-title]
ip

IP information


[cols=3*,options=header]
|===
|Name
|Type
|Description

|address
```

```
|string
a|IPv4 or IPv6 address


|===


[#interface]
[.api-collapsible-fifth-title]
interface

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|ip
|link:#ip[ip]
a|IP information


|name
|string
a|The name of the interface.


|uuid
|string
a|The UUID that uniquely identifies the interface.


|===


[#node]
[.api-collapsible-fifth-title]
node

[cols=3*,options=header]
|===
|Name
|Type
```

```
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|

|uuid
|string
a|

|===


[#share_lock]
[.api-collapsible-fifth-title]
share_lock

[cols=3*,options=header]
|===
|Name
|Type
|Description

|mode
|string
a|Types of share lock modes.


|soft
|boolean
a|Indicates whether it is a soft share lock.


|===


[#smb]
[.api-collapsible-fifth-title]
smb

[cols=3*,options=header]
|===
|Name
```

```
|Type
|Description

|connect_state
|string
a|SMB connection state.


|open_group_id
|string
a|SMB open group ID.


|open_type
|string
a|SMB open type.


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===
```

```
[#volume]
[.api-collapsible-fifth-title]
volume

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the volume.


|uuid
|string
a|Unique identifier for the volume. This corresponds to the instance-uuid
that is exposed in the CLI and ONTAPI. It does not change due to a volume
move.

* example: 028baa66-41bd-11e9-81d5-00a0986138f7
* Introduced in: 9.6


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code
```

```
|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====
```

```
:leveloffset: -1


= View NFS connected clients

:leveloffset: +1


[[IDb920474b85aabfbd2b33f83b985232cf]]
= Protocols NFS connected-clients endpoint overview



== Overview

ONTAP connected clients show functionality is mainly used to provide a
list of currently connected NFS clients. It also provides a potential list
of other NFS clients that can be connected but are currently idle.

The following are details of the fields retrieved for the Connected
Clients GET API:

node.name: The node name hosting this record; basically the node hosting
the "server_ip".
node.uuid: The node UUID hosting this record; basically the node hosting
the "server_ip".
svm.name: The svm name to which the "server_ip" belongs to.
svm.uuid: The svm uuid to which the "server_ip" belongs to.
server_ip: All clients that are connected to this interface are displayed
in rows.
client_ip: The IP address of the client that is connected to the
interface.
volume.name: The name of the volume the client is accessing.
volume.uuid: The UUID of the volume the client is accessing. This field is
expensive field and will be fetched in advance privilege level.
protocol: The NFS protocol version over which client is accessing the
volume.
export_policy.id: The export policy ID associated with the volume.
export_policy.name: The export policy name associated with the volume.
idle_duration: The time elapsed since the last request was sent by the
client for this volume.
local_request_count: A counter that tracks requests that are sent to the
volume with fast-path to local node.
remote_request_count: A counter that tracks requests that are sent to the
volume with slow-path to remote node.

== Example
```

```
=== Retrieves connected client information

----

# The API:
GET /protocols/nfs/connected-clients

# The call:
curl -X GET "https://<cluster-mgmt-ip>/api/protocols/nfs/connected-
clients?return_timeout=15&return_records=true" -H "accept:
application/json"

# The response:
{
"records": [
{
   "svm": {
     "uuid": "c642db55-b8d0-11e9-9ad1-0050568e8480",
     "name": "vs1"
   },
   "node": {
     "uuid": "cc282893-b82f-11e9-a3ad-0050568e8480",
     "name": "vsim1"
   },
   "server_ip": "10.140.72.214",
   "client_ip": "10.140.137.57",
   "volume": {
     "name": "rvol1",
     "uuid": "c6bbc6f2-b8d0-11e9-9ad1-0050568e8480"
   },
   "protocol": "nfs4"
 },
 {
   "svm": {
     "uuid": "c642db55-b8d0-11e9-9ad1-0050568e8480",
     "name": "vs1"
   },
   "node": {
     "uuid": "cc282893-b82f-11e9-a3ad-0050568e8480",
     "name": "vsim1"
   },
   "server_ip": "10.140.72.214",
   "client_ip": "10.140.137.57",
   "volume": {
     "name": "vol1",
```

```
      "uuid": "d28d1999-b8d0-11e9-9ad1-0050568e8480"
    },
    "protocol": "nfs3"
  },
  {
    "svm": {
      "uuid": "c642db55-b8d0-11e9-9ad1-0050568e8480",
      "name": "vs1"
    },
    "node": {
      "uuid": "cc282893-b82f-11e9-a3ad-0050568e8480",
      "name": "vsim1"
    },
    "server_ip": "10.140.72.214",
    "client_ip": "10.140.137.57",
    "volume": {
      "name": "vol1",
      "uuid": "d28d1999-b8d0-11e9-9ad1-0050568e8480"
    },
    "protocol": "nfs4"
  }],
  "num_records": 3
}
----




[[ID041daee0f0100a1abe9978ef19f8bd27]]
= Retrieve the NFS configuration for an SVM

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/nfs/connected-clients`#

*Introduced In:* 9.7

Retrieves the NFS configuration of SVMs.

== Expensive properties

export_policy.id is expensive field. It is not included by default in GET
results and must be explicitly requested using the `fields` query
parameter. See
xref:{relative_path}getting_started_with_the_ontap_rest_api.html#Requestin
g_specific_fields[Requesting specific fields] to learn more.
```

```
* `export_policy.id`


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|export_policy.name
|string
|query
|False
a|Filter by export_policy.name

* Introduced in: 9.9


|export_policy.id
|integer
|query
|False
a|Filter by export_policy.id

* Introduced in: 9.9


|volume.uuid
|string
|query
|False
a|Filter by volume.uuid


|volume.name
|string
|query
|False
a|Filter by volume.name


|server_ip
```

```
|string
|query
|False
a|Filter by server_ip


|node.uuid
|string
|query
|False
a|Filter by node.uuid


|node.name
|string
|query
|False
a|Filter by node.name


|svm.uuid
|string
|query
|False
a|Filter by svm.uuid


|svm.name
|string
|query
|False
a|Filter by svm.name


|idle_duration
|string
|query
|False
a|Filter by idle_duration


|protocol
|string
|query
|False
a|Filter by protocol
```

```
|remote_request_count
|integer
|query
|False
a|Filter by remote_request_count


|local_request_count
|integer
|query
|False
a|Filter by local_request_count


|client_ip
|string
|query
|False
a|Filter by client_ip


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
```

```
* Min value: 0


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of records


|records
|array[link:#nfs_clients[nfs_clients]]
a|

|===
```

.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "client_ip": "string",
      "export_policy": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "id": 100,
        "name": "default"
      },
      "idle_duration": "P4DT84H30M5S",
      "node": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "node1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "protocol": "nfs3",
      "server_ip": "string",
      "svm": {
        "_links": {
```

```
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "volume": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "volume1",
        "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
```

```
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#export_policy]
[.api-collapsible-fifth-title]
export_policy

Export Policy


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|id
|integer
```

```
a|

|name
|string
a|

|===


[#node]
[.api-collapsible-fifth-title]
node

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|

|uuid
|string
a|

|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|
```

```
|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#volume]
[.api-collapsible-fifth-title]
volume

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the volume.


|uuid
|string
a|Unique identifier for the volume. This corresponds to the instance-uuid
that is exposed in the CLI and ONTAPI. It does not change due to a volume
move.

* example: 028baa66-41bd-11e9-81d5-00a0986138f7
* Introduced in: 9.6


|===


[#nfs_clients]
```

```
[.api-collapsible-fifth-title]
nfs_clients

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|client_ip
|string
a|Specifies IP address of the client.


|export_policy
|link:#export_policy[export_policy]
a|Export Policy


|idle_duration
|string
a|Specifies an ISO-8601 format of date and time to retrieve the idle time
duration in hours, minutes, and seconds format.


|local_request_count
|integer
a|A counter that tracks requests that are sent to the volume with fast-
path to local node.


|node
|link:#node[node]
a|

|protocol
|string
a|The NFS protocol version over which client is accessing the volume. The
following values are supported:

* nfs - All NFS versions are considered
* nfs3 - NFS version 3 protocol
* nfs4 - NFS version 4 protocol
```

```
* nfs4.1 - NFS version 4 minor version 1 protocol


|remote_request_count
|integer
a|A counter that tracks requests that are sent to the volume with slow-
path to remote node.


|server_ip
|string
a|Specifies the IP address of the server.


|svm
|link:#svm[svm]
a|

|volume
|link:#volume[volume]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===
```

```
[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



:leveloffset: -1


= Manage NFS export policies

:leveloffset: +1
```

```
[[IDd75ae29b3b09f73cde53487a7a078d0e]]
= Protocols NFS export-policies endpoint overview



== Export Policies

=== 1) Retrieve the export policy details

'''

----

# The API:
GET /api/protocols/nfs/export-policies

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/nfs/export-policies"
----

'''

=== 2) Create an export policy for an SVM

'''

----

# The API:
POST /api/protocols/nfs/export-policies

# The call:
curl -d "@test_post_policy_single_rule.txt" -X POST "https://<mgmt-
ip>/api/protocols/nfs/export-policies"
test_post_policy_single_rule.txt(body):
{
"name": "P1",
"rules":[
  {
    "clients": [
      {
        "match": "host1"
      }
    ],
    "ro_rule": [
      "krb5"
    ],
```

```
    "rw_rule": [
      "ntlm"
    ],
    "anonymous_user": "anon1",
    "chown_mode": "restricted",
    "allow_suid": true
  },
  {
    "clients": [
      {
        "match": "host2"
      }
    ],
    "ro_rule": [
      "sys"
    ],
    "rw_rule": [
      "ntlm"
    ],
    "superuser": [
      "any"
    ],
    "allow_device_creation": true,
    "ntfs_unix_security": "fail"
  }
]
}
----

'''

=== 3) Update an export policy for an SVM

'''

----

# The API:
PATCH /api/protocols/nfs/export-policies/{policy.id}

# The call:
curl -d "@test_patch_policy.txt" -X PATCH "https://<mgmt-
ip>/api/protocols/nfs/export-policies/8589934594"
test_patch_policy.txt(body):
{
"name": "S1",
```

```
"rules":[
  {
    "clients": [
      {
        "match": "host4"
      }
    ],
    "ro_rule": [
      "krb5"
    ],
    "rw_rule": [
      "ntlm"
    ]
  }
]
}
----

'''

=== 4) Delete an export policy for an SVM

'''

----

# The API:
DELETE /api/protocols/nfs/export-policies/{policy.id}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/nfs/export-
policies/8589934594"
----

'''

== Export Rules

=== 1) Retrieve the export policy rule details for an export policy

'''

----

# The API:
GET /api/protocols/nfs/export-policies/{policy.id}/rules
```

```
# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/nfs/export-
policies/8589934595/rules"
----

'''

=== 2) Create an export policy rule for an export policy

'''

----

# The API:
POST /api/protocols/nfs/export-policies/{policy.id}/rules

# The call:
curl -d "@test_patch_export_rule.txt" -X POST "https://<mgmt-
ip>/api/protocols/nfs/export-policies/8589934595/rules"
test_patch_export_rule.txt(body):
{
"clients": [
  {
    "match": "host2"
  }
],
"ro_rule": [
  "sys"
],
"rw_rule": [
  "ntlm"
]
}
----

'''

=== 3) Update an export policy rule for an export policy

'''

----

# The API:
PATCH /api/protocols/nfs/export-policies/{policy.id}/rules/{index}

# The call:
```

```
curl -d "@test_patch_export_rule.txt" -X PATCH "https://<mgmt-
ip>/api/protocols/nfs/export-policies/8589934595/rules/5?new_index=10"
test_patch_export_rule.txt(body):
{
"clients": [
  {
    "match": "host4"
  }
],
"ro_rule": [
  "sys"
],
"rw_rule": [
  "krb5"
]
}
----

'''

=== 4) Delete an export policy rule for an export policy

'''

----

# The API:
DELETE /api/protocols/nfs/export-policies/{policy.id}/rules/{index}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/nfs/export-
policies/8589934595/rules/15"
----

'''

== Export Clients

=== 1) Retrieve the export client matches of an export policy rule

'''

----

# The API:
GET /api/protocols/nfs/export-policies/{policy.id}/rules/{index}/clients
```

```
# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/nfs/export-
policies/8589934593/rules/2/clients"
----

'''

=== 2) Add an export client match to an export policy rule

'''

----

# The API:
POST /api/protocols/nfs/export-policies/{policy.id}/rules/{index}/clients

# The call:
curl -d "@add_client_match.txt" -X POST "https://<mgmt-
ip>/api/protocols/nfs/export-policies/8589934593/rules/1/clients"
add_client_match.txt(body):
{
"match" : "host4"
}
----

'''

=== 3) Delete an export client match from an export policy rule

'''

----

# The API:
DELETE /api/protocols/nfs/export-
policies/{policy.id}/rules/{index}/clients/{match}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/nfs/export-
policies/8589934593/rules/1/clients/host1,host2"
----

'''
```

```
[[ID057ea71982ee25866cf9e93e5e29b07d]]
= Retrieve export policies

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/nfs/export-policies`#

*Introduced In:* 9.6

Retrieves export policies.

== Related ONTAP commands

* `vserver export-policy show`
* `vserver export-policy rule show`

== Learn more

* xref:{relative_path}protocols_nfs_export-
policies_endpoint_overview.html[DOC /protocols/nfs/export-policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|rules.ro_rule
|string
|query
|False
a|Filter by rules.ro_rule


|rules.index
|integer
|query
|False
a|Filter by rules.index
```

```
|rules.chown_mode
|string
|query
|False
a|Filter by rules.chown_mode

* Introduced in: 9.9


|rules.rw_rule
|string
|query
|False
a|Filter by rules.rw_rule


|rules.clients.match
|string
|query
|False
a|Filter by rules.clients.match


|rules.protocols
|string
|query
|False
a|Filter by rules.protocols


|rules.superuser
|string
|query
|False
a|Filter by rules.superuser


|rules.allow_suid
|boolean
|query
|False
a|Filter by rules.allow_suid

* Introduced in: 9.9


|rules.ntfs_unix_security
```

```
|string
|query
|False
a|Filter by rules.ntfs_unix_security

* Introduced in: 9.9


|rules.anonymous_user
|string
|query
|False
a|Filter by rules.anonymous_user


|rules.allow_device_creation
|boolean
|query
|False
a|Filter by rules.allow_device_creation

* Introduced in: 9.9


|name
|string
|query
|False
a|Filter by name


|id
|integer
|query
|False
a|Filter by id


|svm.uuid
|string
|query
|False
a|Filter by svm.uuid


|svm.name
|string
```

```
|query
|False
a|Filter by svm.name


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0


|order_by
|array[string]
|query
|False
```

```
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===
```

```
== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|The number of export policy records


|records
|array[link:#export_policy[export_policy]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
```

```
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "id": 0,
      "name": "string",
      "rules": [
        {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "anonymous_user": "string",
          "chown_mode": "string",
          "clients": [
            {
              "match": "0.0.0.0/0"
            }
          ],
          "index": 0,
          "ntfs_unix_security": "string",
          "protocols": [
            "string"
          ],
          "ro_rule": [
            "string"
          ],
          "rw_rule": [
            "string"
          ],
          "superuser": [
            "string"
          ]
        }
      ],
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
```

```
    }
  ]
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
```

```
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
```

```
|Type
|Description

|self
|link:#href[href]
a|

|===


[#export_clients]
[.api-collapsible-fifth-title]
export_clients

[cols=3*,options=header]
|===
|Name
|Type
|Description

|match
|string
a|Client Match Hostname, IP Address, Netgroup, or Domain.
You can specify the match as a string value in any of the
        following formats:

* As a hostname; for instance, host1
* As an IPv4 address; for instance, 10.1.12.24
* As an IPv6 address; for instance, fd20:8b1e:b255:4071::100:1
* As an IPv4 address with a subnet mask expressed as a number of bits; for
instance, 10.1.12.0/24
* As an IPv6 address with a subnet mask expressed as a number of bits; for
instance, fd20:8b1e:b255:4071::/64
* As an IPv4 address with a network mask; for instance,
10.1.16.0/255.255.255.0
* As a netgroup, with the netgroup name preceded by the @ character; for
instance, @eng
* As a domain name preceded by the . character; for instance, .example.com


|===


[#export_rules]
[.api-collapsible-fifth-title]
export_rules
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|allow_device_creation
|boolean
a|Specifies whether or not device creation is allowed.


|allow_suid
|boolean
a|Specifies whether or not SetUID bits in SETATTR Op is to be honored.


|anonymous_user
|string
a|User ID To Which Anonymous Users Are Mapped.


|chown_mode
|string
a|Specifies who is authorized to change the ownership mode of a file.


|clients
|array[link:#export_clients[export_clients]]
a|Array of client matches


|index
|integer
a|Index of the rule within the export policy.


|ntfs_unix_security
|string
a|NTFS export UNIX security options.


|protocols
|array[string]
```

```
a|

|ro_rule
|array[string]
a|Authentication flavors that the read-only access rule governs


|rw_rule
|array[string]
a|Authentication flavors that the read/write access rule governs


|superuser
|array[string]
a|Authentication flavors that the superuser security type governs


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===
```

```
[#export_policy]
[.api-collapsible-fifth-title]
export_policy

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|id
|integer
a|Export Policy ID


|name
|string
a|Export Policy Name


|rules
|array[link:#export_rules[export_rules]]
a|Rules of the Export Policy.


|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
```

```
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====
```

```
[[IDd47abbe8472f03b007450f721b937a00]]
= Create an export policy

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/protocols/nfs/export-policies`#

*Introduced In:* 9.6

Creates an export policy. An SVM can have any number of export policies to
define rules for which clients can access data exported by the SVM. A
policy with no rules prohibits access.

== Required properties

* `svm.uuid` or `svm.name` - Existing SVM in which to create an export
policy.
* `name`  - Name of the export policy.

== Recommended optional properties

* `rules`  - Rule(s) of an export policy. Used to create the export rule
and populate the export policy with export rules in a single request.

== Related ONTAP commands

* `vserver export-policy create`
* `vserver export-policy rule create`

== Learn more

* xref:{relative_path}protocols_nfs_export-
policies_endpoint_overview.html[DOC /protocols/nfs/export-policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description
```

```
|return_records
|boolean
|query
|False
a|The default is false.  If set to true, the records are returned.

* Default value:

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|id
|integer
a|Export Policy ID


|name
|string
a|Export Policy Name


|rules
|array[link:#export_rules[export_rules]]
a|Rules of the Export Policy.


|svm
|link:#svm[svm]
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
```

```
{
  "id": 0,
  "name": "string",
  "rules": [
    {
      "anonymous_user": "string",
      "chown_mode": "string",
      "clients": [
        {
          "match": "0.0.0.0/0"
        }
      ],
      "index": 0,
      "ntfs_unix_security": "string",
      "protocols": [
        "string"
      ],
      "ro_rule": [
        "string"
      ],
      "rw_rule": [
        "string"
      ],
      "superuser": [
        "string"
      ]
    }
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Response
```

Status: 201, Created

```
[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|num_records
|integer
a|The number of export policy records


|records
|array[link:#export_policy[export_policy]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "records": [
    {
      "id": 0,
      "name": "string",
      "rules": [
        {
          "anonymous_user": "string",
          "chown_mode": "string",
          "clients": [
            {
              "match": "0.0.0.0/0"
            }
          ],
          "index": 0,
          "ntfs_unix_security": "string",
          "protocols": [
            "string"
          ],
          "ro_rule": [
            "string"
          ],
          "rw_rule": [
            "string"
          ],
          "superuser": [
            "string"
          ]
        }
      ],
```

```
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 1703952
| Invalid ruleset name provided. No spaces allowed in a ruleset name

| 1703954
| Export policy does not exist

| 1704049
| Invalid clientmatch: clientmatch lists require an effective cluster
version of Data ONTAP 9.0 or later. Upgrade all nodes to Data ONTAP 9.0 or
above to use features that operate on lists of clientmatch strings in
export-policy rules

| 1704055
| Export policies are only supported for data Vservers

| 3277000
| Upgrade all nodes to Data ONTAP 9.0.0 or above to use krb5p as a
security flavor in export-policy rules

| 3277083
| User ID is not valid. Enter a value for User ID from 0 to 4294967295
|===


== Definitions

[.api-def-first-level]
.See Definitions
```

```
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#export_clients]
[.api-collapsible-fifth-title]
export_clients

[cols=3*,options=header]
|===
|Name
|Type
|Description

|match
|string
a|Client Match Hostname, IP Address, Netgroup, or Domain.
You can specify the match as a string value in any of the
      following formats:

* As a hostname; for instance, host1
* As an IPv4 address; for instance, 10.1.12.24
* As an IPv6 address; for instance, fd20:8b1e:b255:4071::100:1
* As an IPv4 address with a subnet mask expressed as a number of bits; for
instance, 10.1.12.0/24
* As an IPv6 address with a subnet mask expressed as a number of bits; for
instance, fd20:8b1e:b255:4071::/64
```

```
* As an IPv4 address with a network mask; for instance,
10.1.16.0/255.255.255.0
* As a netgroup, with the netgroup name preceded by the @ character; for
instance, @eng
* As a domain name preceded by the . character; for instance, .example.com


|===


[#export_rules]
[.api-collapsible-fifth-title]
export_rules

[cols=3*,options=header]
|===
|Name
|Type
|Description

|allow_device_creation
|boolean
a|Specifies whether or not device creation is allowed.


|allow_suid
|boolean
a|Specifies whether or not SetUID bits in SETATTR Op is to be honored.


|anonymous_user
|string
a|User ID To Which Anonymous Users Are Mapped.


|chown_mode
|string
a|Specifies who is authorized to change the ownership mode of a file.


|clients
|array[link:#export_clients[export_clients]]
a|Array of client matches


|index
|integer
```

```
a|Index of the rule within the export policy.


|ntfs_unix_security
|string
a|NTFS export UNIX security options.


|protocols
|array[string]
a|

|ro_rule
|array[string]
a|Authentication flavors that the read-only access rule governs


|rw_rule
|array[string]
a|Authentication flavors that the read/write access rule governs


|superuser
|array[string]
a|Authentication flavors that the superuser security type governs


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.


|uuid
|string
```

```
a|The unique identifier of the SVM.


|===


[#export_policy]
[.api-collapsible-fifth-title]
export_policy

[cols=3*,options=header]
|===
|Name
|Type
|Description

|id
|integer
a|Export Policy ID


|name
|string
a|Export Policy Name


|rules
|array[link:#export_rules[export_rules]]
a|Rules of the Export Policy.


|svm
|link:#svm[svm]
a|

|===


[#export_clients]
[.api-collapsible-fifth-title]
export_clients

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|match
|string
a|Client Match Hostname, IP Address, Netgroup, or Domain.
You can specify the match as a string value in any of the
    following formats:

* As a hostname; for instance, host1
* As an IPv4 address; for instance, 10.1.12.24
* As an IPv6 address; for instance, fd20:8b1e:b255:4071::100:1
* As an IPv4 address with a subnet mask expressed as a number of bits; for
instance, 10.1.12.0/24
* As an IPv6 address with a subnet mask expressed as a number of bits; for
instance, fd20:8b1e:b255:4071::/64
* As an IPv4 address with a network mask; for instance,
10.1.16.0/255.255.255.0
* As a netgroup, with the netgroup name preceded by the @ character; for
instance, @eng
* As a domain name preceded by the . character; for instance, .example.com


|===


[#export_clients]
[.api-collapsible-fifth-title]
export_clients

[cols=3*,options=header]
|===
|Name
|Type
|Description

|match
|string
a|Client Match Hostname, IP Address, Netgroup, or Domain.
You can specify the match as a string value in any of the
  following formats:

* As a hostname; for instance, host1
* As an IPv4 address; for instance, 10.1.12.24
* As an IPv6 address; for instance, fd20:8b1e:b255:4071::100:1
* As an IPv4 address with a subnet mask expressed as a number of bits; for
instance, 10.1.12.0/24
* As an IPv6 address with a subnet mask expressed as a number of bits; for
```

```
instance, fd20:8b1e:b255:4071::/64
* As an IPv4 address with a network mask; for instance,
10.1.16.0/255.255.255.0
* As a netgroup, with the netgroup name preceded by the @ character; for
instance, @eng
* As a domain name preceded by the . character; for instance, .example.com


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments
```

```
|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID5d5453eca25a5a1f27502f4ec5466ccc]]
= Delete an export policy

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/protocols/nfs/export-policies/{id}`#

*Introduced In:* 9.6

Deletes an export policy.

== Related ONTAP commands

* `vserver export-policy delete`

== Learn more

* xref:{relative_path}protocols_nfs_export-
policies_endpoint_overview.html[DOC /protocols/nfs/export-policies]


== Parameters
```

```
[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|id
|integer
|path
|True
a|Export Policy ID

|===
```

```
== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 1703944
| Failed to delete rule

| 1703945
| Ruleset is in use by a volume.  It cannot be deleted until all volumes
that refer to it are first deleted

| 1703946
| Cannot determine if the ruleset is in use by a volume.  It cannot be
deleted until all volumes that refer to it are first deleted

| 1703947
| Cannot delete default ruleset.  This ruleset will be deleted when the
owning Vserver is deleted
```

```
| 1703952
| Invalid ruleset name provided. No spaces are allowed in a ruleset name

| 1703953
| This ruleset is in use by a qtree export policy.  It cannot be deleted
until all qtree policies that refer to it are first deleted
|===



[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
```

```
//Start collapsible Definitions block
====
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
```

```
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDb5779d2e88eda8ab672fb105819b19b4]]
= Retrieve an export policy

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/nfs/export-policies/{id}`#

*Introduced In:* 9.6

Retrieves an export policy.

== Related ONTAP commands

* `vserver export-policy show`
* `vserver export-policy rule show`

== Learn more

* xref:{relative_path}protocols_nfs_export-
policies_endpoint_overview.html[DOC /protocols/nfs/export-policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description
```

```
|id
|integer
|path
|True
a|Export Policy ID


|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|id
|integer
a|Export Policy ID


|name
|string
a|Export Policy Name


|rules
|array[link:#export_rules[export_rules]]
a|Rules of the Export Policy.


|svm
```

```
|link:#svm[svm]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "id": 0,
  "name": "string",
  "rules": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "anonymous_user": "string",
      "chown_mode": "string",
      "clients": [
        {
          "match": "0.0.0.0/0"
        }
      ],
      "index": 0,
      "ntfs_unix_security": "string",
      "protocols": [
        "string"
      ],
      "ro_rule": [
        "string"
      ],
      "rw_rule": [
        "string"
      ],
      "superuser": [
        "string"
      ]
```

```
    }
  ],
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
```

```
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#export_clients]
```

```
[.api-collapsible-fifth-title]
export_clients

[cols=3*,options=header]
|===
|Name
|Type
|Description

|match
|string
a|Client Match Hostname, IP Address, Netgroup, or Domain.
You can specify the match as a string value in any of the
following formats:

* As a hostname; for instance, host1
* As an IPv4 address; for instance, 10.1.12.24
* As an IPv6 address; for instance, fd20:8b1e:b255:4071::100:1
* As an IPv4 address with a subnet mask expressed as a number of bits; for
instance, 10.1.12.0/24
* As an IPv6 address with a subnet mask expressed as a number of bits; for
instance, fd20:8b1e:b255:4071::/64
* As an IPv4 address with a network mask; for instance,
10.1.16.0/255.255.255.0
* As a netgroup, with the netgroup name preceded by the @ character; for
instance, @eng
* As a domain name preceded by the . character; for instance, .example.com


|===


[#export_rules]
[.api-collapsible-fifth-title]
export_rules

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|allow_device_creation
```

```
|boolean
a|Specifies whether or not device creation is allowed.


|allow_suid
|boolean
a|Specifies whether or not SetUID bits in SETATTR Op is to be honored.


|anonymous_user
|string
a|User ID To Which Anonymous Users Are Mapped.


|chown_mode
|string
a|Specifies who is authorized to change the ownership mode of a file.


|clients
|array[link:#export_clients[export_clients]]
a|Array of client matches


|index
|integer
a|Index of the rule within the export policy.


|ntfs_unix_security
|string
a|NTFS export UNIX security options.


|protocols
|array[string]
a|

|ro_rule
|array[string]
a|Authentication flavors that the read-only access rule governs


|rw_rule
|array[string]
a|Authentication flavors that the read/write access rule governs
```

```
|superuser
|array[string]
a|Authentication flavors that the superuser security type governs


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
```

```
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====
```

```
[[ID9dcaa18cf88346d619b23f97dee9548a]]
= Update export policy properties

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#`/protocols/nfs/export-policies/{id}`#

*Introduced In:* 9.6

Updates the properties of an export policy to change an export policy name
or replace all export policy rules.

== Related ONTAP commands

* `vserver export-policy rename`
* `vserver export-policy rule delete`
* `vserver export-policy rule create`

== Learn more

* xref:{relative_path}protocols_nfs_export-
policies_endpoint_overview.html[DOC /protocols/nfs/export-policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|id
|integer
|path
|True
a|Export Policy ID

|===

== Request Body
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|id
|integer
a|Export Policy ID


|name
|string
a|Export Policy Name


|rules
|array[link:#export_rules[export_rules]]
a|Rules of the Export Policy.


|svm
|link:#svm[svm]
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "id": 0,
  "name": "string",
  "rules": [
    {
      "anonymous_user": "string",
      "chown_mode": "string",
      "clients": [
        {
          "match": "0.0.0.0/0"
        }
      ],
      "index": 0,
```

```
      "ntfs_unix_security": "string",
      "protocols": [
        "string"
      ],
      "ro_rule": [
        "string"
      ],
      "rw_rule": [
        "string"
      ],
      "superuser": [
        "string"
      ]
    }
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 1703950
| Failed to rename ruleset

| 1703952
| Invalid ruleset name provided. No spaces are allowed in a ruleset name
|===


== Definitions
```

```
[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#export_clients]
[.api-collapsible-fifth-title]
export_clients

[cols=3*,options=header]
|===
|Name
|Type
|Description

|match
|string
a|Client Match Hostname, IP Address, Netgroup, or Domain.
You can specify the match as a string value in any of the
following formats:

* As a hostname; for instance, host1
* As an IPv4 address; for instance, 10.1.12.24
* As an IPv6 address; for instance, fd20:8b1e:b255:4071::100:1
* As an IPv4 address with a subnet mask expressed as a number of bits; for
instance, 10.1.12.0/24
```

```
* As an IPv6 address with a subnet mask expressed as a number of bits; for
instance, fd20:8b1e:b255:4071::/64
* As an IPv4 address with a network mask; for instance,
10.1.16.0/255.255.255.0
* As a netgroup, with the netgroup name preceded by the @ character; for
instance, @eng
* As a domain name preceded by the . character; for instance, .example.com


|===


[#export_rules]
[.api-collapsible-fifth-title]
export_rules

[cols=3*,options=header]
|===
|Name
|Type
|Description

|allow_device_creation
|boolean
a|Specifies whether or not device creation is allowed.


|allow_suid
|boolean
a|Specifies whether or not SetUID bits in SETATTR Op is to be honored.


|anonymous_user
|string
a|User ID To Which Anonymous Users Are Mapped.


|chown_mode
|string
a|Specifies who is authorized to change the ownership mode of a file.


|clients
|array[link:#export_clients[export_clients]]
a|Array of client matches
```

```
|index
|integer
a|Index of the rule within the export policy.


|ntfs_unix_security
|string
a|NTFS export UNIX security options.


|protocols
|array[string]
a|

|ro_rule
|array[string]
a|Authentication flavors that the read-only access rule governs


|rw_rule
|array[string]
a|Authentication flavors that the read/write access rule governs


|superuser
|array[string]
a|Authentication flavors that the superuser security type governs


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.
```

```
|uuid
|string
a|The unique identifier of the SVM.


|===


[#export_policy]
[.api-collapsible-fifth-title]
export_policy

[cols=3*,options=header]
|===
|Name
|Type
|Description

|id
|integer
a|Export Policy ID


|name
|string
a|Export Policy Name


|rules
|array[link:#export_rules[export_rules]]
a|Rules of the Export Policy.


|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
```

```
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===
```

```
//end collapsible .Definitions block
====



[[IDe8b07b53a9f8bee767ba839f9bcd91a7]]
= Retrieve export policy rules

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/nfs/export-policies/{policy.id}/rules`#

*Introduced In:* 9.6

Retrieves export policy rules.

== Related ONTAP commands

* `vserver export-policy rule show`

== Learn more

* xref:{relative_path}protocols_nfs_export-
policies_endpoint_overview.html[DOC /protocols/nfs/export-policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|policy.id
|integer
|path
|True
a|Export Policy ID


|allow_device_creation
|boolean
```

```
|query
|False
a|Filter by allow_device_creation

* Introduced in: 9.9


|anonymous_user
|string
|query
|False
a|Filter by anonymous_user


|ntfs_unix_security
|string
|query
|False
a|Filter by ntfs_unix_security

* Introduced in: 9.9


|clients.match
|string
|query
|False
a|Filter by clients.match


|protocols
|string
|query
|False
a|Filter by protocols


|allow_suid
|boolean
|query
|False
a|Filter by allow_suid

* Introduced in: 9.9


|superuser
```

```
|string
|query
|False
a|Filter by superuser


|policy.name
|string
|query
|False
a|Filter by policy.name

* Introduced in: 9.10


|ro_rule
|string
|query
|False
a|Filter by ro_rule


|index
|integer
|query
|False
a|Filter by index


|rw_rule
|string
|query
|False
a|Filter by rw_rule


|svm.uuid
|string
|query
|False
a|Filter by svm.uuid

* Introduced in: 9.10


|svm.name
|string
```

```
|query
|False
a|Filter by svm.name

* Introduced in: 9.10


|chown_mode
|string
|query
|False
a|Filter by chown_mode

* Introduced in: 9.9


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
```

```
reached.

* Default value: 1
* Max value: 120
* Min value: 0


|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of Export Rule records


|records
|array[link:#export_rule[export_rule]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
```

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "anonymous_user": "string",
      "chown_mode": "string",
      "clients": [
        {
          "match": "0.0.0.0/0"
        }
      ],
      "index": 0,
      "ntfs_unix_security": "string",
      "policy": {
        "name": "string"
      },
      "protocols": [
        "string"
      ],
      "ro_rule": [
        "string"
      ],
      "rw_rule": [
        "string"
      ],
      "superuser": [
        "string"
      ],
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
```

```
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions
```

```
[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#export_clients]
[.api-collapsible-fifth-title]
export_clients

[cols=3*,options=header]
|===
|Name
|Type
|Description

|match
|string
a|Client Match Hostname, IP Address, Netgroup, or Domain.
You can specify the match as a string value in any of the
following formats:

* As a hostname; for instance, host1
* As an IPv4 address; for instance, 10.1.12.24
* As an IPv6 address; for instance, fd20:8b1e:b255:4071::100:1
* As an IPv4 address with a subnet mask expressed as a number of bits; for
instance, 10.1.12.0/24
* As an IPv6 address with a subnet mask expressed as a number of bits; for
instance, fd20:8b1e:b255:4071::/64
* As an IPv4 address with a network mask; for instance,
10.1.16.0/255.255.255.0
* As a netgroup, with the netgroup name preceded by the @ character; for
instance, @eng
* As a domain name preceded by the . character; for instance, .example.com


|===


[#policy]
```

```
[.api-collapsible-fifth-title]
policy

[cols=3*,options=header]
|===
|Name
|Type
|Description

|id
|integer
a|Export policy ID


|name
|string
a|Export policy name


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===
```

```
[#export_rule]
[.api-collapsible-fifth-title]
export_rule

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|allow_device_creation
|boolean
a|Specifies whether or not device creation is allowed.


|allow_suid
|boolean
a|Specifies whether or not SetUID bits in SETATTR Op is to be honored.


|anonymous_user
|string
a|User ID To Which Anonymous Users Are Mapped.


|chown_mode
|string
a|Specifies who is authorized to change the ownership mode of a file.


|clients
|array[link:#export_clients[export_clients]]
a|Array of client matches


|index
|integer
a|Index of the rule within the export policy.


|ntfs_unix_security
```

```
|string
a|NTFS export UNIX security options.


|policy
|link:#policy[policy]
a|

|protocols
|array[string]
a|

|ro_rule
|array[string]
a|Authentication flavors that the read-only access rule governs


|rw_rule
|array[string]
a|Authentication flavors that the read/write access rule governs


|superuser
|array[string]
a|Authentication flavors that the superuser security type governs


|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code
```

```
|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====
```

```
[[ID95305633c8df955893b125bdb19e70f9]]
= Create an export policy rule

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/protocols/nfs/export-policies/{policy.id}/rules`#

*Introduced In:* 9.6

Creates an export policy rule.

== Required properties

* `policy.id`  - Existing export policy for which to create an export
rule.
* `clients.match`  - List of clients (hostnames, ipaddresses, netgroups,
domains) to which the export rule applies.
* `ro_rule`  - Used to specify the security type for read-only access to
volumes that use the export rule.
* `rw_rule`  - Used to specify the security type for read-write access to
volumes that use the export rule.

== Default property values

If not specified in POST, the following default property values are
assigned:

* `protocols` - _any_
* `anonymous_user` - _none_
* `superuser` - _any_
* `allow_device_creation` - _true_
* `ntfs_unix_security` - _fail_
* `chown_mode` - _restricted_
* `allow_suid` - _true_

== Related ONTAP commands

* `vserver export-policy rule create`

== Learn more

* xref:{relative_path}protocols_nfs_export-
policies_endpoint_overview.html[DOC /protocols/nfs/export-policies]


== Parameters
```

```
[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|policy.id
|integer
|path
|True
a|Export Policy ID


|return_records
|boolean
|query
|False
a|The default is false.  If set to true, the records are returned.

