



Manage SnapMirror policies

ONTAP 9.15.1 REST API reference

NetApp
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Manage SnapMirror policies

SnapMirror policies endpoint overview

Managing SnapMirror policies

This API is used to manage SnapMirror policies of type "mirror-vault", "async-mirror" with "copy_all_source_snapshots", "vault" with "create_snapshot_on_source" set to "false", "sync-mirror", "strict-sync-mirror", "async" and "sync". When applied to a SnapMirror relationship, the SnapMirror policy controls the behavior of the relationship and specifies the configuration attributes for that relationship. The policy type "async" can be associated with a SnapMirror relationship that has either a FlexVol volume, FlexGroup volume, or SVM as the endpoint. The policy type "sync" can be associated with a SnapMirror relationship that has a FlexVol volume or a consistency group as the endpoint. The policy type "sync" can have a "sync_type" of either "sync", "strict_sync", "automated_failover" or "automated_failover_duplex". If the "sync_type" is "sync", a write success is returned to the client after writing the data to the primary endpoint and before writing the data to the secondary endpoint. If the "sync_type" is "strict_sync", a write success is returned to the client after writing the data to both primary and secondary endpoints. A "sync_type" of "automated_failover" can be associated with a SnapMirror relationship that has a consistency group as the endpoint and provides asymmetric active active access to the two storage copies.

A "sync_type" of "automated_failover_duplex" can be associated with a SnapMirror relationship that has a consistency group as the endpoint and provides symmetric active active access to the two storage copies.

Mapping of SnapMirror policies from CLI to REST

CLI	REST
mirror-vault	async
async-mirror w/	async w/
all_source_snapshots	copy_all_source_snapshots
async-mirror w/o	async w/
all_source_snapshots	copy_latest_source_snapshot
vault	async w/
	create_snapshot_on_source

|| sync_type || |-----| |sync-mirror | sync | sync | |strict-sync-mirror | sync | strict_sync | |automated-failover | sync | automated_failover | |automated-failover-duplex | sync | automated_failover_duplex | || |

Retrieve SnapMirror async and sync policy types

GET /snapmirror/policies

Introduced In: 9.6

Retrieves SnapMirror policies of type "async" and "sync".

Related ONTAP commands

- `snapmirror policy show`

Example

The following example shows how to retrieve a collection of SnapMirror policies.

```
GET "/api/snapmirror/policies"
```

Learn more

- [DOC /snapmirror/policies](#)

Parameters

Name	Type	In	Required	Description
<code>sync_common_snap_shot_schedule.uuid</code>	string	query	False	Filter by <code>sync_common_snap_shot_schedule.uuid</code>
<code>sync_common_snap_shot_schedule.name</code>	string	query	False	Filter by <code>sync_common_snap_shot_schedule.name</code>
<code>name</code>	string	query	False	Filter by name
<code>create_snapshot_on_source</code>	boolean	query	False	Filter by <code>create_snapshot_on_source</code> <ul style="list-style-type: none">• Introduced in: 9.11
<code>retention.label</code>	string	query	False	Filter by <code>retention.label</code>
<code>retention.preserve</code>	boolean	query	False	Filter by <code>retention.preserve</code> <ul style="list-style-type: none">• Introduced in: 9.13
<code>retention.warn</code>	integer	query	False	Filter by <code>retention.warn</code> <ul style="list-style-type: none">• Introduced in: 9.13

Name	Type	In	Required	Description
retention.period	string	query	False	Filter by retention.period • Introduced in: 9.11
retention.prefix	string	query	False	Filter by retention.prefix
retention.creation_schedule.uuid	string	query	False	Filter by retention.creation_schedule.uuid
retention.creation_schedule.name	string	query	False	Filter by retention.creation_schedule.name
retention.count	integer	query	False	Filter by retention.count
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
sync_type	string	query	False	Filter by sync_type
copy_latest_source_snapshot	boolean	query	False	Filter by copy_latest_source_snapshot • Introduced in: 9.11
transfer_schedule.uuid	string	query	False	Filter by transfer_schedule.uuid
transfer_schedule.name	string	query	False	Filter by transfer_schedule.name
type	string	query	False	Filter by type
identity_preservation	string	query	False	Filter by identity_preservation

Name	Type	In	Required	Description
scope	string	query	False	Filter by scope
network_compression_enabled	boolean	query	False	Filter by network_compression_enabled
rpo	integer	query	False	Filter by rpo <ul style="list-style-type: none"> • Introduced in: 9.10
copy_all_source_snapshots	boolean	query	False	Filter by copy_all_source_snapshots <ul style="list-style-type: none"> • Introduced in: 9.10
throttle	integer	query	False	Filter by throttle
comment	string	query	False	Filter by comment
uuid	string	query	False	Filter by uuid
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. <ul style="list-style-type: none"> • Default value: 1

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>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.</p> <ul style="list-style-type: none"> • 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[snapmirror_policy]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "comment": "string",
      "copy_all_source_snapshots": 1,
      "copy_latest_source_snapshot": 1,
      "create_snapshot_on_source": "",
      "identity_preservation": "string",
      "name": "Asynchronous",
      "retention": [
        {
          "count": 7,
          "creation_schedule": {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
            },
            "name": "weekly",
            "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
          },
          "label": "hourly",
          "period": "P30D",
          "prefix": "string",
          "preserve": 1,
          "warn": 4
        }
      ],
      "rpo": 0,
      "scope": "string",

```



