NetApp

Manage SnapMirror relationship tranfers

ONTAP 9.11.1 REST API reference

NetApp
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Manage SnapMirror relationship tranfers

SnapMirror relationships relationship.uuid transfers endpoint overview

Overview

This API is used to manage transfers on an existing SnapMirror relationship.

You can initiate SnapMirror operations such as "initialize", "update", "restore-transfer", and "abort" using this API on asynchronous SnapMirror relationship. On a synchronous SnapMirror relationship, you can initiate SnapMirror "initialize" operation. The GET for this API reports the status of both active transfers and transfers that have terminated within the past 24 hours. For object store relationships only information on active transfers is reported. For the restore relationships, the POST on transfers API triggers "restore-transfer". Successful completion of "restore" also deletes the restore relationship. If the "restore" fails, DELETE on relationships must be called to delete the restore relationship.

Retrieve ongoing SnapMirror transfers for a relationship

GET `/snapmirror/relationships/{relationship.uuid}/transfers`

Introduced In: 9.6

Retrieves the list of ongoing SnapMirror transfers for the specified relationship.

Related ONTAP commands

- `snapmirror show`

Example

```
GET "/api/snapmirror/relationships/293baa53-e63d-11e8-bff1-
005056a793dd/transfers"
```

Learn more

- DOC /snapmirror/relationships/{relationship.uuid}/transfers

Parameters

Name	Type	In	Required	Description
relationship.uuid	string	path	True	Relationship UUID
bytes_transferred	integer	query	False	Filter by bytes_transferred

Name	Type	In	Required	Description
total_duration	string	query	False	Filter by total_duration • Introduced in: 9.10
error_info.message	string	query	False	Filter by error_info.message • Introduced in: 9.10
error_info.code	integer	query	False	Filter by error_info.code • Introduced in: 9.10
uuid	string	query	False	Filter by uuid
state	string	query	False	Filter by state
checkpoint_size	integer	query	False	Filter by checkpoint_size
snapshot	string	query	False	Filter by snapshot
relationship.restore	boolean	query	False	Filter by relationship.restore
relationship.destination.cluster.name	string	query	False	Filter by relationship.destination.cluster.name • Introduced in: 9.7
relationship.destination.cluster.uuid	string	query	False	Filter by relationship.destination.cluster.uuid • Introduced in: 9.7
relationship.destination.svm.uuid	string	query	False	Filter by relationship.destination.svm.uuid

Name	Type	In	Required	Description
relationship.destination.svm.name	string	query	False	Filter by relationship.destination.svm.name
relationship.destination.path	string	query	False	Filter by relationship.destination.path
relationship.destination.uuid	string	query	False	Filter by relationship.destination.uuid • Introduced in: 9.11
relationship.destination.consistency_group_volumes.name	string	query	False	Filter by relationship.destination.consistency_group_volumes.name • Introduced in: 9.8
throttle	integer	query	False	Filter by throttle • Introduced in: 9.9
end_time	string	query	False	Filter by end_time • Introduced in: 9.10
archive_retrieval_priority	string	query	False	Filter by archive_retrieval_priority • Introduced in: 9.11
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[snapmirror_transfer]	

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Example response

```json
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "archive_retrieval_priority": "high",
    "bytes_transferred": 0,
    "checkpoint_size": 0,
    "end_time": "2020-12-02T18:36:19-08:00",
    "error_info": {
      "code": 6620046,
      "message": "Transfer aborted"
    },
    "files": {
      "destination_path": "/dirb/file2",
      "source_path": "/dira/file1"
    },
    "relationship": {
      "destination": {
        "cluster": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "cluster1",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        },
        "consistency_group_volumes": {
          "name": "volume1",
          "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
        },
        "ipspace": "Default",
        "path": "svm1:volume1",
```

```
        "svm": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "svm1",
          "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
        },
        "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
      },
      "uuid": "d2d7ceea-ab52-11e8-855e-00505682a4c7"
    },
    "snapshot": "string",
    "snapshot_retention_period": "P30D",
    "state": "aborted",
    "throttle": 0,
    "total_duration": "PT28M41S",
    "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
  }
}
```

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	

error_info

Error information for the transfer.

Name	Type	Description
code	integer	Error code
message	string	Error message

files

Specifies a file or LUN consisting of a source_path and an optional destination_path. If not specified, the destination_path is the same as the source_path. File restore is not supported if the source_path or destination_path contains commas in its directory or file name.