* Default value:

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|allow_device_creation
|boolean
a|Specifies whether or not device creation is allowed.


|allow_suid
|boolean
a|Specifies whether or not SetUID bits in SETATTR Op is to be honored.


|anonymous_user
```

```
|string
a|User ID To Which Anonymous Users Are Mapped.


|chown_mode
|string
a|Specifies who is authorized to change the ownership mode of a file.


|clients
|array[link:#export_clients[export_clients]]
a|Array of client matches


|index
|integer
a|Index of the rule within the export policy.


|ntfs_unix_security
|string
a|NTFS export UNIX security options.


|policy
|link:#policy[policy]
a|

|protocols
|array[string]
a|

|ro_rule
|array[string]
a|Authentication flavors that the read-only access rule governs


|rw_rule
|array[string]
a|Authentication flavors that the read/write access rule governs


|superuser
|array[string]
a|Authentication flavors that the superuser security type governs
```

```
|svm
|link:#svm[svm]
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "anonymous_user": "string",
  "chown_mode": "string",
  "clients": [
    {
      "match": "0.0.0.0/0"
    }
  ],
  "index": 0,
  "ntfs_unix_security": "string",
  "policy": {
    "name": "string"
  },
  "protocols": [
    "string"
  ],
  "ro_rule": [
    "string"
  ],
  "rw_rule": [
    "string"
  ],
  "superuser": [
    "string"
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Response
```

Status: 201, Created

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|num_records
|integer
a|Number of Export Rule records


|records
|array[link:#export_rule[export_rule]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "records": [
    {
      "anonymous_user": "string",
      "chown_mode": "string",
      "clients": [
        {
          "match": "0.0.0.0/0"
        }
      ],
      "index": 0,
      "ntfs_unix_security": "string",
      "policy": {
        "name": "string"
      },
      "protocols": [
        "string"
      ],
      "ro_rule": [
        "string"
      ],
      "rw_rule": [
        "string"
      ],
```

```
      "superuser": [
        "string"
      ],
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 1703954
| Export policy does not exist

| 1704036
| Invalid clientmatch:  missing domain name

| 1704037
| Invalid clientmatch:  missing network name

| 1704038
| Invalid clientmatch:  missing netgroup name

| 1704039
| Invalid clientmatch

| 1704040
| Invalid clientmatch: address bytes masked out by netmask are non-zero

| 1704041
| Invalid clientmatch: address bytes masked to zero by netmask

| 1704042
| Invalid clientmatch: too many bits in netmask

| 1704043
```

```
| Invalid clientmatch: invalid netmask

| 1704044
| Invalid clientmatch: invalid characters in host name

| 1704045
| Invalid clientmatch: invalid characters in domain name

| 1704050
| Invalid clientmatch: clientmatch list contains a duplicate string.
Duplicate strings in a clientmatch list are not supported

| 1704051
| Warning: Not adding any new strings to the clientmatch field for
ruleindex. All of the match strings are already in the clientmatch list

| 1704064
| Clientmatch host name too long

| 1704065
| Clientmatch domain name too long

| 3277000
| Upgrade all nodes to Data ONTAP 9.0.0 or above to use krb5p as a
security flavor in export-policy rules

| 3277083
| User ID is not valid. Enter a value for User ID from 0 to 4294967295
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#export_clients]
[.api-collapsible-fifth-title]
export_clients

[cols=3*,options=header]
|===
|Name
|Type
|Description

|match
|string
a|Client Match Hostname, IP Address, Netgroup, or Domain.
You can specify the match as a string value in any of the
following formats:

* As a hostname; for instance, host1
* As an IPv4 address; for instance, 10.1.12.24
* As an IPv6 address; for instance, fd20:8b1e:b255:4071::100:1
* As an IPv4 address with a subnet mask expressed as a number of bits; for
instance, 10.1.12.0/24
* As an IPv6 address with a subnet mask expressed as a number of bits; for
instance, fd20:8b1e:b255:4071::/64
* As an IPv4 address with a network mask; for instance,
10.1.16.0/255.255.255.0
* As a netgroup, with the netgroup name preceded by the @ character; for
instance, @eng
* As a domain name preceded by the . character; for instance, .example.com


|===


[#policy]
[.api-collapsible-fifth-title]
policy
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|id
|integer
a|Export policy ID


|name
|string
a|Export policy name


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#export_rule]
[.api-collapsible-fifth-title]
export_rule
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|allow_device_creation
|boolean
a|Specifies whether or not device creation is allowed.


|allow_suid
|boolean
a|Specifies whether or not SetUID bits in SETATTR Op is to be honored.


|anonymous_user
|string
a|User ID To Which Anonymous Users Are Mapped.


|chown_mode
|string
a|Specifies who is authorized to change the ownership mode of a file.


|clients
|array[link:#export_clients[export_clients]]
a|Array of client matches


|index
|integer
a|Index of the rule within the export policy.


|ntfs_unix_security
|string
a|NTFS export UNIX security options.


|policy
|link:#policy[policy]
a|

|protocols
|array[string]
```

```
a|

|ro_rule
|array[string]
a|Authentication flavors that the read-only access rule governs


|rw_rule
|array[string]
a|Authentication flavors that the read/write access rule governs


|superuser
|array[string]
a|Authentication flavors that the superuser security type governs


|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===
```

```
[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDf0405e2e9b362f225b6820816d89fdf6]]
= Delete an export policy rule

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/protocols/nfs/export-policies/{policy.id}/rules/{index}`#

*Introduced In:* 9.6

Deletes an export policy rule.
```

```
== Related ONTAP commands

* `vserver export-policy rule delete`

== Learn more

* xref:{relative_path}protocols_nfs_export-
policies_endpoint_overview.html[DOC /protocols/nfs/export-policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|policy.id
|integer
|path
|True
a|Export Policy ID


|index
|integer
|path
|True
a|Export Rule Index

|===

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 1703945
| Ruleset is in use by a volume.  It cannot be deleted until all volumes
that refer to it are first deleted

| 1703946
| Cannot determine if the ruleset is in use by a volume.  It cannot be
deleted until all volumes that refer to it are first deleted

| 1703954
| Export policy does not exist
|===



[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
```

```
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments
```

```
|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDe3f4cc79a8abea7a2070b64df9ff51e2]]
= Retrieve an export policy rule

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/nfs/export-policies/{policy.id}/rules/{index}`#

*Introduced In:* 9.6

Retrieves an export policy rule

== Related ONTAP commands

* `vserver export-policy rule show`

== Learn more

* xref:{relative_path}protocols_nfs_export-
policies_endpoint_overview.html[DOC /protocols/nfs/export-policies]


== Parameters
```

```
[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|policy.id
|integer
|path
|True
a|Export Policy ID


|index
|integer
|path
|True
a|Export Rule Index


|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|allow_device_creation
```

```
|boolean
a|Specifies whether or not device creation is allowed.


|allow_suid
|boolean
a|Specifies whether or not SetUID bits in SETATTR Op is to be honored.


|anonymous_user
|string
a|User ID To Which Anonymous Users Are Mapped.


|chown_mode
|string
a|Specifies who is authorized to change the ownership mode of a file.


|clients
|array[link:#export_clients[export_clients]]
a|Array of client matches


|index
|integer
a|Index of the rule within the export policy.


|ntfs_unix_security
|string
a|NTFS export UNIX security options.


|policy
|link:#policy[policy]
a|

|protocols
|array[string]
a|

|ro_rule
|array[string]
a|Authentication flavors that the read-only access rule governs
```

```
|rw_rule
|array[string]
a|Authentication flavors that the read/write access rule governs


|superuser
|array[string]
a|Authentication flavors that the superuser security type governs


|svm
|link:#svm[svm]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "anonymous_user": "string",
  "chown_mode": "string",
  "clients": [
    {
      "match": "0.0.0.0/0"
    }
  ],
  "index": 0,
  "ntfs_unix_security": "string",
  "policy": {
    "name": "string"
  },
  "protocols": [
    "string"
  ],
  "ro_rule": [
    "string"
  ],
  "rw_rule": [
```

```
    "string"
  ],
  "superuser": [
    "string"
  ],
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
```

```
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===
```

```
[#export_clients]
[.api-collapsible-fifth-title]
export_clients

[cols=3*,options=header]
|===
|Name
|Type
|Description

|match
|string
a|Client Match Hostname, IP Address, Netgroup, or Domain.
You can specify the match as a string value in any of the
following formats:

* As a hostname; for instance, host1
* As an IPv4 address; for instance, 10.1.12.24
* As an IPv6 address; for instance, fd20:8b1e:b255:4071::100:1
* As an IPv4 address with a subnet mask expressed as a number of bits; for
instance, 10.1.12.0/24
* As an IPv6 address with a subnet mask expressed as a number of bits; for
instance, fd20:8b1e:b255:4071::/64
* As an IPv4 address with a network mask; for instance,
10.1.16.0/255.255.255.0
* As a netgroup, with the netgroup name preceded by the @ character; for
instance, @eng
* As a domain name preceded by the . character; for instance, .example.com


|===


[#policy]
[.api-collapsible-fifth-title]
policy

[cols=3*,options=header]
|===
|Name
|Type
|Description

|id
|integer
```

```
a|Export policy ID


|name
|string
a|Export policy name


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===
```

```
//end collapsible .Definitions block
====



[[IDe4ed8ab50518211d4e3e525b83896d73]]
= Update the properties of an export policy rule

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#`/protocols/nfs/export-policies/{policy.id}/rules/{index}`#

*Introduced In:* 9.6

Updates the properties of an export policy rule to change an export policy
rule's index or fields.

== Related ONTAP commands

* `vserver export-policy rule modify`
* `vserver export-policy rule setindex`

== Learn more

* xref:{relative_path}protocols_nfs_export-
policies_endpoint_overview.html[DOC /protocols/nfs/export-policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|policy.id
|integer
|path
|True
a|Export Policy ID


|index
|integer
```

```
|path
|True
a|Export Rule Index


|new_index
|integer
|query
|False
a|New Export Rule Index

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|allow_device_creation
|boolean
a|Specifies whether or not device creation is allowed.


|allow_suid
|boolean
a|Specifies whether or not SetUID bits in SETATTR Op is to be honored.


|anonymous_user
|string
a|User ID To Which Anonymous Users Are Mapped.


|chown_mode
|string
a|Specifies who is authorized to change the ownership mode of a file.


|clients
|array[link:#export_clients[export_clients]]
a|Array of client matches
```

```
|index
|integer
a|Index of the rule within the export policy.


|ntfs_unix_security
|string
a|NTFS export UNIX security options.


|policy
|link:#policy[policy]
a|

|protocols
|array[string]
a|

|ro_rule
|array[string]
a|Authentication flavors that the read-only access rule governs


|rw_rule
|array[string]
a|Authentication flavors that the read/write access rule governs


|superuser
|array[string]
a|Authentication flavors that the superuser security type governs


|svm
|link:#svm[svm]
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "anonymous_user": "string",
```

```
  "chown_mode": "string",
  "clients": [
    {
      "match": "0.0.0.0/0"
    }
  ],
  "index": 0,
  "ntfs_unix_security": "string",
  "policy": {
    "name": "string"
  },
  "protocols": [
    "string"
  ],
  "ro_rule": [
    "string"
  ],
  "rw_rule": [
    "string"
  ],
  "superuser": [
    "string"
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 1703954
| Export policy does not exist
```

```
| 1704036
| Invalid clientmatch:  missing domain name

| 1704037
| Invalid clientmatch:  missing network name

| 1704038
| Invalid clientmatch:  missing netgroup name

| 1704039
| Invalid clientmatch

| 1704040
| Invalid clientmatch: address bytes masked out by netmask are non-zero

| 1704041
| Invalid clientmatch: address bytes masked to zero by netmask

| 1704042
| Invalid clientmatch: too many bits in netmask

| 1704043
| Invalid clientmatch: invalid netmask

| 1704044
| Invalid clientmatch: invalid characters in host name

| 1704045
| Invalid clientmatch: invalid characters in domain name

| 1704050
| Invalid clientmatch: clientmatch list contains a duplicate string.
Duplicate strings in a clientmatch list are not supported

| 1704051
| Warning: Not adding any new strings to the clientmatch field for
ruleindex. All of the match strings are already in the clientmatch list

| 1704064
| Clientmatch host name too long

| 1704065
| Clientmatch domain name too long

| 3277000
| Upgrade all nodes to Data ONTAP 9.0.0 or above to use krb5p as a
```

```
security flavor in export-policy rules

| 3277083
| User ID is not valid. Enter a value for User ID from 0 to 4294967295
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#export_clients]
[.api-collapsible-fifth-title]
export_clients

[cols=3*,options=header]
|===
|Name
|Type
|Description

|match
|string
a|Client Match Hostname, IP Address, Netgroup, or Domain.
```

```
You can specify the match as a string value in any of the
following formats:

* As a hostname; for instance, host1
* As an IPv4 address; for instance, 10.1.12.24
* As an IPv6 address; for instance, fd20:8b1e:b255:4071::100:1
* As an IPv4 address with a subnet mask expressed as a number of bits; for
instance, 10.1.12.0/24
* As an IPv6 address with a subnet mask expressed as a number of bits; for
instance, fd20:8b1e:b255:4071::/64
* As an IPv4 address with a network mask; for instance,
10.1.16.0/255.255.255.0
* As a netgroup, with the netgroup name preceded by the @ character; for
instance, @eng
* As a domain name preceded by the . character; for instance, .example.com


|===


[#policy]
[.api-collapsible-fifth-title]
policy

[cols=3*,options=header]
|===
|Name
|Type
|Description

|id
|integer
a|Export policy ID


|name
|string
a|Export policy name


|===


[#svm]
[.api-collapsible-fifth-title]
svm
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#export_rule]
[.api-collapsible-fifth-title]
export_rule

[cols=3*,options=header]
|===
|Name
|Type
|Description

|allow_device_creation
|boolean
a|Specifies whether or not device creation is allowed.


|allow_suid
|boolean
a|Specifies whether or not SetUID bits in SETATTR Op is to be honored.


|anonymous_user
|string
a|User ID To Which Anonymous Users Are Mapped.


|chown_mode
|string
a|Specifies who is authorized to change the ownership mode of a file.
```

```
|clients
|array[link:#export_clients[export_clients]]
a|Array of client matches


|index
|integer
a|Index of the rule within the export policy.


|ntfs_unix_security
|string
a|NTFS export UNIX security options.


|policy
|link:#policy[policy]
a|

|protocols
|array[string]
a|

|ro_rule
|array[string]
a|Authentication flavors that the read-only access rule governs


|rw_rule
|array[string]
a|Authentication flavors that the read/write access rule governs


|superuser
|array[string]
a|Authentication flavors that the superuser security type governs


|svm
|link:#svm[svm]
a|

|===
```

```
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message
```

```
|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDde6896189d149a27ee57b72e57aab8eb]]
= Retrieve export policy rule clients

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/nfs/export-policies/{policy.id}/rules/{index}/clients`#

*Introduced In:* 9.6

Retrieves export policy rule clients.

== Learn more

* xref:{relative_path}protocols_nfs_export-
policies_endpoint_overview.html[DOC /protocols/nfs/export-policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|policy.id
|integer
|path
|True
a|Export Policy ID
```

```
|index
|integer
|path
|True
a|Export Rule Index


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0


|order_by
```

```
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of export rule client records


|records
|array[link:#export_client[export_client]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
```

```
  },
  "records": [
    {
      "index": 0,
      "match": "0.0.0.0/0",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
```

```
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
```

```
a|

|self
|link:#href[href]
a|

|===


[#policy]
[.api-collapsible-fifth-title]
policy

[cols=3*,options=header]
|===
|Name
|Type
|Description

|id
|integer
a|Export policy ID


|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#svm]
[.api-collapsible-fifth-title]
svm
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#export_client]
[.api-collapsible-fifth-title]
export_client

[cols=3*,options=header]
|===
|Name
|Type
|Description

|index
|integer
a|Index of the rule within the export policy.


|match
|string
a|Client Match Hostname, IP Address, Netgroup, or Domain.
You can specify the match as a string value in any of the
        following formats:

* As a hostname; for instance, host1
* As an IPv4 address; for instance, 10.1.12.24
```

```
* As an IPv6 address; for instance, fd20:8b1e:b255:4071::100:1
* As an IPv4 address with a subnet mask expressed as a number of bits; for
instance, 10.1.12.0/24
* As an IPv6 address with a subnet mask expressed as a number of bits; for
instance, fd20:8b1e:b255:4071::/64
* As an IPv4 address with a network mask; for instance,
10.1.16.0/255.255.255.0
* As a netgroup, with the netgroup name preceded by the @ character; for
instance, @eng
* As a domain name preceded by the . character; for instance, .example.com


|policy
|link:#policy[policy]
a|

|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
```

```
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDe6e277a9483b6c6fae6ebb71d0b64457]]
= Create an export policy rule client

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/protocols/nfs/export-policies/{policy.id}/rules/{index}/clients`#

*Introduced In:* 9.6

Creates an export policy rule client
```

```
== Required properties

* `policy.id` - Existing export policy that contains export policy rules
for the client being added.
* `index`  - Existing export policy rule for which to create an export
client.
* `match`  - Base name for the export policy client.

== Related ONTAP commands

* `vserver export-policy rule add-clientmatches`

== Learn more

* xref:{relative_path}protocols_nfs_export-
policies_endpoint_overview.html[DOC /protocols/nfs/export-policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|policy.id
|integer
|path
|True
a|Export Policy ID


|index
|integer
|path
|True
a|Export Rule Index


|return_records
|boolean
|query
|False
```

```
a|The default is false.  If set to true, the records are returned.

* Default value:

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|index
|integer
a|Index of the rule within the export policy.


|match
|string
a|Client Match Hostname, IP Address, Netgroup, or Domain.
You can specify the match as a string value in any of the
    following formats:

* As a hostname; for instance, host1
* As an IPv4 address; for instance, 10.1.12.24
* As an IPv6 address; for instance, fd20:8b1e:b255:4071::100:1
* As an IPv4 address with a subnet mask expressed as a number of bits; for
instance, 10.1.12.0/24
* As an IPv6 address with a subnet mask expressed as a number of bits; for
instance, fd20:8b1e:b255:4071::/64
* As an IPv4 address with a network mask; for instance,
10.1.16.0/255.255.255.0
* As a netgroup, with the netgroup name preceded by the @ character; for
instance, @eng
* As a domain name preceded by the . character; for instance, .example.com


|policy
|link:#policy[policy]
a|

|svm
|link:#svm[svm]
```

```
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "index": 0,
  "match": "0.0.0.0/0",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Response
```

Status: 201, Created

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|num_records
|integer
a|Number of export rule client records


|records
|array[link:#export_client[export_client]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "records": [
    {
      "index": 0,
      "match": "0.0.0.0/0",
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description
```

```
| 1703954
| Export policy does not exist

| 1704036
| Invalid clientmatch:  missing domain name

| 1704037
| Invalid clientmatch:  missing network name

| 1704038
| Invalid clientmatch:  missing netgroup name

| 1704039
| Invalid clientmatch

| 1704040
| Invalid clientmatch: address bytes masked out by netmask are non-zero

| 1704041
| Invalid clientmatch: address bytes masked to zero by netmask

| 1704042
| Invalid clientmatch: too many bits in netmask

| 1704043
| Invalid clientmatch: invalid netmask

| 1704044
| Invalid clientmatch: invalid characters in host name

| 1704045
| Invalid clientmatch: invalid characters in domain name

| 1704050
| Invalid clientmatch: the clientmatch list contains a duplicate string.
Duplicate strings in a clientmatch list are not supported

| 1704051
| Warning: Not adding any new strings to the clientmatch field for
ruleindex. All of the match strings are already in the clientmatch list

| 1704064
| Clientmatch host name too long

| 1704065
| Clientmatch domain name too long
|===
```

```
== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#policy]
[.api-collapsible-fifth-title]
policy

[cols=3*,options=header]
|===
|Name
|Type
|Description

|id
|integer
a|Export policy ID


|===


[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
```

```
[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#export_client]
[.api-collapsible-fifth-title]
export_client

[cols=3*,options=header]
|===
|Name
|Type
|Description

|index
|integer
a|Index of the rule within the export policy.


|match
|string
a|Client Match Hostname, IP Address, Netgroup, or Domain.
You can specify the match as a string value in any of the
      following formats:

* As a hostname; for instance, host1
* As an IPv4 address; for instance, 10.1.12.24
* As an IPv6 address; for instance, fd20:8b1e:b255:4071::100:1
```

```
* As an IPv4 address with a subnet mask expressed as a number of bits; for
instance, 10.1.12.0/24
* As an IPv6 address with a subnet mask expressed as a number of bits; for
instance, fd20:8b1e:b255:4071::/64
* As an IPv4 address with a network mask; for instance,
10.1.16.0/255.255.255.0
* As a netgroup, with the netgroup name preceded by the @ character; for
instance, @eng
* As a domain name preceded by the . character; for instance, .example.com


|policy
|link:#policy[policy]
a|

|svm
|link:#svm[svm]
a|

|===


[#export_client]
[.api-collapsible-fifth-title]
export_client

[cols=3*,options=header]
|===
|Name
|Type
|Description

|index
|integer
a|Index of the rule within the export policy.


|match
|string
a|Client Match Hostname, IP Address, Netgroup, or Domain.
You can specify the match as a string value in any of the
  following formats:

* As a hostname; for instance, host1
* As an IPv4 address; for instance, 10.1.12.24
* As an IPv6 address; for instance, fd20:8b1e:b255:4071::100:1
* As an IPv4 address with a subnet mask expressed as a number of bits; for
```

```
instance, 10.1.12.0/24
* As an IPv6 address with a subnet mask expressed as a number of bits; for
instance, fd20:8b1e:b255:4071::/64
* As an IPv4 address with a network mask; for instance,
10.1.16.0/255.255.255.0
* As a netgroup, with the netgroup name preceded by the @ character; for
instance, @eng
* As a domain name preceded by the . character; for instance, .example.com


|policy
|link:#policy[policy]
a|

|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID5d3939a1555e978fdcb398c1c7142d50]]
= Delete an export policy client

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/protocols/nfs/export-
policies/{policy.id}/rules/{index}/clients/{match}`#

*Introduced In:* 9.6

Deletes an export policy client

== Related ONTAP commands
```

```
* `vserver export-policy rule remove-clientmatches`

== Learn more

* xref:{relative_path}protocols_nfs_export-
policies_endpoint_overview.html[DOC /protocols/nfs/export-policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|policy.id
|integer
|path
|True
a|Export Policy ID


|index
|integer
|path
|True
a|Export Rule Index


|match
|string
|path
|True
a|Export Client Match


|return_records
|boolean
|query
|False
a|The default is false.  If set to true, the records are returned.
```

```
* Default value:

|===

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 1703954
| Export policy does not exist

| 1704036
| Invalid clientmatch:  missing domain name

| 1704037
| Invalid clientmatch:  missing network name

| 1704038
| Invalid clientmatch:  missing netgroup name

| 1704039
| Invalid clientmatch

| 1704040
| Invalid clientmatch: address bytes masked out by netmask are non-zero

| 1704041
| Invalid clientmatch: address bytes masked to zero by netmask

| 1704042
| Invalid clientmatch: too many bits in netmask

| 1704043
| Invalid clientmatch: invalid netmask

| 1704044
```

```
| Invalid clientmatch: invalid characters in host name

| 1704045
| Invalid clientmatch: invalid characters in domain name

| 1704050
| Invalid clientmatch: the clientmatch list contains a duplicate string.
Duplicate strings in a clientmatch list are not supported

| 1704052
| Warning: Not removing any strings from the clientmatch field for
ruleindex. None of the match strings were found in the clientmatch list

| 1704064
| Clientmatch host name too long

| 1704065
| Clientmatch domain name too long
|===



[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
```

```
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



:leveloffset: -1


= View and update Kerberos interfaces

:leveloffset: +1


[[IDd3d0ee93db3710212067f70251c6fac6]]
= Protocols NFS Kerberos interfaces endpoint overview



== Examples

=== Retrieving the Kerberos interface configuration details

----
```

```
# The API:
GET /api/protocols/nfs/kerberos/interfaces

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/nfs/kerberos/interfaces"
----

=== Updating the Kerberos interface configuration

----

# The API:
PATCH /api/protocols/nfs/kerberos/interfaces/{interface.uuid}

# The call:
curl -d "@test_patch_kerb_interface.txt" -X PATCH "https://<mgmt-
ip>/api/protocols/nfs/kerberos/interfaces/e62936de-7342-11e8-9eb4-
0050568be2b7"
test_patch_kerb_interface.txt(body):
{
 "enabled" : "true",
 "spn": "nfs/datalif1-vsim3-d1.sim.netapp.com@NFS-NSR-W01.RTP.NETAPP.COM",
 "user" :"administrator",
 "password" :"Hello123!"
}
----




[[ID3d6c7642416d381cd45125d1aa3c8d77]]
= Retrieve Kerberos interfaces

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/nfs/kerberos/interfaces`#

*Introduced In:* 9.6

Retrieves Kerberos interfaces.

== Related ONTAP commands

* `vserver nfs kerberos interface show`

== Learn more
```

```
*
xref:{relative_path}protocols_nfs_kerberos_interfaces_endpoint_overview.ht
ml[DOC /protocols/nfs/kerberos/interfaces]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|encryption_types
|string
|query
|False
a|Filter by encryption_types


|enabled
|boolean
|query
|False
a|Filter by enabled


|interface.ip.address
|string
|query
|False
a|Filter by interface.ip.address


|interface.name
|string
|query
|False
a|Filter by interface.name


|interface.uuid
|string
|query
```

```
|False
a|Filter by interface.uuid


|svm.uuid
|string
|query
|False
a|Filter by svm.uuid


|svm.name
|string
|query
|False
a|Filter by svm.name


|spn
|string
|query
|False
a|Filter by spn


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1
```

```
|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0


|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of records


|records
|array[link:#kerberos_interface[kerberos_interface]]
```

```
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "encryption_types": [
        "string"
      ],
      "interface": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "ip": {
          "address": "10.10.10.7"
        },
        "name": "lif1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "spn": "string",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
```

```
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions
```

```
[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#ip]
[.api-collapsible-fifth-title]
ip

IP information


[cols=3*,options=header]
|===
|Name
|Type
|Description

|address
|string
a|IPv4 or IPv6 address


|===


[#interface]
[.api-collapsible-fifth-title]
interface

Network interface


[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|_links
|link:#_links[_links]
a|

|ip
|link:#ip[ip]
a|IP information


|name
|string
a|The name of the interface.


|uuid
|string
a|The UUID that uniquely identifies the interface.


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.
```

```
|===


[#kerberos_interface]
[.api-collapsible-fifth-title]
kerberos_interface

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|enabled
|boolean
a|Specifies if Kerberos is enabled.


|encryption_types
|array[string]
a|

|interface
|link:#interface[interface]
a|Network interface


|spn
|string
a|Service principal name. Valid in PATCH.


|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.
```

```
|===


//end collapsible .Definitions block
====



[[IDf89b301cf0ca75725a1b8b0ac941760a]]
= Retrieve a Kerberos interface

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/nfs/kerberos/interfaces/{interface.uuid}`#

*Introduced In:* 9.6

Retrieves a Kerberos interface.

== Related ONTAP commands

* `vserver nfs kerberos interface show`

== Learn more

*
xref:{relative_path}protocols_nfs_kerberos_interfaces_endpoint_overview.ht
ml[DOC /protocols/nfs/kerberos/interfaces]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|interface.uuid
|string
|path
|True
a|Network interface UUID
```

```
* Introduced in: 9.7


|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|enabled
|boolean
a|Specifies if Kerberos is enabled.


|encryption_types
|array[string]
a|

|interface
|link:#interface[interface]
a|Network interface


|spn
|string
a|Service principal name. Valid in PATCH.


|svm
```

```
|link:#svm[svm]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "encryption_types": [
    "string"
  ],
  "interface": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "ip": {
      "address": "10.10.10.7"
    },
    "name": "lif1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "spn": "string",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
```

```
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#ip]
[.api-collapsible-fifth-title]
ip

IP information


[cols=3*,options=header]
|===
|Name
|Type
|Description

|address
|string
a|IPv4 or IPv6 address
```

```
|===


[#interface]
[.api-collapsible-fifth-title]
interface

Network interface


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|ip
|link:#ip[ip]
a|IP information


|name
|string
a|The name of the interface.


|uuid
|string
a|The UUID that uniquely identifies the interface.


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
```

```
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID9db8ff12c0f0d6388a4a9dc1f6ad4719]]
= Update Kerberos interface properties

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#`/protocols/nfs/kerberos/interfaces/{interface.uuid}`#

*Introduced In:* 9.6

Updates the properties of a Kerberos interface.

== Related ONTAP commands

* `vserver nfs kerberos interface modify`
* `vserver nfs kerberos interface enable`
* `vserver nfs kerberos interface disable`
```

```
== Learn more

*
xref:{relative_path}protocols_nfs_kerberos_interfaces_endpoint_overview.ht
ml[DOC /protocols/nfs/kerberos/interfaces]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|interface.uuid
|string
|path
|True
a|Network interface UUID

* Introduced in: 9.7

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|enabled
|boolean
a|Specifies if Kerberos is enabled.


|encryption_types
|array[string]
a|
```

```
|interface
|link:#interface[interface]
a|Network interface


|keytab_uri
|string
a|Load keytab from URI


|organizational_unit
|string
a|Organizational unit


|password
|string
a|Account creation password


|spn
|string
a|Service principal name. Valid in PATCH.


|svm
|link:#svm[svm]
a|

|user
|string
a|Account creation user name


|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "encryption_types": [
    "string"
  ],
  "interface": {
```

```
    "name": "lif1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "keytab_uri": "string",
  "organizational_unit": "string",
  "password": "string",
  "spn": "string",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "user": "string"
}
====

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response codes

|===
| Error codes | Description

| 1966082
| LIF could not be found in database. Contact technical support for
assistance.

| 3276801
| Failed to bind service principal name on LIF.

| 3276809
| Failed to disable NFS Kerberos on LIF.

| 3276832
| Failed to insert Kerberos attributes to database.

| 3276842
| Internal error. Failed to import Kerberos keytab file into the
management databases. Contact technical support for assistance.
```

```
| 3276861
| Kerberos is already enabled/disabled on this LIF.

| 3276862
| Kerberos service principal name is required.

| 3276889
| Failed to enable NFS Kerberos on LIF.

| 3276937
| Failed to lookup the Vserver for the virtual interface.

| 3276941
| Kerberos is a required field.

| 3276942
| Service principal name is invalid. It must of the format:"nfs/+++<LIF-
FQDN>+++@REALM"+++</LIF-FQDN>+++

| 3276944
| Internal error. Reason: Failed to initialize the Kerberos context

| 3276945
| Internal error. Reason: Failed to parse the service principal name

| 3276951
| Warning: Skipping unsupported encryption type for service principal name

| 3276952
| "organizational_unit" option cannot be used for "Other" vendor.

| 3276965
| Account sharing across Vservers is not allowed. Use a different service
principal name unique within the first 15 characters.

| 3277019
| Cannot specify -force when enabling Kerberos.

| 3277020
| Modifying the NFS Kerberos configuration for a LIF that is not
configured for NFS is not supported.

| 3277043
| Keytab import failed due to missing keys. Keys for encryption types are
required for  Vserver but found no matching keys for service principal
name. Generate the keytab file with all required keys and try again.
|===
```

```
== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#ip]
[.api-collapsible-fifth-title]
ip

IP information

[#interface]
[.api-collapsible-fifth-title]
interface

Network interface


[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|ip
|link:#ip[ip]
a|IP information


|name
|string
a|The name of the interface.


|uuid
|string
a|The UUID that uniquely identifies the interface.


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#kerberos_interface]
[.api-collapsible-fifth-title]
kerberos_interface

[cols=3*,options=header]
```

```
|===
|Name
|Type
|Description

|enabled
|boolean
a|Specifies if Kerberos is enabled.


|encryption_types
|array[string]
a|

|interface
|link:#interface[interface]
a|Network interface


|keytab_uri
|string
a|Load keytab from URI


|organizational_unit
|string
a|Organizational unit


|password
|string
a|Account creation password


|spn
|string
a|Service principal name. Valid in PATCH.


|svm
|link:#svm[svm]
a|

|user
|string
a|Account creation user name
```

```
|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code
```

```
|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



:leveloffset: -1


= Manage Kerberos realms

:leveloffset: +1


[[IDd8a7b9327abb56e8b76350a9d24a5e16]]
= Protocols NFS Kerberos realms endpoint overview



== Examples

=== Retrieving the Kerberos realm details

----

# The API:
GET /api/protocols/nfs/kerberos/realms

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/nfs/kerberos/realms"
----

=== Creating the Kerberos realm for an SVM

----
```

```
# The API:
POST /api/protocols/nfs/kerberos/realms

# The call:
curl -d "@test_post_kerb_realm.txt" -X POST "https://<mgmt-
ip>/api/protocols/nfs/kerberos/realms"
test_post_kerb_realm.txt(body):
{
"svm.uuid": "05c90dc2-7343-11e8-9eb4-0050568be2b7",
"name": "NFS-NSR-W02.RTP.NETAPP.COM",
  "kdc": {
    "vendor": "microsoft",
    "ip": "10.225.185.112",
    "port": 88
  },
  "comment": "realm",
  "ad_server": {
    "name": "nfs-nsr-w02.rtp.netapp.com",
    "address": "10.225.185.112"
  }
}
----

=== Updating the Kerberos realm for an SVM

----

# The API:
PATCH /api/protocols/nfs/kerberos/realms/{svm.uuid}/{name}

# The call:
curl -d "@test_patch_kerb_realm.txt" -X PATCH "https://<mgmt-
ip>/api/protocols/nfs/kerberos/realms/05c90dc2-7343-11e8-9eb4-
0050568be2b7/NFS-NSR-W02.RTP.NETAPP.COM"
test_patch_kerb_realm.txt(body):
{
"kdc": {
  "vendor": "Microsoft",
  "ip": "100.225.185.112",
  "port": 88
},
"comment": "realm modify",
"ad_server": {
  "name": "nfs.netapp.com",
  "address": "192.2.18.112"
```

```
}
}
----

=== Deleting the Kerberos realm for an SVM

----

# The API:
DELETE /api/protocols/nfs/kerberos/realms/{svm.uuid}/{name}

# The call:
curl -X DELETE "https://<mgmt-
ip>/api/protocols/nfs/kerberos/realms/05c90dc2-7343-11e8-9eb4-
0050568be2b7/NFS-NSR-W02.RTP.NETAPP.COM"
----

'''




[[ID44bb3e1566fbde4410ae1efdf6b990b2]]
= Retrieve Kerberos realms

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/nfs/kerberos/realms`#

*Introduced In:* 9.6

Retrieves Kerberos realms.

== Related ONTAP commands

* `vserver nfs kerberos realm show`

== Learn more

*
xref:{relative_path}protocols_nfs_kerberos_realms_endpoint_overview.html[D
OC /protocols/nfs/kerberos/realms]


== Parameters

[cols=5*,options=header]
```

```
|===

|Name
|Type
|In
|Required
|Description

|encryption_types
|string
|query
|False
a|Filter by encryption_types


|kdc.vendor
|string
|query
|False
a|Filter by kdc.vendor


|kdc.ip
|string
|query
|False
a|Filter by kdc.ip


|kdc.port
|integer
|query
|False
a|Filter by kdc.port


|svm.uuid
|string
|query
|False
a|Filter by svm.uuid


|svm.name
|string
|query
|False
```

```
a|Filter by svm.name


|ad_server.address
|string
|query
|False
a|Filter by ad_server.address


|ad_server.name
|string
|query
|False
a|Filter by ad_server.name


|name
|string
|query
|False
a|Filter by name


|comment
|string
|query
|False
a|Filter by comment


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|return_records
|boolean
```

```
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0


|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
```

```
|integer
a|Number of records


|records
|array[link:#kerberos_realm[kerberos_realm]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "ad_server": {
        "address": "1.2.3.4",
        "name": "string"
      },
      "comment": "string",
      "encryption_types": [
        "string"
      ],
      "kdc": {
        "ip": "1.2.3.4",
        "port": 88,
        "vendor": "string"
      },
      "name": "string",
      "svm": {
```

```
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
```

```
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===
```

```
[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#ad_server]
[.api-collapsible-fifth-title]
ad_server

[cols=3*,options=header]
|===
|Name
|Type
|Description

|address
|string
a|Active Directory server IP address


|name
|string
a|Active Directory server name


|===


[#kdc]
[.api-collapsible-fifth-title]
kdc

[cols=3*,options=header]
```

```
|===
|Name
|Type
|Description

|ip
|string
a|KDC IP address


|port
|integer
a|KDC port


|vendor
|string
a|Key Distribution Center (KDC) vendor. Following values are suported:

* microsoft - Microsoft Active Directory KDC
* other - MIT Kerberos KDC or other KDC


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
```

```
a|The unique identifier of the SVM.


|===


[#kerberos_realm]
[.api-collapsible-fifth-title]
kerberos_realm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|ad_server
|link:#ad_server[ad_server]
a|

|comment
|string
a|Comment


|encryption_types
|array[string]
a|

|kdc
|link:#kdc[kdc]
a|

|name
|string
a|Kerberos realm


|svm
|link:#svm[svm]
a|

|===
```

```
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
```

```
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDe72ce0f2d28ec4b5d267faa968301ce4]]
= Create a Kerberos realm

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/protocols/nfs/kerberos/realms`#

*Introduced In:* 9.6

Creates a Kerberos realm.

== Required properties

* `svm.uuid` or `svm.name` - Existing SVM on which to create the Kerberos
realm.
* `name` - Base name for the Kerberos realm.
* `kdc.vendor` - Vendor of the Key Distribution Center (KDC) server for
this Kerberos realm. If the configuration uses a Microsoft Active
Directory domain for authentication, this field nust be `microsoft`.
* `kdc.ip` - IP address of the KDC server for this Kerberos realm.

== Recommended optional properties

* `ad_server.name` - Host name of the Active Directory Domain Controller
(DC). This is a mandatory parameter if the kdc-vendor is `microsoft`.
* `ad_server.address` - IP address of the Active Directory Domain
Controller (DC). This is a mandatory parameter if the kdc-vendor is
`microsoft`.