```

"snapshot_lock_mode": "string",
"svm": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "svm1",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"sync_common_snapshot_schedule": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "weekly",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"sync_type": "string",
"throttle": 0,
"transfer_schedule": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "weekly",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"type": "string",
"uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
}
]
}

```

Error

Status: Default

ONTAP Error Response codes

Error code	Description
13303842	SnapMirror policy is not supported.

Name	Type	Description
error	returned_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	

archive

Archive information for the objects in an object store SnapMirror relationship. This property is applicable only for "async" policies with "create_snapshot_on_source" set to "false".

Name	Type	Description
after_days	integer	Number of days after which the objects are archived. This is only applicable when "archive.enabled" is "true". If this property is not set when "archive.enabled" is "true", the default value is "0" and therefore archiving will be triggered instantly. The value range is 0..999. If the value is set to "0", the latest snapshot copy will be archived. The value of after_days cannot be changed from "0" if any FlexVol SnapMirror relationship is associated with the policy.
enabled	boolean	When set to "true", the objects are archived. When set to "false", the objects are not archived.

creation_schedule

Schedule used to create Snapshot copies on the destination for long term retention. Only cron schedules are supported for SnapMirror.

Name	Type	Description
_links	_links	
name	string	Job schedule name
uuid	string	Job schedule UUID

snapmirror_policy_rule

SnapMirror policy rule for retention.

Name	Type	Description
count	integer	Number of Snapshot copies to be kept for retention. Maximum value will differ based on type of relationship and scaling factor. For normal SnapMirror relationship without Snapshot copy scaling enabled maximum value can be 251 and with Snapshot copy scaling enabled it can be 1019. For object store SnapMirror relationships maximum value can be 4091.
creation_schedule	creation_schedule	Schedule used to create Snapshot copies on the destination for long term retention. Only cron schedules are supported for SnapMirror.
label	string	Snapshot copy label

Name	Type	Description
period	string	<p>Specifies the duration for which the Snapshot copies are locked. The retention period value represents a duration and must be in the ISO-8601 duration format. Years, months, days, hours, minutes, and seconds are represented as "P<num>Y", "P<num>M", "P<num>D", "PT<num>H", "PT<num>M" and "PT<num>S". Value "infinite" is also a valid input for Flexvol volumes and FlexGroup volumes. A duration which combines different periods is not supported, for example "P1Y10M" is not supported. The range of supported retention period values is between 1 second to infinite. Object store destinations support values only in years, months, or days and between 30 days and 100 years.</p>
prefix	string	<p>Specifies the prefix for the Snapshot copy name to be created as per the schedule. If no value is specified, then the label is used as the prefix.</p>
preserve	boolean	<p>Specifies the behavior when the Snapshot copy retention count is reached on the SnapMirror destination for the rule. The default value is false, which means that the oldest Snapshot copy is deleted to make room for new ones but only if the number of Snapshot copies has exceeded the retention count specified in the 'count' property. When set to true and where the Snapshot copies have reached the retention count, an incremental SnapMirror transfer will fail or if the rule has a schedule, Snapshot copies will be no longer be created on the SnapMirror destination.</p>

Name	Type	Description
warn	integer	Specifies the warning threshold count for the rule. The default value is zero. When set to a value greater than zero, an event is generated after the number of Snapshot copies (for the particular rule) retained on a SnapMirror destination reaches the specified warning limit. The preserve property for the rule must be true in order to set the warn property to a value greater than zero.

svm

SVM, applies only to SVM-scoped objects.

Name	Type	Description
_links	_links	
name	string	The name of the SVM. This field cannot be specified in a PATCH method.
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

sync_common_snapshot_schedule

Schedule used to create common Snapshot copies for synchronous relationships.

Name	Type	Description
_links	_links	
name	string	Job schedule name
uuid	string	Job schedule UUID

transfer_schedule

The schedule used to update asynchronous relationships. Only cron schedules are supported for SnapMirror.

Name	Type	Description
_links	_links	

Name	Type	Description
name	string	Job schedule name
uuid	string	Job schedule UUID

snapmirror_policy

SnapMirror policy information. SnapMirror policy can either be of type "async", "sync" or "continuous". The policy type "async" can be associated with a SnapMirror relationship that has either a FlexVol volume, FlexGroup volume or SVM as the endpoint. The policy type "sync" along with "sync_type" as "sync" or "strict_sync" can be associated with a SnapMirror relationship that has a FlexVol volume as the endpoint. The policy type "sync" can have a "sync_type" of either "sync", "strict_sync", "automated_failover" or "automated_failover_duplex". If the "sync_type" is "sync", a write success is returned to the client after writing the data to the source endpoint and before writing the data to the destination endpoint. If the "sync_type" is "strict_sync", a write success is returned to the client after writing the data to both source and destination endpoints. If the "sync_type" is "automated_failover", the policy can be associated with a SnapMirror active sync relationship that has a consistency group as the endpoint and provides asymmetric active active access to the two storage copies. If the "sync_type" is "automated_failover_duplex", the policy can be associated with a SnapMirror active sync relationship that has a consistency group as the endpoint and provides symmetric active active access to the two storage copies. Use the "sync" policy with "sync_type" as "automated_failover" or "automated_failover_duplex" to establish SnapMirror active sync relationships for business continuity use cases. SnapMirror relationships with policy types as "sync" and "sync_type" as "automated_failover" or "automated_failover_duplex" can be monitored by the Mediator, if configured. If the source Consistency Group endpoint is not reachable, the Mediator might trigger a failover to the destination consistency group endpoint. A policy type of "continuous" can be associated with SnapMirror relationships that have either ONTAP S3 buckets or non-ONTAP object stores as endpoints. This type of policy is used for FabricLink owned targets.

Name	Type	Description
_links	_links	
archive	archive	Archive information for the objects in an object store SnapMirror relationship. This property is applicable only for "async" policies with "create_snapshot_on_source" set to "false".
comment	string	Comment associated with the policy.

Name	Type	Description
copy_all_source_snapshots	boolean	Specifies that all the source Snapshot copies (including the one created by SnapMirror before the transfer begins) should be copied to the destination on a transfer. "Retention" properties cannot be specified along with this property. This is applicable only to async policies. Property can only be set to 'true'.
copy_latest_source_snapshot	boolean	Specifies that the latest source Snapshot copy (created by SnapMirror before the transfer begins) should be copied to the destination on a transfer. "Retention" properties cannot be specified along with this property. This is applicable only to async policies. Property can only be set to 'true'.
create_snapshot_on_source	boolean	Specifies whether a new Snapshot copy should be created on the source at the beginning of an update or resync operation. This is applicable only to async policies. Property can only be set to 'false'.
identity_preservation	string	Specifies which configuration of the source SVM is replicated to the destination SVM. This property is applicable only for SVM data protection with "async" policy type.
name	string	Name of the policy.
network_compression_enabled	boolean	Specifies whether network compression is enabled for transfers. This is applicable only to the policies of type "async".
retention	array[snapmirror_policy_rule]	Rules for Snapshot copy retention.

Name	Type	Description
rpo	integer	Specifies the duration of time for which a change to be propagated to a mirror should be delayed, in seconds. This is an intentional propagation delay between mirrors and is configurable down to zero, which means an immediate propagation. This is supported for policies of type 'continuous'.
scope	string	Set to "svm" for policies owned by an SVM, otherwise set to "cluster".
snapshot_lock_mode	string	Specifies the lock mode of the Snapshot copies stored in the object store. This property is applicable only to policies of type "async" with "create_snapshot_on_source" set to "false". When set to enterprise or compliance, the policy can be associated only with SnapMirror relationships where the source endpoint is a FlexVol volume and the destination endpoint is an object store. When set to compliance, no users can delete a Snapshot copy until the retention period has expired. When set to enterprise, users that have special permissions can delete a Snapshot copy before the retention period has expired.
svm	svm	SVM, applies only to SVM-scoped objects.
sync_common_snapshot_schedule	sync_common_snapshot_schedule	Schedule used to create common Snapshot copies for synchronous relationships.
sync_type	string	
throttle	integer	Throttle in KB/s. Default to unlimited.

Name	Type	Description
transfer_schedule	transfer_schedule	The schedule used to update asynchronous relationships. Only cron schedules are supported for SnapMirror.
type	string	
uuid	string	Unique identifier of the SnapMirror policy.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_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 SnapMirror policy

POST /snapmirror/policies

Introduced In: 9.6

Creates a SnapMirror policy. The property "identity_preservation" is applicable to only SnapMirror relationships with SVM endpoints and it indicates which configuration of the source SVM is replicated to the destination SVM.

It takes the following values:

- `full` - indicates that the source SVM configuration is replicated to the destination SVM endpoint.
- `exclude_network_config` - indicates that the source SVM configuration other than network configuration is replicated to the destination SVM endpoint.

- `exclude_network_and_protocol_config` - indicates that the source SVM configuration is not replicated to the destination SVM endpoint.

Important notes

- The property `identity_preservation` is applicable to only SnapMirror relationships with SVM endpoints and it indicates which configuration of the source SVM is replicated to the destination SVM.
- The properties `identity_preservation` and `transfer_schedule` are not applicable for "sync" type policies.
- The properties `copy_all_source_snapshots`, `copy_latest_source_snapshot`, and `create_snapshot_on_source` are mutually exclusive.
- The properties `copy_all_source_snapshots`, `copy_latest_source_snapshot`, and `create_snapshot_on_source` are not applicable for "sync" type policies.
- No "retention" properties can be specified if `copy_all_source_snapshots` or `copy_latest_source_snapshot` is specified.
- The properties `retention.creation_schedule` and `retention.prefix` are not applicable for "sync" type policies.
- The property `retention.creation_schedule` is not applicable for "async" policies with `create_snapshot_on_source` set to "false".
- The property `sync_common_snapshot_schedule` is not applicable for an "async" type policy.
- The property `retention.count` specifies the maximum number of Snapshot copies that are retained on the SnapMirror destination volume.
- When the property `retention.label` is specified, the Snapshot copies that have a SnapMirror label matching this property is transferred to the SnapMirror destination.
- When the property `retention.creation_schedule` is specified, Snapshot copies are directly created on the SnapMirror destination. The Snapshot copies created have the same content as the latest Snapshot copy already present on the SnapMirror destination.
- The property `transfer_schedule` cannot be set to null (no-quotes) during SnapMirror policy POST.
- The properties `retention.label` and `retention.count` must be specified for "async" policies with `create_snapshot_on_source` set to "false".
- The property `retention.warn` is not supported for a policy when the `retention.preserve` property is false.
- The property `retention.warn` value must be less than the property `retention.count` value for a rule in a policy.
- The property `archive.enabled` can be set to "true" only for "async" policies with `create_snapshot_on_source` set to "false". The property `archive.after_days` can be set only when `archive.enabled` is true.

Required properties

- `name` - Name of the new SnapMirror policy.

Recommended optional properties

- `svm.name` or `svm.uuid` - Name or UUID of the SVM that owns the SnapMirror policy.

Default property values

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

- `type` - *async*
- `sync_type` - *sync* (when `type` is *sync*)
- `network_compression_enabled` - *false*
- `throttle` - *0*
- `identity_preservation` - *exclude_network_and_protocol_config*
- `archive.after_days` - *0* (when `archive.enabled` is *true*)

Related ONTAP commands

- `snapmirror policy create`

Examples

Creating a SnapMirror policy of type "sync"