Name	Type	Description
destination_path	string	
source_path	string	

cluster

Name	Type	Description
_links	_links	
name	string	
uuid	string	

consistency_group_volumes

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 • x-ntap-createOnly: true • Introduced in: 9.8

svm

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

snapmirror_endpoint

Endpoint of a SnapMirror relationship. For a GET request, the property "cluster" is populated when the endpoint is on a remote cluster. A POST request to create the destination SVM endpoint or to establish an SVM DR relationship must have the property "cluster" populated with the remote cluster details. A POST request to create the destination FlexVol volume, FlexGroup volume, Consistency Group, ONTAP S3 bucket and NON-ONTAP object-store endpoints can optionally specify the "cluster" property when the source SVM and the destination SVM are peered. A POST request to establish a SnapMirror relationship between the source endpoint and destination endpoint and when the source SVM and the destination SVM are not peered, must specify the "cluster" property for the remote endpoint.

Name	Type	Description
cluster	cluster	
consistency_group_volumes	array[consistency_group_volumes]	Mandatory property for a Consistency Group endpoint. Specifies the list of FlexVol volumes for a Consistency Group.
ipspace	string	Optional property to specify the IPSpace of the SVM.

Name	Type	Description
path	string	ONTAP FlexVol/FlexGroup - svm1:volume1 ONTAP SVM - svm1: ONTAP Consistency Group - svm1:/cg/cg_name ONTAP S3 - svm1:/bucket/bucket1 NON-ONTAP - objstore1:/objstore • example: svm1:volume1 • Introduced in: 9.6
svm	svm	
uuid	string	UUID of the endpoint. Applicable for object store SnapMirror relationships only.

relationship

Name	Type	Description
destination	snapmirror_endpoint	Endpoint of a SnapMirror relationship. For a GET request, the property "cluster" is populated when the endpoint is on a remote cluster. A POST request to create the destination SVM endpoint or to establish an SVM DR relationship must have the property "cluster" populated with the remote cluster details. A POST request to create the destination FlexVol volume, FlexGroup volume, Consistency Group, ONTAP S3 bucket and NON-ONTAP object-store endpoints can optionally specify the "cluster" property when the source SVM and the destination SVM are peered. A POST request to establish a SnapMirror relationship between the source endpoint and destination endpoint and when the source SVM and the destination SVM are not peered, must specify the "cluster" property for the remote endpoint. • Introduced in: 9.6

Name	Type	Description
restore	boolean	Is the relationship for restore?
uuid	string	

snapmirror_transfer

SnapMirror transfer information

Name	Type	Description
_links	_links	
archive_retrieval_priority	string	This is supported for transfer of restore relationship only. Priority level at which objects are restored from the archival storage. The value can be high, standard or low. The cloud provider's lowest priority will be used as the default. It is only supported for object store SnapMirror relationships. If the objects were not archived, the property will be ignored.
bytes_transferred	integer	Bytes transferred
checkpoint_size	integer	Amount of data transferred in bytes as recorded in the restart checkpoint.
end_time	string	End time of the transfer.
error_info	error_info	Error information for the transfer.
files	array[files]	This is supported for transfer of restore relationship only. This specifies the list of files or LUNs to be restored. Can contain up to eight files or LUNs.
relationship	relationship	
snapshot	string	Name of Snapshot copy being transferred.

Name	Type	Description
snapshot_retention_period	string	Specifies the duration for which the Snapshot copy specified in the 'source_snapshot' property is locked in the object store. The retention period value represents a duration and must be specified in the ISO-8601 duration format. The retention period can be in years, months, or days. A period specified for years, months, or days is represented in the ISO-8601 format as "P<num>Y", "P<num>M", or "P<num>D" respectively. For example, "P10Y" represents a duration of 10 years. The period string must contain only a single time element, that is, either years, months, or days. A duration which combines different periods is not supported, for example "P1Y10M" is not supported. Years, if specified, must be less than or equal to 100. Months, if specified, must be less than or equal to 1200. Days, if specified, must be between and including 30 and 36500. This property is valid only if the 'source_snapshot' property is specified and when the property 'snapshot_lock_mode' in the policy associated with the SnapMirror relationship is set to enterprise or compliance. If this property is not specified and the source Snapshot copy being transferred does not match a policy rule, then a default retention period of "P30D" is set. This property is supported only for non-restore transfers and for object store SnapMirror relationships.</num></num></num>
source_snapshot	string	Specifies the Snapshot copy on the source to be transferred to the destination.