== Default property values

If not specified in POST, the following default property value is
```

```
assigned:

* `kdc.port` - _88_

== Related ONTAP commands

* `vserver nfs kerberos realm create`

== Learn more

*
xref:{relative_path}protocols_nfs_kerberos_realms_endpoint_overview.html[D
OC /protocols/nfs/kerberos/realms]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|return_records
|boolean
|query
|False
a|The default is false.  If set to true, the records are returned.

* Default value:

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|ad_server
```

```
|link:#ad_server[ad_server]
a|

|comment
|string
a|Comment


|encryption_types
|array[string]
a|

|kdc
|link:#kdc[kdc]
a|

|name
|string
a|Kerberos realm


|svm
|link:#svm[svm]
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "ad_server": {
    "address": "1.2.3.4",
    "name": "string"
  },
  "comment": "string",
  "encryption_types": [
    "string"
  ],
  "kdc": {
    "ip": "1.2.3.4",
    "port": 88,
    "vendor": "string"
  },
  "name": "string",
```

```
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Response
```

Status: 201, Created

```
== Error
```

Status: Default

```
ONTAP Error Response codes

|===
| Error codes | Description

| 2949121
| Active Directory server name required.

| 2949122
| Active Directory server address required

| 2949123
| Failed to create Kerberos realm.

| 2949124
| Failed to create hosts file entry.

| 3276949
| Kerberos realm creation failed. Reason: The parameters "ad_server.name"
and "ad_server.address" are only valid when "kdc.vendor" is Microsoft

| 3276976
| "realm" is a required input

| 3276998
| Only the data Vservers can own NFS Kerberos realms.
|===


== Definitions
```

```
[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#ad_server]
[.api-collapsible-fifth-title]
ad_server

[cols=3*,options=header]
|===
|Name
|Type
|Description

|address
|string
a|Active Directory server IP address


|name
|string
a|Active Directory server name


|===
```

```
[#kdc]
[.api-collapsible-fifth-title]
kdc

[cols=3*,options=header]
|===
|Name
|Type
|Description

|ip
|string
a|KDC IP address


|port
|integer
a|KDC port


|vendor
|string
a|Key Distribution Center (KDC) vendor. Following values are suported:

* microsoft - Microsoft Active Directory KDC
* other - MIT Kerberos KDC or other KDC


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.
```

```
|uuid
|string
a|The unique identifier of the SVM.


|===


[#kerberos_realm]
[.api-collapsible-fifth-title]
kerberos_realm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|ad_server
|link:#ad_server[ad_server]
a|

|comment
|string
a|Comment


|encryption_types
|array[string]
a|

|kdc
|link:#kdc[kdc]
a|

|name
|string
a|Kerberos realm


|svm
|link:#svm[svm]
a|

|===
```

```
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message
```

```
|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID300ce6c51c5d5ab8c3387fe591149c18]]
= Delete a Kerberos realm

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/protocols/nfs/kerberos/realms/{svm.uuid}/{name}`#

*Introduced In:* 9.6

Deletes a Kerberos realm.

* `vserver nfs kerberos realm delete`

== Learn more

*
xref:{relative_path}protocols_nfs_kerberos_realms_endpoint_overview.html[D
OC /protocols/nfs/kerberos/realms]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|svm.uuid
|string
```

```
|path
|True
a|SVM UUID


|name
|string
|path
|True
a|Kerberos realm

|===

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response codes

|===
| Error codes | Description

| 1966125
| Failed to remove hosts entry.

| 1966126
| Failed to lookup hosts entry.

| 2949141
| Failed to lookup Kerberos realm.

| 2949142
| Failed to remove Kerberos realm.

| 3276942
| Service principal name is invalid. It must of the format:"nfs/+++<LIF-
FQDN>+++@REALM\\\"+++</LIF-FQDN>+++

| 3276976
| "realm" is a required input
```

```
| 3276998
| Only the data Vservers can own NFS Kerberos realms.
|===



[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#error_arguments]
```

```
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message
```

```
|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID5ec70d6c2d1639cdca22d0b4ebf65e3e]]
= Retrieve a Kerberos realm

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/nfs/kerberos/realms/{svm.uuid}/{name}`#

*Introduced In:* 9.6

Retrieves a Kerberos realm.

* `vserver nfs kerberos realm show`

== Learn more

*
xref:{relative_path}protocols_nfs_kerberos_realms_endpoint_overview.html[D
OC /protocols/nfs/kerberos/realms]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|svm.uuid
|string
|path
|True
```

```
a|SVM UUID


|name
|string
|path
|True
a|Kerberos realm


|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|ad_server
|link:#ad_server[ad_server]
a|

|comment
|string
a|Comment


|encryption_types
|array[string]
a|

|kdc
```

```
|link:#kdc[kdc]
a|

|name
|string
a|Kerberos realm


|svm
|link:#svm[svm]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "ad_server": {
    "address": "1.2.3.4",
    "name": "string"
  },
  "comment": "string",
  "encryption_types": [
    "string"
  ],
  "kdc": {
    "ip": "1.2.3.4",
    "port": 88,
    "vendor": "string"
  },
  "name": "string",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
```

```
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
```

```
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#ad_server]
[.api-collapsible-fifth-title]
ad_server

[cols=3*,options=header]
|===
|Name
|Type
|Description

|address
```

```
|string
a|Active Directory server IP address


|name
|string
a|Active Directory server name


|===


[#kdc]
[.api-collapsible-fifth-title]
kdc

[cols=3*,options=header]
|===
|Name
|Type
|Description

|ip
|string
a|KDC IP address


|port
|integer
a|KDC port


|vendor
|string
a|Key Distribution Center (KDC) vendor. Following values are suported:

* microsoft - Microsoft Active Directory KDC
* other - MIT Kerberos KDC or other KDC


|===


[#svm]
[.api-collapsible-fifth-title]
svm
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
```

```
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDc5c06fe5934dadb7c6c16303c62fdaea]]
= Update Kerberos realm properties

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#`/protocols/nfs/kerberos/realms/{svm.uuid}/{name}`#

*Introduced In:* 9.6

Updates the properties of a Kerberos realm.
```

```
* `vserver nfs kerberos realm modify`

== Learn more

*
xref:{relative_path}protocols_nfs_kerberos_realms_endpoint_overview.html[D
OC /protocols/nfs/kerberos/realms]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|svm.uuid
|string
|path
|True
a|SVM UUID


|name
|string
|path
|True
a|Kerberos realm

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|ad_server
|link:#ad_server[ad_server]
```

```
a|

|comment
|string
a|Comment


|encryption_types
|array[string]
a|

|kdc
|link:#kdc[kdc]
a|

|name
|string
a|Kerberos realm


|svm
|link:#svm[svm]
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "ad_server": {
    "address": "1.2.3.4",
    "name": "string"
  },
  "comment": "string",
  "encryption_types": [
    "string"
  ],
  "kdc": {
    "ip": "1.2.3.4",
    "port": 88,
    "vendor": "string"
  },
  "name": "string",
  "svm": {
```

```
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response codes

|===
| Error codes | Description

| 1966125
| Failed to remove hosts entry.

| 1966126
| Failed to lookup hosts entry.

| 1966131
| Failed to create hosts entry.

| 1966132
| Failed to modify hosts entry.

| 2949121
| Active Directory server name required.

| 2949122
| Active Directory server address required

| 2949123
| Failed to create Kerberos realm.

| 2949124
| Failed to create hosts file entry.

| 2949141
| Failed to lookup Kerberos realm.
```

```
| 2949148
| Failed to modify Kerberos realm.

| 3276976
| "realm" is a required input

| 3276998
| Only the data Vservers can own NFS Kerberos realms.
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#ad_server]
[.api-collapsible-fifth-title]
ad_server

[cols=3*,options=header]
|===
|Name
|Type
```

```
|Description

|address
|string
a|Active Directory server IP address


|name
|string
a|Active Directory server name


|===


[#kdc]
[.api-collapsible-fifth-title]
kdc

[cols=3*,options=header]
|===
|Name
|Type
|Description

|ip
|string
a|KDC IP address


|port
|integer
a|KDC port


|vendor
|string
a|Key Distribution Center (KDC) vendor. Following values are suported:

* microsoft - Microsoft Active Directory KDC
* other - MIT Kerberos KDC or other KDC


|===


[#svm]
```

```
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#kerberos_realm]
[.api-collapsible-fifth-title]
kerberos_realm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|ad_server
|link:#ad_server[ad_server]
a|

|comment
|string
a|Comment


|encryption_types
|array[string]
a|

|kdc
|link:#kdc[kdc]
```

```
a|

|name
|string
a|Kerberos realm


|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



:leveloffset: -1


= Manage NFS services

:leveloffset: +1


[[IDc279a22d1df62f013dc37a2ec05ba6c5]]
= Protocols NFS services endpoint overview



=== Retrieving an NFS configuration

----

# The API:
GET /api/protocols/nfs/services
```

```
# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/nfs/services"
----

=== Retrieving the mount permissions for a specified volume for a given IP
address.

----

# The API:
GET /api/protocols/nfs/services

# The call:
curl -X GET curl -X GET "https://<mgmt-
ip>/api/protocols/nfs/services?protocol_access_rules.volume=testvol12&prot
ocol_access_rules.client_ip=1.2.3.4&protocol_access_rules.auth_type=sys&sv
m.uuid=525928e9-9f84-11eb-a89f-
005056bb70a8&fields=*&return_timeout=15&return_records=true"

#
Returns the protocol_access_rules structure and provides access
permissions for each protocol.
"protocol_access_rules": {
  "nfs3_access_type": "read_write",
  "nfs4_access_type": "read",
  "cifs_access_type": "read_write"
}
----

=== Creating an NFS configuration for an SVM

----

# The API:
POST /api/protocols/nfs/services

# The call:
curl  -d "@test_nfs_post.txt" -X POST "https://<mgmt-
ip>/api/protocols/nfs/services"
test_nfs_post.txt(body):
{
"svm": {
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"protocol": {
```

```
  "v4_id_domain": "nfs-nsr-w01.rtp.netapp.com"
},
"vstorage_enabled": "true"
}
----

=== Updating an  NFS configuration for an SVM

----

# The API:
PATCH /api/protocols/nfs/services/{svm.uuid}

# The call:
curl -d "@test_nfs_patch.txt" -X PATCH "https://<mgmt-
ip>/api/protocols/nfs/services/4a415601-548c-11e8-a21d-0050568bcbc9"
test_nfs_patch.txt(body):
{
"protocol": {
  "v4_id_domain": "nfs-nsr-w01.rtp.netapp.com"
},
"vstorage_enabled": "false"
}
----

=== Deleting an NFS configuration for an SVM

----

# The API:
DELETE /api/protocols/nfs/services/{svm.uuid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/nfs/services/4a415601-
548c-11e8-a21d-0050568bcbc9"
----

== Performance monitoring

Performance of the SVM can be monitored by the `metric.+*+` and
`statistics.+*+` properties. These show the performance of the SVM in
terms of IOPS, latency and throughput. The `metric.+*+` properties denote
an average whereas `statistics.+*+` properties denote a real-time
monotonically increasing value aggregated across all nodes.
```

```
[[IDc796ecee2e196a6f962c53c6298c2873]]
= Retrieve NFS configuration for SVMs

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/nfs/services`#

*Introduced In:* 9.6

Retrieves the NFS configuration of SVMs.

== Expensive properties

There is an added cost to retrieving values for these properties. They are
not included by default in GET results and must be explicitly requested
using the `fields` query parameter. See
xref:{relative_path}getting_started_with_the_ontap_rest_api.html#Requestin
g_specific_fields[Requesting specific fields] to learn more.

* `statistics.+*+`
* `metric.+*+`

== Related ONTAP commands

* `vserver nfs show`
* `vserver nfs status`

== Learn more

* xref:{relative_path}protocols_nfs_services_endpoint_overview.html[DOC
/protocols/nfs/services]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|protocol_access_rules.volume
|string
```

```
|query
|False
a|Volume on which access needs to be checked.

* Introduced in: 9.10


|protocol_access_rules.client_ip
|string
|query
|False
a|IP address for the client for which access needs to be checked.

* Introduced in: 9.10


|protocol_access_rules.auth_type
|string
|query
|False
a|Authentication method used to check the client's access to the volume.

* Introduced in: 9.10
* Default value: 1


|metric.v3.duration
|string
|query
|False
a|Filter by metric.v3.duration

* Introduced in: 9.7


|metric.v3.timestamp
|string
|query
|False
a|Filter by metric.v3.timestamp

* Introduced in: 9.7


|metric.v3.latency.total
|integer
|query
```

```
|False
a|Filter by metric.v3.latency.total

* Introduced in: 9.7


|metric.v3.latency.write
|integer
|query
|False
a|Filter by metric.v3.latency.write

* Introduced in: 9.7


|metric.v3.latency.other
|integer
|query
|False
a|Filter by metric.v3.latency.other

* Introduced in: 9.7


|metric.v3.latency.read
|integer
|query
|False
a|Filter by metric.v3.latency.read

* Introduced in: 9.7


|metric.v3.iops.total
|integer
|query
|False
a|Filter by metric.v3.iops.total

* Introduced in: 9.7


|metric.v3.iops.write
|integer
|query
|False
a|Filter by metric.v3.iops.write
```

```
* Introduced in: 9.7


|metric.v3.iops.other
|integer
|query
|False
a|Filter by metric.v3.iops.other

* Introduced in: 9.7


|metric.v3.iops.read
|integer
|query
|False
a|Filter by metric.v3.iops.read

* Introduced in: 9.7


|metric.v3.status
|string
|query
|False
a|Filter by metric.v3.status

* Introduced in: 9.7


|metric.v3.throughput.read
|integer
|query
|False
a|Filter by metric.v3.throughput.read

* Introduced in: 9.7


|metric.v3.throughput.total
|integer
|query
|False
a|Filter by metric.v3.throughput.total

* Introduced in: 9.7
```

```
|metric.v3.throughput.write
|integer
|query
|False
a|Filter by metric.v3.throughput.write

* Introduced in: 9.7


|metric.v4.duration
|string
|query
|False
a|Filter by metric.v4.duration

* Introduced in: 9.8


|metric.v4.timestamp
|string
|query
|False
a|Filter by metric.v4.timestamp

* Introduced in: 9.8


|metric.v4.latency.total
|integer
|query
|False
a|Filter by metric.v4.latency.total

* Introduced in: 9.8


|metric.v4.latency.write
|integer
|query
|False
a|Filter by metric.v4.latency.write

* Introduced in: 9.8
```

```
|metric.v4.latency.other
|integer
|query
|False
a|Filter by metric.v4.latency.other

* Introduced in: 9.8


|metric.v4.latency.read
|integer
|query
|False
a|Filter by metric.v4.latency.read

* Introduced in: 9.8


|metric.v4.iops.total
|integer
|query
|False
a|Filter by metric.v4.iops.total

* Introduced in: 9.8


|metric.v4.iops.write
|integer
|query
|False
a|Filter by metric.v4.iops.write

* Introduced in: 9.8


|metric.v4.iops.other
|integer
|query
|False
a|Filter by metric.v4.iops.other

* Introduced in: 9.8


|metric.v4.iops.read
|integer
```

```
|query
|False
a|Filter by metric.v4.iops.read

* Introduced in: 9.8


|metric.v4.status
|string
|query
|False
a|Filter by metric.v4.status

* Introduced in: 9.8


|metric.v4.throughput.read
|integer
|query
|False
a|Filter by metric.v4.throughput.read

* Introduced in: 9.8


|metric.v4.throughput.total
|integer
|query
|False
a|Filter by metric.v4.throughput.total

* Introduced in: 9.8


|metric.v4.throughput.write
|integer
|query
|False
a|Filter by metric.v4.throughput.write

* Introduced in: 9.8


|metric.v41.duration
|string
|query
|False
```

```
a|Filter by metric.v41.duration

* Introduced in: 9.8


|metric.v41.timestamp
|string
|query
|False
a|Filter by metric.v41.timestamp

* Introduced in: 9.8


|metric.v41.latency.total
|integer
|query
|False
a|Filter by metric.v41.latency.total

* Introduced in: 9.8


|metric.v41.latency.write
|integer
|query
|False
a|Filter by metric.v41.latency.write

* Introduced in: 9.8


|metric.v41.latency.other
|integer
|query
|False
a|Filter by metric.v41.latency.other

* Introduced in: 9.8


|metric.v41.latency.read
|integer
|query
|False
a|Filter by metric.v41.latency.read
```

```
* Introduced in: 9.8


|metric.v41.iops.total
|integer
|query
|False
a|Filter by metric.v41.iops.total

* Introduced in: 9.8


|metric.v41.iops.write
|integer
|query
|False
a|Filter by metric.v41.iops.write

* Introduced in: 9.8


|metric.v41.iops.other
|integer
|query
|False
a|Filter by metric.v41.iops.other

* Introduced in: 9.8


|metric.v41.iops.read
|integer
|query
|False
a|Filter by metric.v41.iops.read

* Introduced in: 9.8


|metric.v41.status
|string
|query
|False
a|Filter by metric.v41.status

* Introduced in: 9.8
```

```
|metric.v41.throughput.read
|integer
|query
|False
a|Filter by metric.v41.throughput.read

* Introduced in: 9.8


|metric.v41.throughput.total
|integer
|query
|False
a|Filter by metric.v41.throughput.total

* Introduced in: 9.8


|metric.v41.throughput.write
|integer
|query
|False
a|Filter by metric.v41.throughput.write

* Introduced in: 9.8


|extended_groups_limit
|integer
|query
|False
a|Filter by extended_groups_limit

* Introduced in: 9.8


|statistics.v3.latency_raw.total
|integer
|query
|False
a|Filter by statistics.v3.latency_raw.total

* Introduced in: 9.7


|statistics.v3.latency_raw.write
```

```
|integer
|query
|False
a|Filter by statistics.v3.latency_raw.write

* Introduced in: 9.7


|statistics.v3.latency_raw.other
|integer
|query
|False
a|Filter by statistics.v3.latency_raw.other

* Introduced in: 9.7


|statistics.v3.latency_raw.read
|integer
|query
|False
a|Filter by statistics.v3.latency_raw.read

* Introduced in: 9.7


|statistics.v3.status
|string
|query
|False
a|Filter by statistics.v3.status

* Introduced in: 9.7


|statistics.v3.iops_raw.total
|integer
|query
|False
a|Filter by statistics.v3.iops_raw.total

* Introduced in: 9.7


|statistics.v3.iops_raw.write
|integer
|query
```

```
|False
a|Filter by statistics.v3.iops_raw.write

* Introduced in: 9.7


|statistics.v3.iops_raw.other
|integer
|query
|False
a|Filter by statistics.v3.iops_raw.other

* Introduced in: 9.7


|statistics.v3.iops_raw.read
|integer
|query
|False
a|Filter by statistics.v3.iops_raw.read

* Introduced in: 9.7


|statistics.v3.timestamp
|string
|query
|False
a|Filter by statistics.v3.timestamp

* Introduced in: 9.7


|statistics.v3.throughput_raw.read
|integer
|query
|False
a|Filter by statistics.v3.throughput_raw.read

* Introduced in: 9.7


|statistics.v3.throughput_raw.total
|integer
|query
|False
a|Filter by statistics.v3.throughput_raw.total
```

```
* Introduced in: 9.7


|statistics.v3.throughput_raw.write
|integer
|query
|False
a|Filter by statistics.v3.throughput_raw.write

* Introduced in: 9.7


|statistics.v4.latency_raw.total
|integer
|query
|False
a|Filter by statistics.v4.latency_raw.total

* Introduced in: 9.8


|statistics.v4.latency_raw.write
|integer
|query
|False
a|Filter by statistics.v4.latency_raw.write

* Introduced in: 9.8


|statistics.v4.latency_raw.other
|integer
|query
|False
a|Filter by statistics.v4.latency_raw.other

* Introduced in: 9.8


|statistics.v4.latency_raw.read
|integer
|query
|False
a|Filter by statistics.v4.latency_raw.read

* Introduced in: 9.8
```

```
|statistics.v4.status
|string
|query
|False
a|Filter by statistics.v4.status

* Introduced in: 9.8


|statistics.v4.iops_raw.total
|integer
|query
|False
a|Filter by statistics.v4.iops_raw.total

* Introduced in: 9.8


|statistics.v4.iops_raw.write
|integer
|query
|False
a|Filter by statistics.v4.iops_raw.write

* Introduced in: 9.8


|statistics.v4.iops_raw.other
|integer
|query
|False
a|Filter by statistics.v4.iops_raw.other

* Introduced in: 9.8


|statistics.v4.iops_raw.read
|integer
|query
|False
a|Filter by statistics.v4.iops_raw.read

* Introduced in: 9.8
```

```
|statistics.v4.timestamp
|string
|query
|False
a|Filter by statistics.v4.timestamp

* Introduced in: 9.8


|statistics.v4.throughput_raw.read
|integer
|query
|False
a|Filter by statistics.v4.throughput_raw.read

* Introduced in: 9.8


|statistics.v4.throughput_raw.total
|integer
|query
|False
a|Filter by statistics.v4.throughput_raw.total

* Introduced in: 9.8


|statistics.v4.throughput_raw.write
|integer
|query
|False
a|Filter by statistics.v4.throughput_raw.write

* Introduced in: 9.8


|statistics.v41.latency_raw.total
|integer
|query
|False
a|Filter by statistics.v41.latency_raw.total

* Introduced in: 9.8


|statistics.v41.latency_raw.write
|integer
```

```
|query
|False
a|Filter by statistics.v41.latency_raw.write

* Introduced in: 9.8


|statistics.v41.latency_raw.other
|integer
|query
|False
a|Filter by statistics.v41.latency_raw.other

* Introduced in: 9.8


|statistics.v41.latency_raw.read
|integer
|query
|False
a|Filter by statistics.v41.latency_raw.read

* Introduced in: 9.8


|statistics.v41.status
|string
|query
|False
a|Filter by statistics.v41.status

* Introduced in: 9.8


|statistics.v41.iops_raw.total
|integer
|query
|False
a|Filter by statistics.v41.iops_raw.total

* Introduced in: 9.8


|statistics.v41.iops_raw.write
|integer
|query
|False
```

```
a|Filter by statistics.v41.iops_raw.write

* Introduced in: 9.8


|statistics.v41.iops_raw.other
|integer
|query
|False
a|Filter by statistics.v41.iops_raw.other

* Introduced in: 9.8


|statistics.v41.iops_raw.read
|integer
|query
|False
a|Filter by statistics.v41.iops_raw.read

* Introduced in: 9.8


|statistics.v41.timestamp
|string
|query
|False
a|Filter by statistics.v41.timestamp

* Introduced in: 9.8


|statistics.v41.throughput_raw.read
|integer
|query
|False
a|Filter by statistics.v41.throughput_raw.read

* Introduced in: 9.8


|statistics.v41.throughput_raw.total
|integer
|query
|False
a|Filter by statistics.v41.throughput_raw.total
```

```
* Introduced in: 9.8


|statistics.v41.throughput_raw.write
|integer
|query
|False
a|Filter by statistics.v41.throughput_raw.write

* Introduced in: 9.8


|enabled
|boolean
|query
|False
a|Filter by enabled


|qtree.validate_export
|boolean
|query
|False
a|Filter by qtree.validate_export

* Introduced in: 9.10


|qtree.export_enabled
|boolean
|query
|False
a|Filter by qtree.export_enabled

* Introduced in: 9.10


|protocol.v41_features.pnfs_enabled
|boolean
|query
|False
a|Filter by protocol.v41_features.pnfs_enabled


|protocol.v41_features.write_delegation_enabled
|boolean
|query
```

```
|False
a|Filter by protocol.v41_features.write_delegation_enabled


|protocol.v41_features.read_delegation_enabled
|boolean
|query
|False
a|Filter by protocol.v41_features.read_delegation_enabled


|protocol.v41_features.acl_enabled
|boolean
|query
|False
a|Filter by protocol.v41_features.acl_enabled


|protocol.v3_enabled
|boolean
|query
|False
a|Filter by protocol.v3_enabled


|protocol.v40_features.write_delegation_enabled
|boolean
|query
|False
a|Filter by protocol.v40_features.write_delegation_enabled


|protocol.v40_features.acl_enabled
|boolean
|query
|False
a|Filter by protocol.v40_features.acl_enabled


|protocol.v40_features.read_delegation_enabled
|boolean
|query
|False
a|Filter by protocol.v40_features.read_delegation_enabled


|protocol.v3_64bit_identifiers_enabled
```

```
|boolean
|query
|False
a|Filter by protocol.v3_64bit_identifiers_enabled

* Introduced in: 9.8


|protocol.v40_enabled
|boolean
|query
|False
a|Filter by protocol.v40_enabled


|protocol.v4_64bit_identifiers_enabled
|boolean
|query
|False
a|Filter by protocol.v4_64bit_identifiers_enabled

* Introduced in: 9.8


|protocol.v4_id_domain
|string
|query
|False
a|Filter by protocol.v4_id_domain


|protocol.v41_enabled
|boolean
|query
|False
a|Filter by protocol.v41_enabled


|rquota_enabled
|boolean
|query
|False
a|Filter by rquota_enabled

* Introduced in: 9.8
```

```
|transport.udp_enabled
|boolean
|query
|False
a|Filter by transport.udp_enabled


|transport.tcp_enabled
|boolean
|query
|False
a|Filter by transport.tcp_enabled


|protocol_access_rules.nfs4_access_type
|string
|query
|False
a|Filter by protocol_access_rules.nfs4_access_type

* Introduced in: 9.10


|protocol_access_rules.nfs3_access_type
|string
|query
|False
a|Filter by protocol_access_rules.nfs3_access_type

* Introduced in: 9.10


|protocol_access_rules.cifs_access_type
|string
|query
|False
a|Filter by protocol_access_rules.cifs_access_type

* Introduced in: 9.10


|vstorage_enabled
|boolean
|query
|False
a|Filter by vstorage_enabled
```

```
|positive_cached_credential_ttl
|integer
|query
|False
a|Filter by positive_cached_credential_ttl

* Introduced in: 9.8


|access_cache_config.ttl_positive
|integer
|query
|False
a|Filter by access_cache_config.ttl_positive

* Introduced in: 9.10


|access_cache_config.harvest_timeout
|integer
|query
|False
a|Filter by access_cache_config.harvest_timeout

* Introduced in: 9.10


|access_cache_config.isDnsTTLEnabled
|boolean
|query
|False
a|Filter by access_cache_config.isDnsTTLEnabled

* Introduced in: 9.10


|access_cache_config.ttl_failure
|integer
|query
|False
a|Filter by access_cache_config.ttl_failure

* Introduced in: 9.10


|access_cache_config.ttl_negative
```

```
|integer
|query
|False
a|Filter by access_cache_config.ttl_negative

* Introduced in: 9.10


|svm.uuid
|string
|query
|False
a|Filter by svm.uuid


|svm.name
|string
|query
|False
a|Filter by svm.name


|showmount_enabled
|boolean
|query
|False
a|Filter by showmount_enabled

* Introduced in: 9.8


|state
|string
|query
|False
a|Filter by state


|auth_sys_extended_groups_enabled
|boolean
|query
|False
a|Filter by auth_sys_extended_groups_enabled

* Introduced in: 9.8
```

```
|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===
```

```
== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of NFS Server Records


|records
|array[link:#nfs_service[nfs_service]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
```

```
      "extended_groups_limit": 32,
      "metric": {
        "v3": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "duration": "PT15S",
          "iops": {
            "read": 200,
            "total": 1000,
            "write": 100
          },
          "latency": {
            "read": 200,
            "total": 1000,
            "write": 100
          },
          "status": "ok",
          "throughput": {
            "read": 200,
            "total": 1000,
            "write": 100
          },
          "timestamp": "2017-01-25T11:20:13Z"
        },
        "v4": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "duration": "PT15S",
          "iops": {
            "read": 200,
            "total": 1000,
            "write": 100
          },
          "latency": {
            "read": 200,
            "total": 1000,
            "write": 100
          },
          "status": "ok",
          "throughput": {
```

```
            "read": 200,
            "total": 1000,
            "write": 100
          },
          "timestamp": "2017-01-25T11:20:13Z"
        },
        "v41": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "duration": "PT15S",
          "iops": {
            "read": 200,
            "total": 1000,
            "write": 100
          },
          "latency": {
            "read": 200,
            "total": 1000,
            "write": 100
          },
          "status": "ok",
          "throughput": {
            "read": 200,
            "total": 1000,
            "write": 100
          },
          "timestamp": "2017-01-25T11:20:13Z"
        }
      },
      "positive_cached_credential_ttl": 7200000,
      "protocol": {
        "v4_id_domain": "string"
      },
      "protocol_access_rules": {
        "cifs_access_type": "string",
        "nfs3_access_type": "string",
        "nfs4_access_type": "string"
      },
      "state": "string",
      "statistics": {
        "v3": {
          "iops_raw": {
            "read": 200,
```

```
        "total": 1000,
        "write": 100
      },
      "latency_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "status": "ok",
      "throughput_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "timestamp": "2017-01-25T11:20:13Z"
    },
    "v4": {
      "iops_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "latency_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "status": "ok",
      "throughput_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "timestamp": "2017-01-25T11:20:13Z"
    },
    "v41": {
      "iops_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "latency_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
```

```
          "status": "ok",
          "throughput_raw": {
            "read": 200,
            "total": 1000,
            "write": 100
          },
          "timestamp": "2017-01-25T11:20:13Z"
        }
      },
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
```

```
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
```

```
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#access_cache_config]
[.api-collapsible-fifth-title]
access_cache_config

[cols=3*,options=header]
|===
|Name
|Type
|Description

|harvest_timeout
|integer
a|Specifies the time after which an entry is deleted from the access
cache, if unused.


|isDnsTTLEnabled
```

```
|boolean
a|Specifies whether Dns TTL is enabled.


|ttl_failure
|integer
a|Specifies the time to live value for entries for which a failure was
encountered, in seconds.


|ttl_negative
|integer
a|Specifies the time to live value of a negative access cache, in seconds.


|ttl_positive
|integer
a|Specifies the time to live value of a positive access cache, in seconds.


|===


[#iops]
[.api-collapsible-fifth-title]
iops

The rate of I/O operations observed at the storage object.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.
```

```
|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#latency]
[.api-collapsible-fifth-title]
latency

The round trip latency in microseconds observed at the storage object.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.
```

```
|===


[#throughput]
[.api-collapsible-fifth-title]
throughput

The rate of throughput bytes per second observed at the storage object.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#v3]
[.api-collapsible-fifth-title]
v3

The NFSv3 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|_links
|link:#_links[_links]
a|

|duration
|string
a|The duration over which this sample is calculated. The time durations
are represented in the ISO-8601 standard format. Samples can be calculated
over the following durations:


|iops
|link:#iops[iops]
a|The rate of I/O operations observed at the storage object.


|latency
|link:#latency[latency]
a|The round trip latency in microseconds observed at the storage object.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_ delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput
|link:#throughput[throughput]
a|The rate of throughput bytes per second observed at the storage object.


|timestamp
|string
a|The timestamp of the performance data.


|===
```

```
[#v4]
[.api-collapsible-fifth-title]
v4

The NFSv4 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|duration
|string
a|The duration over which this sample is calculated. The time durations
are represented in the ISO-8601 standard format. Samples can be calculated
over the following durations:


|iops
|link:#iops[iops]
a|The rate of I/O operations observed at the storage object.


|latency
|link:#latency[latency]
a|The round trip latency in microseconds observed at the storage object.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_ delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
```

```
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput
|link:#throughput[throughput]
a|The rate of throughput bytes per second observed at the storage object.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#v41]
[.api-collapsible-fifth-title]
v41

The NFSv4.1 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|duration
|string
a|The duration over which this sample is calculated. The time durations
are represented in the ISO-8601 standard format. Samples can be calculated
over the following durations:


|iops
|link:#iops[iops]
a|The rate of I/O operations observed at the storage object.


|latency
```

```
|link:#latency[latency]
a|The round trip latency in microseconds observed at the storage object.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_ delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput
|link:#throughput[throughput]
a|The rate of throughput bytes per second observed at the storage object.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#metric]
[.api-collapsible-fifth-title]
metric

Historical performance numbers, such as IOPS latency and throughput, for
SVM-NFS protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|v3
```

```
|link:#v3[v3]
a|The NFSv3 operations


|v4
|link:#v4[v4]
a|The NFSv4 operations


|v41
|link:#v41[v41]
a|The NFSv4.1 operations


|===


[#v40_features]
[.api-collapsible-fifth-title]
v40_features

[cols=3*,options=header]
|===
|Name
|Type
|Description

|acl_enabled
|boolean
a|Specifies whether NFSv4.0 ACLs is enabled.


|read_delegation_enabled
|boolean
a|Specifies whether NFSv4.0 Read Delegation is enabled.


|write_delegation_enabled
|boolean
a|Specifies whether NFSv4.0 Write Delegation is enabled.


|===


[#v41_features]
[.api-collapsible-fifth-title]
```

```
v41_features

[cols=3*,options=header]
|===
|Name
|Type
|Description

|acl_enabled
|boolean
a|Specifies whether NFSv4.1 or later ACLs is enabled.


|pnfs_enabled
|boolean
a|Specifies whether NFSv4.1 or later Parallel NFS is enabled.


|read_delegation_enabled
|boolean
a|Specifies whether NFSv4.1 or later Read Delegation is enabled.


|write_delegation_enabled
|boolean
a|Specifies whether NFSv4.1 or later Write Delegation is enabled.


|===


[#protocol]
[.api-collapsible-fifth-title]
protocol

[cols=3*,options=header]
|===
|Name
|Type
|Description

|v3_64bit_identifiers_enabled
|boolean
a|Specifies whether 64-bit support for NFSv3 FSIDs and file IDs is
enabled.
```

```
|v3_enabled
|boolean
a|Specifies whether NFSv3 protocol is enabled.


|v40_enabled
|boolean
a|Specifies whether NFSv4.0 protocol is enabled.


|v40_features
|link:#v40_features[v40_features]
a|

|v41_enabled
|boolean
a|Specifies whether NFSv4.1 or later protocol is enabled.


|v41_features
|link:#v41_features[v41_features]
a|

|v4_64bit_identifiers_enabled
|boolean
a|Specifies whether 64-bit support for NFSv4.x FSIDs and file IDs is
enabled.


|v4_id_domain
|string
a|Specifies the domain portion of the string form of user and group
names as defined by the NFSv4 protocol.


|===


[#protocol_access_rules]
[.api-collapsible-fifth-title]
protocol_access_rules

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|cifs_access_type
|string
a|Access available for the CIFS protocol.


|nfs3_access_type
|string
a|Access available for the NFSv3 protocol.


|nfs4_access_type
|string
a|Access available for the NFSv4 protocol.


|===


[#qtree]
[.api-collapsible-fifth-title]
qtree

[cols=3*,options=header]
|===
|Name
|Type
|Description

|export_enabled
|boolean
a|Specifies whether qtree export is enabled.


|validate_export
|boolean
a|Specifies whether qtree export validation is enabled.


|===


[#iops_raw]
[.api-collapsible-fifth-title]
iops_raw

The number of I/O operations observed at the storage object. This should
```

```
be used along with delta time to calculate the rate of I/O operations per
unit of time.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#latency_raw]
[.api-collapsible-fifth-title]
latency_raw

The raw latency in microseconds observed at the storage object. This
should be divided by the raw IOPS value to calculate the average latency
per I/O operation.


[cols=3*,options=header]
|===
|Name
|Type
```

```
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#throughput_raw]
[.api-collapsible-fifth-title]
throughput_raw

Throughput bytes observed at the storage object. This should be used along
with delta time to calculate the rate of throughput bytes per unit of
time.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|read
|integer
a|Performance metric for read I/O operations.


|total
```

```
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#v3]
[.api-collapsible-fifth-title]
v3

The NFSv3 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|iops_raw
|link:#iops_raw[iops_raw]
a|The number of I/O operations observed at the storage object. This should
be used along with delta time to calculate the rate of I/O operations per
unit of time.


|latency_raw
|link:#latency_raw[latency_raw]
a|The raw latency in microseconds observed at the storage object. This
should be divided by the raw IOPS value to calculate the average latency
per I/O operation.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_delta_time" is encountered when the time
```

```
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput_raw
|link:#throughput_raw[throughput_raw]
a|Throughput bytes observed at the storage object. This should be used
along with delta time to calculate the rate of throughput bytes per unit
of time.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#v4]
[.api-collapsible-fifth-title]
v4

The NFSv4 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|iops_raw
|link:#iops_raw[iops_raw]
a|The number of I/O operations observed at the storage object. This should
be used along with delta time to calculate the rate of I/O operations per
unit of time.


|latency_raw
|link:#latency_raw[latency_raw]
a|The raw latency in microseconds observed at the storage object. This
should be divided by the raw IOPS value to calculate the average latency
per I/O operation.
```

```
|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput_raw
|link:#throughput_raw[throughput_raw]
a|Throughput bytes observed at the storage object. This should be used
along with delta time to calculate the rate of throughput bytes per unit
of time.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#v41]
[.api-collapsible-fifth-title]
v41

The NFSv4.1 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|iops_raw
|link:#iops_raw[iops_raw]
```

```
a|The number of I/O operations observed at the storage object. This should
be used along with delta time to calculate the rate of I/O operations per
unit of time.


|latency_raw
|link:#latency_raw[latency_raw]
a|The raw latency in microseconds observed at the storage object. This
should be divided by the raw IOPS value to calculate the average latency
per I/O operation.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput_raw
|link:#throughput_raw[throughput_raw]
a|Throughput bytes observed at the storage object. This should be used
along with delta time to calculate the rate of throughput bytes per unit
of time.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#statistics]
[.api-collapsible-fifth-title]
statistics

Realtime performance numbers, such as IOPS latency and throughput, for
```

```
SVM-NFS protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|v3
|link:#v3[v3]
a|The NFSv3 operations


|v4
|link:#v4[v4]
a|The NFSv4 operations


|v41
|link:#v41[v41]
a|The NFSv4.1 operations


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
```

```
|string
a|The unique identifier of the SVM.


|===


[#transport]
[.api-collapsible-fifth-title]
transport

[cols=3*,options=header]
|===
|Name
|Type
|Description

|tcp_enabled
|boolean
a|Specifies whether TCP transports are enabled on the server.


|udp_enabled
|boolean
a|Specifies whether UDP transports are enabled on the server.


|===


[#nfs_service]
[.api-collapsible-fifth-title]
nfs_service

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|access_cache_config
|link:#access_cache_config[access_cache_config]
a|
```

```
|auth_sys_extended_groups_enabled
|boolean
a|Specifies whether or not extended groups support over AUTH_SYS is
enabled.


|enabled
|boolean
a|Specifies if the NFS service is administratively enabled.


|extended_groups_limit
|integer
a|Specifies the maximum auxillary groups supported over AUTH_SYS and
RPCSEC_GSS.


|metric
|link:#metric[metric]
a|Historical performance numbers, such as IOPS latency and throughput, for
SVM-NFS protocol.


|positive_cached_credential_ttl
|integer
a|Specifies the time to live value (in msecs) of a positive cached
credential


|protocol
|link:#protocol[protocol]
a|

|protocol_access_rules
|link:#protocol_access_rules[protocol_access_rules]
a|

|qtree
|link:#qtree[qtree]
a|

|rquota_enabled
|boolean
a|Specifies whether or not the remote quota feature is enabled.
```

```
|showmount_enabled
|boolean
a|Specifies whether or not the showmount feature is enabled.


|state
|string
a|Specifies the state of the NFS service on the SVM. The following values
are supported:
        * online - NFS server is ready to accept client requests.
        * offline - NFS server is not ready to accept client requests.


|statistics
|link:#statistics[statistics]
a|Realtime performance numbers, such as IOPS latency and throughput, for
SVM-NFS protocol.


|svm
|link:#svm[svm]
a|

|transport
|link:#transport[transport]
a|

|vstorage_enabled
|boolean
a|Specifies whether or not the VMware vstorage feature is enabled.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
```

```
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====
```

```
[[IDc03c6f99655254912a401e59dda09d25]]
= Create the NFS configuration for an SVM

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/protocols/nfs/services`#

*Introduced In:* 9.6

Creates an NFS configuration for an SVM.