```
POST "/api/snapmirror/policies/" '{"name": "policy1", "svm.name": "VS0",
"type": "sync", "sync_type": "sync"}'
```

Creating a SnapMirror policy of type "async" with two sets of retention values, one with a creation_schedule

```
POST "/api/snapmirror/policies" '{"name": "policy_ret", "svm": {"name":
"vs1"}, "retention": [{"label": "weekly", "count": "2",
"creation_schedule": {"name": "weekly"}}, {"label": "daily",
"count": "7"}]}'
```

Creating a SnapMirror policy of type "async"

```
POST "/api/snapmirror/policies" '{"name": "newPolicy", "svm":{"name" :
"vs1"}, "type": "async"}'
```

Creating a SnapMirror policy of type "async" which replicates all Snapshot copies

```
POST "/api/snapmirror/policies" '{"name": "newPolicy", "svm":{"name" :
"vs1"}, "type": "async", "copy_all_source_snapshots": "true"}'
```

Creating a SnapMirror policy of type "async" which replicates latest Snapshot copy

```
POST "/api/snapmirror/policies" '{"name": "newPolicy2", "svm":{"name" : "vs1"}, "type": "async", "copy_latest_source_snapshot": "true"}'
```

Creating a SnapMirror policy of type "async" which does not create Snapshot copies on source

```
POST "/api/snapmirror/policies" '{"name": "newPolicy", "svm":{"name" : "vs1"}, "type": "async", "create_snapshot_on_source": "false", "retention": [{"label": "daily", "count": 7}]}'
```

Creating a SnapMirror policy of type "sync" with sync_type as "automated_failover"

```
POST "/api/snapmirror/policies/" '{"name": "policy1", "svm.name": "VS0", "type": "sync", "sync_type": "automated_failover" }'
```

Creating a SnapMirror policy of type "sync" with sync_type as "automated_failover_duplex"

```
POST "/api/snapmirror/policies/" '{"name": "policy_afd", "svm.name": "VS0", "type": "sync", "sync_type": "automated_failover_duplex" }'
```

Creating a SnapMirror policy of type "async" which does not create Snapshot copies on source and archive is triggered after 30 days

```
POST "/api/snapmirror/policies" '{"name": "newPolicy", "svm":{"name" : "vs1"}, "type": "async", "create_snapshot_on_source": "false", "retention": [{"label": "daily", "count": 7}], "archive": {"enabled": "true", "after_days": 30}}'
```

Creating a SnapMirror policy of type "async" which does not create Snapshot copies on source, and the Snapshot copies with a daily label in the object store will be locked in "compliance" mode for a default period of 30 days.

```
POST "/api/snapmirror/policies" '{"name": "NewPolicy", "svm":{"name" : "vs1"}, "type": "async", "create_snapshot_on_source": "false", "snapshot_lock_mode": "compliance", "retention": [{"label": "daily", "count": 7}]}'
```

Creating a SnapMirror policy of type "async" which does not create Snapshot copies on source, and the Snapshot copies with a daily label in the object store will be locked in "enterprise" mode for a period of 2 years

```
POST "/api/snapmirror/policies" '{"name": "NewPolicy", "svm":{"name" :
"vs1"}, "type": "async", "create_snapshot_on_source": "false",
"snapshot_lock_mode":"enterprise","retention": [{"label": "daily",
"count": 7, "period":"P2Y"}]}'
```

Creating a SnapMirror policy of type "async" with two sets of retention values and retention periods

```
POST "/api/snapmirror/policies" '{"name": "policy_ret", "svm": {"name":
"vs1"}, "retention": [{"label": "weekly", "count": "2", "period": "P7D"},
{"label":"daily", "count":"7", "period": "PT3H"}]}'
```

Creating a SnapMirror policy of type "async" with retention value as "infinite"

```
POST "/api/snapmirror/policies" '{"name": "policy_ret", "svm": {"name":
"vs1"}, "retention": [{"label": "weekly", "count": "5", "period":
"infinite"}]}'
```

Creating a SnapMirror policy of type "async" with properties retention preserve as true and retention warn as 3.

```
POST "/api/snapmirror/policies" '{"name": "policy_ret", "svm": {"name":
"vs1"}, "retention": [{"label": "weekly", "count": "5", "preserve": true,
"warn": 3}]}'
```

Learn more

- [DOC /snapmirror/policies](#)

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. <ul style="list-style-type: none"> • Default value:

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>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.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0

Request Body

Name	Type	Description
_links	_links	
archive	archive	Archive information for the objects in an object store SnapMirror relationship. This property is applicable only for "async" policies with "create_snapshot_on_source" set to "false".
comment	string	Comment associated with the policy.

Name	Type	Description
copy_all_source_snapshots	boolean	Specifies that all the source Snapshot copies (including the one created by SnapMirror before the transfer begins) should be copied to the destination on a transfer. "Retention" properties cannot be specified along with this property. This is applicable only to async policies. Property can only be set to 'true'.
copy_latest_source_snapshot	boolean	Specifies that the latest source Snapshot copy (created by SnapMirror before the transfer begins) should be copied to the destination on a transfer. "Retention" properties cannot be specified along with this property. This is applicable only to async policies. Property can only be set to 'true'.
create_snapshot_on_source	boolean	Specifies whether a new Snapshot copy should be created on the source at the beginning of an update or resync operation. This is applicable only to async policies. Property can only be set to 'false'.
identity_preservation	string	Specifies which configuration of the source SVM is replicated to the destination SVM. This property is applicable only for SVM data protection with "async" policy type.
name	string	Name of the policy.
network_compression_enabled	boolean	Specifies whether network compression is enabled for transfers. This is applicable only to the policies of type "async".
retention	array[snapmirror_policy_rule]	Rules for Snapshot copy retention.

Name	Type	Description
rpo	integer	Specifies the duration of time for which a change to be propagated to a mirror should be delayed, in seconds. This is an intentional propagation delay between mirrors and is configurable down to zero, which means an immediate propagation. This is supported for policies of type 'continuous'.
scope	string	Set to "svm" for policies owned by an SVM, otherwise set to "cluster".
snapshot_lock_mode	string	Specifies the lock mode of the Snapshot copies stored in the object store. This property is applicable only to policies of type "async" with "create_snapshot_on_source" set to "false". When set to enterprise or compliance, the policy can be associated only with SnapMirror relationships where the source endpoint is a FlexVol volume and the destination endpoint is an object store. When set to compliance, no users can delete a Snapshot copy until the retention period has expired. When set to enterprise, users that have special permissions can delete a Snapshot copy before the retention period has expired.
svm	svm	SVM, applies only to SVM-scoped objects.
sync_common_snapshot_schedule	sync_common_snapshot_schedule	Schedule used to create common Snapshot copies for synchronous relationships.
sync_type	string	
throttle	integer	Throttle in KB/s. Default to unlimited.

Name	Type	Description
transfer_schedule	transfer_schedule	The schedule used to update asynchronous relationships. Only cron schedules are supported for SnapMirror.
type	string	
uuid	string	Unique identifier of the SnapMirror policy.

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "comment": "string",
  "copy_all_source_snapshots": 1,
  "copy_latest_source_snapshot": 1,
  "create_snapshot_on_source": "",
  "identity_preservation": "string",
  "name": "Asynchronous",
  "retention": [
    {
      "count": 7,
      "creation_schedule": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "weekly",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "label": "hourly",
      "period": "P30D",
      "prefix": "string",
      "preserve": 1,
      "warn": 4
    }
  ],
  "rpo": 0,
  "scope": "string",
  "snapshot_lock_mode": "string",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "sync_common_snapshot_schedule": {
```

```
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "weekly",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"sync_type": "string",
"throttle": 0,
"transfer_schedule": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "weekly",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"type": "string",
"uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
}
```