Name	Type	Description
state	string	Status of the transfer. Set PATCH state to "aborted" to abort the transfer. Set PATCH state to "hard_aborted" to abort the transfer and discard the restart checkpoint.
storage_efficiency_enabled	boolean	This is supported for transfer of restore relationship only. Set this property to "false" to turn off storage efficiency for data transferred over the wire and written to the destination.
throttle	integer	Throttle, in KBs per second. This "throttle" overrides the "throttle" set on the SnapMirror relationship or SnapMirror relationship's policy. If neither of these are set, defaults to 0, which is interpreted as unlimited.
total_duration	string	Elapsed transfer time.
uuid	string	

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.

Start a SnapMirror transfer operation

POST `/snapmirror/relationships/{relationship.uuid}/transfers`

Introduced In: 9.6

Starts a SnapMirror transfer operation. This API initiates a restore operation if the SnapMirror relationship is of type "restore". Otherwise, it intiates a SnapMirror "initialize" operation or "update" operation based on the current SnapMirror state.

Default property values

- `storage_efficiency_enabled` - *true*

Related ONTAP commands

- `snapmirror update`
- `snapmirror initialize`
- `snapmirror restore`

Important notes

- The property "archive_retrieval_priority" is only applicable for object store SnapMirror relationships of type "restore".

Examples

The following examples show how to perform SnapMirror "initialize", "update", and "restore" operations.

Perform SnapMirror initialize or update

```
POST "/api/snapmirror/relationships/e4e7e130-0279-11e9-b566-
0050568e9909/transfers" '{}'
```

Perform SnapMirror initialize, update or restore with throttle value set

```
POST "/api/snapmirror/relationships/e4e7e130-0279-11e9-b566-
0050568e9909/transfers" '{"throttle":"100"}'
```

Perform SnapMirror restore transfer of a file

```
POST "/api/snapmirror/relationships/c8c62a90-0fef-11e9-b09e-
0050568e7067/transfers" '{"source_snapshot": "src",
"files":[{"source_path": "/a1.txt.0", "destination_path": "/a1-
renamed.txt.0"}]}'
```

Performing a SnapMirror initialize or update using a particular Snapshot copy.

```
  POST "/api/snapmirror/relationships/e4e7e130-0279-11e9-b566-
  0050568e9909/transfers" '{"source_snapshot":"snap1"}'
```

Performing a SnapMirror initialize or update of an object store SnapMirror relationship and locking Snapshot copy 'snap1' for a period of 40 months.

```
  POST "/api/snapmirror/relationships/e4e7e130-0279-11e9-b566-
  0050568e9909/transfers" '{"source_snapshot":"snap1",
  "snapshot_retention_period":"P40M"}]}'
```

Performing a SnapMirror restore transfer of a file with inode number 96 from an object store.

```
  POST "/api/snapmirror/relationships/5aadf886-2039-11ea-b47a-
  005056a778b7/transfers" '{"source_snapshot": "snap1",
  "files":[{"source_path": "96", "destination_path": "/f1"}]}'
```

Performing a SnapMirror restore transfer of a whole volume from an object store.

```
  POST "/api/snapmirror/relationships/5aadf886-2039-11ea-b47a-
  005056a778b7/transfers" '{"source_snapshot": "snap1"}'
```

Performing a SnapMirror restore transfer of a whole volume from an object store with archive_retrieval_priority high.

```
  POST "/api/snapmirror/relationships/5aadf886-2039-11ea-b47a-
  005056a778b7/transfers" '{"source_snapshot": "snap1",
  "archive_retrieval_priority": "high"}'
```

Learn more

- DOC /snapmirror/relationships/{relationship.uuid}/transfers

Parameters

Name	Type	In	Required	Description
relationship.uuid	string	path	True	Relationship UUID

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

Request Body

Name	Type	Description
_links	_links	

Name	Type	Description
archive_retrieval_priority	string	This is supported for transfer of restore relationship only. Priority level at which objects are restored from the archival storage. The value can be high, standard or low. The cloud provider's lowest priority will be used as the default. It is only supported for object store SnapMirror relationships. If the objects were not archived, the property will be ignored.
bytes_transferred	integer	Bytes transferred
checkpoint_size	integer	Amount of data transferred in bytes as recorded in the restart checkpoint.
end_time	string	End time of the transfer.
error_info	error_info	Error information for the transfer.
files	array[files]	This is supported for transfer of restore relationship only. This specifies the list of files or LUNs to be restored. Can contain up to eight files or LUNs.
relationship	relationship	
snapshot	string	Name of Snapshot copy being transferred.