== Required properties

* `svm.uuid` or `svm.name` - Existing SVM for which to create the NFS
configuration.

== Default property values

If not specified in POST, the following default property values are
assigned:

* `enabled` - _true_
* `state` - online
* `transport.udp_enabled` - _true_
* `transport.tcp_enabled` - _true_
* `protocol.v3_enabled` - _true_
* `protocol.v3_64bit_identifiers_enabled` - _false_
* `protocol.v4_id_domain` - defaultv4iddomain.com
* `protocol.v4_64bit_identifiers_enabled` - _true_
* `protocol.v4_enabled` - _false_
* `protocol.v41_enabled` - _false_
* `protocol.v40_features.acl_enabled` - _false_
* `protocol.v40_features.read_delegation_enabled` - _false_
* `protocol.v40_features.write_delegation_enabled` - _false_
* `protocol.v41_features.acl_enabled` - _false_
* `protocol.v41_features.read_delegation_enabled` - _false_
* `protocol.v41_features.write_delegation_enabled` - _false_
* `protocol.v41_features.pnfs_enabled` - _false_
* `vstorage_enabled` - _false_
* `rquota_enabled` - _false_
* `showmount_enabled` - _true_
* `auth_sys_extended_groups_enabled` - _false_
* `extended_groups_limit` - _32_
* `positive_cached_credential_ttl` - _7200000_
* `qtree.export_enabled` - _false_
```

```
* `qtree.validate_export` - _true_
* `access_cache_config.ttl_positive` - _60_
* `access_cache_config.ttl_negative` - _30_
* `access_cache_config.ttl_failure` - _1_
* `access_cache_config.harvest_timeout` - _3600_
* `access_cache_config.isDnsTTLEnabled` - _false_

== Related ONTAP commands

* `vserver nfs create`
* `export-policy access-cache config show`

== Learn more

* xref:{relative_path}protocols_nfs_services_endpoint_overview.html[DOC
/protocols/nfs/services]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|return_records
|boolean
|query
|False
a|The default is false.  If set to true, the records are returned.

* Default value:

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
```

```
|Description

|access_cache_config
|link:#access_cache_config[access_cache_config]
a|

|auth_sys_extended_groups_enabled
|boolean
a|Specifies whether or not extended groups support over AUTH_SYS is
enabled.


|enabled
|boolean
a|Specifies if the NFS service is administratively enabled.


|extended_groups_limit
|integer
a|Specifies the maximum auxillary groups supported over AUTH_SYS and
RPCSEC_GSS.


|positive_cached_credential_ttl
|integer
a|Specifies the time to live value (in msecs) of a positive cached
credential


|protocol
|link:#protocol[protocol]
a|

|protocol_access_rules
|link:#protocol_access_rules[protocol_access_rules]
a|

|qtree
|link:#qtree[qtree]
a|

|rquota_enabled
|boolean
a|Specifies whether or not the remote quota feature is enabled.


|showmount_enabled
```

```
|boolean
a|Specifies whether or not the showmount feature is enabled.


|state
|string
a|Specifies the state of the NFS service on the SVM. The following values
are supported:
    * online - NFS server is ready to accept client requests.
    * offline - NFS server is not ready to accept client requests.


|svm
|link:#svm[svm]
a|

|transport
|link:#transport[transport]
a|

|vstorage_enabled
|boolean
a|Specifies whether or not the VMware vstorage feature is enabled.


|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "extended_groups_limit": 32,
  "positive_cached_credential_ttl": 7200000,
  "protocol": {
    "v4_id_domain": "string"
  },
  "protocol_access_rules": {
    "cifs_access_type": "string",
    "nfs3_access_type": "string",
    "nfs4_access_type": "string"
  },
  "state": "string",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
```