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

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

Headers

Name	Description	Type
Location	Useful for tracking the resource location	string

Response

Status: 201, Created

Error

Status: Default

ONTAP Error Response codes

Error code	Description
6619714	Schedule specified is an interval schedule. SnapMirror does not support interval schedules.
13304126	Enter a value for "count" in the range indicated in the error message.
13303887	Failed to create SnapMirror policy. Reason: Maximum number of allowed retention rules reached
13304083	The specified property is not supported because all nodes in the cluster are not capable of supporting this property.
13304084	Properties specified are mutually exclusive. Provide only one property.

Error code	Description
13304085	The specified property does not support the specified value.
13304092	Input value of the retention period property is invalid. For relationships with FlexVol volume or FlexGroup volume destinations, the duration must be in ISO 6801 format or can be infinite. For relationships with object store destinations, only duration values with Y, M or D and supported and must be in the specified range.
13303932	Invalid input property
13303947	The specified property needs another property to be specified
13303948	The specified properties cannot be set to the specified values.
13304047	An additional property is required with the specified policy property.
13304051	The property only supports values from 0 to 999.
13303872	Property specified requires an effective cluster version of ONTAP specified or later.
13303850	Input parameter specified is not valid for SnapMirror policy type specified.
13304096	Property archive is not supported when property snapshot_lock_mode is set to compliance or enterprise.

| 6621045 | The property retention.warn is not supported for a policy when the retention.preserve property is false. | 13304129 | The property retention.warn value must be less than the property retention.count value for a rule in a policy. | 13304130 | The total retention.count value for all rules in a policy cannot exceed the value indicated in the error message. | 6621060 | Failed to create specified policy. Reason: A policy with this name already exists. | | 13304118 | The specified properties cannot be both set at the same time: retention.creation_schedule and retention.period | | 6621972 | Schedule specified is not supported by SnapMirror Synchronous. The allowed time interval for the creation of common Snapshot copies can range between 30 minutes and 24 hours. | | 13304011 | Failed to create or modify the specified SnapMirror policy. Reason: The property retention.count cannot have a value greater than 1. | | 6621091 | The specified SnapMirror policy cannot have a rule with a preserve value of true. | | 6621088 | The specified SnapMirror policy must have at least one rule without a schedule. |

Name	Type	Description
error	returned_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	

archive

Archive information for the objects in an object store SnapMirror relationship. This property is applicable only for "async" policies with "create_snapshot_on_source" set to "false".

Name	Type	Description
after_days	integer	Number of days after which the objects are archived. This is only applicable when "archive.enabled" is "true". If this property is not set when "archive.enabled" is "true", the default value is "0" and therefore archiving will be triggered instantly. The value range is 0..999. If the value is set to "0", the latest snapshot copy will be archived. The value of after_days cannot be changed from "0" if any FlexVol SnapMirror relationship is associated with the policy.
enabled	boolean	When set to "true", the objects are archived. When set to "false", the objects are not archived.

creation_schedule

Schedule used to create Snapshot copies on the destination for long term retention. Only cron schedules are supported for SnapMirror.

Name	Type	Description
_links	_links	
name	string	Job schedule name

Name	Type	Description
uuid	string	Job schedule UUID

snapmirror_policy_rule

SnapMirror policy rule for retention.

Name	Type	Description
count	integer	Number of Snapshot copies to be kept for retention. Maximum value will differ based on type of relationship and scaling factor. For normal SnapMirror relationship without Snapshot copy scaling enabled maximum value can be 251 and with Snapshot copy scaling enabled it can be 1019. For object store SnapMirror relationships maximum value can be 4091.
creation_schedule	creation_schedule	Schedule used to create Snapshot copies on the destination for long term retention. Only cron schedules are supported for SnapMirror.
label	string	Snapshot copy label

Name	Type	Description
period	string	<p>Specifies the duration for which the Snapshot copies are locked. The retention period value represents a duration and must be in the ISO-8601 duration format. Years, months, days, hours, minutes, and seconds are represented as "P<num>Y", "P<num>M", "P<num>D", "PT<num>H", "PT<num>M" and "PT<num>S". Value "infinite" is also a valid input for Flexvol volumes and FlexGroup volumes. A duration which combines different periods is not supported, for example "P1Y10M" is not supported. The range of supported retention period values is between 1 second to infinite. Object store destinations support values only in years, months, or days and between 30 days and 100 years.</p>
prefix	string	<p>Specifies the prefix for the Snapshot copy name to be created as per the schedule. If no value is specified, then the label is used as the prefix.</p>
preserve	boolean	<p>Specifies the behavior when the Snapshot copy retention count is reached on the SnapMirror destination for the rule. The default value is false, which means that the oldest Snapshot copy is deleted to make room for new ones but only if the number of Snapshot copies has exceeded the retention count specified in the 'count' property. When set to true and where the Snapshot copies have reached the retention count, an incremental SnapMirror transfer will fail or if the rule has a schedule, Snapshot copies will be no longer be created on the SnapMirror destination.</p>

Name	Type	Description
warn	integer	Specifies the warning threshold count for the rule. The default value is zero. When set to a value greater than zero, an event is generated after the number of Snapshot copies (for the particular rule) retained on a SnapMirror destination reaches the specified warning limit. The preserve property for the rule must be true in order to set the warn property to a value greater than zero.

svm

SVM, applies only to SVM-scoped objects.

Name	Type	Description
_links	_links	
name	string	The name of the SVM. This field cannot be specified in a PATCH method.
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

sync_common_snapshot_schedule

Schedule used to create common Snapshot copies for synchronous relationships.

Name	Type	Description
_links	_links	
name	string	Job schedule name
uuid	string	Job schedule UUID

transfer_schedule

The schedule used to update asynchronous relationships. Only cron schedules are supported for SnapMirror.