Name	Type	Description
snapshot_retention_period	string	Specifies the duration for which the Snapshot copy specified in the 'source_snapshot' property is locked in the object store. The retention period value represents a duration and must be specified in the ISO-8601 duration format. The retention period can be in years, months, or days. A period specified for years, months, or days is represented in the ISO-8601 format as "P<num>Y", "P<num>M", or "P<num>D" respectively. For example, "P10Y" represents a duration of 10 years. The period string must contain only a single time element, that is, either years, months, or days. A duration which combines different periods is not supported, for example "P1Y10M" is not supported. Years, if specified, must be less than or equal to 100. Months, if specified, must be less than or equal to 1200. Days, if specified, must be between and including 30 and 36500. This property is valid only if the 'source_snapshot' property is specified and when the property 'snapshot_lock_mode' in the policy associated with the SnapMirror relationship is set to enterprise or compliance. If this property is not specified and the source Snapshot copy being transferred does not match a policy rule, then a default retention period of "P30D" is set. This property is supported only for non-restore transfers and for object store SnapMirror relationships.</num></num></num>
source_snapshot	string	Specifies the Snapshot copy on the source to be transferred to the destination.

Name	Type	Description
state	string	Status of the transfer. Set PATCH state to "aborted" to abort the transfer. Set PATCH state to "hard_aborted" to abort the transfer and discard the restart checkpoint.
storage_efficiency_enabled	boolean	This is supported for transfer of restore relationship only. Set this property to "false" to turn off storage efficiency for data transferred over the wire and written to the destination.
throttle	integer	Throttle, in KBs per second. This "throttle" overrides the "throttle" set on the SnapMirror relationship or SnapMirror relationship's policy. If neither of these are set, defaults to 0, which is interpreted as unlimited.
total_duration	string	Elapsed transfer time.
uuid	string	

Example request

```json
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "archive_retrieval_priority": "high",
  "bytes_transferred": 0,
  "checkpoint_size": 0,
  "end_time": "2020-12-02T18:36:19-08:00",
  "error_info": {
    "code": 6620046,
    "message": "Transfer aborted"
  },
  "files": {
    "destination_path": "/dirb/file2",
    "source_path": "/dira/file1"
  },
  "relationship": {
    "destination": {
      "cluster": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "cluster1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "consistency_group_volumes": {
        "name": "volume1",
        "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
      },
      "ipspace": "Default",
      "path": "svm1:volume1",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
```

```
        "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
      },
      "uuid": "d2d7ceea-ab52-11e8-855e-00505682a4c7"
    },
    "snapshot": "string",
    "snapshot_retention_period": "P30D",
    "state": "aborted",
    "throttle": 0,
    "total_duration": "PT28M41S",
    "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
  }
```

Response

```
Status: 201, Created
```

Error

```
Status: Default
```

ONTAP Error Response codes

Error code	Description
13303845	Restore operation failed
13303812	Initialize operation failed
13303844	Update operation failed
13303846	Empty source path file list
13303847	Invalid arguments
13304040	Throttle not supported for update of Synchronous SnapMirror relationships
6620237	SnapMirror relationship database write failed
6620238	SnapMirror relationship database read failed
13304026	API license token is required for this operation.
13304027	Invalid API license token specified.
6621865	Unexpected input value.
13304047	An additional property is required with the specified policy property.

Error code	Description
13303872	Property specified requires an effective cluster version of ONTAP specified or later.
13304093	Property specified is not supported for specified relationships.
13304094	The property snapshot_retention_period is not supported for this relationship because the policy associated with it does not have the snapshot_lock_mode set to compliance or enterprise.

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	

error_info

Error information for the transfer.

Name	Type	Description
code	integer	Error code
message	string	Error message

files

Specifies a file or LUN consisting of a source_path and an optional destination_path. If not specified, the destination_path is the same as the source_path. File restore is not supported if the source_path or destination_path contains commas in its directory or file name.