```
  }
}
====

== Response
```

Status: 201, Created

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|num_records
|integer
a|Number of NFS Server Records


|records
|array[link:#nfs_service[nfs_service]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "records": [
    {
      "extended_groups_limit": 32,
      "positive_cached_credential_ttl": 7200000,
      "protocol": {
        "v4_id_domain": "string"
      },
      "protocol_access_rules": {
        "cifs_access_type": "string",
        "nfs3_access_type": "string",
        "nfs4_access_type": "string"
      },
      "state": "string",
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 3276916
| Vserver is not running

| 3276994
| Kerberos must be disabled on all LIFs on Vserver before adding or
removing AES encryption. Disable Kerberos on the LIF and try again

| 3277038
| Cannot enable \"showmount\" feature because it requires an effective
cluster version of Data ONTAP 8.3.0 or later

| 3277049
| Cannot enable \"showmount\" feature on ID-Discard Vserver. Ensure that
the Vserver is initialized and retry the command

| 3277052
| NFSv4.x access to transitioned volumes in this Vserver could trigger
conversion of non-Unicode directories to Unicode, which might impact data-
serving performance. Before enabling NFSv4.x for this Vserver, refer to
the Data and Configuration Transition Guide

| 3277069
| Cannot disable TCP because the SnapDiff RPC server is in the \"on\"
state

| 3277089
| Attempting to create an NFS server using 64-bits for NFSv3 FSIDs and
File IDs on Vserver. Older client software might not work with 64-bit
identifiers

| 3277099
| Domain name contains invalid characters or it is too short. Allowed
characters are: alphabetical characters (A-Za-z), numeric characters (0-
9), minus sign (-), and the period (.). The first character must be
alphabetical or numeric, last character must not be a minus sign or a
period. Minimum supported length: 2 characters, maximum of 256 characters
|===
```

```
== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#access_cache_config]
[.api-collapsible-fifth-title]
access_cache_config

[cols=3*,options=header]
|===
|Name
|Type
|Description

|harvest_timeout
|integer
a|Specifies the time after which an entry is deleted from the access
cache, if unused.


|isDnsTTLEnabled
|boolean
a|Specifies whether Dns TTL is enabled.
```

```
|ttl_failure
|integer
a|Specifies the time to live value for entries for which a failure was
encountered, in seconds.


|ttl_negative
|integer
a|Specifies the time to live value of a negative access cache, in seconds.


|ttl_positive
|integer
a|Specifies the time to live value of a positive access cache, in seconds.


|===


[#iops]
[.api-collapsible-fifth-title]
iops

The rate of I/O operations observed at the storage object.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.
```

```
|write
|integer
a|Peformance metric for write I/O operations.


|===


[#latency]
[.api-collapsible-fifth-title]
latency

The round trip latency in microseconds observed at the storage object.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===
```

```
[#throughput]
[.api-collapsible-fifth-title]
throughput

The rate of throughput bytes per second observed at the storage object.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#v3]
[.api-collapsible-fifth-title]
v3

The NFSv3 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|duration
|string
a|The duration over which this sample is calculated. The time durations
```

```
are represented in the ISO-8601 standard format. Samples can be calculated
over the following durations:


|iops
|link:#iops[iops]
a|The rate of I/O operations observed at the storage object.


|latency
|link:#latency[latency]
a|The round trip latency in microseconds observed at the storage object.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_ delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput
|link:#throughput[throughput]
a|The rate of throughput bytes per second observed at the storage object.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#v4]
[.api-collapsible-fifth-title]
v4

The NFSv4 operations
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|duration
|string
a|The duration over which this sample is calculated. The time durations
are represented in the ISO-8601 standard format. Samples can be calculated
over the following durations:


|iops
|link:#iops[iops]
a|The rate of I/O operations observed at the storage object.


|latency
|link:#latency[latency]
a|The round trip latency in microseconds observed at the storage object.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_ delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput
|link:#throughput[throughput]
a|The rate of throughput bytes per second observed at the storage object.


|timestamp
|string
```

```
a|The timestamp of the performance data.


|===


[#v41]
[.api-collapsible-fifth-title]
v41

The NFSv4.1 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|duration
|string
a|The duration over which this sample is calculated. The time durations
are represented in the ISO-8601 standard format. Samples can be calculated
over the following durations:


|iops
|link:#iops[iops]
a|The rate of I/O operations observed at the storage object.


|latency
|link:#latency[latency]
a|The round trip latency in microseconds observed at the storage object.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_ delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
```

```
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput
|link:#throughput[throughput]
a|The rate of throughput bytes per second observed at the storage object.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#metric]
[.api-collapsible-fifth-title]
metric

Historical performance numbers, such as IOPS latency and throughput, for
SVM-NFS protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|v3
|link:#v3[v3]
a|The NFSv3 operations


|v4
|link:#v4[v4]
a|The NFSv4 operations


|v41
|link:#v41[v41]
a|The NFSv4.1 operations


|===
```

```
[#v40_features]
[.api-collapsible-fifth-title]
v40_features

[cols=3*,options=header]
|===
|Name
|Type
|Description

|acl_enabled
|boolean
a|Specifies whether NFSv4.0 ACLs is enabled.


|read_delegation_enabled
|boolean
a|Specifies whether NFSv4.0 Read Delegation is enabled.


|write_delegation_enabled
|boolean
a|Specifies whether NFSv4.0 Write Delegation is enabled.


|===


[#v41_features]
[.api-collapsible-fifth-title]
v41_features

[cols=3*,options=header]
|===
|Name
|Type
|Description

|acl_enabled
|boolean
a|Specifies whether NFSv4.1 or later ACLs is enabled.


|pnfs_enabled
|boolean
```

```
a|Specifies whether NFSv4.1 or later Parallel NFS is enabled.


|read_delegation_enabled
|boolean
a|Specifies whether NFSv4.1 or later Read Delegation is enabled.


|write_delegation_enabled
|boolean
a|Specifies whether NFSv4.1 or later Write Delegation is enabled.


|===


[#protocol]
[.api-collapsible-fifth-title]
protocol

[cols=3*,options=header]
|===
|Name
|Type
|Description

|v3_64bit_identifiers_enabled
|boolean
a|Specifies whether 64-bit support for NFSv3 FSIDs and file IDs is
enabled.


|v3_enabled
|boolean
a|Specifies whether NFSv3 protocol is enabled.


|v40_enabled
|boolean
a|Specifies whether NFSv4.0 protocol is enabled.


|v40_features
|link:#v40_features[v40_features]
a|

|v41_enabled
```

```
|boolean
a|Specifies whether NFSv4.1 or later protocol is enabled.


|v41_features
|link:#v41_features[v41_features]
a|

|v4_64bit_identifiers_enabled
|boolean
a|Specifies whether 64-bit support for NFSv4.x FSIDs and file IDs is
enabled.


|v4_id_domain
|string
a|Specifies the domain portion of the string form of user and group
names as defined by the NFSv4 protocol.


|===


[#protocol_access_rules]
[.api-collapsible-fifth-title]
protocol_access_rules

[cols=3*,options=header]
|===
|Name
|Type
|Description

|cifs_access_type
|string
a|Access available for the CIFS protocol.


|nfs3_access_type
|string
a|Access available for the NFSv3 protocol.


|nfs4_access_type
|string
a|Access available for the NFSv4 protocol.
```

```
|===


[#qtree]
[.api-collapsible-fifth-title]
qtree

[cols=3*,options=header]
|===
|Name
|Type
|Description

|export_enabled
|boolean
a|Specifies whether qtree export is enabled.


|validate_export
|boolean
a|Specifies whether qtree export validation is enabled.


|===


[#iops_raw]
[.api-collapsible-fifth-title]
iops_raw

The number of I/O operations observed at the storage object. This should
be used along with delta time to calculate the rate of I/O operations per
unit of time.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.
```

```
|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#latency_raw]
[.api-collapsible-fifth-title]
latency_raw

The raw latency in microseconds observed at the storage object. This
should be divided by the raw IOPS value to calculate the average latency
per I/O operation.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
```

```
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#throughput_raw]
[.api-collapsible-fifth-title]
throughput_raw

Throughput bytes observed at the storage object. This should be used along
with delta time to calculate the rate of throughput bytes per unit of
time.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#v3]
[.api-collapsible-fifth-title]
v3
```

```
The NFSv3 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|iops_raw
|link:#iops_raw[iops_raw]
a|The number of I/O operations observed at the storage object. This should
be used along with delta time to calculate the rate of I/O operations per
unit of time.


|latency_raw
|link:#latency_raw[latency_raw]
a|The raw latency in microseconds observed at the storage object. This
should be divided by the raw IOPS value to calculate the average latency
per I/O operation.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput_raw
|link:#throughput_raw[throughput_raw]
a|Throughput bytes observed at the storage object. This should be used
along with delta time to calculate the rate of throughput bytes per unit
of time.


|timestamp
```

```
|string
a|The timestamp of the performance data.


|===


[#v4]
[.api-collapsible-fifth-title]
v4

The NFSv4 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|iops_raw
|link:#iops_raw[iops_raw]
a|The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.


|latency_raw
|link:#latency_raw[latency_raw]
a|The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
```

```
|throughput_raw
|link:#throughput_raw[throughput_raw]
a|Throughput bytes observed at the storage object. This should be used
along with delta time to calculate the rate of throughput bytes per unit
of time.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#v41]
[.api-collapsible-fifth-title]
v41

The NFSv4.1 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|iops_raw
|link:#iops_raw[iops_raw]
a|The number of I/O operations observed at the storage object. This should
be used along with delta time to calculate the rate of I/O operations per
unit of time.


|latency_raw
|link:#latency_raw[latency_raw]
a|The raw latency in microseconds observed at the storage object. This
should be divided by the raw IOPS value to calculate the average latency
per I/O operation.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
```

```
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput_raw
|link:#throughput_raw[throughput_raw]
a|Throughput bytes observed at the storage object. This should be used
along with delta time to calculate the rate of throughput bytes per unit
of time.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#statistics]
[.api-collapsible-fifth-title]
statistics

Realtime performance numbers, such as IOPS latency and throughput, for
SVM-NFS protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|v3
|link:#v3[v3]
a|The NFSv3 operations


|v4
```

```
|link:#v4[v4]
a|The NFSv4 operations


|v41
|link:#v41[v41]
a|The NFSv4.1 operations


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#transport]
[.api-collapsible-fifth-title]
transport

[cols=3*,options=header]
|===
|Name
|Type
|Description

|tcp_enabled
|boolean
```

```
a|Specifies whether TCP transports are enabled on the server.


|udp_enabled
|boolean
a|Specifies whether UDP transports are enabled on the server.


|===


[#nfs_service]
[.api-collapsible-fifth-title]
nfs_service

[cols=3*,options=header]
|===
|Name
|Type
|Description

|access_cache_config
|link:#access_cache_config[access_cache_config]
a|

|auth_sys_extended_groups_enabled
|boolean
a|Specifies whether or not extended groups support over AUTH_SYS is
enabled.


|enabled
|boolean
a|Specifies if the NFS service is administratively enabled.


|extended_groups_limit
|integer
a|Specifies the maximum auxillary groups supported over AUTH_SYS and
RPCSEC_GSS.


|positive_cached_credential_ttl
|integer
a|Specifies the time to live value (in msecs) of a positive cached
credential
```

```
|protocol
|link:#protocol[protocol]
a|

|protocol_access_rules
|link:#protocol_access_rules[protocol_access_rules]
a|

|qtree
|link:#qtree[qtree]
a|

|rquota_enabled
|boolean
a|Specifies whether or not the remote quota feature is enabled.


|showmount_enabled
|boolean
a|Specifies whether or not the showmount feature is enabled.


|state
|string
a|Specifies the state of the NFS service on the SVM. The following values
are supported:
      * online - NFS server is ready to accept client requests.
      * offline - NFS server is not ready to accept client requests.


|svm
|link:#svm[svm]
a|

|transport
|link:#transport[transport]
a|

|vstorage_enabled
|boolean
a|Specifies whether or not the VMware vstorage feature is enabled.


|===
```

```
[#nfs_service]
[.api-collapsible-fifth-title]
nfs_service

[cols=3*,options=header]
|===
|Name
|Type
|Description

|access_cache_config
|link:#access_cache_config[access_cache_config]
a|

|auth_sys_extended_groups_enabled
|boolean
a|Specifies whether or not extended groups support over AUTH_SYS is
enabled.


|enabled
|boolean
a|Specifies if the NFS service is administratively enabled.


|extended_groups_limit
|integer
a|Specifies the maximum auxillary groups supported over AUTH_SYS and
RPCSEC_GSS.


|positive_cached_credential_ttl
|integer
a|Specifies the time to live value (in msecs) of a positive cached
credential


|protocol
|link:#protocol[protocol]
a|

|protocol_access_rules
|link:#protocol_access_rules[protocol_access_rules]
a|

|qtree
|link:#qtree[qtree]
```

```
a|

|rquota_enabled
|boolean
a|Specifies whether or not the remote quota feature is enabled.


|showmount_enabled
|boolean
a|Specifies whether or not the showmount feature is enabled.


|state
|string
a|Specifies the state of the NFS service on the SVM. The following values
are supported:

***** online - NFS server is ready to accept client requests.

***** offline - NFS server is not ready to accept client requests.


|svm
|link:#svm[svm]
a|

|transport
|link:#transport[transport]
a|

|vstorage_enabled
|boolean
a|Specifies whether or not the VMware vstorage feature is enabled.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===
```

```
//end collapsible .Definitions block
====



[[ID9a8b5dc506deb427878b7214c43ec289]]
= Delete the NFS configuration for an SVM

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/protocols/nfs/services/{svm.uuid}`#

*Introduced In:* 9.6

Deletes the NFS configuration of an SVM.

== Related ONTAP commands

* `vserver nfs delete`

== Learn more

* xref:{relative_path}protocols_nfs_services_endpoint_overview.html[DOC
/protocols/nfs/services]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|svm.uuid
|string
|path
|True
a|
|===

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 3276916
| Vserver is not running

| 3277008
| NFS Kerberos must be disabled on all LIFs of Vserver before deleting the
NFS configuration. When all LIFs are disabled, try the operation

| 3277009
| NFS Kerberos realms associated with the Vserver are deleted

| 3277111
| Internal error. Failed to remove NFS-specific security trace filter for
Vserver

| 3277112
| Internal error. Failed to modify the protocols field of a security trace
filter for Vserver
|===



[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
```

```
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===
```

```
[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDc4afff6c2d2473a08e6bd3a6c87ab29c]]
= Retrieve the NFS configuration for an SVM

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/nfs/services/{svm.uuid}`#

*Introduced In:* 9.6

Retrieves the NFS configuration of an SVM.
```

```
== Related ONTAP commands

* `vserver nfs show`
* `vserver nfs status`

== Learn more

* xref:{relative_path}protocols_nfs_services_endpoint_overview.html[DOC
/protocols/nfs/services]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|svm.uuid
|string
|path
|True
a|

|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|_links
|link:#_links[_links]
a|

|access_cache_config
|link:#access_cache_config[access_cache_config]
a|

|auth_sys_extended_groups_enabled
|boolean
a|Specifies whether or not extended groups support over AUTH_SYS is
enabled.


|enabled
|boolean
a|Specifies if the NFS service is administratively enabled.


|extended_groups_limit
|integer
a|Specifies the maximum auxillary groups supported over AUTH_SYS and
RPCSEC_GSS.


|metric
|link:#metric[metric]
a|Historical performance numbers, such as IOPS latency and throughput, for
SVM-NFS protocol.


|positive_cached_credential_ttl
|integer
a|Specifies the time to live value (in msecs) of a positive cached
credential


|protocol
|link:#protocol[protocol]
a|

|protocol_access_rules
|link:#protocol_access_rules[protocol_access_rules]
a|

|qtree
```

```
|link:#qtree[qtree]
a|

|rquota_enabled
|boolean
a|Specifies whether or not the remote quota feature is enabled.


|showmount_enabled
|boolean
a|Specifies whether or not the showmount feature is enabled.


|state
|string
a|Specifies the state of the NFS service on the SVM. The following values
are supported:

***** online - NFS server is ready to accept client requests.

***** offline - NFS server is not ready to accept client requests.


|statistics
|link:#statistics[statistics]
a|Realtime performance numbers, such as IOPS latency and throughput, for
SVM-NFS protocol.


|svm
|link:#svm[svm]
a|

|transport
|link:#transport[transport]
a|

|vstorage_enabled
|boolean
a|Specifies whether or not the VMware vstorage feature is enabled.


|===


.Example response
[%collapsible%closed]
```

```
====
[source,json,subs=+macros]
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "extended_groups_limit": 32,
  "metric": {
    "v3": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "duration": "PT15S",
      "iops": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "latency": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "status": "ok",
      "throughput": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "timestamp": "2017-01-25T11:20:13Z"
    },
    "v4": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "duration": "PT15S",
      "iops": {
        "read": 200,
        "total": 1000,
        "write": 100
```

```
      },
      "latency": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "status": "ok",
      "throughput": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "timestamp": "2017-01-25T11:20:13Z"
    },
    "v41": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "duration": "PT15S",
      "iops": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "latency": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "status": "ok",
      "throughput": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "timestamp": "2017-01-25T11:20:13Z"
    }
  },
  "positive_cached_credential_ttl": 7200000,
  "protocol": {
    "v4_id_domain": "string"
  },
  "protocol_access_rules": {
    "cifs_access_type": "string",
```

```
    "nfs3_access_type": "string",
    "nfs4_access_type": "string"
  },
  "state": "string",
  "statistics": {
    "v3": {
      "iops_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "latency_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "status": "ok",
      "throughput_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "timestamp": "2017-01-25T11:20:13Z"
    },
    "v4": {
      "iops_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "latency_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "status": "ok",
      "throughput_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "timestamp": "2017-01-25T11:20:13Z"
    },
    "v41": {
      "iops_raw": {
        "read": 200,
```

```
        "total": 1000,
        "write": 100
      },
      "latency_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "status": "ok",
      "throughput_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "timestamp": "2017-01-25T11:20:13Z"
    }
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===
```

```
.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#access_cache_config]
[.api-collapsible-fifth-title]
access_cache_config

[cols=3*,options=header]
|===
|Name
|Type
|Description

|harvest_timeout
|integer
a|Specifies the time after which an entry is deleted from the access
cache, if unused.


|isDnsTTLEnabled
|boolean
a|Specifies whether Dns TTL is enabled.


|ttl_failure
|integer
a|Specifies the time to live value for entries for which a failure was
encountered, in seconds.


|ttl_negative
|integer
a|Specifies the time to live value of a negative access cache, in seconds.


|ttl_positive
|integer
```

```
a|Specifies the time to live value of a positive access cache, in seconds.


|===


[#iops]
[.api-collapsible-fifth-title]
iops

The rate of I/O operations observed at the storage object.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#latency]
[.api-collapsible-fifth-title]
latency
```

```
The round trip latency in microseconds observed at the storage object.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#throughput]
[.api-collapsible-fifth-title]
throughput

The rate of throughput bytes per second observed at the storage object.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|read
```

```
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#v3]
[.api-collapsible-fifth-title]
v3

The NFSv3 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|duration
|string
a|The duration over which this sample is calculated. The time durations
are represented in the ISO-8601 standard format. Samples can be calculated
over the following durations:


|iops
|link:#iops[iops]
a|The rate of I/O operations observed at the storage object.


|latency
```

```
|link:#latency[latency]
a|The round trip latency in microseconds observed at the storage object.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_ delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput
|link:#throughput[throughput]
a|The rate of throughput bytes per second observed at the storage object.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#v4]
[.api-collapsible-fifth-title]
v4

The NFSv4 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
```

```
a|

|duration
|string
a|The duration over which this sample is calculated. The time durations
are represented in the ISO-8601 standard format. Samples can be calculated
over the following durations:


|iops
|link:#iops[iops]
a|The rate of I/O operations observed at the storage object.


|latency
|link:#latency[latency]
a|The round trip latency in microseconds observed at the storage object.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_ delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput
|link:#throughput[throughput]
a|The rate of throughput bytes per second observed at the storage object.


|timestamp
|string
a|The timestamp of the performance data.


|===
```

```
[#v41]
[.api-collapsible-fifth-title]
v41

The NFSv4.1 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|duration
|string
a|The duration over which this sample is calculated. The time durations
are represented in the ISO-8601 standard format. Samples can be calculated
over the following durations:


|iops
|link:#iops[iops]
a|The rate of I/O operations observed at the storage object.


|latency
|link:#latency[latency]
a|The round trip latency in microseconds observed at the storage object.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_ delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.
```

```
|throughput
|link:#throughput[throughput]
a|The rate of throughput bytes per second observed at the storage object.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#metric]
[.api-collapsible-fifth-title]
metric

Historical performance numbers, such as IOPS latency and throughput, for
SVM-NFS protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|v3
|link:#v3[v3]
a|The NFSv3 operations


|v4
|link:#v4[v4]
a|The NFSv4 operations


|v41
|link:#v41[v41]
a|The NFSv4.1 operations


|===
```

```
[#v40_features]
[.api-collapsible-fifth-title]
v40_features

[cols=3*,options=header]
|===
|Name
|Type
|Description

|acl_enabled
|boolean
a|Specifies whether NFSv4.0 ACLs is enabled.


|read_delegation_enabled
|boolean
a|Specifies whether NFSv4.0 Read Delegation is enabled.


|write_delegation_enabled
|boolean
a|Specifies whether NFSv4.0 Write Delegation is enabled.


|===


[#v41_features]
[.api-collapsible-fifth-title]
v41_features

[cols=3*,options=header]
|===
|Name
|Type
|Description

|acl_enabled
|boolean
a|Specifies whether NFSv4.1 or later ACLs is enabled.


|pnfs_enabled
|boolean
a|Specifies whether NFSv4.1 or later Parallel NFS is enabled.
```

```
|read_delegation_enabled
|boolean
a|Specifies whether NFSv4.1 or later Read Delegation is enabled.


|write_delegation_enabled
|boolean
a|Specifies whether NFSv4.1 or later Write Delegation is enabled.


|===


[#protocol]
[.api-collapsible-fifth-title]
protocol

[cols=3*,options=header]
|===
|Name
|Type
|Description

|v3_64bit_identifiers_enabled
|boolean
a|Specifies whether 64-bit support for NFSv3 FSIDs and file IDs is
enabled.


|v3_enabled
|boolean
a|Specifies whether NFSv3 protocol is enabled.


|v40_enabled
|boolean
a|Specifies whether NFSv4.0 protocol is enabled.


|v40_features
|link:#v40_features[v40_features]
a|

|v41_enabled
|boolean
a|Specifies whether NFSv4.1 or later protocol is enabled.
```

```
|v41_features
|link:#v41_features[v41_features]
a|

|v4_64bit_identifiers_enabled
|boolean
a|Specifies whether 64-bit support for NFSv4.x FSIDs and file IDs is
enabled.


|v4_id_domain
|string
a|Specifies the domain portion of the string form of user and group
names as defined by the NFSv4 protocol.


|===


[#protocol_access_rules]
[.api-collapsible-fifth-title]
protocol_access_rules

[cols=3*,options=header]
|===
|Name
|Type
|Description

|cifs_access_type
|string
a|Access available for the CIFS protocol.


|nfs3_access_type
|string
a|Access available for the NFSv3 protocol.


|nfs4_access_type
|string
a|Access available for the NFSv4 protocol.


|===
```

```
[#qtree]
[.api-collapsible-fifth-title]
qtree

[cols=3*,options=header]
|===
|Name
|Type
|Description

|export_enabled
|boolean
a|Specifies whether qtree export is enabled.


|validate_export
|boolean
a|Specifies whether qtree export validation is enabled.


|===


[#iops_raw]
[.api-collapsible-fifth-title]
iops_raw

The number of I/O operations observed at the storage object. This should
be used along with delta time to calculate the rate of I/O operations per
unit of time.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
```

```
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#latency_raw]
[.api-collapsible-fifth-title]
latency_raw

The raw latency in microseconds observed at the storage object. This
should be divided by the raw IOPS value to calculate the average latency
per I/O operation.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.
```

```
|write
|integer
a|Peformance metric for write I/O operations.


|===


[#throughput_raw]
[.api-collapsible-fifth-title]
throughput_raw

Throughput bytes observed at the storage object. This should be used along
with delta time to calculate the rate of throughput bytes per unit of
time.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#v3]
[.api-collapsible-fifth-title]
v3

The NFSv3 operations
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|iops_raw
|link:#iops_raw[iops_raw]
a|The number of I/O operations observed at the storage object. This should
be used along with delta time to calculate the rate of I/O operations per
unit of time.


|latency_raw
|link:#latency_raw[latency_raw]
a|The raw latency in microseconds observed at the storage object. This
should be divided by the raw IOPS value to calculate the average latency
per I/O operation.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput_raw
|link:#throughput_raw[throughput_raw]
a|Throughput bytes observed at the storage object. This should be used
along with delta time to calculate the rate of throughput bytes per unit
of time.


|timestamp
|string
a|The timestamp of the performance data.
```

```
|===


[#v4]
[.api-collapsible-fifth-title]
v4

The NFSv4 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|iops_raw
|link:#iops_raw[iops_raw]
a|The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.


|latency_raw
|link:#latency_raw[latency_raw]
a|The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
```

```
|throughput_raw
|link:#throughput_raw[throughput_raw]
a|Throughput bytes observed at the storage object. This should be used
along with delta time to calculate the rate of throughput bytes per unit
of time.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#v41]
[.api-collapsible-fifth-title]
v41

The NFSv4.1 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|iops_raw
|link:#iops_raw[iops_raw]
a|The number of I/O operations observed at the storage object. This should
be used along with delta time to calculate the rate of I/O operations per
unit of time.


|latency_raw
|link:#latency_raw[latency_raw]
a|The raw latency in microseconds observed at the storage object. This
should be divided by the raw IOPS value to calculate the average latency
per I/O operation.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
```

```
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput_raw
|link:#throughput_raw[throughput_raw]
a|Throughput bytes observed at the storage object. This should be used
along with delta time to calculate the rate of throughput bytes per unit
of time.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#statistics]
[.api-collapsible-fifth-title]
statistics

Realtime performance numbers, such as IOPS latency and throughput, for
SVM-NFS protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|v3
|link:#v3[v3]
a|The NFSv3 operations


|v4
|link:#v4[v4]
a|The NFSv4 operations
```

```
|v41
|link:#v41[v41]
a|The NFSv4.1 operations


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#transport]
[.api-collapsible-fifth-title]
transport

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|tcp_enabled
|boolean
a|Specifies whether TCP transports are enabled on the server.


|udp_enabled
|boolean
a|Specifies whether UDP transports are enabled on the server.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
```

```
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDc0764b846b3e63af912ec7324759b847]]
= Update the NFS configuration for an SVM

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#`/protocols/nfs/services/{svm.uuid}`#

*Introduced In:* 9.6

Updates the NFS configuration of an SVM.

== Related ONTAP commands

* `vserver nfs modify`
* `vserver nfs on`
* `vserver nfs off`
* `vserver nfs start`
* `vserver nfs stop`

== Learn more
```

```
* xref:{relative_path}protocols_nfs_services_endpoint_overview.html[DOC
/protocols/nfs/services]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|svm.uuid
|string
|path
|True
a|
|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|access_cache_config
|link:#access_cache_config[access_cache_config]
a|

|auth_sys_extended_groups_enabled
|boolean
a|Specifies whether or not extended groups support over AUTH_SYS is
enabled.


|enabled
|boolean
a|Specifies if the NFS service is administratively enabled.
```

```
|extended_groups_limit
|integer
a|Specifies the maximum auxillary groups supported over AUTH_SYS and
RPCSEC_GSS.


|positive_cached_credential_ttl
|integer
a|Specifies the time to live value (in msecs) of a positive cached
credential


|protocol
|link:#protocol[protocol]
a|

|protocol_access_rules
|link:#protocol_access_rules[protocol_access_rules]
a|

|qtree
|link:#qtree[qtree]
a|

|rquota_enabled
|boolean
a|Specifies whether or not the remote quota feature is enabled.


|showmount_enabled
|boolean
a|Specifies whether or not the showmount feature is enabled.


|state
|string
a|Specifies the state of the NFS service on the SVM. The following values
are supported:

***** online - NFS server is ready to accept client requests.

***** offline - NFS server is not ready to accept client requests.


|svm
|link:#svm[svm]
a|
```

```
|transport
|link:#transport[transport]
a|

|vstorage_enabled
|boolean
a|Specifies whether or not the VMware vstorage feature is enabled.


|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "extended_groups_limit": 32,
  "positive_cached_credential_ttl": 7200000,
  "protocol": {
    "v4_id_domain": "string"
  },
  "protocol_access_rules": {
    "cifs_access_type": "string",
    "nfs3_access_type": "string",
    "nfs4_access_type": "string"
  },
  "state": "string",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes
```

```
|===
| Error Code | Description

| 3276916
| Vserver is not running

| 3277069
| Cannot disable TCP because the SnapDiff RPC server is in the \"on\"
state

| 3277087
| Attempting to reduce the number of bits used for NFSv3 FSIDs and File
IDs from 64 to 32 on Vserver. This could result in collisions between
different File IDs and is not recommended

| 3277088
| Attempting to increase the number of bits used for NFSv3 FSIDs and File
IDs from 32 to 64 on Vserver. This could result in older client software
no longer working with the volumes owned by Vserver

| 3277090
| Attempting to disallow multiple FSIDs per mount point on Vserver. Since
this Vserver currently uses 32-bit NFSv3 FSIDs and File IDs, this could
result in collisions between different File IDs and is not recommended

| 3277099
| Domain name contains invalid characters or its too short. Allowed
characters are: alphabetical characters (A-Za-z), numeric characters (0-
9), minus sign (-), and the period (.). The first character must be
alphabetical or numeric, last character must not be a minus sign or a
period. Minimum supported length: 2 characters, maximum of 256 characters
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
```

```
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#access_cache_config]
[.api-collapsible-fifth-title]
access_cache_config

[cols=3*,options=header]
|===
|Name
|Type
|Description

|harvest_timeout
|integer
a|Specifies the time after which an entry is deleted from the access
cache, if unused.


|isDnsTTLEnabled
|boolean
a|Specifies whether Dns TTL is enabled.


|ttl_failure
|integer
a|Specifies the time to live value for entries for which a failure was
encountered, in seconds.


|ttl_negative
|integer
a|Specifies the time to live value of a negative access cache, in seconds.
```

```
|ttl_positive
|integer
a|Specifies the time to live value of a positive access cache, in seconds.


|===


[#iops]
[.api-collapsible-fifth-title]
iops

The rate of I/O operations observed at the storage object.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#latency]
[.api-collapsible-fifth-title]
```

```
latency

The round trip latency in microseconds observed at the storage object.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#throughput]
[.api-collapsible-fifth-title]
throughput

The rate of throughput bytes per second observed at the storage object.


[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#v3]
[.api-collapsible-fifth-title]
v3

The NFSv3 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|duration
|string
a|The duration over which this sample is calculated. The time durations
are represented in the ISO-8601 standard format. Samples can be calculated
over the following durations:


|iops
|link:#iops[iops]
a|The rate of I/O operations observed at the storage object.


|latency
|link:#latency[latency]
a|The round trip latency in microseconds observed at the storage object.
```

```
|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_ delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput
|link:#throughput[throughput]
a|The rate of throughput bytes per second observed at the storage object.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#v4]
[.api-collapsible-fifth-title]
v4

The NFSv4 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|duration
|string
a|The duration over which this sample is calculated. The time durations
are represented in the ISO-8601 standard format. Samples can be calculated
```

```
over the following durations:


|iops
|link:#iops[iops]
a|The rate of I/O operations observed at the storage object.


|latency
|link:#latency[latency]
a|The round trip latency in microseconds observed at the storage object.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_ delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput
|link:#throughput[throughput]
a|The rate of throughput bytes per second observed at the storage object.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#v41]
[.api-collapsible-fifth-title]
v41

The NFSv4.1 operations
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|duration
|string
a|The duration over which this sample is calculated. The time durations
are represented in the ISO-8601 standard format. Samples can be calculated
over the following durations:


|iops
|link:#iops[iops]
a|The rate of I/O operations observed at the storage object.


|latency
|link:#latency[latency]
a|The round trip latency in microseconds observed at the storage object.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_ delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput
|link:#throughput[throughput]
a|The rate of throughput bytes per second observed at the storage object.


|timestamp
|string
a|The timestamp of the performance data.
```

```
|===


[#metric]
[.api-collapsible-fifth-title]
metric

Historical performance numbers, such as IOPS latency and throughput, for
SVM-NFS protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|v3
|link:#v3[v3]
a|The NFSv3 operations


|v4
|link:#v4[v4]
a|The NFSv4 operations


|v41
|link:#v41[v41]
a|The NFSv4.1 operations


|===


[#v40_features]
[.api-collapsible-fifth-title]
v40_features

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|acl_enabled
|boolean
a|Specifies whether NFSv4.0 ACLs is enabled.


|read_delegation_enabled
|boolean
a|Specifies whether NFSv4.0 Read Delegation is enabled.


|write_delegation_enabled
|boolean
a|Specifies whether NFSv4.0 Write Delegation is enabled.


|===


[#v41_features]
[.api-collapsible-fifth-title]
v41_features

[cols=3*,options=header]
|===
|Name
|Type
|Description

|acl_enabled
|boolean
a|Specifies whether NFSv4.1 or later ACLs is enabled.


|pnfs_enabled
|boolean
a|Specifies whether NFSv4.1 or later Parallel NFS is enabled.


|read_delegation_enabled
|boolean
a|Specifies whether NFSv4.1 or later Read Delegation is enabled.


|write_delegation_enabled
|boolean
a|Specifies whether NFSv4.1 or later Write Delegation is enabled.
```

```
|===


[#protocol]
[.api-collapsible-fifth-title]
protocol

[cols=3*,options=header]
|===
|Name
|Type
|Description

|v3_64bit_identifiers_enabled
|boolean
a|Specifies whether 64-bit support for NFSv3 FSIDs and file IDs is
enabled.


|v3_enabled
|boolean
a|Specifies whether NFSv3 protocol is enabled.


|v40_enabled
|boolean
a|Specifies whether NFSv4.0 protocol is enabled.


|v40_features
|link:#v40_features[v40_features]
a|

|v41_enabled
|boolean
a|Specifies whether NFSv4.1 or later protocol is enabled.


|v41_features
|link:#v41_features[v41_features]
a|

|v4_64bit_identifiers_enabled
|boolean
a|Specifies whether 64-bit support for NFSv4.x FSIDs and file IDs is
enabled.
```

```
|v4_id_domain
|string
a|Specifies the domain portion of the string form of user and group
names as defined by the NFSv4 protocol.


|===


[#protocol_access_rules]
[.api-collapsible-fifth-title]
protocol_access_rules

[cols=3*,options=header]
|===
|Name
|Type
|Description

|cifs_access_type
|string
a|Access available for the CIFS protocol.


|nfs3_access_type
|string
a|Access available for the NFSv3 protocol.


|nfs4_access_type
|string
a|Access available for the NFSv4 protocol.


|===


[#qtree]
[.api-collapsible-fifth-title]
qtree

[cols=3*,options=header]
|===
|Name
|Type
```

```
|Description

|export_enabled
|boolean
a|Specifies whether qtree export is enabled.


|validate_export
|boolean
a|Specifies whether qtree export validation is enabled.


|===


[#iops_raw]
[.api-collapsible-fifth-title]
iops_raw

The number of I/O operations observed at the storage object. This should
be used along with delta time to calculate the rate of I/O operations per
unit of time.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
```

```
|integer
a|Peformance metric for write I/O operations.


|===


[#latency_raw]
[.api-collapsible-fifth-title]
latency_raw

The raw latency in microseconds observed at the storage object. This
should be divided by the raw IOPS value to calculate the average latency
per I/O operation.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#throughput_raw]
```

```
[.api-collapsible-fifth-title]
throughput_raw

Throughput bytes observed at the storage object. This should be used along
with delta time to calculate the rate of throughput bytes per unit of
time.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#v3]
[.api-collapsible-fifth-title]
v3

The NFSv3 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|iops_raw
|link:#iops_raw[iops_raw]
```

```
a|The number of I/O operations observed at the storage object. This should
be used along with delta time to calculate the rate of I/O operations per
unit of time.


|latency_raw
|link:#latency_raw[latency_raw]
a|The raw latency in microseconds observed at the storage object. This
should be divided by the raw IOPS value to calculate the average latency
per I/O operation.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput_raw
|link:#throughput_raw[throughput_raw]
a|Throughput bytes observed at the storage object. This should be used
along with delta time to calculate the rate of throughput bytes per unit
of time.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#v4]
[.api-collapsible-fifth-title]
v4

The NFSv4 operations
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|iops_raw
|link:#iops_raw[iops_raw]
a|The number of I/O operations observed at the storage object. This should
be used along with delta time to calculate the rate of I/O operations per
unit of time.


|latency_raw
|link:#latency_raw[latency_raw]
a|The raw latency in microseconds observed at the storage object. This
should be divided by the raw IOPS value to calculate the average latency
per I/O operation.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput_raw
|link:#throughput_raw[throughput_raw]
a|Throughput bytes observed at the storage object. This should be used
along with delta time to calculate the rate of throughput bytes per unit
of time.


|timestamp
|string
a|The timestamp of the performance data.
```

```
|===


[#v41]
[.api-collapsible-fifth-title]
v41

The NFSv4.1 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|iops_raw
|link:#iops_raw[iops_raw]
a|The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.


|latency_raw
|link:#latency_raw[latency_raw]
a|The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
```

```
|throughput_raw
|link:#throughput_raw[throughput_raw]
a|Throughput bytes observed at the storage object. This should be used
along with delta time to calculate the rate of throughput bytes per unit
of time.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#statistics]
[.api-collapsible-fifth-title]
statistics

Realtime performance numbers, such as IOPS latency and throughput, for
SVM-NFS protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|v3
|link:#v3[v3]
a|The NFSv3 operations


|v4
|link:#v4[v4]
a|The NFSv4 operations


|v41
|link:#v41[v41]
a|The NFSv4.1 operations


|===
```

```
[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#transport]
[.api-collapsible-fifth-title]
transport

[cols=3*,options=header]
|===
|Name
|Type
|Description

|tcp_enabled
|boolean
a|Specifies whether TCP transports are enabled on the server.


|udp_enabled
|boolean
a|Specifies whether UDP transports are enabled on the server.


|===


[#nfs_service]
```

```
[.api-collapsible-fifth-title]
nfs_service

[cols=3*,options=header]
|===
|Name
|Type
|Description

|access_cache_config
|link:#access_cache_config[access_cache_config]
a|

|auth_sys_extended_groups_enabled
|boolean
a|Specifies whether or not extended groups support over AUTH_SYS is
enabled.


|enabled
|boolean
a|Specifies if the NFS service is administratively enabled.


|extended_groups_limit
|integer
a|Specifies the maximum auxillary groups supported over AUTH_SYS and
RPCSEC_GSS.


|positive_cached_credential_ttl
|integer
a|Specifies the time to live value (in msecs) of a positive cached
credential


|protocol
|link:#protocol[protocol]
a|

|protocol_access_rules
|link:#protocol_access_rules[protocol_access_rules]
a|

|qtree
|link:#qtree[qtree]
a|
```

```
|rquota_enabled
|boolean
a|Specifies whether or not the remote quota feature is enabled.


|showmount_enabled
|boolean
a|Specifies whether or not the showmount feature is enabled.


|state
|string
a|Specifies the state of the NFS service on the SVM. The following values
are supported:

***** online - NFS server is ready to accept client requests.

***** offline - NFS server is not ready to accept client requests.


|svm
|link:#svm[svm]
a|

|transport
|link:#transport[transport]
a|

|vstorage_enabled
|boolean
a|Specifies whether or not the VMware vstorage feature is enabled.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
```

```
====



[[ID974dd11c357b84f15c6a769ad00ad137]]
= Retrieve NFS protocol historical performance metrics

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/nfs/services/{svm.uuid}/metrics`#

*Introduced In:* 9.7

Retrieves historical performance metrics for the NFS protocol of an SVM.


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|v41.latency.total
|integer
|query
|False
a|Filter by v41.latency.total

* Introduced in: 9.8


|v41.latency.write
|integer
|query
|False
a|Filter by v41.latency.write

* Introduced in: 9.8


|v41.latency.other
|integer
|query
```

```
|False
a|Filter by v41.latency.other

* Introduced in: 9.8


|v41.latency.read
|integer
|query
|False
a|Filter by v41.latency.read

* Introduced in: 9.8


|v41.duration
|string
|query
|False
a|Filter by v41.duration

* Introduced in: 9.8


|v41.throughput.read
|integer
|query
|False
a|Filter by v41.throughput.read

* Introduced in: 9.8


|v41.throughput.total
|integer
|query
|False
a|Filter by v41.throughput.total

* Introduced in: 9.8


|v41.throughput.write
|integer
|query
|False
a|Filter by v41.throughput.write
```

```
* Introduced in: 9.8


|v41.status
|string
|query
|False
a|Filter by v41.status

* Introduced in: 9.8


|v41.iops.total
|integer
|query
|False
a|Filter by v41.iops.total

* Introduced in: 9.8


|v41.iops.write
|integer
|query
|False
a|Filter by v41.iops.write

* Introduced in: 9.8


|v41.iops.other
|integer
|query
|False
a|Filter by v41.iops.other

* Introduced in: 9.8


|v41.iops.read
|integer
|query
|False
a|Filter by v41.iops.read

* Introduced in: 9.8
```

```
|timestamp
|string
|query
|False
a|Filter by timestamp


|v3.latency.total
|integer
|query
|False
a|Filter by v3.latency.total


|v3.latency.write
|integer
|query
|False
a|Filter by v3.latency.write


|v3.latency.other
|integer
|query
|False
a|Filter by v3.latency.other


|v3.latency.read
|integer
|query
|False
a|Filter by v3.latency.read


|v3.duration
|string
|query
|False
a|Filter by v3.duration


|v3.throughput.read
|integer
|query
```

```
|False
a|Filter by v3.throughput.read


|v3.throughput.total
|integer
|query
|False
a|Filter by v3.throughput.total


|v3.throughput.write
|integer
|query
|False
a|Filter by v3.throughput.write


|v3.status
|string
|query
|False
a|Filter by v3.status


|v3.iops.total
|integer
|query
|False
a|Filter by v3.iops.total


|v3.iops.write
|integer
|query
|False
a|Filter by v3.iops.write


|v3.iops.other
|integer
|query
|False
a|Filter by v3.iops.other


|v3.iops.read
```

```
|integer
|query
|False
a|Filter by v3.iops.read


|v4.status
|string
|query
|False
a|Filter by v4.status

* Introduced in: 9.8


|v4.iops.total
|integer
|query
|False
a|Filter by v4.iops.total

* Introduced in: 9.8


|v4.iops.write
|integer
|query
|False
a|Filter by v4.iops.write

* Introduced in: 9.8


|v4.iops.other
|integer
|query
|False
a|Filter by v4.iops.other

* Introduced in: 9.8


|v4.iops.read
|integer
|query
|False
a|Filter by v4.iops.read
```

```
* Introduced in: 9.8


|v4.throughput.read
|integer
|query
|False
a|Filter by v4.throughput.read

* Introduced in: 9.8


|v4.throughput.total
|integer
|query
|False
a|Filter by v4.throughput.total

* Introduced in: 9.8


|v4.throughput.write
|integer
|query
|False
a|Filter by v4.throughput.write

* Introduced in: 9.8


|v4.duration
|string
|query
|False
a|Filter by v4.duration

* Introduced in: 9.8


|v4.latency.total
|integer
|query
|False
a|Filter by v4.latency.total

* Introduced in: 9.8
```

```
|v4.latency.write
|integer
|query
|False
a|Filter by v4.latency.write

* Introduced in: 9.8


|v4.latency.other
|integer
|query
|False
a|Filter by v4.latency.other

* Introduced in: 9.8


|v4.latency.read
|integer
|query
|False
a|Filter by v4.latency.read

* Introduced in: 9.8


|svm.uuid
|string
|path
|True
a|Unique identifier of the SVM.


|interval
|string
|query
|False
a|The time range for the data. Examples can be 1h, 1d, 1m, 1w, 1y.
The period for each time range is as follows:

* 1h: Metrics over the most recent hour sampled over 15 seconds.
* 1d: Metrics over the most recent day sampled over 5 minutes.
* 1w: Metrics over the most recent week sampled over 30 minutes.
* 1m: Metrics over the most recent month sampled over 2 hours.
```

```
* 1y: Metrics over the most recent year sampled over a day.
* Default value: 1
* enum: ["1h", "1d", "1w", "1m", "1y"]


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.
```

```
* Default value: 1

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of records


|records
|array[link:#records[records]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
```

```
      "v3": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "duration": "PT15S",
        "iops": {
          "read": 200,
          "total": 1000,
          "write": 100
        },
        "latency": {
          "read": 200,
          "total": 1000,
          "write": 100
        },
        "status": "ok",
        "throughput": {
          "read": 200,
          "total": 1000,
          "write": 100
        },
        "timestamp": "2017-01-25T11:20:13Z"
      },
      "v4": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "duration": "PT15S",
        "iops": {
          "read": 200,
          "total": 1000,
          "write": 100
        },
        "latency": {
          "read": 200,
          "total": 1000,
          "write": 100
        },
        "status": "ok",
        "throughput": {
          "read": 200,
          "total": 1000,
```

```
          "write": 100
        },
        "timestamp": "2017-01-25T11:20:13Z"
      },
      "v41": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "duration": "PT15S",
        "iops": {
          "read": 200,
          "total": 1000,
          "write": 100
        },
        "latency": {
          "read": 200,
          "total": 1000,
          "write": 100
        },
        "status": "ok",
        "throughput": {
          "read": 200,
          "total": 1000,
          "write": 100
        },
        "timestamp": "2017-01-25T11:20:13Z"
      }
    }
  ]
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
```

```
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|
```

```
|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#iops]
[.api-collapsible-fifth-title]
iops

The rate of I/O operations observed at the storage object.
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#latency]
[.api-collapsible-fifth-title]
latency

The round trip latency in microseconds observed at the storage object.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|other
|integer
a|Performance metric for other I/O operations. Other I/O operations can be
```

```
metadata operations, such as directory lookups and so on.


|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.


|===


[#throughput]
[.api-collapsible-fifth-title]
throughput

The rate of throughput bytes per second observed at the storage object.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|read
|integer
a|Performance metric for read I/O operations.


|total
|integer
a|Performance metric aggregated over all types of I/O operations.


|write
|integer
a|Peformance metric for write I/O operations.
```

```
|===


[#v3]
[.api-collapsible-fifth-title]
v3

The NFSv3 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|duration
|string
a|The duration over which this sample is calculated. The time durations
are represented in the ISO-8601 standard format. Samples can be calculated
over the following durations:


|iops
|link:#iops[iops]
a|The rate of I/O operations observed at the storage object.


|latency
|link:#latency[latency]
a|The round trip latency in microseconds observed at the storage object.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_ delta_time" is encountered when the time
```

```
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput
|link:#throughput[throughput]
a|The rate of throughput bytes per second observed at the storage object.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#v4]
[.api-collapsible-fifth-title]
v4

The NFSv4 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|duration
|string
a|The duration over which this sample is calculated. The time durations
are represented in the ISO-8601 standard format. Samples can be calculated
over the following durations:


|iops
|link:#iops[iops]
a|The rate of I/O operations observed at the storage object.
```

```
|latency
|link:#latency[latency]
a|The round trip latency in microseconds observed at the storage object.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_ delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput
|link:#throughput[throughput]
a|The rate of throughput bytes per second observed at the storage object.


|timestamp
|string
a|The timestamp of the performance data.


|===


[#v41]
[.api-collapsible-fifth-title]
v41

The NFSv4.1 operations


[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|_links
|link:#_links[_links]
a|

|duration
|string
a|The duration over which this sample is calculated. The time durations
are represented in the ISO-8601 standard format. Samples can be calculated
over the following durations:


|iops
|link:#iops[iops]
a|The rate of I/O operations observed at the storage object.


|latency
|link:#latency[latency]
a|The round trip latency in microseconds observed at the storage object.


|status
|string
a|Any errors associated with the sample. For example, if the aggregation
of data over multiple nodes fails then any of the partial errors might be
returned, "ok" on success, or "error" on any internal uncategorized
failure. Whenever a sample collection is missed but done at a later time,
it is back filled to the previous 15 second timestamp and tagged with
"backfilled_data". "Inconsistent_ delta_time" is encountered when the time
between two collections is not the same for all nodes. Therefore, the
aggregated value might be over or under inflated. "Negative_delta" is
returned when an expected monotonically increasing value has decreased in
value. "Inconsistent_old_data" is returned when one or more nodes do not
have the latest data.


|throughput
|link:#throughput[throughput]
a|The rate of throughput bytes per second observed at the storage object.


|timestamp
|string
a|The timestamp of the performance data.
```

```
|===


[#records]
[.api-collapsible-fifth-title]
records

Historical performance numbers, such as IOPS latency and throughput, for
SVM-NFS protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|v3
|link:#v3[v3]
a|The NFSv3 operations


|v4
|link:#v4[v4]
a|The NFSv4 operations


|v41
|link:#v41[v41]
a|The NFSv4.1 operations


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
```

```
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====
```

```
:leveloffset: -1


= View and create Vscan configuration

:leveloffset: +1


[[ID2e38e7fe7381be2b34446caa7370714a]]
= Protocols Vscan endpoint overview



== Overview

Use Vscan to protect data from being compromised by viruses or other
malicious code. Vscan combines best-in-class third party antivirus
software with ONTAP features that give you the flexibility you need to
control which files get scanned and when. Storage systems offload scanning
operations to external servers hosting antivirus software from third party
vendors. An Antivirus Connector on the external server handles
communications between the storage system and the antivirus software.

== Examples

=== Retrieving all of the Vscan configurations

----

# The API:
/api/protocols/vscan

# The call:
curl -X GET "https://<mgmt-
ip>/api/protocols/vscan?fields=*&return_records=true&return_timeout=15" -H
"accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "03ce5c36-f269-11e8-8852-0050568e5298",
      "name": "vs1"
    },
```

```
    "enabled": true,
    "scanner_pools": [
      {
        "name": "scanner-1",
        "servers": [
          "1.1.1.1",
          "10.72.204.27"
        ],
        "privileged_users": [
          "cifs\\u1",
          "cifs\\u2"
        ],
        "role": "primary",
        "cluster": {
          "name": "Cluster1",
          "uuid": "0228714d-f268-11e8-8851-0050568e5298"
        }
      },
      {
        "name": "scanner-2",
        "servers": [
          "1.1.1.1",
          "10.72.204.27"
        ],
        "privileged_users": [
          "cifs\\u1",
          "cifs\\u2"
        ],
        "role": "primary",
        "cluster": {
          "name": "Cluster1",
          "uuid": "0228714d-f268-11e8-8851-0050568e5298"
        }
      }
    ],
    "on_access_policies": [
      {
        "name": "default_CIFS",
        "vsName": "vs1",
        "enabled": true,
        "mandatory": true,
        "scope": {
          "max_file_size": 2147483648,
          "include_extensions": [
            "*"
          ],
```

```
        "scan_without_extension": true,
        "scan_readonly_volumes": false,
        "only_execute_access": false
      }
    },
    {
      "name": "on-access-test1",
      "vsName": "vs1",
      "enabled": false,
      "mandatory": true,
      "scope": {
        "max_file_size": 10000,
        "exclude_paths": [
          "\\dir"
        ],
        "include_extensions": [
          "mp*",
          "txt"
        ],
        "exclude_extensions": [
          "mp*",
          "txt"
        ],
        "scan_without_extension": true,
        "scan_readonly_volumes": false,
        "only_execute_access": false
      }
    },
    {
      "name": "on-access-test2",
      "vsName": "vs1",
      "enabled": false,
      "mandatory": true,
      "scope": {
        "max_file_size": 10000,
        "exclude_paths": [
          "\\dir"
        ],
        "include_extensions": [
          "mp*",
          "txt"
        ],
        "exclude_extensions": [
          "mp*",
          "txt"
        ],
```

```
        "scan_without_extension": true,
        "scan_readonly_volumes": false,
        "only_execute_access": false
      }
    }
  ],
  "on_demand_policies": [
    {
      "name": "task-1",
      "scan_paths": [
        "/vol1"
      ],
      "log_path": "/vol1",
      "scope": {
        "max_file_size": 10000,
        "exclude_paths": [
          "/vol1"
        ],
        "include_extensions": [
          "vmdk",
          "mp*"
        ],
        "exclude_extensions": [
          "mp3",
          "mp4"
        ],
        "scan_without_extension": true
      }
    },
    {
      "name": "task-2",
      "scan_paths": [
        "/vol1"
      ],
      "log_path": "/vol2",
      "scope": {
        "max_file_size": 10000,
        "exclude_paths": [
          "/vol2"
        ],
        "include_extensions": [
          "vmdk",
          "mp*"
        ],
        "exclude_extensions": [
          "mp3",
```

```
            "mp4"
          ],
          "scan_without_extension": true
        }
      }
    ]
  },
  {
    "svm": {
      "uuid": "24c2567a-f269-11e8-8852-0050568e5298",
      "name": "vs2"
    },
    "enabled": false,
    "scanner_pools": [
      {
        "name": "sp2",
        "servers": [
          "1.1.1.1"
        ],
        "privileged_users": [
          "cifs\\u1"
        ],
        "role": "idle"
      }
    ],
    "on_access_policies": [
      {
        "name": "default_CIFS",
        "vsName": "vs2",
        "enabled": true,
        "mandatory": true,
        "scope": {
          "max_file_size": 2147483648,
          "include_extensions": [
            "*"
          ],
          "scan_without_extension": true,
          "scan_readonly_volumes": false,
          "only_execute_access": false
        }
      },
      {
        "name": "ap1",
        "vsName": "vs2",
        "enabled": false,
        "mandatory": true,
```

```
        "scope": {
          "max_file_size": 2147483648,
          "include_extensions": [
            "*"
          ],
          "scan_without_extension": true,
          "scan_readonly_volumes": false,
          "only_execute_access": false
        }
      }
    ],
    "on_demand_policies": [
      {
        "name": "t1",
        "scan_paths": [
          "/vol1"
        ],
        "log_path": "/vol1",
        "scope": {
          "max_file_size": 10737418240,
          "include_extensions": [
            "*"
          ],
          "scan_without_extension": true
        }
      }
    ]
  }
],
"num_records": 2
}
----

=== Retrieving all Vscan configurations for a particular SVM

----

# The API:
/api/protocols/vscan/{svm.uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/vscan/24c2567a-f269-11e8-
8852-0050568e5298?fields=*" -H "accept: application/json"

# The response:
{
```

```
"svm": {
  "uuid": "24c2567a-f269-11e8-8852-0050568e5298",
  "name": "vs2"
},
"enabled": false,
"scanner_pools": [
  {
    "name": "sp2",
    "servers": [
      "1.1.1.1"
    ],
    "privileged_users": [
      "cifs\\u1"
    ],
    "role": "idle"
  }
],
"on_access_policies": [
  {
    "name": "default_CIFS",
    "vsName": "vs2",
    "enabled": true,
    "mandatory": true,
    "scope": {
      "max_file_size": 2147483648,
      "include_extensions": [
        "*"
      ],
      "scan_without_extension": true,
      "scan_readonly_volumes": false,
      "only_execute_access": false
    }
  },
  {
    "name": "ap1",
    "vsName": "vs2",
    "enabled": false,
    "mandatory": true,
    "scope": {
      "max_file_size": 2147483648,
      "include_extensions": [
        "*"
      ],
      "scan_without_extension": true,
      "scan_readonly_volumes": false,
      "only_execute_access": false
```

```
    }
  }
],
"on_demand_policies": [
  {
    "name": "t1",
    "scan_paths": [
      "/vol1"
    ],
    "log_path": "/vol1",
    "scope": {
      "max_file_size": 10737418240,
      "include_extensions": [
        "*"
      ],
      "scan_without_extension": true
    }
  }
]
}
----

=== Creating a Vscan configuration

----

# The API:
/api/protocols/vscan

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/vscan?return_records=true"
-H "accept: appication/json" -H "Content-Type: application/json" -d "{
\"enabled\": true, \"on_access_policies\": [ { \"enabled\": true,
\"mandatory\": true, \"name\": \"on-access-test\", \"scope\": {
\"exclude_extensions\": [ \"mp*\", \"txt\" ], \"exclude_paths\": [
\"\\\\vol\" ], \"include_extensions\": [ \"mp*\", \"txt\" ],
\"max_file_size\": 21474, \"only_execute_access\": false,
\"scan_readonly_volumes\": false, \"scan_without_extension\": true } } ],
\"on_demand_policies\": [ { \"log_path\": \"/vol\", \"name\": \"task-1\",
\"scan_paths\": [ \"/vol\" ], \"schedule\": { \"name\": \"daily\",
\"uuid\": \"d4984822-17b7-11e9-b450-0050568ecd85\" }, \"scope\": {
\"exclude_extensions\": [ \"mp3\", \"mp4\" ], \"exclude_paths\": [
\"/vol\" ], \"include_extensions\": [ \"vmdk\", \"mp*\" ],
\"max_file_size\": 10737, \"scan_without_extension\": true } } ],
\"scanner_pools\": [ { \"cluster\": { \"name\": \"Cluster1\", \"uuid\":
\"ab746d77-17b7-11e9-b450-0050568ecd85\" }, \"name\": \"scanner-1\",
```

```
\"privileged_users\": [ \"cifs\\\\u1\", \"cifs\\\\u2\" ], \"role\":
\"primary\", \"servers\": [ \"1.1.1.1\", \"10.72.204.27\" ] } ], \"svm\":
{ \"name\": \"vs1\", \"uuid\": \"b103be27-17b8-11e9-b451-0050568ecd85\"
}}"

# The response:
{
"num_records": 1,
"records": [
  {
    "svm": {
    "uuid": "b103be27-17b8-11e9-b451-0050568ecd85",
    "name": "vs1"
    },
    "enabled": true,
    "scanner_pools": [
      {
        "name": "scanner-1",
        "servers": [
          "1.1.1.1",
          "10.72.204.27"
        ],
        "privileged_users": [
          "cifs\\u1",
          "cifs\\u2"
        ],
        "role": "primary",
        "cluster": {
          "name": "Cluster1",
          "uuid": "ab746d77-17b7-11e9-b450-0050568ecd85"
        }
      }
    ],
    "on_access_policies": [
      {
        "name": "on-access-test",
        "enabled": true,
        "mandatory": true,
        "scope": {
          "max_file_size": 21474,
          "exclude_paths": [
            "\\vol"
          ],
          "include_extensions": [
            "mp*",
            "txt"
```

```
          ],
          "exclude_extensions": [
            "mp*",
            "txt"
          ],
          "scan_without_extension": true,
          "scan_readonly_volumes": false,
          "only_execute_access": false
        }
      }
    ],
    "on_demand_policies": [
      {
        "name": "task-1",
        "scan_paths": [
          "/vol"
        ],
        "log_path": "/vol",
        "schedule": {
          "uuid": "d4984822-17b7-11e9-b450-0050568ecd85",
          "name": "daily"
        },
        "scope": {
          "max_file_size": 10737,
          "exclude_paths": [
            "//"
          ],
          "include_extensions": [
            "vmdk",
            "mp*"
          ],
          "exclude_extensions": [
            "mp3",
            "mp4"
          ],
          "scan_without_extension": true
        }
      }
    ]
  }
]
}
----

=== Creating multiple Vscan scanner-pools for the specified SVM
```

```
----

# The API:
/api/protocols/vscan

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/vscan?return_records=true"
-H "accept: appication/json" -H "Content-Type: application/json" -d "{
\"scanner_pools\": [ { \"cluster\": { \"name\": \"Cluster1\", \"uuid\":
\"ab746d77-17b7-11e9-b450-0050568ecd85\" }, \"name\": \"scanner-1\",
\"privileged_users\": [ \"cifs\\\\u1\", \"cifs\\\\u2\" ], \"role\":
\"primary\", \"servers\": [ \"1.1.1.1\", \"10.72.204.27\" ] }, {
\"cluster\": { \"name\": \"Cluster1\", \"uuid\": \"ab746d77-17b7-11e9-
b450-0050568ecd85\" }, \"name\": \"scanner-2\", \"privileged_users\": [
\"cifs\\\\u3\", \"cifs\\\\u4\" ], \"role\": \"primary\", \"servers\": [
\"1.1.1.5\", \"10.72.3.27\" ] } ], \"svm\": { \"name\": \"vs1\", \"uuid\":
\"b103be27-17b8-11e9-b451-0050568ecd85\" }}"

# The response:
{
"num_records": 1,
"records": [
  {
    "svm": {
    "uuid": "b103be27-17b8-11e9-b451-0050568ecd85",
    "name": "vs1"
    },
    "scanner_pools": [
      {
        "name": "scanner-1",
        "servers": [
          "1.1.1.1",
          "10.72.204.27"
        ],
        "privileged_users": [
          "cifs\\u1",
          "cifs\\u2"
        ],
        "role": "primary",
        "cluster": {
          "name": "Cluster1",
          "uuid": "ab746d77-17b7-11e9-b450-0050568ecd85"
        }
      },
      {
        "name": "scanner-2",
```

```
        "servers": [
          "1.1.1.5",
          "10.72.3.27"
        ],
        "privileged_users": [
          "cifs\\u3",
          "cifs\\u4"
        ],
        "role": "primary",
        "cluster": {
          "name": "Cluster1",
          "uuid": "ab746d77-17b7-11e9-b450-0050568ecd85"
        }
      }
    ]
  }
]
}
----

=== Creating multiple Vscan On-access policies for a specified SVM

----

# The API:
/api/protocols/vscan

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/vscan?return_records=true"
-H "accept: application/json" -H "Content-Type: application/json" -d "{
\"on_access_policies\": [ { \"enabled\": false, \"mandatory\": true,
\"name\": \"on-access-test11\", \"scope\": { \"exclude_extensions\": [
\"mp*\", \"txt\" ], \"exclude_paths\": [ \"\\\\vol\" ],
\"include_extensions\": [ \"mp*\", \"txt\" ], \"max_file_size\": 214748,
\"only_execute_access\": false, \"scan_readonly_volumes\": false,
\"scan_without_extension\": true } }, { \"enabled\": false, \"mandatory\":
true, \"name\": \"on-access-test10\", \"scope\": { \"exclude_extensions\":
[ \"mp*\", \"txt\" ], \"exclude_paths\": [ \"\\\\vol\" ],
\"include_extensions\": [ \"mp*\", \"txt\" ], \"max_file_size\": 21474,
\"only_execute_access\": false, \"scan_readonly_volumes\": false,
\"scan_without_extension\": true } } ], \"svm\": { \"name\": \"vs1\",
\"uuid\": \"b103be27-17b8-11e9-b451-0050568ecd85\" }}"

# The response:
{
"num_records": 1,
```

```
"records": [
  {
    "svm": {
      "uuid": "b103be27-17b8-11e9-b451-0050568ecd85",
      "name": "vs1"
    },
    "on_access_policies": [
      {
        "name": "on-access-test11",
        "enabled": false,
        "mandatory": true,
        "scope": {
          "max_file_size": 214748,
          "exclude_paths": [
            "\\vol"
          ],
          "include_extensions": [
            "mp*",
            "txt"
          ],
          "exclude_extensions": [
            "mp*",
            "txt"
          ],
          "scan_without_extension": true,
          "scan_readonly_volumes": false,
          "only_execute_access": false
        }
      },
      {
        "name": "on-access-test10",
        "enabled": false,
        "mandatory": true,
        "scope": {
          "max_file_size": 21474,
          "exclude_paths": [
            "\\vol"
          ],
          "include_extensions": [
            "mp*",
            "txt"
          ],
          "exclude_extensions": [
            "mp*",
            "txt"
          ],
```

```
          "scan_without_extension": true,
          "scan_readonly_volumes": false,
          "only_execute_access": false
        }
      }
    ]
  }
]
}
----

=== Creating multiple Vscan On-demand policies for a specified SVM

----

# The API:
/api/protocols/vscan

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/vscan?return_records=true"
-H "accept: application/json" -H "Content-Type: application/json" -d "{
\"on_demand_policies\": [ { \"log_path\": \"/vol\", \"name\": \"task-1\",
\"scan_paths\": [ \"/vol\" ], \"schedule\": { \"name\": \"daily\",
\"uuid\": \"d4984822-17b7-11e9-b450-0050568ecd85\" }, \"scope\": {
\"exclude_extensions\": [ \"mp3\", \"mp4\" ], \"exclude_paths\": [
\"/vol1\" ], \"include_extensions\": [ \"vmdk\", \"mp*\" ],
\"max_file_size\": 107374, \"scan_without_extension\": true } }, {
\"log_path\": \"/vol\", \"name\": \"task-2\", \"scan_paths\": [ \"/vol\"
], \"scope\": { \"exclude_extensions\": [ \"mp3\", \"mp4\" ],
\"exclude_paths\": [ \"/vol1\" ], \"include_extensions\": [ \"vmdk\",
\"mp*\" ], \"max_file_size\": 107374, \"scan_without_extension\": true } }
], \"svm\": { \"name\": \"vs1\", \"uuid\": \"b103be27-17b8-11e9-b451-
0050568ecd85\" }}"

# The response:
{
"num_records": 1,
"records": [
  {
    "svm": {
      "uuid": "b103be27-17b8-11e9-b451-0050568ecd85",
      "name": "vs1"
    },
    "on_demand_policies": [
      {
        "name": "task-1",
```

```
      "scan_paths": [
        "/vol"
      ],
      "log_path": "/vol",
      "schedule": {
        "uuid": "d4984822-17b7-11e9-b450-0050568ecd85",
        "name": "daily"
      },
      "scope": {
        "max_file_size": 107374,
        "exclude_paths": [
          "/vol1"
        ],
        "include_extensions": [
          "vmdk",
          "mp*"
        ],
        "exclude_extensions": [
          "mp3",
          "mp4"
        ],
        "scan_without_extension": true
      }
    },
    {
      "name": "task-2",
      "scan_paths": [
        "/vol"
      ],
      "log_path": "/vol",
      "scope": {
        "max_file_size": 107374,
        "exclude_paths": [
          "/vol1"
        ],
        "include_extensions": [
          "vmdk",
          "mp*"
        ],
        "exclude_extensions": [
          "mp3",
          "mp4"
        ],
        "scan_without_extension": true
      }
    }
```

```
    ]
  }
]
}
----

=== Enabling Vscan for a specified SVM

----

# The API:
/api/protocols/vscan/{svm.uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/vscan/03ce5c36-f269-11e8-
8852-0050568e5298" -H "accept: application/json" -H "Content-Type:
application/json" -d "{ \"enabled\": true}"
----

=== Clearing the Vscan cache for the specified SVM

----

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/vscan/03ce5c36-f269-11e8-
8852-0050568e5298" -H "accept: application/json" -H "Content-Type:
application/json" -d "{ \"cache_clear\": true}"
----

=== Deleting the Vscan configuration for a specified SVM

----

# The API:
/api/protocols/vscan/{svm.uuid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/vscan/03ce5c36-f269-11e8-
8852-0050568e5298" -H "accept: application/json"
----




[[IDe6622a03d2cf140d2694fde3bfefb40e]]
= Retrieve the Vscan configuration
```

```
[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/vscan`#

*Introduced In:* 9.6

Retrieves the Vscan configuration.
This includes scanner-pools, On-Access policies, On-Demand policies, and
information about whether a Vscan is enabled or disabled on an SVM.

Important notes:

* You can enable only one Vscan configuration at a time for an SVM.
* You can only query using `svm.uuid` or `svm.name`.

== Related ONTAP commands

* `vserver vscan show`
* `vserver vscan scanner-pool show`
* `vserver vscan scanner-pool servers show`
* `vserver vscan scanner-pool privileged-users show`
* `vserver vscan on-access-policy show`
* `vserver vscan on-access-policy file-ext-to-exclude show`
* `vserver vscan on-access-policy file-ext-to-include show`
* `vserver vscan on-access-policy paths-to-exclude show`
* `vserver vscan on-demand-task show`

== Learn more

* xref:{relative_path}protocols_vscan_endpoint_overview.html[DOC
/protocols/vscan]
* xref:{relative_path}protocols_vscan_svm.uuid_scanner-
pools_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/scanner-
pools]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description
```

```
|scanner_pools.privileged_users
|string
|query
|False
a|Filter by scanner_pools.privileged_users


|scanner_pools.cluster.name
|string
|query
|False
a|Filter by scanner_pools.cluster.name


|scanner_pools.cluster.uuid
|string
|query
|False
a|Filter by scanner_pools.cluster.uuid


|scanner_pools.name
|string
|query
|False
a|Filter by scanner_pools.name


|scanner_pools.servers
|string
|query
|False
a|Filter by scanner_pools.servers


|scanner_pools.role
|string
|query
|False
a|Filter by scanner_pools.role


|svm.uuid
|string
|query
|False
a|Filter by svm.uuid
```

```
|svm.name
|string
|query
|False
a|Filter by svm.name


|on_demand_policies.schedule.name
|string
|query
|False
a|Filter by on_demand_policies.schedule.name


|on_demand_policies.schedule.uuid
|string
|query
|False
a|Filter by on_demand_policies.schedule.uuid


|on_demand_policies.name
|string
|query
|False
a|Filter by on_demand_policies.name


|on_demand_policies.log_path
|string
|query
|False
a|Filter by on_demand_policies.log_path


|on_demand_policies.scope.exclude_extensions
|string
|query
|False
a|Filter by on_demand_policies.scope.exclude_extensions


|on_demand_policies.scope.include_extensions
|string
|query
```

```
|False
a|Filter by on_demand_policies.scope.include_extensions


|on_demand_policies.scope.scan_without_extension
|boolean
|query
|False
a|Filter by on_demand_policies.scope.scan_without_extension


|on_demand_policies.scope.max_file_size
|integer
|query
|False
a|Filter by on_demand_policies.scope.max_file_size


|on_demand_policies.scope.exclude_paths
|string
|query
|False
a|Filter by on_demand_policies.scope.exclude_paths


|on_demand_policies.scan_paths
|string
|query
|False
a|Filter by on_demand_policies.scan_paths


|enabled
|boolean
|query
|False
a|Filter by enabled


|on_access_policies.name
|string
|query
|False
a|Filter by on_access_policies.name


|on_access_policies.scope.only_execute_access
```

```
|boolean
|query
|False
a|Filter by on_access_policies.scope.only_execute_access


|on_access_policies.scope.exclude_paths
|string
|query
|False
a|Filter by on_access_policies.scope.exclude_paths


|on_access_policies.scope.max_file_size
|integer
|query
|False
a|Filter by on_access_policies.scope.max_file_size


|on_access_policies.scope.scan_without_extension
|boolean
|query
|False
a|Filter by on_access_policies.scope.scan_without_extension


|on_access_policies.scope.include_extensions
|string
|query
|False
a|Filter by on_access_policies.scope.include_extensions


|on_access_policies.scope.exclude_extensions
|string
|query
|False
a|Filter by on_access_policies.scope.exclude_extensions


|on_access_policies.scope.scan_readonly_volumes
|boolean
|query
|False
a|Filter by on_access_policies.scope.scan_readonly_volumes
```

```
|on_access_policies.mandatory
|boolean
|query
|False
a|Filter by on_access_policies.mandatory


|on_access_policies.enabled
|boolean
|query
|False
a|Filter by on_access_policies.enabled


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.
```

```
* Default value: 1
* Max value: 120
* Min value: 0


|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===
```

```
== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of records


|records
|array[link:#vscan[vscan]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
```

```
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "on_access_policies": [
        {
          "name": "on-access-test",
          "scope": {
            "exclude_extensions": [
              "mp*",
              "txt"
            ],
            "exclude_paths": [
              "\\dir1\\dir2\\name",
              "\\vol\\a b",
              "\\vol\\a,b\\"
            ],
            "include_extensions": [
              "mp*",
              "txt"
            ],
            "max_file_size": 2147483648
          }
        }
      ],
      "on_demand_policies": [
        {
          "log_path": "/vol0/report_dir",
          "name": "task-1",
          "scan_paths": [
            "/vol1/",
            "/vol2/cifs/"
          ],
          "schedule": {
            "_links": {
```

```
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "weekly",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        },
        "scope": {
          "exclude_extensions": [
            "mp3",
            "mp4"
          ],
          "exclude_paths": [
            "/vol1/cold-files/",
            "/vol1/cifs/names"
          ],
          "include_extensions": [
            "vmdk",
            "mp*"
          ],
          "max_file_size": 10737418240
        }
      }
    ],
    "scanner_pools": [
      {
        "cluster": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "cluster1",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        },
        "name": "scanner-1",
        "privileged_users": [
          "cifs\\u1",
          "cifs\\u2"
        ],
        "role": "string",
        "servers": [
          "1.1.1.1",
          "10.72.204.27",
          "vmwin204-27.fsct.nb"
        ]
```

```
        }
      ],
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
```

```
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
```

```
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
|array[string]
a|List of file paths for which scanning must not be performed.


|include_extensions
|array[string]
a|List of file extensions to be scanned.
```

```
|max_file_size
|integer
a|Maximum file size, in bytes, allowed for scanning.


|only_execute_access
|boolean
a|Scan only files opened with execute-access.


|scan_readonly_volumes
|boolean
a|Specifies whether or not read-only volume can be scanned.


|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.


|===


[#vscan_on_access]
[.api-collapsible-fifth-title]
vscan_on_access

An On-Access policy that defines the scope of an On-Access scan. Use On-
Access scanning to check for viruses when clients open, read, rename, or
close files over CIFS. By default, ONTAP creates an On-Access policy named
"default_CIFS" and enables it for all the SVMs in a cluster.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|enabled
|boolean
a|Status of the On-Access Vscan policy


|mandatory
|boolean
a|Specifies if scanning is mandatory. File access is denied if there are
```

```
no external virus-scanning servers available for virus scanning.


|name
|string
a|On-Access policy ame


|scope
|link:#scope[scope]
a|

|===


[#schedule]
[.api-collapsible-fifth-title]
schedule

Schedule of the task.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|Job schedule name


|uuid
|string
a|Job schedule UUID


|===


[#scope]
[.api-collapsible-fifth-title]
```

```
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
|array[string]
a|List of file paths for which scanning must not be performed.


|include_extensions
|array[string]
a|List of file extensions to be scanned.


|max_file_size
|integer
a|Maximum file size, in bytes, allowed for scanning.


|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.


|===


[#vscan_on_demand_policy]
[.api-collapsible-fifth-title]
vscan_on_demand_policy

Use On-Demand scanning to check files for viruses on a schedule. An On-
Demand policy defines the scope of an On-Demand scan.


[cols=3*,options=header]
|===
|Name
```

```
|Type
|Description

|log_path
|string
a|The path from the Vserver root where the task report is created.


|name
|string
a|On-Demand task name


|scan_paths
|array[string]
a|List of paths that need to be scanned.


|schedule
|link:#schedule[schedule]
a|Schedule of the task.


|scope
|link:#scope[scope]
a|

|===


[#cluster_reference]
[.api-collapsible-fifth-title]
cluster_reference

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|
```

```
|uuid
|string
a|

|===


[#scanner_pool]
[.api-collapsible-fifth-title]
scanner_pool

Scanner pool is a set of attributes which are used to validate and manage
connections between clustered ONTAP and external virus-scanning server, or
"Vscan server".


[cols=3*,options=header]
|===
|Name
|Type
|Description

|cluster
|link:#cluster_reference[cluster_reference]
a|

|name
|string
a|Specifies the name of the scanner pool. Scanner pool name can be up to
256 characters long and is a string that can only contain any combination
of ASCII-range alphanumeric characters a-z, A-Z, 0-9), "_", "-" and ".".


|privileged_users
|array[string]
a|Specifies a list of privileged users. A valid form of privileged user-
name is "domain-name\user-name". Privileged user-names are stored and
treated as case-insensitive strings. Virus scanners must use one of the
registered privileged users for connecting to clustered Data ONTAP for
exchanging virus-scanning protocol messages and to access file for
scanning, remedying and quarantining operations.

* example: ["cifs\u1", "cifs\u2"]
* Introduced in: 9.10
```

```
|role
|string
a|Specifies the role of the scanner pool. The possible values are:

*** primary   - Always active.

*** secondary - Active only when none of the primary external virus-
scanning servers are connected.

*** idle      - Always inactive.


|servers
|array[string]
a|Specifies a list of IP addresses or FQDN for each Vscan server host
names which are allowed to connect to clustered ONTAP.

* example: ["1.1.1.1", "10.72.204.27", "vmwin204-27.fsct.nb"]
* Introduced in: 9.10


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.
```

```
|===


[#vscan]
[.api-collapsible-fifth-title]
vscan

Vscan can be used to protect data from being compromised by viruses or
other malicious code. This combines best-in-class third-party antivirus
software with ONTAP features that give you the flexibility you need to
control which files get scanned and when. Storage systems offload scanning
operations to external servers hosting antivirus software from thirdparty
vendors. An Antivirus Connector on the external server handles
communications between the storage system and the antivirus software.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|cache_clear
|boolean
a|Discards the cached information of the files that have been successfully
scanned. Once the cache is cleared, files are scanned again when they are
accessed. PATCH only


|enabled
|boolean
a|Specifies whether or not Vscan is enabled on the SVM.


|on_access_policies
|array[link:#vscan_on_access[vscan_on_access]]
a|

|on_demand_policies
|array[link:#vscan_on_demand_policy[vscan_on_demand_policy]]
a|
```

```
|scanner_pools
|array[link:#scanner_pool[scanner_pool]]
a|

|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments
```

```
|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID97de887acbe81be1ce4e719cbfa53f19]]
= Create a Vscan configuration

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/protocols/vscan`#

*Introduced In:* 9.6

Creates a Vscan configuration, which includes a list of scanner-pools,
Vscan On-Access policies and Vscan On-Demand policies. Defines whether the
Vscan configuration you create is enabled or disabled for a specified SVM.

Important notes:

* You can enable only one Vscan configuration at a time for an SVM.
* There needs to be at least one active scanner-pool and one enabled On-
Access policy to enable Vscan successfully.
* By default, a Vscan is enabled when it's created.
* By default, the Vscan On-Access policies created from this endpoint are
in the disabled state. You can use the On-Access policy PATCH endpoint to
enable a particular On-Access policy. In ONTAP 9.6, only one Vscan On-
Access policy can be enabled and only one Vscan On-Demand policy can be
```

```
scheduled on an SVM.

== Required properties

* `svm.uuid` or `svm.name` - Existing SVM in which to create the Vscan
configuration.

== Recommended optional properties

* `scanner_pools` - There must be at least one active scanner-pool for
Vscan configuration. Created either through Vscan POST operation or
scanner-pools POST operation.

== Default property values

If not specified in POST, the following default property value is
assigned:

* `enabled` - _true_

== Related ONTAP commands

* `vserver vscan enable`
* `vserver vscan scanner-pool create`
* `vserver vscan scanner-pool apply-policy`
* `vserver vscan scanner-pool servers add`
* `vserver vscan scanner-pool privileged-users add`
* `vserver vscan on-access-policy create`
* `vserver vscan on-access-policy file-ext-to-exclude add`
* `vserver vscan on-access-policy file-ext-to-include add`
* `vserver vscan on-access-policy paths-to-exclude add`
* `vserver vscan on-demand-task create`

== Learn more

* xref:{relative_path}protocols_vscan_endpoint_overview.html[DOC
/protocols/vscan]
* xref:{relative_path}protocols_vscan_svm.uuid_scanner-
pools_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/scanner-
pools]


== Parameters

[cols=5*,options=header]
|===
```

```
|Name
|Type
|In
|Required
|Description

|return_records
|boolean
|query
|False
a|The default is false.  If set to true, the records are returned.

* Default value:

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|cache_clear
|boolean
a|Discards the cached information of the files that have been successfully
scanned. Once the cache is cleared, files are scanned again when they are
accessed. PATCH only


|enabled
|boolean
a|Specifies whether or not Vscan is enabled on the SVM.


|on_access_policies
|array[link:#vscan_on_access[vscan_on_access]]
a|

|on_demand_policies
|array[link:#vscan_on_demand_policy[vscan_on_demand_policy]]
a|

|scanner_pools
```

```
|array[link:#scanner_pool[scanner_pool]]
a|

|svm
|link:#svm[svm]
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "on_access_policies": [
    {
      "name": "on-access-test",
      "scope": {
        "exclude_extensions": [
          "mp*",
          "txt"
        ],
        "exclude_paths": [
          "\\dir1\\dir2\\name",
          "\\vol\\a b",
          "\\vol\\a,b\\"
        ],
        "include_extensions": [
          "mp*",
          "txt"
        ],
        "max_file_size": 2147483648
      }
    }
  ],
  "on_demand_policies": [
    {
      "log_path": "/vol0/report_dir",
      "name": "task-1",
      "scan_paths": [
        "/vol1/",
        "/vol2/cifs/"
      ],
      "schedule": {
        "name": "weekly",
```

```
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "scope": {
        "exclude_extensions": [
          "mp3",
          "mp4"
        ],
        "exclude_paths": [
          "/vol1/cold-files/",
          "/vol1/cifs/names"
        ],
        "include_extensions": [
          "vmdk",
          "mp*"
        ],
        "max_file_size": 10737418240
      }
    }
  ],
  "scanner_pools": [
    {
      "cluster": {
        "name": "cluster1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "name": "scanner-1",
      "privileged_users": [
        "cifs\\u1",
        "cifs\\u2"
      ],
      "role": "string",
      "servers": [
        "1.1.1.1",
        "10.72.204.27",
        "vmwin204-27.fsct.nb"
      ]
    }
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Response
```