Name	Type	Description
_links	_links	

Name	Type	Description
name	string	Job schedule name
uuid	string	Job schedule UUID

snapmirror_policy

SnapMirror policy information. SnapMirror policy can either be of type "async", "sync" or "continuous". The policy type "async" can be associated with a SnapMirror relationship that has either a FlexVol volume, FlexGroup volume or SVM as the endpoint. The policy type "sync" along with "sync_type" as "sync" or "strict_sync" can be associated with a SnapMirror relationship that has a FlexVol volume as the endpoint. The policy type "sync" can have a "sync_type" of either "sync", "strict_sync", "automated_failover" or "automated_failover_duplex". If the "sync_type" is "sync", a write success is returned to the client after writing the data to the source endpoint and before writing the data to the destination endpoint. If the "sync_type" is "strict_sync", a write success is returned to the client after writing the data to both source and destination endpoints. If the "sync_type" is "automated_failover", the policy can be associated with a SnapMirror active sync relationship that has a consistency group as the endpoint and provides asymmetric active active access to the two storage copies. If the "sync_type" is "automated_failover_duplex", the policy can be associated with a SnapMirror active sync relationship that has a consistency group as the endpoint and provides symmetric active active access to the two storage copies. Use the "sync" policy with "sync_type" as "automated_failover" or "automated_failover_duplex" to establish SnapMirror active sync relationships for business continuity use cases. SnapMirror relationships with policy types as "sync" and "sync_type" as "automated_failover" or "automated_failover_duplex" can be monitored by the Mediator, if configured. If the source Consistency Group endpoint is not reachable, the Mediator might trigger a failover to the destination consistency group endpoint. A policy type of "continuous" can be associated with SnapMirror relationships that have either ONTAP S3 buckets or non-ONTAP object stores as endpoints. This type of policy is used for FabricLink owned targets.

Name	Type	Description
_links	_links	
archive	archive	Archive information for the objects in an object store SnapMirror relationship. This property is applicable only for "async" policies with "create_snapshot_on_source" set to "false".
comment	string	Comment associated with the policy.

Name	Type	Description
copy_all_source_snapshots	boolean	Specifies that all the source Snapshot copies (including the one created by SnapMirror before the transfer begins) should be copied to the destination on a transfer. "Retention" properties cannot be specified along with this property. This is applicable only to async policies. Property can only be set to 'true'.
copy_latest_source_snapshot	boolean	Specifies that the latest source Snapshot copy (created by SnapMirror before the transfer begins) should be copied to the destination on a transfer. "Retention" properties cannot be specified along with this property. This is applicable only to async policies. Property can only be set to 'true'.
create_snapshot_on_source	boolean	Specifies whether a new Snapshot copy should be created on the source at the beginning of an update or resync operation. This is applicable only to async policies. Property can only be set to 'false'.
identity_preservation	string	Specifies which configuration of the source SVM is replicated to the destination SVM. This property is applicable only for SVM data protection with "async" policy type.
name	string	Name of the policy.
network_compression_enabled	boolean	Specifies whether network compression is enabled for transfers. This is applicable only to the policies of type "async".
retention	array[snapmirror_policy_rule]	Rules for Snapshot copy retention.

Name	Type	Description
rpo	integer	Specifies the duration of time for which a change to be propagated to a mirror should be delayed, in seconds. This is an intentional propagation delay between mirrors and is configurable down to zero, which means an immediate propagation. This is supported for policies of type 'continuous'.
scope	string	Set to "svm" for policies owned by an SVM, otherwise set to "cluster".
snapshot_lock_mode	string	Specifies the lock mode of the Snapshot copies stored in the object store. This property is applicable only to policies of type "async" with "create_snapshot_on_source" set to "false". When set to enterprise or compliance, the policy can be associated only with SnapMirror relationships where the source endpoint is a FlexVol volume and the destination endpoint is an object store. When set to compliance, no users can delete a Snapshot copy until the retention period has expired. When set to enterprise, users that have special permissions can delete a Snapshot copy before the retention period has expired.
svm	svm	SVM, applies only to SVM-scoped objects.
sync_common_snapshot_schedule	sync_common_snapshot_schedule	Schedule used to create common Snapshot copies for synchronous relationships.
sync_type	string	
throttle	integer	Throttle in KB/s. Default to unlimited.

Name	Type	Description
transfer_schedule	transfer_schedule	The schedule used to update asynchronous relationships. Only cron schedules are supported for SnapMirror.
type	string	
uuid	string	Unique identifier of the SnapMirror policy.

job_link

Name	Type	Description
_links	_links	
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

returned_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 SnapMirror policy

DELETE /snapmirror/policies/{uuid}

Introduced In: 9.6

Deletes a SnapMirror policy.

Related ONTAP commands

- `snapmirror policy delete`

Example

```
DELETE "/api/snapmirror/policies/510c15d4-f9e6-11e8-bdb5-0050568e12c2"
```

Learn more

- [DOC /snapmirror/policies](#)

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	SnapMirror policy UUID

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>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.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0

Response

Status: 200, Ok

Name	Type	Description
job	job_link	

Example response

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

Response

Status: 202, Accepted

Error

Status: Default, Error

Name	Type	Description
error	returned_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	

job_link

Name	Type	Description
_links	_links	
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

returned_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 specific SnapMirror policy

GET /snapmirror/policies/{uuid}

Introduced In: 9.6

Retrieves a specific SnapMirror policy.

Example

```
GET "/api/snapmirror/policies/567aaac0-f863-11e8-a666-0050568e12c2"
```

Learn more

- [DOC /snapmirror/policies](#)

Parameters

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

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
archive	archive	Archive information for the objects in an object store SnapMirror relationship. This property is applicable only for "async" policies with "create_snapshot_on_source" set to "false".
comment	string	Comment associated with the policy.

Name	Type	Description
copy_all_source_snapshots	boolean	Specifies that all the source Snapshot copies (including the one created by SnapMirror before the transfer begins) should be copied to the destination on a transfer. "Retention" properties cannot be specified along with this property. This is applicable only to async policies. Property can only be set to 'true'.
copy_latest_source_snapshot	boolean	Specifies that the latest source Snapshot copy (created by SnapMirror before the transfer begins) should be copied to the destination on a transfer. "Retention" properties cannot be specified along with this property. This is applicable only to async policies. Property can only be set to 'true'.
create_snapshot_on_source	boolean	Specifies whether a new Snapshot copy should be created on the source at the beginning of an update or resync operation. This is applicable only to async policies. Property can only be set to 'false'.
identity_preservation	string	Specifies which configuration of the source SVM is replicated to the destination SVM. This property is applicable only for SVM data protection with "async" policy type.
name	string	Name of the policy.
network_compression_enabled	boolean	Specifies whether network compression is enabled for transfers. This is applicable only to the policies of type "async".
retention	array[snapmirror_policy_rule]	Rules for Snapshot copy retention.

Name	Type	Description
rpo	integer	Specifies the duration of time for which a change to be propagated to a mirror should be delayed, in seconds. This is an intentional propagation delay between mirrors and is configurable down to zero, which means an immediate propagation. This is supported for policies of type 'continuous'.
scope	string	Set to "svm" for policies owned by an SVM, otherwise set to "cluster".
snapshot_lock_mode	string	Specifies the lock mode of the Snapshot copies stored in the object store. This property is applicable only to policies of type "async" with "create_snapshot_on_source" set to "false". When set to enterprise or compliance, the policy can be associated only with SnapMirror relationships where the source endpoint is a FlexVol volume and the destination endpoint is an object store. When set to compliance, no users can delete a Snapshot copy until the retention period has expired. When set to enterprise, users that have special permissions can delete a Snapshot copy before the retention period has expired.
svm	svm	SVM, applies only to SVM-scoped objects.
sync_common_snapshot_schedule	sync_common_snapshot_schedule	Schedule used to create common Snapshot copies for synchronous relationships.
sync_type	string	
throttle	integer	Throttle in KB/s. Default to unlimited.

Name	Type	Description
transfer_schedule	transfer_schedule	The schedule used to update asynchronous relationships. Only cron schedules are supported for SnapMirror.
type	string	
uuid	string	Unique identifier of the SnapMirror policy.

Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "comment": "string",
  "copy_all_source_snapshots": 1,
  "copy_latest_source_snapshot": 1,
  "create_snapshot_on_source": "",
  "identity_preservation": "string",
  "name": "Asynchronous",
  "retention": [
    {
      "count": 7,
      "creation_schedule": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "weekly",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "label": "hourly",
      "period": "P30D",
      "prefix": "string",
      "preserve": 1,
      "warn": 4
    }
  ],
  "rpo": 0,
  "scope": "string",
  "snapshot_lock_mode": "string",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "sync_common_snapshot_schedule": {
```



```

    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "weekly",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "sync_type": "string",
  "throttle": 0,
  "transfer_schedule": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "weekly",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "type": "string",
  "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
}

```

Error

Status: Default

ONTAP Error Response codes

Error code	Description
13303842	SnapMirror policy is not supported.

Name	Type	Description
error	returned_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	

archive

Archive information for the objects in an object store SnapMirror relationship. This property is applicable only for "async" policies with "create_snapshot_on_source" set to "false".

Name	Type	Description
after_days	integer	Number of days after which the objects are archived. This is only applicable when "archive.enabled" is "true". If this property is not set when "archive.enabled" is "true", the default value is "0" and therefore archiving will be triggered instantly. The value range is 0..999. If the value is set to "0", the latest snapshot copy will be archived. The value of after_days cannot be changed from "0" if any FlexVol SnapMirror relationship is associated with the policy.
enabled	boolean	When set to "true", the objects are archived. When set to "false", the objects are not archived.

creation_schedule

Schedule used to create Snapshot copies on the destination for long term retention. Only cron schedules are supported for SnapMirror.

Name	Type	Description
_links	_links	
name	string	Job schedule name

Name	Type	Description
uuid	string	Job schedule UUID

snapmirror_policy_rule

SnapMirror policy rule for retention.

Name	Type	Description
count	integer	Number of Snapshot copies to be kept for retention. Maximum value will differ based on type of relationship and scaling factor. For normal SnapMirror relationship without Snapshot copy scaling enabled maximum value can be 251 and with Snapshot copy scaling enabled it can be 1019. For object store SnapMirror relationships maximum value can be 4091.
creation_schedule	creation_schedule	Schedule used to create Snapshot copies on the destination for long term retention. Only cron schedules are supported for SnapMirror.
label	string	Snapshot copy label

Name	Type	Description
period	string	<p>Specifies the duration for which the Snapshot copies are locked. The retention period value represents a duration and must be in the ISO-8601 duration format. Years, months, days, hours, minutes, and seconds are represented as "P<num>Y", "P<num>M", "P<num>D", "PT<num>H", "PT<num>M" and "PT<num>S". Value "infinite" is also a valid input for Flexvol volumes and FlexGroup volumes. A duration which combines different periods is not supported, for example "P1Y10M" is not supported. The range of supported retention period values is between 1 second to infinite. Object store destinations support values only in years, months, or days and between 30 days and 100 years.</p>
prefix	string	<p>Specifies the prefix for the Snapshot copy name to be created as per the schedule. If no value is specified, then the label is used as the prefix.</p>
preserve	boolean	<p>Specifies the behavior when the Snapshot copy retention count is reached on the SnapMirror destination for the rule. The default value is false, which means that the oldest Snapshot copy is deleted to make room for new ones but only if the number of Snapshot copies has exceeded the retention count specified in the 'count' property. When set to true and where the Snapshot copies have reached the retention count, an incremental SnapMirror transfer will fail or if the rule has a schedule, Snapshot copies will be no longer be created on the SnapMirror destination.</p>

Name	Type	Description
warn	integer	Specifies the warning threshold count for the rule. The default value is zero. When set to a value greater than zero, an event is generated after the number of Snapshot copies (for the particular rule) retained on a SnapMirror destination reaches the specified warning limit. The preserve property for the rule must be true in order to set the warn property to a value greater than zero.

svm

SVM, applies only to SVM-scoped objects.

Name	Type	Description
_links	_links	
name	string	The name of the SVM. This field cannot be specified in a PATCH method.
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

sync_common_snapshot_schedule

Schedule used to create common Snapshot copies for synchronous relationships.

Name	Type	Description
_links	_links	
name	string	Job schedule name
uuid	string	Job schedule UUID

transfer_schedule

The schedule used to update asynchronous relationships. Only cron schedules are supported for SnapMirror.

Name	Type	Description
_links	_links	

Name	Type	Description
name	string	Job schedule name
uuid	string	Job schedule UUID

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_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 SnapMirror policy

PATCH /snapmirror/policies/{uuid}

Introduced In: 9.6

Updates the SnapMirror policy.

Important notes

- The properties "retention.label" and "retention.count" are mandatory if "retention" is provided in the input. The provided "retention.label" is the final list and it replaces the existing values.
- The value of the "identity_preservation" property cannot be changed if the SnapMirror relationships associated with the policy have different identity_preservation configurations.
- If the SnapMirror policy "identity_preservation" value matches the "identity_preservation" value of the associated SnapMirror relationships, then the "identity_preservation" value can be changed from a higher "identity_preservation" threshold value to a lower "identity_preservation" threshold value but not vice-versa. For example, the threshold value of the "identity_preservation" property can be changed from "full" to "exclude_network_config", but cannot be increased from "exclude_network_and_protocol_config" to "exclude_network_config" to "full". The threshold value of the "identity_preservation" cannot be changed to

"exclude_network_and_protocol_config" for IDP SVMDR.

- The policy properties "copy_all_source_snapshots", "copy_latest_source_snapshot", and "create_snapshot_on_source" cannot be modified.
- No "retention" properties can be modified if the "copy_all_source_snapshots" or "copy_latest_source_snapshot" property is present in the policy.
- Replacing or deleting all retention rules of a policy that has the "create_snapshot_on_source" property set to false in a single API call is not supported.
- Modifying the property "retention.label" for all retention rules of a policy that has the "create_snapshot_on_source" property set to false in a single API call is not supported.
- To remove a transfer_schedule on a SnapMirror policy set the "transfer_schedule" to null (no-quotes) during SnapMirror policy PATCH.
- The property "archive.enabled" can be modified to "true" only for "async" policies with "create_snapshot_on_source" set to "false".
- The property "archive.after_days" can be modified only when "archive.enabled" is "true". The value range of "archive.after_days" is 0..999. If the value is set to "0", the latest snapshot copy will be archived. The value of "archive.after_days" cannot be changed from "0" if any SnapMirror relationship is associated with the policy.
- Modifying the property "network_compression_enabled" to "true" is not allowed if policy is associated with snapmirror relationship having object store endpoints.
- Modifying the property "retention.creation_schedule" is not allowed if policy is associated with snapmirror relationship having object store endpoints.
- The property "retention.warn" is not supported for a policy when the "retention.preserve" property is false.
- The property "retention.warn" value must be less than the property "retention.count" value for a rule in a policy.

Related ONTAP commands

- `snapmirror policy modify`

Example

Updating the "retention" property to add rules to a policy without any rules.