Status: 201, Created

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|num_records
|integer
a|Number of records


|records
|array[link:#vscan[vscan]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "records": [
    {
      "on_access_policies": [
        {
          "name": "on-access-test",
          "scope": {
            "exclude_extensions": [
              "mp*",
              "txt"
            ],
            "exclude_paths": [
              "\\dir1\\dir2\\name",
              "\\vol\\a b",
              "\\vol\\a,b\\"
            ],
            "include_extensions": [
              "mp*",
              "txt"
            ],
            "max_file_size": 2147483648
          }
```

```
      }
    ],
    "on_demand_policies": [
      {
        "log_path": "/vol0/report_dir",
        "name": "task-1",
        "scan_paths": [
          "/vol1/",
          "/vol2/cifs/"
        ],
        "schedule": {
          "name": "weekly",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        },
        "scope": {
          "exclude_extensions": [
            "mp3",
            "mp4"
          ],
          "exclude_paths": [
            "/vol1/cold-files/",
            "/vol1/cifs/names"
          ],
          "include_extensions": [
            "vmdk",
            "mp*"
          ],
          "max_file_size": 10737418240
        }
      }
    ],
    "scanner_pools": [
      {
        "cluster": {
          "name": "cluster1",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        },
        "name": "scanner-1",
        "privileged_users": [
          "cifs\\u1",
          "cifs\\u2"
        ],
        "role": "string",
        "servers": [
          "1.1.1.1",
          "10.72.204.27",
```

```
            "vmwin204-27.fsct.nb"
          ]
        }
      ],
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default

```
ONTAP Error Response Codes
//start table
[cols=2*,options=header]
|===
//header
| Error Code | Description
//end header
//end row
//start row
|10027259 +
//end row
//start row
|A scanner-pool, an On-Access policy, or an On-Demand policy might fail to
get created due to either a systematic error or some hardware failure. The
error code returned details the failure along with the reason for the
failure. For example, if a scanner-pool fails due to an incorrect cluster
name, then the error might read: "Failed to create scanner-pool "scanner-
1". Reason: "Cluster uuid points to different cluster name instead of the
cluster-name supplied.". Retry the operation."
//end row
//start row
|10027260 +
//end row
//start row
|If a scanner-pool, an On-Access policy or an On-Demand policy specified
in the input already exists, then a duplicate error is returned. For
example, if a scanner-pool "scanner-1" already exists for an SVM and is
again specified in the input, the error message will read: " Failed to
```

```
create scanner-pool "scanner-1" as the specified entry already exists.
Delete the entry and retry the POST operation."
//end row
//start row
|2621462  +
//end row
//start row
|The specified SVM name is invalid
//end row
//start row
|2621706  +
//end row
//start row
|The specified svm.uuid is either invalid or belongs to a different SVM
//end row
//start row
|10027015 +
//end row
//start row
|Attempting to enable a Vscan but no active scanner-pool exists for the
specified SVM
//end row
//start row
|10027011 +
//end row
//start row
|Attempting to enable a Vscan for an SVM for which no CIFS server exists
//end row
//start row
|10027023 +
//end row
//start row
|Attempting to enable a Vscan for an SVM for which no active Vscan On-
Access policy exist
//end row
|===
//end table


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
```

```
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
|array[string]
a|List of file paths for which scanning must not be performed.


|include_extensions
|array[string]
a|List of file extensions to be scanned.


|max_file_size
|integer
```

```
a|Maximum file size, in bytes, allowed for scanning.


|only_execute_access
|boolean
a|Scan only files opened with execute-access.


|scan_readonly_volumes
|boolean
a|Specifies whether or not read-only volume can be scanned.


|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.


|===


[#vscan_on_access]
[.api-collapsible-fifth-title]
vscan_on_access

An On-Access policy that defines the scope of an On-Access scan. Use On-Access scanning to check for viruses when clients open, read, rename, or close files over CIFS. By default, ONTAP creates an On-Access policy named "default_CIFS" and enables it for all the SVMs in a cluster.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|enabled
|boolean
a|Status of the On-Access Vscan policy


|mandatory
|boolean
a|Specifies if scanning is mandatory. File access is denied if there are no external virus-scanning servers available for virus scanning.
```

```
|name
|string
a|On-Access policy ame


|scope
|link:#scope[scope]
a|

|===


[#schedule]
[.api-collapsible-fifth-title]
schedule

Schedule of the task.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|Job schedule name


|uuid
|string
a|Job schedule UUID


|===


[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
```

```
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
|array[string]
a|List of file paths for which scanning must not be performed.


|include_extensions
|array[string]
a|List of file extensions to be scanned.


|max_file_size
|integer
a|Maximum file size, in bytes, allowed for scanning.


|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.


|===


[#vscan_on_demand_policy]
[.api-collapsible-fifth-title]
vscan_on_demand_policy

Use On-Demand scanning to check files for viruses on a schedule. An On-
Demand policy defines the scope of an On-Demand scan.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|log_path
|string
a|The path from the Vserver root where the task report is created.
```

```
|name
|string
a|On-Demand task name


|scan_paths
|array[string]
a|List of paths that need to be scanned.


|schedule
|link:#schedule[schedule]
a|Schedule of the task.


|scope
|link:#scope[scope]
a|

|===


[#cluster_reference]
[.api-collapsible-fifth-title]
cluster_reference

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|

|uuid
|string
a|

|===


[#scanner_pool]
[.api-collapsible-fifth-title]
```

```
scanner_pool

Scanner pool is a set of attributes which are used to validate and manage
connections between clustered ONTAP and external virus-scanning server, or
"Vscan server".


[cols=3*,options=header]
|===
|Name
|Type
|Description

|cluster
|link:#cluster_reference[cluster_reference]
a|

|name
|string
a|Specifies the name of the scanner pool. Scanner pool name can be up to
256 characters long and is a string that can only contain any combination
of ASCII-range alphanumeric characters a-z, A-Z, 0-9), "_", "-" and ".".


|privileged_users
|array[string]
a|Specifies a list of privileged users. A valid form of privileged user-
name is "domain-name\user-name". Privileged user-names are stored and
treated as case-insensitive strings. Virus scanners must use one of the
registered privileged users for connecting to clustered Data ONTAP for
exchanging virus-scanning protocol messages and to access file for
scanning, remedying and quarantining operations.

* example: ["cifs\u1", "cifs\u2"]
* Introduced in: 9.10


|role
|string
a|Specifies the role of the scanner pool. The possible values are:

*** primary   - Always active.

*** secondary - Active only when none of the primary external virus-
scanning servers are connected.

*** idle      - Always inactive.
```

```
|servers
|array[string]
a|Specifies a list of IP addresses or FQDN for each Vscan server host
names which are allowed to connect to clustered ONTAP.

* example: ["1.1.1.1", "10.72.204.27", "vmwin204-27.fsct.nb"]
* Introduced in: 9.10


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#vscan]
[.api-collapsible-fifth-title]
vscan

Vscan can be used to protect data from being compromised by viruses or
other malicious code. This combines best-in-class third-party antivirus
software with ONTAP features that give you the flexibility you need to
control which files get scanned and when. Storage systems offload scanning
operations to external servers hosting antivirus software from thirdparty
vendors. An Antivirus Connector on the external server handles
```

```
communications between the storage system and the antivirus software.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|cache_clear
|boolean
a|Discards the cached information of the files that have been successfully
scanned. Once the cache is cleared, files are scanned again when they are
accessed. PATCH only


|enabled
|boolean
a|Specifies whether or not Vscan is enabled on the SVM.


|on_access_policies
|array[link:#vscan_on_access[vscan_on_access]]
a|

|on_demand_policies
|array[link:#vscan_on_demand_policy[vscan_on_demand_policy]]
a|

|scanner_pools
|array[link:#scanner_pool[scanner_pool]]
a|

|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
```

```
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===
```

```
//end collapsible .Definitions block
====



:leveloffset: -1


= Manage Vscan configuration

:leveloffset: +1


[[ID720a48e4279141edaa428a029c739a57]]
= Protocols Vscan server-status endpoint overview



== Overview

This API is used to display connection status information for the external
virus-scanning servers or "Vscan servers".

== Examples

=== Retrieving all fields for the Vscan server status

'''

----

# The API:
/api/protocols/vscan/server-status/

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/vscan/server-status?fields=*"
-H "accept: application/hal+json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "66f8564d-aefc-11eb-bd8c-0050568e8ed1",
      "name": "vs1"
```

```
    },
    "node": {
      "uuid": "ce2463d9-aef6-11eb-bd8c-0050568e8ed1",
      "name": "chiragm-vsim1"
    },
    "ip": "10.140.132.141",
    "type": "primary",
    "state": "connected",
    "update_time": "2021-05-07T21:35:02+05:30",
    "vendor": "mighty master anti-evil scanner",
    "version": "5.643",
    "extended_stats": [
      "ts=10:15:28 PM May 07,2021",
      "scans=sent:0,compok:0,comperr:0,compnotfnd:0,ms/comp:0",
      "avshim-version=1.0.5.0",
      "mempage/s=0, procs=52, threads=2063, %cpu=0.22, procqlen=0,
diskio/s=0, smbbytes/s=52, ",
      "ifmac=FA:16:3E:F0:70:88,
tcpstat=retrans:7538,connfail:2137,connreset:52018,inerr:0",
      "cfg=Host Name:SCSPB2271817001",
      "OS Name:Microsoft Windows Server 2012 R2 Standard",
      "OS Version:6.3.9600 N/A Build 9600",
      "System Boot Time:5/6/2021, 9:01:42 PM",
      "System Manufacturer:RDO",
      "System Model:OpenStack Compute",
      "System Type:x64-based PC",
      "Processor(s):2 Processor(s) Installed.",
      "[01]:Intel64 Family 6 Model 94 Stepping 3 GenuineIntel ~2400 Mhz"
    ],
    "interface": {
      "name": "vs1.data",
      "uuid": "6911e7c6-aefc-11eb-bd8c-0050568e8ed1",
      "ip": {
        "address": "10.140.69.165"
      }
    }
  },
  {
    "svm": {
      "uuid": "a776e8f2-aef9-11eb-8530-0050568e8ed1",
      "name": "vs2"
    },
    "node": {
      "uuid": "ce2463d9-aef6-11eb-bd8c-0050568e8ed1",
      "name": "chiragm-vsim1"
    },
```

```
    "ip": "10.140.128.163",
    "type": "primary",
    "state": "connected",
    "update_time": "2021-05-07T21:35:43+05:30",
    "vendor": "mighty master anti-evil scanner",
    "version": "5.643",
    "extended_stats": [
      "ts=10:15:26 PM May 07,2021",
      "scans=sent:0,compok:0,comperr:0,compnotfnd:0,ms/comp:0",
      "avshim-version=1.0.5.0",
      "mempage/s=0, procs=46, threads=1947, %cpu=0.07, procqlen=0,
diskio/s=1, smbbytes/s=181, ",
      "ifmac=FA:16:3E:06:9F:D6,
tcpstat=retrans:123453,connfail:6864,connreset:13188,inerr:0",
      "cfg=Host Name:SCSPB2271815001",
      "OS Name:Microsoft Windows Server 2012 R2 Standard",
      "OS Version:6.3.9600 N/A Build 9600",
      "System Boot Time:4/20/2021, 5:23:29 PM",
      "System Manufacturer:RDO",
      "System Model:OpenStack Compute",
      "System Type:x64-based PC",
      "Processor(s):2 Processor(s) Installed.",
      "[01]:Intel64 Family 6 Model 94 Stepping 3 GenuineIntel ~2400 Mhz"
    ],
    "interface": {
      "name": "vs2.data",
      "uuid": "c070b4c2-aef9-11eb-8530-0050568e8ed1",
      "ip": {
        "address": "10.140.70.154"
      }
    }
  }
],
"num_records": 2
}
----

'''

=== Retrieving the server status information for the server with IP
address 10.141.46.173

'''

----
```

```
# The API:
/api/protocols/vscan/server-status

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/vscan/server-
status?ip=10.140.132.141&fields=*" -H "accept: application/hal+json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "66f8564d-aefc-11eb-bd8c-0050568e8ed1",
      "name": "vs1"
    },
    "node": {
      "uuid": "ce2463d9-aef6-11eb-bd8c-0050568e8ed1",
      "name": "chiragm-vsim1"
    },
    "ip": "10.140.132.141",
    "type": "primary",
    "state": "connected",
    "update_time": "2021-05-07T23:08:21+05:30",
    "vendor": "mighty master anti-evil scanner",
    "version": "5.643",
    "extended_stats": [
      "ts=12:07:30 AM May 08,2021",
      "scans=sent:0,compok:0,comperr:0,compnotfnd:0,ms/comp:0",
      "avshim-version=1.0.5.0",
      "mempage/s=0, procs=52, threads=2108, %cpu=0.07, procqlen=0,
diskio/s=0, smbbytes/s=230, ",
      "ifmac=FA:16:3E:F0:70:88,
tcpstat=retrans:8249,connfail:2174,connreset:52243,inerr:0",
      "cfg=Host Name:SCSPB2271817001",
      "OS Name:Microsoft Windows Server 2012 R2 Standard",
      "OS Version:6.3.9600 N/A Build 9600",
      "System Boot Time:5/6/2021, 9:01:42 PM",
      "System Manufacturer:RDO",
      "System Model:OpenStack Compute",
      "System Type:x64-based PC",
      "Processor(s):2 Processor(s) Installed.",
      "[01]:Intel64 Family 6 Model 94 Stepping 3 GenuineIntel ~2400 Mhz"
    ],
    "interface": {
      "name": "vs1.data",
      "uuid": "6911e7c6-aefc-11eb-bd8c-0050568e8ed1",
```

```
      "ip": {
        "address": "10.140.69.165"
      }
    }
  }
],
"num_records": 1
}
----

'''




[[ID6047bd6295579a972f667b20cc713bd0]]
= Retrieve the Vscan server status

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/vscan/server-status`#

*Introduced In:* 9.6

Retrieves a Vscan server status.

== Related ONTAP commands

* `vserver vscan connection-status show-all`

== Learn more

* xref:{relative_path}protocols_vscan_server-
status_endpoint_overview.html[DOC /protocols/vscan/server-status]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description
```

```
|type
|string
|query
|False
a|Filter by type


|update_time
|string
|query
|False
a|Filter by update_time


|svm.uuid
|string
|query
|False
a|Filter by svm.uuid


|svm.name
|string
|query
|False
a|Filter by svm.name


|version
|string
|query
|False
a|Filter by version


|disconnected_reason
|string
|query
|False
a|Filter by disconnected_reason


|interface.ip.address
|string
|query
|False
a|Filter by interface.ip.address
```

```
* Introduced in: 9.10


|interface.name
|string
|query
|False
a|Filter by interface.name

* Introduced in: 9.10


|interface.uuid
|string
|query
|False
a|Filter by interface.uuid

* Introduced in: 9.10


|node.uuid
|string
|query
|False
a|Filter by node.uuid


|node.name
|string
|query
|False
a|Filter by node.name


|vendor
|string
|query
|False
a|Filter by vendor


|ip
|string
|query
|False
```

```
a|Filter by ip


|state
|string
|query
|False
a|Filter by state


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0
```

```
|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of records


|records
|array[link:#vscan_server_status[vscan_server_status]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
```

```
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "disconnected_reason": "string",
      "interface": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "ip": {
          "address": "10.10.10.7"
        },
        "name": "lif1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "ip": "string",
      "node": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "node1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "state": "string",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "type": "string",
      "update_time": "string",
      "vendor": "string",
      "version": "string"
    }
  ]
}
====
```

```
== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
```

```
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
```

```
|link:#href[href]
a|

|===


[#ip]
[.api-collapsible-fifth-title]
ip

IP information


[cols=3*,options=header]
|===
|Name
|Type
|Description

|address
|string
a|IPv4 or IPv6 address


|===


[#interface]
[.api-collapsible-fifth-title]
interface

Address of the interface used for the Vscan connection.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|ip
|link:#ip[ip]
a|IP information
```

```
|name
|string
a|The name of the interface.


|uuid
|string
a|The UUID that uniquely identifies the interface.


|===


[#node]
[.api-collapsible-fifth-title]
node

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|

|uuid
|string
a|

|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
```

```
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#vscan_server_status]
[.api-collapsible-fifth-title]
vscan_server_status

Displays the connection status information of the external virus-scanning
servers.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|disconnected_reason
|string
a|Specifies the server disconnected reason.
The following is a list of the possible reasons:

* unknown                   - Disconnected, unknown reason.
* vscan_disabled            - Disconnected, Vscan is disabled on the SVM.
* no_data_lif               - Disconnected, SVM does not have data LIF.
* session_uninitialized     - Disconnected, session is not initialized.
* remote_closed             - Disconnected, server has closed the
connection.
* invalid_protocol_msg      - Disconnected, invalid protocol message
received.
```

```
* invalid_session_id        - Disconnected, invalid session ID received.
* inactive_connection       - Disconnected, no activity on connection.
* invalid_user              - Connection request by an invalid user.
* server_removed            - Disconnected, server has been removed from
the active Scanners List.
enum:
* unknown
* vscan_disabled
* no_data_lif
* session_uninitialized
* remote_closed
* invalid_protocol_msg
* invalid_session_id
* inactive_connection
* invalid_user
* server_removed


|interface
|link:#interface[interface]
a|Address of the interface used for the Vscan connection.


|ip
|string
a|IP address of the Vscan server.


|node
|link:#node[node]
a|

|state
|string
a|Specifies the server connection state indicating if it is in the
connected or disconnected state.
The following is a list of the possible states:

* connected                 - Connected
* disconnected              - Disconnected
enum:
* connected
* disconnected


|svm
|link:#svm[svm]
```

```
a|

|type
|string
a|Server type. The possible values are:

*** primary - Primary server

*** backup  - Backup server


|update_time
|string
a|Specifies the time the server is in the connected or disconnected state.


|vendor
|string
a|Name of the connected virus-scanner vendor.


|version
|string
a|Version of the connected virus-scanner.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument
```

```
|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID96fc27b0e2367f49aa1f9352a3705109]]
= Delete a Vscan configuration

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
```

```
block]#`/protocols/vscan/{svm.uuid}`#

*Introduced In:* 9.6

Deletes a Vscan configuration.

Important notes:

* The Vscan DELETE endpoint deletes all of the Vscan configuration of an
SVM. It first disables the Vscan and then deletes all of the SVM scanner-
pools, On-Access policies, and On-Demand policies.
* Disable the active Vscan On-Access policy on an SVM before performing
the Vscan delete operation on that SVM.

== Related ONTAP commands

* `vserver vscan scanner-pool delete`
* `vserver vscan on-access-policy delete`
* `vserver vscan on-demand-policy delete`

== Learn more

* xref:{relative_path}protocols_vscan_endpoint_overview.html[DOC
/protocols/vscan]
* xref:{relative_path}protocols_vscan_svm.uuid_scanner-
pools_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/scanner-
pools]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===
```

```
== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes
//start table
[cols=2*,options=header]
|===
//header
| Error Code | Description
//end header
//end row
//start row
|10027259 +
//end row
//start row
|A scanner-pool, an On-Access policy, or an On-Demand policy might fail to
get deleted due to either a systematic error or some hardware failure. The
error code returned details the failure along with the reason for the
failure. For example, "Failed to delete On-Access policy "sp1". Reason:
"Failed to delete policy. Reason: policy must be disabled before being
deleted.". Retry the operation."
//end row
|===
//end table



[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===
```

```
.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument
```

```
|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDa227b1c368947a7dd6ec0ae30a13a292]]
= Retrieve the Vscan configuration for an SVM

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}`#
```

```
*Introduced In:* 9.6

Retrieves the Vscan configuration for a specified SVM.
This includes scanner-pools, On-Access policies, On-Demand policies, and
information about whether a Vscan is enabled or disabled on an SVM.

Important note:

* You can enable only one Vscan configuration at a time for an SVM.

== Related ONTAP commands

* `vserver vscan show`
* `vserver vscan scanner-pool show`
* `vserver vscan scanner-pool servers show`
* `vserver vscan scanner-pool privileged-users show`
* `vserver vscan on-access-policy show`
* `vserver vscan on-access-policy file-ext-to-exclude show`
* `vserver vscan on-access-policy file-ext-to-include show`
* `vserver vscan on-access-policy paths-to-exclude show`
* `vserver vscan on-demand-task show`

== Learn more

* xref:{relative_path}protocols_vscan_endpoint_overview.html[DOC
/protocols/vscan]
* xref:{relative_path}protocols_vscan_svm.uuid_scanner-
pools_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/scanner-
pools]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.
```

```
|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|cache_clear
|boolean
a|Discards the cached information of the files that have been successfully
scanned. Once the cache is cleared, files are scanned again when they are
accessed. PATCH only


|enabled
|boolean
a|Specifies whether or not Vscan is enabled on the SVM.


|on_access_policies
|array[link:#vscan_on_access[vscan_on_access]]
a|

|on_demand_policies
|array[link:#vscan_on_demand_policy[vscan_on_demand_policy]]
a|

|scanner_pools
|array[link:#scanner_pool[scanner_pool]]
```

```
a|

|svm
|link:#svm[svm]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "on_access_policies": [
    {
      "name": "on-access-test",
      "scope": {
        "exclude_extensions": [
          "mp*",
          "txt"
        ],
        "exclude_paths": [
          "\\dir1\\dir2\\name",
          "\\vol\\a b",
          "\\vol\\a,b\\"
        ],
        "include_extensions": [
          "mp*",
          "txt"
        ],
        "max_file_size": 2147483648
      }
    }
  ],
  "on_demand_policies": [
    {
      "log_path": "/vol0/report_dir",
      "name": "task-1",
      "scan_paths": [
        "/vol1/",
```

```
        "/vol2/cifs/"
      ],
      "schedule": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "weekly",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "scope": {
        "exclude_extensions": [
          "mp3",
          "mp4"
        ],
        "exclude_paths": [
          "/vol1/cold-files/",
          "/vol1/cifs/names"
        ],
        "include_extensions": [
          "vmdk",
          "mp*"
        ],
        "max_file_size": 10737418240
      }
    }
  ],
  "scanner_pools": [
    {
      "cluster": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "cluster1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "name": "scanner-1",
      "privileged_users": [
        "cifs\\u1",
        "cifs\\u2"
      ],
      "role": "string",
      "servers": [
```

```
        "1.1.1.1",
        "10.72.204.27",
        "vmwin204-27.fsct.nb"
      ]
    }
  ],
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
```

```
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|
```

```
|===


[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
|array[string]
a|List of file paths for which scanning must not be performed.


|include_extensions
|array[string]
a|List of file extensions to be scanned.


|max_file_size
|integer
a|Maximum file size, in bytes, allowed for scanning.


|only_execute_access
|boolean
a|Scan only files opened with execute-access.


|scan_readonly_volumes
|boolean
a|Specifies whether or not read-only volume can be scanned.


|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.
```

```
|===


[#vscan_on_access]
[.api-collapsible-fifth-title]
vscan_on_access

An On-Access policy that defines the scope of an On-Access scan. Use On-Access scanning to check for viruses when clients open, read, rename, or close files over CIFS. By default, ONTAP creates an On-Access policy named "default_CIFS" and enables it for all the SVMs in a cluster.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|enabled
|boolean
a|Status of the On-Access Vscan policy


|mandatory
|boolean
a|Specifies if scanning is mandatory. File access is denied if there are no external virus-scanning servers available for virus scanning.


|name
|string
a|On-Access policy ame


|scope
|link:#scope[scope]
a|

|===


[#schedule]
[.api-collapsible-fifth-title]
schedule
```

```
Schedule of the task.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|Job schedule name


|uuid
|string
a|Job schedule UUID


|===


[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
|array[string]
a|List of file paths for which scanning must not be performed.


|include_extensions
```

```
|array[string]
a|List of file extensions to be scanned.


|max_file_size
|integer
a|Maximum file size, in bytes, allowed for scanning.


|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.


|===


[#vscan_on_demand_policy]
[.api-collapsible-fifth-title]
vscan_on_demand_policy

Use On-Demand scanning to check files for viruses on a schedule. An On-
Demand policy defines the scope of an On-Demand scan.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|log_path
|string
a|The path from the Vserver root where the task report is created.


|name
|string
a|On-Demand task name


|scan_paths
|array[string]
a|List of paths that need to be scanned.


|schedule
```

```
|link:#schedule[schedule]
a|Schedule of the task.


|scope
|link:#scope[scope]
a|

|===


[#cluster_reference]
[.api-collapsible-fifth-title]
cluster_reference

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|

|uuid
|string
a|

|===


[#scanner_pool]
[.api-collapsible-fifth-title]
scanner_pool

Scanner pool is a set of attributes which are used to validate and manage
connections between clustered ONTAP and external virus-scanning server, or
"Vscan server".


[cols=3*,options=header]
|===
```

```
|Name
|Type
|Description

|cluster
|link:#cluster_reference[cluster_reference]
a|

|name
|string
a|Specifies the name of the scanner pool. Scanner pool name can be up to
256 characters long and is a string that can only contain any combination
of ASCII-range alphanumeric characters a-z, A-Z, 0-9), "_", "-" and ".".


|privileged_users
|array[string]
a|Specifies a list of privileged users. A valid form of privileged user-
name is "domain-name\user-name". Privileged user-names are stored and
treated as case-insensitive strings. Virus scanners must use one of the
registered privileged users for connecting to clustered Data ONTAP for
exchanging virus-scanning protocol messages and to access file for
scanning, remedying and quarantining operations.

* example: ["cifs\u1", "cifs\u2"]
* Introduced in: 9.10


|role
|string
a|Specifies the role of the scanner pool. The possible values are:

*** primary   - Always active.

*** secondary - Active only when none of the primary external virus-
scanning servers are connected.

*** idle      - Always inactive.


|servers
|array[string]
a|Specifies a list of IP addresses or FQDN for each Vscan server host
names which are allowed to connect to clustered ONTAP.

* example: ["1.1.1.1", "10.72.204.27", "vmwin204-27.fsct.nb"]
* Introduced in: 9.10
```

```
|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code
```

```
|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID40ac73557ff9b40be5df8beebcd1e99c]]
```

```
= Update the Vscan configuration for an SVM

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}`#

*Introduced In:* 9.6

Updates the Vscan configuration of an SVM. Allows you to either enable or
disable a Vscan, and allows you to clear the Vscan cache that stores the
past scanning data for an SVM.

Important note:

* The Vscan PATCH endpoint does not allow you to modify scanner-pools, On-
Demand policies or On-Access policies. Those modifications can only be
done through their respective endpoints.

== Related ONTAP commands

* `vserver vscan enable`
* `vserver vscan disable`
* `vserver vscan reset`

== Learn more

* xref:{relative_path}protocols_vscan_endpoint_overview.html[DOC
/protocols/vscan]
* xref:{relative_path}protocols_vscan_svm.uuid_scanner-
pools_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/scanner-
pools]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|svm.uuid
|string
|path
|True
```

```
a|UUID of the SVM to which this object belongs.

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|cache_clear
|boolean
a|Discards the cached information of the files that have been successfully
scanned. Once the cache is cleared, files are scanned again when they are
accessed. PATCH only


|enabled
|boolean
a|Specifies whether or not Vscan is enabled on the SVM.


|===


== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes
//start table
[cols=2*,options=header]
|===
//header
| Error Code | Description
//end header
//end row
```

```
//start row
|10027015 +
//end row
//start row
|Attempting to enable a Vscan but no active scanner-pool exists for the
specified SVM
//end row
//start row
|10027011 +
//end row
//start row
|Attempting to enable a Vscan for an SVM for which no CIFS server exists
//end row
//start row
|10027023 +
//end row
//start row
|Attempting to enable a Vscan for an SVM for which no active Vscan On-
Access policy exists
//end row
|===
//end table


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===
```

```
[#_links]
[.api-collapsible-fifth-title]
_links
[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
|array[string]
a|List of file paths for which scanning must not be performed.


|include_extensions
|array[string]
a|List of file extensions to be scanned.


|max_file_size
|integer
a|Maximum file size, in bytes, allowed for scanning.


|only_execute_access
|boolean
a|Scan only files opened with execute-access.


|scan_readonly_volumes
|boolean
a|Specifies whether or not read-only volume can be scanned.


|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.
```

```
|===


[#vscan_on_access]
[.api-collapsible-fifth-title]
vscan_on_access

An On-Access policy that defines the scope of an On-Access scan. Use On-
Access scanning to check for viruses when clients open, read, rename, or
close files over CIFS. By default, ONTAP creates an On-Access policy named
"default_CIFS" and enables it for all the SVMs in a cluster.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|enabled
|boolean
a|Status of the On-Access Vscan policy


|mandatory
|boolean
a|Specifies if scanning is mandatory. File access is denied if there are
no external virus-scanning servers available for virus scanning.


|scope
|link:#scope[scope]
a|

|===


[#schedule]
[.api-collapsible-fifth-title]
schedule

Schedule of the task.


[cols=3*,options=header]
```

```
|===
|Name
|Type
|Description

|name
|string
a|Job schedule name


|uuid
|string
a|Job schedule UUID


|===


[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
|array[string]
a|List of file paths for which scanning must not be performed.


|include_extensions
|array[string]
a|List of file extensions to be scanned.


|max_file_size
|integer
a|Maximum file size, in bytes, allowed for scanning.
```

```
|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.


|===


[#vscan_on_demand_policy]
[.api-collapsible-fifth-title]
vscan_on_demand_policy

Use On-Demand scanning to check files for viruses on a schedule. An On-
Demand policy defines the scope of an On-Demand scan.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|log_path
|string
a|The path from the Vserver root where the task report is created.


|scan_paths
|array[string]
a|List of paths that need to be scanned.


|schedule
|link:#schedule[schedule]
a|Schedule of the task.


|scope
|link:#scope[scope]
a|

|===


[#cluster_reference]
[.api-collapsible-fifth-title]
```

```
cluster_reference

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|

|uuid
|string
a|

|===


[#scanner_pool]
[.api-collapsible-fifth-title]
scanner_pool

Scanner pool is a set of attributes which are used to validate and manage
connections between clustered ONTAP and external virus-scanning server, or
"Vscan server".


[cols=3*,options=header]
|===
|Name
|Type
|Description

|cluster
|link:#cluster_reference[cluster_reference]
a|

|privileged_users
|array[string]
a|Specifies a list of privileged users. A valid form of privileged user-
name is "domain-name\user-name". Privileged user-names are stored and
treated as case-insensitive strings. Virus scanners must use one of the
registered privileged users for connecting to clustered Data ONTAP for
exchanging virus-scanning protocol messages and to access file for
scanning, remedying and quarantining operations.
```

```
* example: ["cifs\u1", "cifs\u2"]
* Introduced in: 9.10


|role
|string
a|Specifies the role of the scanner pool. The possible values are:

*** primary   - Always active.

*** secondary - Active only when none of the primary external virus-
scanning servers are connected.

*** idle      - Always inactive.


|servers
|array[string]
a|Specifies a list of IP addresses or FQDN for each Vscan server host
names which are allowed to connect to clustered ONTAP.

* example: ["1.1.1.1", "10.72.204.27", "vmwin204-27.fsct.nb"]
* Introduced in: 9.10


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.
```

```
|===


[#vscan]
[.api-collapsible-fifth-title]
vscan

Vscan can be used to protect data from being compromised by viruses or
other malicious code. This combines best-in-class third-party antivirus
software with ONTAP features that give you the flexibility you need to
control which files get scanned and when. Storage systems offload scanning
operations to external servers hosting antivirus software from thirdparty
vendors. An Antivirus Connector on the external server handles
communications between the storage system and the antivirus software.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|cache_clear
|boolean
a|Discards the cached information of the files that have been successfully
scanned. Once the cache is cleared, files are scanned again when they are
accessed. PATCH only


|enabled
|boolean
a|Specifies whether or not Vscan is enabled on the SVM.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===
```

```
//end collapsible .Definitions block
====



:leveloffset: -1


= Manage Vscan On-Access policies

:leveloffset: +1


[[IDea27d8ca87034637c73e48e91f974ae0]]
= Protocols Vscan svm.uuid on-access-policies endpoint overview



== Overview

Use Vscan On-Access scanning to actively scan file objects for viruses
when clients access files over SMB. To control which file operations
trigger a vscan, use Vscan File-Operations Profile (vscan-fileop-profile)
option in the CIFS share. The Vscan On-Access policy configuration defines
the scope and status of On-Access scanning on file objects. Use this API
to retrieve and manage Vscan On-Access policy configurations and Vscan On-
Access policy statuses for the SVM.

== Examples

=== Retrieving all fields for all policies of an SVM

'''

----

# The API:
/api/protocols/vscan/{svm.uuid}/on-access-policies/

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/vscan/{svm.uuid}/on-access-
policies?fields=*" -H "accept: application/hal+json"

# The response:
{
"records": [
  {
```

```
    "svm": {
      "uuid": "179d3c85-7053-11e8-b9b8-005056b41bd1",
      "name": "vs1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/179d3c85-7053-11e8-b9b8-005056b41bd1"
        }
      }
    },
    "name": "default_CIFS",
    "enabled": true,
    "mandatory": true,
    "scope": {
      "max_file_size": 2147483648,
      "include_extensions": [
        "*"
      ],
      "scan_without_extension": true,
      "scan_readonly_volumes": false,
      "only_execute_access": false
    },
    "_links": {
      "self": {
        "href": "/api/protocols/vscan/179d3c85-7053-11e8-b9b8-
005056b41bd1/on-access-policies/default_CIFS"
      }
    }
  },
  {
    "svm": {
      "uuid": "179d3c85-7053-11e8-b9b8-005056b41bd1",
      "name": "vs1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/179d3c85-7053-11e8-b9b8-005056b41bd1"
        }
      }
    },
    "name": "on-access-policy",
    "enabled": false,
    "mandatory": true,
    "scope": {
      "max_file_size": 3221225472,
      "exclude_paths": [
        "\\vol\\a b\\",
        "\\vol\\a,b\\"
```

```
      ],
      "include_extensions": [
        "mp*",
        "tx*"
      ],
      "exclude_extensions": [
        "mp3",
        "txt"
      ],
      "scan_without_extension": true,
      "scan_readonly_volumes": false,
      "only_execute_access": true
    },
    "_links": {
      "self": {
        "href": "/api/protocols/vscan/179d3c85-7053-11e8-b9b8-
005056b41bd1/on-access-policies/on-access-policy"
      }
    }
  }
],
"num_records": 2,
"_links": {
  "self": {
    "href": "/api/protocols/vscan/179d3c85-7053-11e8-b9b8-005056b41bd1/on-
access-policies?fields=*"
  }
}
}
----

'''

=== Retrieving the specific On-Access policy associated with the specified
SVM

'''

----

# The API:
/api/protocols/vscan/{svm.uuid}/on-access-policies/{name}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/vscan/179d3c85-7053-11e8-
b9b8-005056b41bd1/on-access-policies/on-access-policy" -H "accept:
```

```
application/json"

# The response:
{
"svm": {
  "uuid": "179d3c85-7053-11e8-b9b8-005056b41bd1",
  "name": "vs1",
  "_links": {
    "self": {
      "href": "/api/svm/svms/179d3c85-7053-11e8-b9b8-005056b41bd1"
    }
  }
},
"name": "on-access-policy",
"enabled": true,
"mandatory": true,
"scope": {
  "max_file_size": 3221225472,
  "exclude_paths": [
    "\\vol\\a b\\",
    "\\vol\\a,b\\"
  ],
  "include_extensions": [
    "mp*",
    "tx*"
  ],
  "exclude_extensions": [
    "mp3",
    "txt"
  ],
  "scan_without_extension": true,
  "scan_readonly_volumes": false,
  "only_execute_access": true
},
"_links": {
  "self": {
    "href": "/api/protocols/vscan/179d3c85-7053-11e8-b9b8-005056b41bd1/on-
access-policies/task1"
  }
}
}
----

'''

=== Creating a Vscan On-Access policy
```

```
The Vscan On-Access policy POST endpoint creates an On-Access policy for
the specified SVM. Set enabled to "true" to enable scanning on the created
policy.

----

# The API:
/api/protocols/vscan/{svm.uuid}/on-access-policies

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/vscan/86fbc414-f140-11e8-
8e22-0050568e0945/on-access-policies?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"enabled\":
false, \"mandatory\": true, \"name\": \"on-access-policy\", \"scope\": {
\"exclude_extensions\": [ \"txt\", \"mp3\" ], \"exclude_paths\": [
\"\\\\dir1\\\\dir2\\\\ame\", \"\\\\vol\\\\a b\" ], \"include_extensions\":
[  \"mp*\", \"txt\" ], \"max_file_size\": 3221225472,
\"only_execute_access\": true, \"scan_readonly_volumes\": false,
\"scan_without_extension\": true }}"

# The response:
{
"num_records": 1,
"records": [
  {
    "svm": {
      "name": "vs1"
    },
    "name": "on-access-policy",
    "enabled": false,
    "mandatory": true,
    "scope": {
      "max_file_size": 3221225472,
      "exclude_paths": [
        "\\dir1\\dir2\\ame",
        "\\vol\\a b"
      ],
      "include_extensions": [
        "mp*",
        "txt"
      ],
      "exclude_extensions": [
        "txt",
        "mp3"
      ],
```

```
      "scan_without_extension": true,
      "scan_readonly_volumes": false,
      "only_execute_access": true
    }
  }
]
}
----

'''

=== Creating a Vscan On-Access policy where a number of optional fields
are not specified

'''

----

# The API:
/api/protocols/vscan/{svm.uuid}/on-access-policies

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/vscan/86fbc414-f140-11e8-
8e22-0050568e0945/on-access-policies?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"enabled\":
false, \"mandatory\": true, \"name\": \"on-access-policy\", \"scope\": {
\"exclude_paths\": [ \"\\\\vol\\\\a b\", \"\\\\vol\\\\a,b\\\\\" ],
\"max_file_size\": 1073741824, \"scan_without_extension\": true }}"

# The response:
{
"num_records": 1,
"records": [
  {
    "svm": {
      "name": "vs1"
    },
    "name": "on-access-policy",
    "enabled": false,
    "mandatory": true,
    "scope": {
      "max_file_size": 1073741824,
      "exclude_paths": [
        "\\vol\\a b",
        "\\vol\\a,b\\"
      ],
```

```
      "scan_without_extension": true
    }
  }
]
}
----

'''

=== Updating a Vscan On-Access policy

The policy being modified is identified by the UUID of the SVM and the
policy name.

----

# The API:
/api/protocols/vscan/{svm.uuid}/on-access-policies/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/vscan/86fbc414-f140-11e8-
8e22-0050568e0945/on-access-policies/on-access-policy" -H "accept:
application/hal+json" -H "Content-Type: application/json" -d "{ \"scope\":
{ \"include_extensions\": [ \"txt\" ], \"only_execute_access\": true,
\"scan_readonly_volumes\": false, \"scan_without_extension\": true }}"
----

'''

=== Deleting a Vscan On-Access policy

The policy to be deleted is identified by the UUID of the SVM and the
policy name.

----

# The API:
/api/protocols/vscan/{svm.uuid}/on-access-policies/{name}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/vscan/86fbc414-f140-11e8-
8e22-0050568e0945/on-access-policies/on-access-policy" -H "accept:
application/hal+json"
----

'''
```

```
[[ID5b397d9030f5413643544f1c734516e3]]
= Retrieve a Vscan On-Access policy

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}/on-access-policies`#

*Introduced In:* 9.6

Retrieves the Vscan On-Access policy.

== Related ONTAP commands

* `vserver vscan on-access-policy show`
* `vserver vscan on-access-policy file-ext-to-include show`
* `vserver vscan on-access-policy file-ext-to-exclude show`
* `vserver vscan on-access-policy paths-to-exclude show`

== Learn more

* xref:{relative_path}protocols_vscan_svm.uuid_on-access-
policies_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/on-access-
policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|query
|False
a|Filter by name


|scope.only_execute_access
```

```
|boolean
|query
|False
a|Filter by scope.only_execute_access


|scope.exclude_paths
|string
|query
|False
a|Filter by scope.exclude_paths


|scope.max_file_size
|integer
|query
|False
a|Filter by scope.max_file_size


|scope.scan_without_extension
|boolean
|query
|False
a|Filter by scope.scan_without_extension


|scope.include_extensions
|string
|query
|False
a|Filter by scope.include_extensions


|scope.exclude_extensions
|string
|query
|False
a|Filter by scope.exclude_extensions


|scope.scan_readonly_volumes
|boolean
|query
|False
a|Filter by scope.scan_readonly_volumes
```

```
|mandatory
|boolean
|query
|False
a|Filter by mandatory


|enabled
|boolean
|query
|False
a|Filter by enabled


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|return_timeout
```

```
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0


|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of records


|records
|array[link:#vscan_on_access[vscan_on_access]]
a|

|===
```

```
.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "name": "on-access-test",
      "scope": {
        "exclude_extensions": [
          "mp*",
          "txt"
        ],
        "exclude_paths": [
          "\\dir1\\dir2\\name",
          "\\vol\\a b",
          "\\vol\\a,b\\"
        ],
        "include_extensions": [
          "mp*",
          "txt"
        ],
        "max_file_size": 2147483648
      }
    }
  ]
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
```

```
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===


[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
|array[string]
a|List of file paths for which scanning must not be performed.
```

```
|include_extensions
|array[string]
a|List of file extensions to be scanned.


|max_file_size
|integer
a|Maximum file size, in bytes, allowed for scanning.


|only_execute_access
|boolean
a|Scan only files opened with execute-access.


|scan_readonly_volumes
|boolean
a|Specifies whether or not read-only volume can be scanned.


|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.


|===


[#vscan_on_access]
[.api-collapsible-fifth-title]
vscan_on_access

An On-Access policy that defines the scope of an On-Access scan. Use On-Access scanning to check for viruses when clients open, read, rename, or close files over CIFS. By default, ONTAP creates an On-Access policy named "default_CIFS" and enables it for all the SVMs in a cluster.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|enabled
|boolean
```

```
a|Status of the On-Access Vscan policy


|mandatory
|boolean
a|Specifies if scanning is mandatory. File access is denied if there are
no external virus-scanning servers available for virus scanning.


|name
|string
a|On-Access policy ame


|scope
|link:#scope[scope]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID8df2ad19404274b06c70ad8311766d22]]
= Create a Vscan On-Access policy

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}/on-access-policies`#

*Introduced In:* 9.6

Creates a Vscan On-Access policy. Created only on a data SVM.
</b>Important notes:

* You must enable the policy on an SVM before its files can be scanned.
```

```
* You can enable only one On-Access policy at a time on an SVM. By
default, the policy is enabled on creation. * If the Vscan On-Access
policy has been created successfully on an SVM but cannot be enabled due
to an error, the Vscan On-Access policy configurations are saved. The
Vscan On-Access policy is then enabled using the PATCH operation.

== Required properties

* `svm.uuid` - Existing SVM in which to create the Vscan On-Access policy.
* `name` - Name of the Vscan On-Access policy. Maximum length is 256
characters.

== Default property values

If not specified in POST, the following default property values are
assigned:

* `enabled` - _true_
* `mandatory` - _true_
* `include_extensions` - _*_
* `max_file_size` - _2147483648_
* `only_execute_access` - _false_
* `scan_readonly_volumes` - _false_
* `scan_without_extension` - _true_

== Related ONTAP commands

* `vserver vscan on-access-policy create`
* `vserver vscan on-access-policy enable`
* `vserver vscan on-access-policy disable`
* `vserver vscan on-access-policy file-ext-to-include add`
* `vserver vscan on-access-policy file-ext-to-exclude add`
* `vserver vscan on-access-policy paths-to-exclude add`

== Learn more

* xref:{relative_path}protocols_vscan_svm.uuid_on-access-
policies_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/on-access-
policies]


== Parameters

[cols=5*,options=header]
|===

|Name
```

```
|Type
|In
|Required
|Description

|return_records
|boolean
|query
|False
a|The default is false.  If set to true, the records are returned.

* Default value:


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|enabled
|boolean
a|Status of the On-Access Vscan policy


|mandatory
|boolean
a|Specifies if scanning is mandatory. File access is denied if there are
no external virus-scanning servers available for virus scanning.


|name
|string
a|On-Access policy ame
```

```
|scope
|link:#scope[scope]
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "name": "on-access-test",
  "scope": {
    "exclude_extensions": [
      "mp*",
      "txt"
    ],
    "exclude_paths": [
      "\\dir1\\dir2\\name",
      "\\vol\\a b",
      "\\vol\\a,b\\"
    ],
    "include_extensions": [
      "mp*",
      "txt"
    ],
    "max_file_size": 2147483648
  }
}
====

== Response
```