```
PATCH "/api/snapmirror/policies/fe65686d-00dc-11e9-b5fb-0050568e3f83"  
'{"retention": [{"label": "newlabel", "count": 2}, {"label": "weekly",  
"count": 2, "creation_schedule": {"name": "weekly"}}, {"label": "daily",  
"count": 14}]}'
```

Updating the "retention" property to add rules to a policy with existing rules {"retention": [{"label": "oldLabel1", "count": 2}, {"label": "oldLabel2", "count": 5}]}


```
PATCH "/api/snapmirror/policies/fe65686d-00dc-11e9-b5fb-0050568e3f83"
'{"retention": [{"label": "oldLabel1", "count": 2}, {"label": "oldLabel2",
"count": 5}, {"label": "newlabel", "count": 3}, {"label": "weekly",
"count": 1}]}'
```

Updating the "retention" property to remove a rule (oldLabel1) and add new rule to a policy with existing rules
{'retention': [{'label': "oldLabel1", "count": 2}, {"label": "oldLabel2", "count": 3}]}

```
PATCH "/api/snapmirror/policies/fe65686d-00dc-11e9-b5fb-0050568e3f83"
'{"retention": [{"label": "oldLabel2", "count": 3}, {"label": "newlabel",
"count": 2}]}'
```

Updating "transfer_schedule", "throttle", and "identity_preservation" properties

```
PATCH "/api/snapmirror/policies/8aef950b-3bef-11e9-80ac-0050568ea591"
'{"transfer_schedule.name" : "weekly", "throttle" : "100",
"identity_preservation": "exclude_network_and_protocol_config"}'
```

Removing the SnapMirror transfer_schedule for a SnapMirror policy. Transfer_schedule can be specified as UUID or name or both with the value set to null (no-quotes).

```
PATCH "/api/snapmirror/policies/98bb2608-fc60-11e8-aa13-005056a707ff/"
'{"transfer_schedule":{"uuid":null, "name":null}}'
```

Updating the "archive" property

```
PATCH "/api/snapmirror/policies/fe65686d-00dc-11e9-b5fb-0050568e3f83"
'{"archive": {"enabled": "true", "after_days": "30"}}'
```

Updating the "retention" property to have retention.preserve and retention.warn for existing rule.

```
PATCH "/api/snapmirror/policies/fe65686d-00dc-11e9-b5fb-0050568e3f83"
'{"retention": [{"label": "oldLabel1", "count": 3, "preserve": true,
"warn": 2}]}'
```

Learn more

- [DOC /snapmirror/policies](#)

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	SnapMirror policy UUID
return_timeout	integer	query	False	<p>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.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0

Request Body

Name	Type	Description
_links	_links	

Name	Type	Description
archive	archive	Archive information for the objects in an object store SnapMirror relationship. This property is applicable only for "async" policies with "create_snapshot_on_source" set to "false".
comment	string	Comment associated with the policy.
copy_all_source_snapshots	boolean	Specifies that all the source Snapshot copies (including the one created by SnapMirror before the transfer begins) should be copied to the destination on a transfer. "Retention" properties cannot be specified along with this property. This is applicable only to async policies. Property can only be set to 'true'.
copy_latest_source_snapshot	boolean	Specifies that the latest source Snapshot copy (created by SnapMirror before the transfer begins) should be copied to the destination on a transfer. "Retention" properties cannot be specified along with this property. This is applicable only to async policies. Property can only be set to 'true'.
create_snapshot_on_source	boolean	Specifies whether a new Snapshot copy should be created on the source at the beginning of an update or resync operation. This is applicable only to async policies. Property can only be set to 'false'.
identity_preservation	string	Specifies which configuration of the source SVM is replicated to the destination SVM. This property is applicable only for SVM data protection with "async" policy type.
name	string	Name of the policy.

Name	Type	Description
network_compression_enabled	boolean	Specifies whether network compression is enabled for transfers. This is applicable only to the policies of type "async".
retention	array[snapmirror_policy_rule]	Rules for Snapshot copy retention.
rpo	integer	Specifies the duration of time for which a change to be propagated to a mirror should be delayed, in seconds. This is an intentional propagation delay between mirrors and is configurable down to zero, which means an immediate propagation. This is supported for policies of type 'continuous'.
scope	string	Set to "svm" for policies owned by an SVM, otherwise set to "cluster".
snapshot_lock_mode	string	Specifies the lock mode of the Snapshot copies stored in the object store. This property is applicable only to policies of type "async" with "create_snapshot_on_source" set to "false". When set to enterprise or compliance, the policy can be associated only with SnapMirror relationships where the source endpoint is a FlexVol volume and the destination endpoint is an object store. When set to compliance, no users can delete a Snapshot copy until the retention period has expired. When set to enterprise, users that have special permissions can delete a Snapshot copy before the retention period has expired.
svm	svm	SVM, applies only to SVM-scoped objects.
sync_common_snapshot_schedule	sync_common_snapshot_schedule	Schedule used to create common Snapshot copies for synchronous relationships.
sync_type	string	

Name	Type	Description
throttle	integer	Throttle in KB/s. Default to unlimited.
transfer_schedule	transfer_schedule	The schedule used to update asynchronous relationships. Only cron schedules are supported for SnapMirror.
type	string	
uuid	string	Unique identifier of the SnapMirror policy.

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "comment": "string",
  "copy_all_source_snapshots": 1,
  "copy_latest_source_snapshot": 1,
  "create_snapshot_on_source": "",
  "identity_preservation": "string",
  "name": "Asynchronous",
  "retention": [
    {
      "count": 7,
      "creation_schedule": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "weekly",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "label": "hourly",
      "period": "P30D",
      "prefix": "string",
      "preserve": 1,
      "warn": 4
    }
  ],
  "rpo": 0,
  "scope": "string",
  "snapshot_lock_mode": "string",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "sync_common_snapshot_schedule": {
```

```
"_links": {
  "self": {
    "href": "/api/resourcelink"
  }
},
"name": "weekly",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"sync_type": "string",
"throttle": 0,
"transfer_schedule": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "weekly",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"type": "string",
"uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
}
```

Response

Status: 200, Ok

Name	Type	Description
job	job_link	

Example response

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

Response

Status: 202, Accepted

Error

Status: Default

ONTAP Error Response codes

Error code	Description
6619714	Schedule specified is an interval schedule. SnapMirror does not support interval schedules.
13303842	SnapMirror policy is not supported.
13303843	Conflicting values between SnapMirror policy and SnapMirror relationships for either 'transfer_schedule, throttle or identity_preservation' properties
13303850	Invalid input parameter
13303887	Failed to create SnapMirror policy. Reason: Maximum number of allowed retention rules reached
13304050	Retention cannot be empty for a SnapMirror policy with 'create_snapshot_on_source' set to false.
13304092	Input value of the retention period property is invalid. For relationships with FlexVol volume or FlexGroup volume destinations, the duration must be in ISO 6801 format or can be infinite. For relationships with object store destinations, only duration values with Y, M or D and supported and must be in the specified range.

Error code	Description
13303932	Invalid input property
13303947	The specified property needs another property to be specified
13303948	The specified properties cannot be set to the specified values.
13304047	An additional property is required with the specified policy property.
6621102	Failed to modify the property from zero because the policy is currently associated with a SnapMirror relationship.
6621104	Failed to modify the property because the policy is currently associated with a relationship which does not support the property.
13304090	The property snapshot_lock_mode cannot be specified for this operation.
13304096	Property archive is not supported when property snapshot_lock_mode is set to compliance or enterprise.
6621045	The property retention.warn is not supported for a policy when the retention.preserve property is false.
13304129	The property retention.warn value must be less than the property retention.count value for a rule in a policy.
13304126	Enter a value for "count" in the range indicated in the error message.
13304130	The total retention.count value for all rules in a policy cannot exceed the value indicated in the error message."
13304131	Modifying property "retention.creation_schedule" for the policy is not supported because the policy is associated with a relationship with a FlexGroup volume endpoint.
13304011	Failed to create or modify the specified Snapmirror policy. Reason: The property retention.count cannot have a value greater than 1.
6621091	The specified Snapmirror policy cannot have a rule with a preserve value of true.
6621088	The specified Snapmirror policy must have at least one rule without a schedule.

Name	Type	Description
error	returned_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	

archive

Archive information for the objects in an object store SnapMirror relationship. This property is applicable only for "async" policies with "create_snapshot_on_source" set to "false".