Status: 201, Created

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|num_records
|integer
```

```
a|Number of records


|records
|array[link:#vscan_on_access[vscan_on_access]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "records": [
    {
      "name": "on-access-test",
      "scope": {
        "exclude_extensions": [
          "mp*",
          "txt"
        ],
        "exclude_paths": [
          "\\dir1\\dir2\\name",
          "\\vol\\a b",
          "\\vol\\a,b\\"
        ],
        "include_extensions": [
          "mp*",
          "txt"
        ],
        "max_file_size": 2147483648
      }
    }
  ]
}
====

== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
```

```
| Error Code | Description

| 10027043
| The new On-Access policy cannot be created as the SVM has reached the
maximum number of On-Access policies allowed. Delete an existing policy in
order to create a new policy

| 10027101
| The file size must be in the range 1KB to 1TB

| 10027107
| The include extensions list cannot be empty. Specify at least one
extension for inclusion

| 10027109
| The specified CIFS path is invalid. It must be in the form "\dir1\dir2"
or "\dir1\dir2\"

| 10027249
| The On-Access policy created successfully but failed to enable the
policy. The reason for enable policy operation failure might be that
another policy is enabled. Disable the enabled policy and then enable the
newly created policy using the PATCH operation

| 10027253
| The number of paths specified exceeds the configured number of maximum
paths. You cannot specify more than the maximum number of configured paths

| 10027254
| The number of extensions specified exceeds the configured maximum number
of extensions. You cannot specify more than the maximum number of
configured extensions
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
```

```
|===
|Name
|Type
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
|array[string]
a|List of file paths for which scanning must not be performed.


|include_extensions
|array[string]
a|List of file extensions to be scanned.


|max_file_size
|integer
a|Maximum file size, in bytes, allowed for scanning.


|only_execute_access
|boolean
a|Scan only files opened with execute-access.


|scan_readonly_volumes
|boolean
a|Specifies whether or not read-only volume can be scanned.


|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.


|===


[#vscan_on_access]
[.api-collapsible-fifth-title]
vscan_on_access
```

```
An On-Access policy that defines the scope of an On-Access scan. Use On-
Access scanning to check for viruses when clients open, read, rename, or
close files over CIFS. By default, ONTAP creates an On-Access policy named
"default_CIFS" and enables it for all the SVMs in a cluster.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|enabled
|boolean
a|Status of the On-Access Vscan policy


|mandatory
|boolean
a|Specifies if scanning is mandatory. File access is denied if there are
no external virus-scanning servers available for virus scanning.


|name
|string
a|On-Access policy ame


|scope
|link:#scope[scope]
a|

|===


[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
```

```
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
```

```
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDdde190d6593f8ee04234cc85d417a8c9]]
= Delete an antivirus On-Access policy configuration

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}/on-access-policies/{name}`#

*Introduced In:* 9.6

Deletes the anti-virus On-Access policy configuration.

== Related ONTAP commands

* `vserver vscan on-access-policy delete`

== Learn more

* xref:{relative_path}protocols_vscan_svm.uuid_on-access-
policies_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/on-access-
policies]


== Parameters

[cols=5*,options=header]
|===
```

```
|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 10027034
| An On-Access policy associated with an administrative SVM cannot be
deleted.

| 10027040
| An On-Access policy with a status enabled cannot be deleted. Disable the
policy and then delete the policy.
|===
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
```

```
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===
```

```
//end collapsible .Definitions block
====



[[IDd0bdc9558765123e78c5f89ac50d10fa]]
= Retrieve the Vscan On-Access policy configuration for an SVM

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}/on-access-policies/{name}`#

*Introduced In:* 9.6

Retrieves the Vscan On-Access policy configuration of an SVM.

== Related ONTAP commands

* `vserver vscan on-access-policy show`
* `vserver vscan on-access-policy file-ext-to-include show`
* `vserver vscan on-access-policy file-ext-to-exclude show`
* `vserver vscan on-access-policy paths-to-exclude show`

== Learn more

* xref:{relative_path}protocols_vscan_svm.uuid_on-access-
policies_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/on-access-
policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|
```

```
|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|enabled
|boolean
a|Status of the On-Access Vscan policy


|mandatory
|boolean
a|Specifies if scanning is mandatory. File access is denied if there are
no external virus-scanning servers available for virus scanning.


|name
|string
a|On-Access policy ame


|scope
|link:#scope[scope]
a|
```

```
|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "name": "on-access-test",
  "scope": {
    "exclude_extensions": [
      "mp*",
      "txt"
    ],
    "exclude_paths": [
      "\\dir1\\dir2\\name",
      "\\vol\\a b",
      "\\vol\\a,b\\"
    ],
    "include_extensions": [
      "mp*",
      "txt"
    ],
    "max_file_size": 2147483648
  }
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
```

```
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
|array[string]
a|List of file paths for which scanning must not be performed.


|include_extensions
```

```
|array[string]
a|List of file extensions to be scanned.


|max_file_size
|integer
a|Maximum file size, in bytes, allowed for scanning.


|only_execute_access
|boolean
a|Scan only files opened with execute-access.


|scan_readonly_volumes
|boolean
a|Specifies whether or not read-only volume can be scanned.


|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument
```

```
|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID58a4bef81b6fbc162bc4adcec84ff78b]]
= Update the Vscan On-Access policy configuration for an SVM

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}/on-access-policies/{name}`#
```

```
*Introduced In:* 9.6

Updates the Vscan On-Access policy configuration and/or enables/disables
the Vscan On-Access policy of an SVM. You cannot modify the configurations
for an On-Access policy associated with an administrative SVM, although
you can encable and disable the policy associated with an administrative
SVM.

== Related ONTAP commands

* `vserver vscan on-access-policy modify`
* `vserver vscan on-access-policy enable`
* `vserver vscan on-access-policy disable`
* `vserver vscan on-access-policy file-ext-to-include add`
* `vserver vscan on-access-policy file-ext-to-exclude add`
* `vserver vscan on-access-policy paths-to-exclude add`
* `vserver vscan on-access-policy file-ext-to-include remove`
* `vserver vscan on-access-policy file-ext-to-exclude remove`
* `vserver vscan on-access-policy paths-to-exclude remove`

== Learn more

* xref:{relative_path}protocols_vscan_svm.uuid_on-access-
policies_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/on-access-
policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
|path
```

```
|True
a|UUID of the SVM to which this object belongs.

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|enabled
|boolean
a|Status of the On-Access Vscan policy


|mandatory
|boolean
a|Specifies if scanning is mandatory. File access is denied if there are
no external virus-scanning servers available for virus scanning.


|scope
|link:#scope[scope]
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "scope": {
    "exclude_extensions": [
      "mp*",
      "txt"
    ],
    "exclude_paths": [
      "\\dir1\\dir2\\name",
      "\\vol\\a b",
      "\\vol\\a,b\\"
```

```
    ],
    "include_extensions": [
      "mp*",
      "txt"
    ],
    "max_file_size": 2147483648
  }
}
====

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 10027033
| Configurations for an On-Access policy associated with an administrative
SVM cannot be modified. However, the policy can be enabled or disabled.

| 10027046
| The specified SVM is not the owner of the specified policy. Check for
the correct SVM who owns the policy.

| 10027101
| The file size must be in the range 1KB to 1TB

| 10027107
| The include extensions list cannot be empty. Specify at least one
extension for inclusion.

| 10027109
| The specified CIFS path is invalid. It must be in the form "\dir1\dir2"
or "\dir1\dir2\".

| 10027249
| The On-Access policy updated successfully but failed to enable/disable
the policy. The reason for an enable policy operation failure might be
```

```
that another policy is enabled. Disable the already enabled policy and
then enable the policy. The reason for a disable policy operation failure
might be that Vscan is enabled on the SVM. Disable the Vscan first and
then disable the policy.

| 10027250
| The On-Access policy cannot be enabled/disabled. The reason for an
enable policy operation failure might be that another policy is enabled.
Disable the already enabled policy and then enable the policy. The reason
for a disable policy operation failure might be that Vscan is enabled on
the SVM. Disable the Vscan and then disable the policy.

| 10027253
| The number of paths specified exceeds the configured maximum number of
paths. You cannot specify more than the maximum number of configured
paths.

| 10027254
| The number of extensions specified exceeds the configured maximum number
of extensions. You cannot specify more than the maximum number of
configured extensions.
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
```

```
|array[string]
a|List of file paths for which scanning must not be performed.


|include_extensions
|array[string]
a|List of file extensions to be scanned.


|max_file_size
|integer
a|Maximum file size, in bytes, allowed for scanning.


|only_execute_access
|boolean
a|Scan only files opened with execute-access.


|scan_readonly_volumes
|boolean
a|Specifies whether or not read-only volume can be scanned.


|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.


|===


[#vscan_on_access]
[.api-collapsible-fifth-title]
vscan_on_access

An On-Access policy that defines the scope of an On-Access scan. Use On-Access scanning to check for viruses when clients open, read, rename, or close files over CIFS. By default, ONTAP creates an On-Access policy named "default_CIFS" and enables it for all the SVMs in a cluster.


[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|enabled
|boolean
a|Status of the On-Access Vscan policy


|mandatory
|boolean
a|Specifies if scanning is mandatory. File access is denied if there are
no external virus-scanning servers available for virus scanning.


|scope
|link:#scope[scope]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
```

```
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



:leveloffset: -1


= Manage Vscan On-Demand policies

:leveloffset: +1


[[ID08d3d06dc675e010c9b1586ce2ff37f3]]
= Protocols Vscan svm.uuid on-demand-policies endpoint overview



== Overview
```

```
Vscan On-Demand scanning is used to check files for viruses on a schedule.
For example, it can be used to run scans only in off-peak hours, or to
scan very large files that are excluded from an on-access scan. Vscan On-
Demand scanning can be used for any path in the SVM namespace.

Vscan On-Demand policy configurations define the scope of a Vscan On-
Demand scan. The schedule parameter in the On-Demand policy configuration
decides when to execute the task. Schedule can be created using the
/api/clusters/schedule endpoint and can be assigned on policy create or
policy modify. This API is used to retrieve and manage Vscan On-Demand
policy configurations. It is also used to schedule the Vscan On-Demand
scan.

== Examples

=== Retrieving all fields for all policies of an SVM

'''

----

# The API:
/api/protocols/vscan/{svm.uuid}/on-demand-policies/

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/vscan/{svm.uuid}/on-demand-
policies?fields=*" -H "accept: application/hal+json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "86fbc414-f140-11e8-8e22-0050568e0945",
      "name": "vs1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/86fbc414-f140-11e8-8e22-0050568e0945"
        }
      }
    },
    "name": "on-demand-policy1",
    "scan_paths": [
      "/vol1/",
      "/vol2/cifs/"
```

```
    ],
    "log_path": "/vol0/report_dir",
    "schedule": {
      "uuid": "f6d0843e-f159-11e8-8e22-0050568e0945",
      "name": "schedule",
      "_links": {
        "self": {
          "href": "/api/cluster/schedules/f6d0843e-f159-11e8-8e22-
0050568e0945"
        }
      }
    },
    "scope": {
      "max_file_size": 10737418240,
      "exclude_paths": [
        "/vol1/cold-files/",
        "/vol1/cifs/names"
      ],
      "include_extensions": [
        "vmdk",
        "mp*"
      ],
      "exclude_extensions": [
        "mp3",
        "mp4"
      ],
      "scan_without_extension": false
    },
    "_links": {
      "self": {
        "href": "/api/protocols/vscan/86fbc414-f140-11e8-8e22-
0050568e0945/on-demand-policies/policy1"
      }
    }
  },
  {
    "svm": {
      "uuid": "86fbc414-f140-11e8-8e22-0050568e0945",
      "name": "vs1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/86fbc414-f140-11e8-8e22-0050568e0945"
        }
      }
    },
    "name": "on-demand-policy2",
```

```
    "scan_paths": [
      "/vol1/",
      "/vol2/cifs/"
    ],
    "log_path": "/report",
    "scope": {
      "max_file_size": 10737418240,
      "include_extensions": [
        "mp*"
      ],
      "scan_without_extension": true
    },
    "_links": {
      "self": {
        "href": "/api/protocols/vscan/86fbc414-f140-11e8-8e22-
0050568e0945/on-demand-policies/policy2"
      }
    }
  }
],
"num_records": 2,
"_links": {
  "self": {
    "href": "/api/protocols/vscan/86fbc414-f140-11e8-8e22-0050568e0945/on-
demand-policies?fields=*"
  }
}
}
----

'''

=== Retrieving a specific On-Demand policy associated with a specified SVM

'''

----

# The API:
/api/protocols/vscan/{svm.uuid}/on-demand-policies/{name}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/vscan/86fbc414-f140-11e8-
8e22-0050568e0945/on-demand-policies/on-demand-task" -H "accept:
application/json"
```

```
# The response:
{
"svm": {
  "uuid": "86fbc414-f140-11e8-8e22-0050568e0945",
  "name": "vs1",
  "_links": {
    "self": {
      "href": "/api/svm/svms/86fbc414-f140-11e8-8e22-0050568e0945"
    }
  }
},
"name": "on-demand-policy",
"scan_paths": [
  "/vol1/cifs"
],
"log_path": "/report",
"scope": {
  "max_file_size": 10737418240,
  "include_extensions": [
    "vmdk",
    "mp*"
  ],
  "scan_without_extension": true
},
"_links": {
  "self": {
    "href": "/api/protocols/vscan/86fbc414-f140-11e8-8e22-0050568e0945/on-
demand-policies/policy2"
  }
}
}
----

'''

=== Creating a Vscan On-Demand policy

The Vscan On-Demand policy POST endpoint creates an On-Demand policy for
the specified SVM. Specify the schedule parameter to schedule an On-Demand
scan.

----

# The API:
/api/protocols/vscan/{svm.uuid}/on-demand-policies
```

```
# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/vscan/86fbc414-f140-11e8-
8e22-0050568e0945/on-demand-policies?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"log_path\":
\"/vol0/report_dir\", \"name\": \"on-demand-policy\", \"scan_paths\": [
\"/vol1/\", \"/vol2/cifs/\" ], \"schedule\": { \"name\": \"weekly\",
\"uuid\": \"1cd8a442-86d1-11e0-ae1c-123478563412\" }, \"scope\": {
\"exclude_extensions\": [ \"mp3\" ], \"exclude_paths\": [ \"/vol/cold-
files/\" ], \"include_extensions\": [ \"vmdk\", \"mp*\" ],
\"max_file_size\": 1073741824, \"scan_without_extension\": true }}"

# The response:
{
"num_records": 1,
"records": [
  {
    "svm": {
      "name": "vs1"
    },
    "name": "on-demand-policy",
    "scan_paths": [
      "/vol1/",
      "/vol2/cifs/"
    ],
    "log_path": "/vol0/report_dir",
    "schedule": {
      "name": "weekly"
    },
    "scope": {
      "max_file_size": 1073741824,
      "exclude_paths": [
        "/vol/cold-files/"
      ],
      "include_extensions": [
        "vmdk",
        "mp*"
      ],
      "exclude_extensions": [
        "mp3"
      ],
      "scan_without_extension": true
    }
  }
]
}
----
```

```
'''

=== Creating a Vscan On-Demand policy where a number of optional fields
are not specified

'''

----

# The API:
/api/protocols/vscan/{svm.uuid}/on-demand-policies

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/vscan/86fbc414-f140-11e8-
8e22-0050568e0945/on-demand-policies?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"log_path\":
\"/report\", \"name\": \"on-demand-policy\", \"scan_paths\": [
\"/vol1/cifs/\" ], \"scope\": { \"include_extensions\": [ \"mp*\" ],
\"scan_without_extension\": true }}"

# The response:
{
"num_records": 1,
"records": [
  {
    "svm": {
      "name": "vs1"
    },
    "name": "on-demand-policy",
    "scan_paths": [
      "vol1/cifs/"
    ],
    "log_path": "/report",
    "scope": {
      "max_file_size": 10737418240,
      "include_extensions": [
        "vmdk",
        "mp*"
      ],
      "scan_without_extension": true
    }
  }
]
}
----
```

```
'''

=== Updating a Vscan On-Demand policy

The policy being modified is identified by the UUID of the SVM and the
policy name.

----

# The API:
/api/protocols/vscan/{svm.uuid}/on-demand-policies/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/vscan/86fbc414-f140-11e8-
8e22-0050568e0945/on-demand-policies/on-demand-policy" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"schedule\":
{ \"name\": \"weekly\" }, \"scope\": { \"exclude_extensions\": [ \"mp3\"
], \"exclude_paths\": [ \"/vol/\" ], \"include_extensions\": [ \"vmdk\",
\"mp3\" ], \"scan_without_extension\": true }}"
----

'''

=== Deleting a Vscan On-Demand policy

The policy to be deleted is identified by the UUID of the SVM and the
policy name.

----

# The API:
/api/protocols/vscan/{svm.uuid}/on-demand-policies/{name}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/vscan/86fbc414-f140-11e8-
8e22-0050568e0945/on-demand-policies/on-demand-policy" -H "accept:
application/hal+json"
----

'''




[[ID6d8270325406bcb4e6cd1fd04802928f]]
= Retrieve a Vscan On-Demand policy
```

```
[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}/on-demand-policies`#

*Introduced In:* 9.6

Retrieves the Vscan On-Demand policy.

== Related ONTAP commands

* `vserver vscan on-demand-task show`

== Learn more

* xref:{relative_path}protocols_vscan_svm.uuid_on-demand-
policies_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/on-demand-
policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|query
|False
a|Filter by name


|svm.name
|string
|query
|False
a|Filter by svm.name

* Introduced in: 9.10


|schedule.name
```

```
|string
|query
|False
a|Filter by schedule.name


|schedule.uuid
|string
|query
|False
a|Filter by schedule.uuid


|log_path
|string
|query
|False
a|Filter by log_path


|scope.scan_without_extension
|boolean
|query
|False
a|Filter by scope.scan_without_extension


|scope.max_file_size
|integer
|query
|False
a|Filter by scope.max_file_size


|scope.include_extensions
|string
|query
|False
a|Filter by scope.include_extensions


|scope.exclude_extensions
|string
|query
|False
a|Filter by scope.exclude_extensions
```

```
|scope.exclude_paths
|string
|query
|False
a|Filter by scope.exclude_paths


|scan_paths
|string
|query
|False
a|Filter by scan_paths


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
of records is returned.

* Default value: 1


|return_timeout
```

```
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0


|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of records


|records
|array[link:#vscan_on_demand[vscan_on_demand]]
a|

|===
```

.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "log_path": "/vol0/report_dir",
      "name": "task-1",
      "scan_paths": [
        "/vol1/",
        "/vol2/cifs/"
      ],
      "schedule": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "weekly",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "scope": {
        "exclude_extensions": [
          "mp3",
          "mp4"
        ],
        "exclude_paths": [
          "/vol1/cold-files/",
          "/vol1/cifs/names"
        ],
        "include_extensions": [
          "vmdk",
          "mp*"
        ],
        "max_file_size": 10737418240
```

```
      },
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
```

```
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|
```

```
|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#schedule]
[.api-collapsible-fifth-title]
schedule

Schedule of the task.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|Job schedule name


|uuid
|string
a|Job schedule UUID
```

```
|===


[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
|array[string]
a|List of file paths for which scanning must not be performed.


|include_extensions
|array[string]
a|List of file extensions to be scanned.


|max_file_size
|integer
a|Maximum file size, in bytes, allowed for scanning.


|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
```

```
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#vscan_on_demand]
[.api-collapsible-fifth-title]
vscan_on_demand

Use On-Demand scanning to check files for viruses on a schedule. An On-
Demand policy defines the scope of an On-Demand scan.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|log_path
|string
a|The path from the Vserver root where the task report is created.


|name
|string
a|On-Demand task name


|scan_paths
```

```
|array[string]
a|List of paths that need to be scanned.


|schedule
|link:#schedule[schedule]
a|Schedule of the task.


|scope
|link:#scope[scope]
a|

|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDa1f555e32713de72662d8917530fbdf4]]
= Create a Vscan On-Demand policy

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}/on-demand-policies`#

*Introduced In:* 9.6

Creates a Vscan On-Demand policy. Created only on a data SVM.

Important notes:

*** Only one policy can be scheduled at a time on an SVM. Use schedule
```

```
name or schedule uuid to schedule an On-Demand policy.

*** Scanning must be enabled on the SVM before the policy is scheduled to
run.

*** The exclude_extensions setting overrides the include_extensions
setting. Set scan_without_extension to true to scan files without
extensions.

== Required properties

* `svm.uuid` - Existing SVM in which to create the Vscan On-Demand policy.
* `name` - Name of the Vscan On-Demand policy. Maximum length is 256
characters.
* `log_path` - Path from the Vserver root where the On-Demand policy
report is created.
* `scan_paths` - List of paths that need to be scanned.

== Recommended optional properties

* `schedule` - Scan schedule. It is recommended to set the schedule
property, as it dictates when to scan for viruses.

== Default property values

If not specified in POST, the following default property values are
assigned:

* `include_extensions` - _*_
* `max_file_size` - _10737418240_
* `scan_without_extension` - _true_

== Related ONTAP commands

* `vserver vscan on-demand-task create`
* `vserver vscan on-demand-task schedule`

== Learn more

* xref:{relative_path}protocols_vscan_svm.uuid_on-demand-
policies_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/on-demand-
policies]


== Parameters

[cols=5*,options=header]
```

```
|===

|Name
|Type
|In
|Required
|Description

|return_records
|boolean
|query
|False
a|The default is false.  If set to true, the records are returned.

* Default value:


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|log_path
|string
a|The path from the Vserver root where the task report is created.


|name
|string
a|On-Demand task name


|scan_paths
|array[string]
```

```
a|List of paths that need to be scanned.


|schedule
|link:#schedule[schedule]
a|Schedule of the task.


|scope
|link:#scope[scope]
a|

|svm
|link:#svm[svm]
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "log_path": "/vol0/report_dir",
  "name": "task-1",
  "scan_paths": [
    "/vol1/",
    "/vol2/cifs/"
  ],
  "schedule": {
    "name": "weekly",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "scope": {
    "exclude_extensions": [
      "mp3",
      "mp4"
    ],
    "exclude_paths": [
      "/vol1/cold-files/",
      "/vol1/cifs/names"
    ],
    "include_extensions": [
      "vmdk",
      "mp*"
```

```
    ],
    "max_file_size": 10737418240
  },
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====
```

```
== Response
```

Status: 201, Created

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|num_records
|integer
a|Number of records


|records
|array[link:#vscan_on_demand[vscan_on_demand]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "records": [
    {
      "log_path": "/vol0/report_dir",
      "name": "task-1",
      "scan_paths": [
        "/vol1/",
        "/vol2/cifs/"
      ],
      "schedule": {
```

```
        "name": "weekly",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "scope": {
        "exclude_extensions": [
          "mp3",
          "mp4"
        ],
        "exclude_paths": [
          "/vol1/cold-files/",
          "/vol1/cifs/names"
        ],
        "include_extensions": [
          "vmdk",
          "mp*"
        ],
        "max_file_size": 10737418240
      },
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 10027101
| The file size must be in the range 1KB to 1TB

| 10027107
| The include extensions list cannot be empty. Specify at least one
extension for inclusion.

| 10027164
| An On-Demand policy cannot be scheduled, as the Vscan is disabled.
```

```
Enable the Vscan and retry the operation.

| 10027167
| The specified schedule does not exist. Create the schedule or create a
policy without specifying the schedule.

| 10027168
| The specified scan path does not exist. The scan path must be specified
from the root of the SVM, and must begin with UNIX path delimiters (use
"`/`" not "`\`")

| 10027169
| The specified scan path is not supported for scanning.

| 10027173
| The new On-Demand policy cannot be created as the SVM has reached the
maximum number of On-Demand policies allowed. Delete an existing policy in
order to create a new policy.

| 10027174
| The specified exclude path is invalid. The path must be specified from
the root of the SVM, and must begin with UNIX path delimiters (use "/" not
"\")

| 10027175
| An On-Demand policy cannot be scheduled as the Vserver is not in an
operational state.

| 10027176
| The log-path specified does not exist. The log path must be specified
from the root of the SVM, and must begin with UNIX path delimiters (use
"`/`" not "`\`").

| 10027177
| The log path specified is not supported.

| 10027253
| The number of paths specified exceeds the configured maximum number of
paths. You cannot specify more than the maximum number of configured
paths.

| 10027254
| The number of extensions specified exceeds the configured maximum number
of extensions. You cannot specify more than the maximum number of
configured extensions.

| 10027255
```

```
| Another policy is already scheduled. Only one policy per SVM is allowed
to be scheduled at any one time. Create a policy without specifying a
schedule.
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#schedule]
[.api-collapsible-fifth-title]
schedule

Schedule of the task.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
```

```
|string
a|Job schedule name


|uuid
|string
a|Job schedule UUID


|===


[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
|array[string]
a|List of file paths for which scanning must not be performed.


|include_extensions
|array[string]
a|List of file extensions to be scanned.


|max_file_size
|integer
a|Maximum file size, in bytes, allowed for scanning.


|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.
```

```
|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#vscan_on_demand]
[.api-collapsible-fifth-title]
vscan_on_demand

Use On-Demand scanning to check files for viruses on a schedule. An On-
Demand policy defines the scope of an On-Demand scan.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|log_path
|string
a|The path from the Vserver root where the task report is created.


|name
|string
```

```
a|On-Demand task name


|scan_paths
|array[string]
a|List of paths that need to be scanned.


|schedule
|link:#schedule[schedule]
a|Schedule of the task.


|scope
|link:#scope[scope]
a|

|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===
```

```
[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDa3e2dd63eb07ae034fa5744ec4889905]]
= Delete a Vscan On-Demand configuration

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}/on-demand-policies/{name}`#

*Introduced In:* 9.6

Deletes the Vscan On-Demand configuration.
```

```
== Related ONTAP commands

* `vserver vscan on-demand-task delete`

== Learn more

* xref:{relative_path}protocols_vscan_svm.uuid_on-demand-
policies_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/on-demand-
policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
```

```
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===
```

```
//end collapsible .Definitions block
====



[[ID0c5d4d8c246eaeaabca66f2a99af8fb6]]
= Retrieve the Vscan On-Demand configuration for an SVM

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}/on-demand-policies/{name}`#

*Introduced In:* 9.6

Retrieves the Vscan On-Demand configuration of an SVM.

== Related ONTAP commands

* `vserver vscan on-demand-task show`

== Learn more

* xref:{relative_path}protocols_vscan_svm.uuid_on-demand-
policies_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/on-demand-
policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
```

```
|path
|True
a|UUID of the SVM to which this object belongs.


|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|log_path
|string
a|The path from the Vserver root where the task report is created.


|name
|string
a|On-Demand task name


|scan_paths
|array[string]
a|List of paths that need to be scanned.


|schedule
|link:#schedule[schedule]
a|Schedule of the task.


|scope
|link:#scope[scope]
a|
```

```
|svm
|link:#svm[svm]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "log_path": "/vol0/report_dir",
  "name": "task-1",
  "scan_paths": [
    "/vol1/",
    "/vol2/cifs/"
  ],
  "schedule": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "weekly",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "scope": {
    "exclude_extensions": [
      "mp3",
      "mp4"
    ],
    "exclude_paths": [
      "/vol1/cold-files/",
      "/vol1/cifs/names"
    ],
    "include_extensions": [
      "vmdk",
      "mp*"
    ],
    "max_file_size": 10737418240
  },
  "svm": {
    "_links": {
      "self": {
```

```
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions
```

```
[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#schedule]
[.api-collapsible-fifth-title]
schedule

Schedule of the task.
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|Job schedule name


|uuid
|string
a|Job schedule UUID


|===


[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
|array[string]
a|List of file paths for which scanning must not be performed.


|include_extensions
|array[string]
a|List of file extensions to be scanned.
```

```
|max_file_size
|integer
a|Maximum file size, in bytes, allowed for scanning.


|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
```

```
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.
```

```
|===


//end collapsible .Definitions block
====



[[ID0dac9d3ed4ae7fe55dc8d5e8cf9959d9]]
= Update the Vscan On-Demand policy configuration for an SVM

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}/on-demand-policies/{name}`#

*Introduced In:* 9.6

Updates the Vscan On-Demand policy configuration of an SVM. Use schedule
name or schedule UUID to schedule an On-Demand scan.

== Related ONTAP commands

* `vserver vscan on-demand-task modify`
* `vserver vscan on-demand-task schedule`
* `vserver vscan on-demand-task unschedule`

== Learn more

* xref:{relative_path}protocols_vscan_svm.uuid_on-demand-
policies_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/on-demand-
policies]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
```

```
a|

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|log_path
|string
a|The path from the Vserver root where the task report is created.


|scan_paths
|array[string]
a|List of paths that need to be scanned.


|schedule
|link:#schedule[schedule]
a|Schedule of the task.


|scope
|link:#scope[scope]
a|

|svm
|link:#svm[svm]
a|

|===


.Example request
```

```
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "log_path": "/vol0/report_dir",
  "scan_paths": [
    "/vol1/",
    "/vol2/cifs/"
  ],
  "schedule": {
    "name": "weekly",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "scope": {
    "exclude_extensions": [
      "mp3",
      "mp4"
    ],
    "exclude_paths": [
      "/vol1/cold-files/",
      "/vol1/cifs/names"
    ],
    "include_extensions": [
      "vmdk",
      "mp*"
    ],
    "max_file_size": 10737418240
  },
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes
```

```
|===
| Error Code | Description

| 10027101
| The file size must be in the range 1KB to 1TB

| 10027107
| The include extensions list cannot be empty. Specify at least one
extension for inclusion.

| 10027164
| An On-Demand policy cannot be scheduled, as the Vscan is disabled.
Enable the Vscan and retry the operation.

| 10027167
| The specified schedule does not exist. Create the schedule or create a
policy without specifying the schedule.

| 10027168
| The specified scan path does not exist. The scan path must be specified
from the root of the SVM, and must begin with UNIX path delimiters (use
"`/`" not "`\`")

| 10027169
| The specified scan path is not supported for scanning.

| 10027174
| The specified exclude path is invalid. The path must be specified from
the root of the SVM, and must begin with UNIX path delimiters (use "/" not
"\")

| 10027175
| An On-Demand policy cannot be scheduled as the SVM is not in an
operational state.

| 10027176
| The log-path specified does not exist. The log path must be specified
from the root of the SVM, and must begin with UNIX path delimiters (use
"`/`" not "`\`")

| 10027177
| The log path specified is not supported.

| 10027253
| The number of paths specified exceeds the configured maximum number of
paths. You cannot specify more than the maximum number of configured
paths.
```

```
| 10027254
| The number of extensions specified exceeds the configured maximum number
of extensions. You cannot specify more than the maximum number of
configured extensions.

| 10027255
| Another policy is already scheduled. Only one policy per SVM is allowed
to be scheduled at any one time. Update a policy without specifying a
schedule.
|===


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#schedule]
[.api-collapsible-fifth-title]
schedule

Schedule of the task.
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|Job schedule name


|uuid
|string
a|Job schedule UUID


|===


[#scope]
[.api-collapsible-fifth-title]
scope

[cols=3*,options=header]
|===
|Name
|Type
|Description

|exclude_extensions
|array[string]
a|List of file extensions for which scanning is not performed.


|exclude_paths
|array[string]
a|List of file paths for which scanning must not be performed.


|include_extensions
|array[string]
a|List of file extensions to be scanned.


|max_file_size
|integer
a|Maximum file size, in bytes, allowed for scanning.
```

```
|scan_without_extension
|boolean
a|Specifies whether or not files without any extension can be scanned.


|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#vscan_on_demand]
[.api-collapsible-fifth-title]
vscan_on_demand

Use On-Demand scanning to check files for viruses on a schedule. An On-
Demand policy defines the scope of an On-Demand scan.


[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|log_path
|string
a|The path from the Vserver root where the task report is created.


|scan_paths
|array[string]
a|List of paths that need to be scanned.


|schedule
|link:#schedule[schedule]
a|Schedule of the task.


|scope
|link:#scope[scope]
a|

|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===
```

```
[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



:leveloffset: -1


= Manage Vscan scanner-pool configuration

:leveloffset: +1
```

```
[[ID01a62ab3c750065071dcbbd9ae599207]]
= Protocols Vscan svm.uuid scanner-pools endpoint overview



== Overview

A scanner-pool defines the Vscan servers and privileged users that can
connect to SVMs and a scanner policy or role determines whether a scanner-
pool is active. You can configure a scanner-pool to be used on the local
cluster or any other cluster in an MCC/DR setup.

== Examples

=== Retrieving all fields for all scanner-pools of an SVM

----

# The API:
/api/protocols/vscan/{svm.uuid}/scanner-pools

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/vscan/<svm-uuid>/scanner-
pools?fields=*&return_records=true&return_timeout=15" -H "accept:
application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "0e2f7c91-f227-11e8-9601-0050568ecc06"
    },
    "name": "scanner-1",
    "servers": [
      "1.1.1.1",
      "10.72.204.27"
    ],
    "privileged_users": [
      "cifs\\u1",
      "cifs\\u2"
    ],
    "role": "primary"
  },
  {
    "svm": {
```

```
      "uuid": "0e2f7c91-f227-11e8-9601-0050568ecc06"
    },
    "name": "scanner-2",
    "servers": [
      "1.1.1.1",
      "10.72.204.27"
    ],
    "privileged_users": [
      "cifs\\u1",
      "cifs\\u2"
    ],
    "role": "secondary"
  }
],
"num_records": 2
}
----

=== Retrieving all scanner-pools with _role_ set as _secondary_

----

# The API:
/api/protocols/vscan/{svm.uuid}/scanner-pools

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/vscan/<svm-uuid>/scanner-
pools?role=secondary&fields=*&return_records=true&return_timeout=15" -H
"accept: application/json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "0e2f7c91-f227-11e8-9601-0050568ecc06",
      "name": "vs1"
    },
    "name": "scanner-2",
    "servers": [
      "1.1.1.1",
      "10.72.204.27"
    ],
    "privileged_users": [
      "cifs\\u1",
      "cifs\\u2"
```

```
    ],
    "role": "secondary",
    "cluster": {
      "uuid": "0933f9b5-f226-11e8-9601-0050568ecc06",
      "name": "Cluster3"
    }
  }
],
"num_records": 1
}
----

=== Retrieving the specified scanner-pool associated with an SVM

----

# The API:
/api/protocols/vscan/{svm.uuid}/scanner-pools/{name}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/vscan/0e2f7c91-f227-11e8-
9601-0050568ecc06/scanner-pools/scanner-1?fields=*" -H "accept:
application/json"

# The response:
{
"svm": {
  "uuid": "0e2f7c91-f227-11e8-9601-0050568ecc06",
  "name": "vs1"
},
"name": "scanner-1",
"servers": [
  "1.1.1.1",
  "10.72.204.27"
],
"privileged_users": [
  "cifs\\u1",
  "cifs\\u2"
],
"role": "primary",
"cluster": {
  "uuid": "0933f9b5-f226-11e8-9601-0050568ecc06",
  "name": "Cluster3"
}
}
----
```

```
=== Creating a scanner-pool for an SVM with all fields specified

----

# The API:
/api/protocols/vscan/{svm.uuid}/scanner-pools/

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/vscan/b103be27-17b8-11e9-
b451-0050568ecd85/scanner-pools?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"cluster\": {
\"name\": \"Cluster1\", \"uuid\": \"ab746d77-17b7-11e9-b450-0050568ecd85\"
}, \"name\": \"test-scanner\", \"privileged_users\": [ \"cifs\\\\u1\",
\"cifs\\\\u2\" ], \"role\": \"primary\", \"servers\": [ \"1.1.1.1\",
\"10.72.204.27\" ]}"

# The response:
{
"num_records": 1,
"records": [
  {
    "name": "test-scanner",
    "servers": [
      "1.1.1.1",
      "10.72.204.27"
    ],
    "privileged_users": [
      "cifs\\u1",
      "cifs\\u2"
    ],
    "role": "primary",
    "cluster": {
      "uuid": "ab746d77-17b7-11e9-b450-0050568ecd85",
      "name": "Cluster1"
    }
  }
]
}
----

=== Creating a scanner-pool for an SVM with an unspecified role and
cluster

----

# The API:
```

```
/api/protocols/vscan/{svm.uuid}/scanner-pools/

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/vscan/b103be27-17b8-11e9-
b451-0050568ecd85/scanner-pools" -H "accept: application/json" -H
"Content-Type: application/json" -d "{ \"name\": \"test-scanner-1\",
\"privileged_users\": [ \"cifs\\\\u1\", \"cifs\\\\u2\" ], \"servers\": [
\"1.1.1.1\", \"10.72.204.27\" ]}"

# The response:
{
"num_records": 1,
"records": [
  {
    "name": "test-scanner-1",
    "servers": [
      "1.1.1.1",
      "10.72.204.27"
    ],
    "privileged_users": [
      "cifs\\u1",
      "cifs\\u2"
    ]
  }
]
}
----

=== Updating a scanner-pool for an SVM with all of the fields specified

----

# The API:
/api/protocols/vscan/{svm.uuid}/scanner-pools/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/vscan/0e2f7c91-f227-11e8-
9601-0050568ecc06/scanner-pools/test-scanner-1" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"cluster\": {
\"name\": \"Cluster3\", \"uuid\": \"0933f9b5-f226-11e8-9601-0050568ecc06\"
}, \"privileged_users\": [ \"cifs\\\\u1\", \"cifs\\\\u2\" ], \"role\":
\"secondary\", \"servers\": [ \"1.1.1.1\", \"10.72.204.27\" ]}"
----

=== Updating the "role" of a scanner-pool for an SVM
```

```
----

# The API:
/api/protocols/vscan/{svm.uuid}/scanner-pools/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/vscan/0e2f7c91-f227-11e8-
9601-0050568ecc06/scanner-pools/test-scanner-1" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"cluster\": {
\"name\": \"Cluster3\", \"uuid\": \"0933f9b5-f226-11e8-9601-0050568ecc06\"
}, \"role\": \"primary\"}"
----

=== Deleting a scanner-pool for a specified SVM

----

# The API:
/api/protocols/vscan/{svm.uuid}/scanner-pools/{name}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/vscan/0e2f7c91-f227-11e8-
9601-0050568ecc06/scanner-pools/test-scanner-1" -H "accept:
application/json"
----




[[ID275fef8b29d9b99f38d1516578e23833]]
= Retrieve a Vscan scanner-pool configuration for an SVM

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}/scanner-pools`#

*Introduced In:* 9.6

Retrieves the Vscan scanner-pool configuration of an SVM.

== Related ONTAP commands

* `vserver vscan scanner-pool show`
* `vserver vscan scanner-pool privileged-users show`
* `vserver vscan scanner-pool servers show`

== Learn more
```

```
* xref:{relative_path}protocols_vscan_svm.uuid_scanner-
pools_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/scanner-
pools]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|query
|False
a|Filter by name


|svm.name
|string
|query
|False
a|Filter by svm.name

* Introduced in: 9.10


|role
|string
|query
|False
a|Filter by role


|servers
|string
|query
|False
a|Filter by servers
```

```
|privileged_users
|string
|query
|False
a|Filter by privileged_users


|cluster.name
|string
|query
|False
a|Filter by cluster.name


|cluster.uuid
|string
|query
|False
a|Filter by cluster.uuid


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|fields
|array[string]
|query
|False
a|Specify the fields to return.


|max_records
|integer
|query
|False
a|Limit the number of records returned.


|return_records
|boolean
|query
|False
a|The default is true for GET calls.  When set to false, only the number
```

```
of records is returned.

* Default value: 1


|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning.
When iterating over a collection, the default is 15 seconds.  ONTAP
returns earlier if either max records or the end of the collection is
reached.

* Default value: 1
* Max value: 120
* Min value: 0


|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of records
```

```
|records
|array[link:#vscan_scanner_pool[vscan_scanner_pool]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "cluster": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "cluster1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "name": "scanner-1",
      "privileged_users": [
        "cifs\\u1",
        "cifs\\u2"
      ],
      "role": "string",
      "servers": [
        "1.1.1.1",
        "10.72.204.27",
        "vmwin204-27.fsct.nb"
      ],
      "svm": {
        "_links": {
          "self": {
```

```
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

```
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===
```

```
[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#cluster_reference]
[.api-collapsible-fifth-title]
cluster_reference

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|

|uuid
|string
a|

|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
```

```
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#vscan_scanner_pool]
[.api-collapsible-fifth-title]
vscan_scanner_pool

Scanner pool is a set of attributes which are used to validate and manage
connections between clustered ONTAP and external virus-scanning server, or
"Vscan server".


[cols=3*,options=header]
|===
|Name
|Type
|Description

|cluster
|link:#cluster_reference[cluster_reference]
a|

|name
|string
a|Specifies the name of the scanner pool. Scanner pool name can be up to
256 characters long and is a string that can only contain any combination
of ASCII-range alphanumeric characters a-z, A-Z, 0-9), "_", "-" and ".".
```

```
|privileged_users
|array[string]
a|Specifies a list of privileged users. A valid form of privileged user-
name is "domain-name\user-name". Privileged user-names are stored and
treated as case-insensitive strings. Virus scanners must use one of the
registered privileged users for connecting to clustered Data ONTAP for
exchanging virus-scanning protocol messages and to access file for
scanning, remedying and quarantining operations.

* example: ["cifs\u1", "cifs\u2"]
* Introduced in: 9.6


|role
|string
a|Specifies the role of the scanner pool. The possible values are:

*** primary   - Always active.

*** secondary - Active only when none of the primary external virus-
scanning servers are connected.

*** idle      - Always inactive.


|servers
|array[string]
a|Specifies a list of IP addresses or FQDN for each Vscan server host
names which are allowed to connect to clustered ONTAP.

* example: ["1.1.1.1", "10.72.204.27", "vmwin204-27.fsct.nb"]
* Introduced in: 9.6


|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
```

```
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.
```

```
|===


//end collapsible .Definitions block
====



[[ID5df72931df70bcd3becce674c172a207]]
= Create a Vscan scanner-pool configuration for an SVM

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}/scanner-pools`#

*Introduced In:* 9.6

Creates a Vscan scanner-pool configuration for a specified SVM. You can
create a scanner-pool with all fields specified or only mandatory fields
specified.

Important notes:

* A scanner-pool must have servers and privileged users specified.
* If the role or cluster is not specified, the scanner-pool is created on
the local cluster with the role set as primary.
*`Only one of the fields cluster-uuid or cluster-name is required.

== Required properties

* `svm.uuid` or `svm.name` - Existing SVM in which to create the Vscan
configuration.
* `name` - Scanner-pool name.
* `privileged_users` - List of privileged users.
* `servers` - List of server IP addresses or FQDNs.

== Recommended optional properties

* `role` - Setting a role for a scanner-pool is recommended.
* `cluster` - Passing the cluster name or UUID (or both) in a multi-
cluster environment is recommended.

== Default property values

If not specified in POST, the following default property values are
assigned:
```

```
* `role` - _primary_
* `cluster.name` - Local cluster name.
* `cluster.uuid` - Local cluster UUID.

== Related ONTAP commands

* `vserver vscan scanner-pool create`
* `vserver vscan scanner-pool apply-policy`
* `vserver vscan scanner-pool privileged-users add`
* `vserver vscan scanner-pool servers add`

== Learn more

* xref:{relative_path}protocols_vscan_svm.uuid_scanner-
pools_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/scanner-
pools]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|return_records
|boolean
|query
|False
a|The default is false.  If set to true, the records are returned.

* Default value:


|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Request Body
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|cluster
|link:#cluster_reference[cluster_reference]
a|

|name
|string
a|Specifies the name of the scanner pool. Scanner pool name can be up to
256 characters long and is a string that can only contain any combination
of ASCII-range alphanumeric characters a-z, A-Z, 0-9), "_", "-" and ".".


|privileged_users
|array[string]
a|Specifies a list of privileged users. A valid form of privileged user-
name is "domain-name\user-name". Privileged user-names are stored and
treated as case-insensitive strings. Virus scanners must use one of the
registered privileged users for connecting to clustered Data ONTAP for
exchanging virus-scanning protocol messages and to access file for
scanning, remedying and quarantining operations.

* example: ["cifs\u1", "cifs\u2"]
* Introduced in: 9.6


|role
|string
a|Specifies the role of the scanner pool. The possible values are:

*** primary   - Always active.

*** secondary - Active only when none of the primary external virus-
scanning servers are connected.

*** idle      - Always inactive.


|servers
|array[string]
```

```
a|Specifies a list of IP addresses or FQDN for each Vscan server host
names which are allowed to connect to clustered ONTAP.

* example: ["1.1.1.1", "10.72.204.27", "vmwin204-27.fsct.nb"]
* Introduced in: 9.6


|svm
|link:#svm[svm]
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "cluster": {
    "name": "cluster1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "name": "scanner-1",
  "privileged_users": [
    "cifs\\u1",
    "cifs\\u2"
  ],
  "role": "string",
  "servers": [
    "1.1.1.1",
    "10.72.204.27",
    "vmwin204-27.fsct.nb"
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Response
```

Status: 201, Created

```
[cols=3*,options=header]
```

```
|===
|Name
|Type
|Description

|num_records
|integer
a|Number of records


|records
|array[link:#vscan_scanner_pool[vscan_scanner_pool]]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "records": [
    {
      "cluster": {
        "name": "cluster1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "name": "scanner-1",
      "privileged_users": [
        "cifs\\u1",
        "cifs\\u2"
      ],
      "role": "string",
      "servers": [
        "1.1.1.1",
        "10.72.204.27",
        "vmwin204-27.fsct.nb"
      ],
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```

```
====

== Error
```

Status: Default

```
ONTAP Error Response Codes
//start table
[cols=2*,options=header]
|===
//header
| Error Code | Description
//end header
//end row
//start row
|10027086 +
//end row
//start row
|The specified list of servers contain one or more entries that cannot be
resolved
//end row
//start row
|10027258 +
//end row
//start row
|The specified cluster_name does not exist
//end row
//start row
|10027256 +
//end row
//start row
|The specified cluster_uuid does not exist
//end row
//start row
|10027257 +
//end row
//start row
|The specified cluster_name and cluster_uuid are valid but belong to
different clusters
//end row
//start row
|10027248 +
//end row
//start row
|Scanner-pool created successfully but failed to activate
```

```
//end row
//start row
|10027107 +
//end row
//start row
|The list of privileged users or list of servers specified is empty
//end row
//start row
|10027108 +
//end row
//start row
|The list of privileged users specified contains an invalid entry
//end row
//start row
|10027063 +
//end row
//start row
|Attempting to modify a scanner-pool on an administrative SVM with a data
SVM
//end row
|===
//end table


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===
```

```
[#_links]
[.api-collapsible-fifth-title]
_links
[#cluster_reference]
[.api-collapsible-fifth-title]
cluster_reference

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|

|uuid
|string
a|

|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===
```

```
[#vscan_scanner_pool]
[.api-collapsible-fifth-title]
vscan_scanner_pool

Scanner pool is a set of attributes which are used to validate and manage
connections between clustered ONTAP and external virus-scanning server, or
"Vscan server".


[cols=3*,options=header]
|===
|Name
|Type
|Description

|cluster
|link:#cluster_reference[cluster_reference]
a|

|name
|string
a|Specifies the name of the scanner pool. Scanner pool name can be up to
256 characters long and is a string that can only contain any combination
of ASCII-range alphanumeric characters a-z, A-Z, 0-9), "_", "-" and ".".


|privileged_users
|array[string]
a|Specifies a list of privileged users. A valid form of privileged user-
name is "domain-name\user-name". Privileged user-names are stored and
treated as case-insensitive strings. Virus scanners must use one of the
registered privileged users for connecting to clustered Data ONTAP for
exchanging virus-scanning protocol messages and to access file for
scanning, remedying and quarantining operations.

* example: ["cifs\u1", "cifs\u2"]
* Introduced in: 9.6


|role
|string
a|Specifies the role of the scanner pool. The possible values are:

*** primary   - Always active.

*** secondary - Active only when none of the primary external virus-
```

```
scanning servers are connected.

*** idle      - Always inactive.


|servers
|array[string]
a|Specifies a list of IP addresses or FQDN for each Vscan server host
names which are allowed to connect to clustered ONTAP.

* example: ["1.1.1.1", "10.72.204.27", "vmwin204-27.fsct.nb"]
* Introduced in: 9.6


|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[ID36f39d0b6c50d917fcfb6e633165b6d2]]
= Delete a Vscan scanner-pool configuration

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}/scanner-pools/{name}`#

*Introduced In:* 9.6

Deletes a Vscan scanner-pool configuration.

Important notes:
```

```
* The Vscan scanner-pool DELETE endpoint deletes all of the Vscan scanner-
pools for a specified SVM.
* If a Vscan is enabled, it requires at least one scanner-pool to be in
the active state. Therefore, disable Vscan on the specified SVM so all the
scanner-pools configured on that SVM can be deleted.

== Related ONTAP commands

* `vserver vscan scanner-pool delete`

== Learn more

* xref:{relative_path}protocols_vscan_svm.uuid_scanner-
pools_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/scanner-
pools]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes
//start table
[cols=2*,options=header]
|===
//header
| Error Code | Description
//end header
//end row
//start row
|10027070 +
//end row
//start row
|Attempting to delete a scanner-pool but it is the only active scanner-
pool for a Vscan enabled on the SVM
//end row
//start row
|10027064 +
//end row
//start row
|Attempting to delete a scanner-pool with a data SVM which was created
with an administrative SVM
//end row
|===
//end table



[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
```

```
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===
```

```
[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



[[IDc49739821958f754e4a6b694d39b0fd9]]
= Retrieve the Vscan scanner-pool configuration for an SVM

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}/scanner-pools/{name}`#

*Introduced In:* 9.6
```

```
Retrieves the configuration of a specified scanner-pool of an SVM.

== Related ONTAP commands

* `vserver vscan scanner-pool show`
* `vserver vscan scanner-pool privileged-users show`
* `vserver vscan scanner-pool servers show`

== Learn more

* xref:{relative_path}protocols_vscan_svm.uuid_scanner-
pools_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/scanner-
pools]


== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.


|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===
```

```
== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|cluster
|link:#cluster_reference[cluster_reference]
a|

|name
|string
a|Specifies the name of the scanner pool. Scanner pool name can be up to
256 characters long and is a string that can only contain any combination
of ASCII-range alphanumeric characters a-z, A-Z, 0-9), "_", "-" and ".".


|privileged_users
|array[string]
a|Specifies a list of privileged users. A valid form of privileged user-
name is "domain-name\user-name". Privileged user-names are stored and
treated as case-insensitive strings. Virus scanners must use one of the
registered privileged users for connecting to clustered Data ONTAP for
exchanging virus-scanning protocol messages and to access file for
scanning, remedying and quarantining operations.

* example: ["cifs\u1", "cifs\u2"]
* Introduced in: 9.6


|role
|string
a|Specifies the role of the scanner pool. The possible values are:

*** primary   - Always active.

*** secondary - Active only when none of the primary external virus-
scanning servers are connected.

*** idle      - Always inactive.
```

```
|servers
|array[string]
a|Specifies a list of IP addresses or FQDN for each Vscan server host
names which are allowed to connect to clustered ONTAP.

* example: ["1.1.1.1", "10.72.204.27", "vmwin204-27.fsct.nb"]
* Introduced in: 9.6


|svm
|link:#svm[svm]
a|

|===


.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "cluster": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "cluster1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "name": "scanner-1",
  "privileged_users": [
    "cifs\\u1",
    "cifs\\u2"
  ],
  "role": "string",
  "servers": [
    "1.1.1.1",
    "10.72.204.27",
    "vmwin204-27.fsct.nb"
  ],
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
```

```
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Error
```

Status: Default, Error

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===


.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
```

```
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===


[#cluster_reference]
[.api-collapsible-fifth-title]
cluster_reference

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|_links
|link:#_links[_links]
a|

|name
|string
a|

|uuid
|string
a|

|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.
```

```
|===


//end collapsible .Definitions block
====



[[IDde9e210b50a770372eac647521970d4e]]
= Update the Vscan scanner-pool configuration for an SVM

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#`/protocols/vscan/{svm.uuid}/scanner-pools/{name}`#

*Introduced In:* 9.6

Updates the Vscan scanner-pool configuration of an SVM.

Important notes:

* Along with servers and privileged-users, the role of a scanner-pool can
also be updated with the cluster on which a scanner-pool is allowed.
* If role is specified and cluster isn't, then role is applied to the
local cluster.

== Related ONTAP commands

* `vserver vscan scanner-pool modify`
* `vserver vscan scanner-pool apply-policy`
* `vserver vscan scanner-pool privileged-users add`
* `vserver vscan scanner-pool privileged-users remove`
* `vserver vscan scanner-pool servers remove`
* `vserver vscan scanner-pool servers add`

== Learn more

* xref:{relative_path}protocols_vscan_svm.uuid_scanner-
pools_endpoint_overview.html[DOC /protocols/vscan/{svm.uuid}/scanner-
pools]


== Parameters

[cols=5*,options=header]
|===
```

```
|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|

|svm.uuid
|string
|path
|True
a|UUID of the SVM to which this object belongs.

|===

== Request Body



[cols=3*,options=header]
|===
|Name
|Type
|Description

|cluster
|link:#cluster_reference[cluster_reference]
a|

|privileged_users
|array[string]
a|Specifies a list of privileged users. A valid form of privileged user-
name is "domain-name\user-name". Privileged user-names are stored and
treated as case-insensitive strings. Virus scanners must use one of the
registered privileged users for connecting to clustered Data ONTAP for
exchanging virus-scanning protocol messages and to access file for
scanning, remedying and quarantining operations.

* example: ["cifs\u1", "cifs\u2"]
* Introduced in: 9.6
```

```
|role
|string
a|Specifies the role of the scanner pool. The possible values are:

*** primary   - Always active.

*** secondary - Active only when none of the primary external virus-
scanning servers are connected.

*** idle      - Always inactive.


|servers
|array[string]
a|Specifies a list of IP addresses or FQDN for each Vscan server host
names which are allowed to connect to clustered ONTAP.

* example: ["1.1.1.1", "10.72.204.27", "vmwin204-27.fsct.nb"]
* Introduced in: 9.6


|svm
|link:#svm[svm]
a|

|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "cluster": {
    "name": "cluster1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "privileged_users": [
    "cifs\\u1",
    "cifs\\u2"
  ],
  "role": "string",
  "servers": [
    "1.1.1.1",
    "10.72.204.27",
    "vmwin204-27.fsct.nb"
```

```
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
====

== Response
```

Status: 200, Ok

```
== Error
```

Status: Default

```
ONTAP Error Response Codes
//start table
[cols=2*,options=header]
|===
//header
| Error Code | Description
//end header
//end row
//start row
|10027258 +
//end row
//start row
|The specified cluster_name does not exist
//end row
//start row
|10027256 +
//end row
//start row
|The specified cluster_uuid does not exist
//end row
//start row
|10027257 +
//end row
//start row
|The specified cluster_name and cluster_uuid are valid but belong to
different clusters
//end row
//start row
```

```
|10027248 +
//end row
//start row
|Scanner-pool updated successfully but failed to apply the specified role
//end row
//start row
|10027107 +
//end row
//start row
|The list of privileged users or list of servers specified is empty
//end row
//start row
|10027108 +
//end row
//start row
|The list of privileged users specified contains an invalid entry
//end row
//start row
|10027063 +
//end row
//start row
|Attempting to modify a scanner-pool on an administrative SVM with a data
SVM
//end row
|===
//end table


== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
```

```
|string
a|

|===


[#_links]
[.api-collapsible-fifth-title]
_links
[#cluster_reference]
[.api-collapsible-fifth-title]
cluster_reference

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|

|uuid
|string
a|

|===


[#svm]
[.api-collapsible-fifth-title]
svm

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the SVM.


|uuid
|string
```

```
a|The unique identifier of the SVM.


|===


[#vscan_scanner_pool]
[.api-collapsible-fifth-title]
vscan_scanner_pool

Scanner pool is a set of attributes which are used to validate and manage
connections between clustered ONTAP and external virus-scanning server, or
"Vscan server".


[cols=3*,options=header]
|===
|Name
|Type
|Description

|cluster
|link:#cluster_reference[cluster_reference]
a|

|privileged_users
|array[string]
a|Specifies a list of privileged users. A valid form of privileged user-
name is "domain-name\user-name". Privileged user-names are stored and
treated as case-insensitive strings. Virus scanners must use one of the
registered privileged users for connecting to clustered Data ONTAP for
exchanging virus-scanning protocol messages and to access file for
scanning, remedying and quarantining operations.

* example: ["cifs\u1", "cifs\u2"]
* Introduced in: 9.6


|role
|string
a|Specifies the role of the scanner pool. The possible values are:

*** primary   - Always active.

*** secondary - Active only when none of the primary external virus-
scanning servers are connected.
```

```
*** idle      - Always inactive.


|servers
|array[string]
a|Specifies a list of IP addresses or FQDN for each Vscan server host
names which are allowed to connect to clustered ONTAP.

* example: ["1.1.1.1", "10.72.204.27", "vmwin204-27.fsct.nb"]
* Introduced in: 9.6


|svm
|link:#svm[svm]
a|

|===


[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code


|message
|string
a|Message argument


|===


[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
```

```
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments


|code
|string
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



:leveloffset: -1


:leveloffset: -1


:leveloffset: -1

<<<
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