Name	Type	Description
after_days	integer	Number of days after which the objects are archived. This is only applicable when "archive.enabled" is "true". If this property is not set when "archive.enabled" is "true", the default value is "0" and therefore archiving will be triggered instantly. The value range is 0..999. If the value is set to "0", the latest snapshot copy will be archived. The value of after_days cannot be changed from "0" if any FlexVol SnapMirror relationship is associated with the policy.
enabled	boolean	When set to "true", the objects are archived. When set to "false", the objects are not archived.

creation_schedule

Schedule used to create Snapshot copies on the destination for long term retention. Only cron schedules are supported for SnapMirror.

Name	Type	Description
_links	_links	
name	string	Job schedule name

Name	Type	Description
uuid	string	Job schedule UUID

snapmirror_policy_rule

SnapMirror policy rule for retention.

Name	Type	Description
count	integer	Number of Snapshot copies to be kept for retention. Maximum value will differ based on type of relationship and scaling factor. For normal SnapMirror relationship without Snapshot copy scaling enabled maximum value can be 251 and with Snapshot copy scaling enabled it can be 1019. For object store SnapMirror relationships maximum value can be 4091.
creation_schedule	creation_schedule	Schedule used to create Snapshot copies on the destination for long term retention. Only cron schedules are supported for SnapMirror.
label	string	Snapshot copy label

Name	Type	Description
period	string	<p>Specifies the duration for which the Snapshot copies are locked. The retention period value represents a duration and must be in the ISO-8601 duration format. Years, months, days, hours, minutes, and seconds are represented as "P<num>Y", "P<num>M", "P<num>D", "PT<num>H", "PT<num>M" and "PT<num>S". Value "infinite" is also a valid input for Flexvol volumes and FlexGroup volumes. A duration which combines different periods is not supported, for example "P1Y10M" is not supported. The range of supported retention period values is between 1 second to infinite. Object store destinations support values only in years, months, or days and between 30 days and 100 years.</p>
prefix	string	<p>Specifies the prefix for the Snapshot copy name to be created as per the schedule. If no value is specified, then the label is used as the prefix.</p>
preserve	boolean	<p>Specifies the behavior when the Snapshot copy retention count is reached on the SnapMirror destination for the rule. The default value is false, which means that the oldest Snapshot copy is deleted to make room for new ones but only if the number of Snapshot copies has exceeded the retention count specified in the 'count' property. When set to true and where the Snapshot copies have reached the retention count, an incremental SnapMirror transfer will fail or if the rule has a schedule, Snapshot copies will be no longer be created on the SnapMirror destination.</p>

Name	Type	Description
warn	integer	Specifies the warning threshold count for the rule. The default value is zero. When set to a value greater than zero, an event is generated after the number of Snapshot copies (for the particular rule) retained on a SnapMirror destination reaches the specified warning limit. The preserve property for the rule must be true in order to set the warn property to a value greater than zero.

svm

SVM, applies only to SVM-scoped objects.

Name	Type	Description
_links	_links	
name	string	The name of the SVM. This field cannot be specified in a PATCH method.
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

sync_common_snapshot_schedule

Schedule used to create common Snapshot copies for synchronous relationships.

Name	Type	Description
_links	_links	
name	string	Job schedule name
uuid	string	Job schedule UUID

transfer_schedule

The schedule used to update asynchronous relationships. Only cron schedules are supported for SnapMirror.

Name	Type	Description
_links	_links	

Name	Type	Description
name	string	Job schedule name
uuid	string	Job schedule UUID

snapmirror_policy

SnapMirror policy information. SnapMirror policy can either be of type "async", "sync" or "continuous". The policy type "async" can be associated with a SnapMirror relationship that has either a FlexVol volume, FlexGroup volume or SVM as the endpoint. The policy type "sync" along with "sync_type" as "sync" or "strict_sync" can be associated with a SnapMirror relationship that has a FlexVol volume as the endpoint. The policy type "sync" can have a "sync_type" of either "sync", "strict_sync", "automated_failover" or "automated_failover_duplex". If the "sync_type" is "sync", a write success is returned to the client after writing the data to the source endpoint and before writing the data to the destination endpoint. If the "sync_type" is "strict_sync", a write success is returned to the client after writing the data to both source and destination endpoints. If the "sync_type" is "automated_failover", the policy can be associated with a SnapMirror active sync relationship that has a consistency group as the endpoint and provides asymmetric active active access to the two storage copies. If the "sync_type" is "automated_failover_duplex", the policy can be associated with a SnapMirror active sync relationship that has a consistency group as the endpoint and provides symmetric active active access to the two storage copies. Use the "sync" policy with "sync_type" as "automated_failover" or "automated_failover_duplex" to establish SnapMirror active sync relationships for business continuity use cases. SnapMirror relationships with policy types as "sync" and "sync_type" as "automated_failover" or "automated_failover_duplex" can be monitored by the Mediator, if configured. If the source Consistency Group endpoint is not reachable, the Mediator might trigger a failover to the destination consistency group endpoint. A policy type of "continuous" can be associated with SnapMirror relationships that have either ONTAP S3 buckets or non-ONTAP object stores as endpoints. This type of policy is used for FabricLink owned targets.

Name	Type	Description
_links	_links	
archive	archive	Archive information for the objects in an object store SnapMirror relationship. This property is applicable only for "async" policies with "create_snapshot_on_source" set to "false".
comment	string	Comment associated with the policy.

Name	Type	Description
copy_all_source_snapshots	boolean	Specifies that all the source Snapshot copies (including the one created by SnapMirror before the transfer begins) should be copied to the destination on a transfer. "Retention" properties cannot be specified along with this property. This is applicable only to async policies. Property can only be set to 'true'.
copy_latest_source_snapshot	boolean	Specifies that the latest source Snapshot copy (created by SnapMirror before the transfer begins) should be copied to the destination on a transfer. "Retention" properties cannot be specified along with this property. This is applicable only to async policies. Property can only be set to 'true'.
create_snapshot_on_source	boolean	Specifies whether a new Snapshot copy should be created on the source at the beginning of an update or resync operation. This is applicable only to async policies. Property can only be set to 'false'.
identity_preservation	string	Specifies which configuration of the source SVM is replicated to the destination SVM. This property is applicable only for SVM data protection with "async" policy type.
name	string	Name of the policy.
network_compression_enabled	boolean	Specifies whether network compression is enabled for transfers. This is applicable only to the policies of type "async".
retention	array[snapmirror_policy_rule]	Rules for Snapshot copy retention.

Name	Type	Description
rpo	integer	Specifies the duration of time for which a change to be propagated to a mirror should be delayed, in seconds. This is an intentional propagation delay between mirrors and is configurable down to zero, which means an immediate propagation. This is supported for policies of type 'continuous'.
scope	string	Set to "svm" for policies owned by an SVM, otherwise set to "cluster".
snapshot_lock_mode	string	Specifies the lock mode of the Snapshot copies stored in the object store. This property is applicable only to policies of type "async" with "create_snapshot_on_source" set to "false". When set to enterprise or compliance, the policy can be associated only with SnapMirror relationships where the source endpoint is a FlexVol volume and the destination endpoint is an object store. When set to compliance, no users can delete a Snapshot copy until the retention period has expired. When set to enterprise, users that have special permissions can delete a Snapshot copy before the retention period has expired.
svm	svm	SVM, applies only to SVM-scoped objects.
sync_common_snapshot_schedule	sync_common_snapshot_schedule	Schedule used to create common Snapshot copies for synchronous relationships.
sync_type	string	
throttle	integer	Throttle in KB/s. Default to unlimited.

Name	Type	Description
transfer_schedule	transfer_schedule	The schedule used to update asynchronous relationships. Only cron schedules are supported for SnapMirror.
type	string	
uuid	string	Unique identifier of the SnapMirror policy.

job_link

Name	Type	Description
_links	_links	
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

returned_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.

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