Name	Type	Description
destination_path	string	
source_path	string	

cluster

Name	Type	Description
_links	_links	
name	string	
uuid	string	

consistency_group_volumes

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 • x-ntap-createOnly: true • Introduced in: 9.8

svm

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

snapmirror_endpoint

Endpoint of a SnapMirror relationship. For a GET request, the property "cluster" is populated when the endpoint is on a remote cluster. A POST request to create the destination SVM endpoint or to establish an SVM DR relationship must have the property "cluster" populated with the remote cluster details. A POST request to create the destination FlexVol volume, FlexGroup volume, Consistency Group, ONTAP S3 bucket and NON-ONTAP object-store endpoints can optionally specify the "cluster" property when the source SVM and the destination SVM are peered. A POST request to establish a SnapMirror relationship between the source endpoint and destination endpoint and when the source SVM and the destination SVM are not peered, must specify the "cluster" property for the remote endpoint.

Name	Type	Description
cluster	cluster	
consistency_group_volumes	array[consistency_group_volumes]	Mandatory property for a Consistency Group endpoint. Specifies the list of FlexVol volumes for a Consistency Group.
ipspace	string	Optional property to specify the IPSpace of the SVM.

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Name	Type	Description
path	string	ONTAP FlexVol/FlexGroup - svm1:volume1 ONTAP SVM - svm1: ONTAP Consistency Group - svm1:/cg/cg_name ONTAP S3 - svm1:/bucket/bucket1 NON-ONTAP - objstore1:/objstore • example: svm1:volume1 • Introduced in: 9.6
svm	svm	
uuid	string	UUID of the endpoint. Applicable for object store SnapMirror relationships only.

relationship

Name	Type	Description
destination	snapmirror_endpoint	Endpoint of a SnapMirror relationship. For a GET request, the property "cluster" is populated when the endpoint is on a remote cluster. A POST request to create the destination SVM endpoint or to establish an SVM DR relationship must have the property "cluster" populated with the remote cluster details. A POST request to create the destination FlexVol volume, FlexGroup volume, Consistency Group, ONTAP S3 bucket and NON-ONTAP object-store endpoints can optionally specify the "cluster" property when the source SVM and the destination SVM are peered. A POST request to establish a SnapMirror relationship between the source endpoint and destination endpoint and when the source SVM and the destination SVM are not peered, must specify the "cluster" property for the remote endpoint. • Introduced in: 9.6

Name	Type	Description
restore	boolean	Is the relationship for restore?
uuid	string	

snapmirror_transfer

SnapMirror transfer information

Name	Type	Description
_links	_links	
archive_retrieval_priority	string	This is supported for transfer of restore relationship only. Priority level at which objects are restored from the archival storage. The value can be high, standard or low. The cloud provider's lowest priority will be used as the default. It is only supported for object store SnapMirror relationships. If the objects were not archived, the property will be ignored.
bytes_transferred	integer	Bytes transferred
checkpoint_size	integer	Amount of data transferred in bytes as recorded in the restart checkpoint.
end_time	string	End time of the transfer.
error_info	error_info	Error information for the transfer.
files	array[files]	This is supported for transfer of restore relationship only. This specifies the list of files or LUNs to be restored. Can contain up to eight files or LUNs.
relationship	relationship	
snapshot	string	Name of Snapshot copy being transferred.

Name	Type	Description
snapshot_retention_period	string	Specifies the duration for which the Snapshot copy specified in the 'source_snapshot' property is locked in the object store. The retention period value represents a duration and must be specified in the ISO-8601 duration format. The retention period can be in years, months, or days. A period specified for years, months, or days is represented in the ISO-8601 format as "P<num>Y", "P<num>M", or "P<num>D" respectively. For example, "P10Y" represents a duration of 10 years. The period string must contain only a single time element, that is, either years, months, or days. A duration which combines different periods is not supported, for example "P1Y10M" is not supported. Years, if specified, must be less than or equal to 100. Months, if specified, must be less than or equal to 1200. Days, if specified, must be between and including 30 and 36500. This property is valid only if the 'source_snapshot' property is specified and when the property 'snapshot_lock_mode' in the policy associated with the SnapMirror relationship is set to enterprise or compliance. If this property is not specified and the source Snapshot copy being transferred does not match a policy rule, then a default retention period of "P30D" is set. This property is supported only for non-restore transfers and for object store SnapMirror relationships.</num></num></num>
source_snapshot	string	Specifies the Snapshot copy on the source to be transferred to the destination.

Name	Type	Description
state	string	Status of the transfer. Set PATCH state to "aborted" to abort the transfer. Set PATCH state to "hard_aborted" to abort the transfer and discard the restart checkpoint.
storage_efficiency_enabled	boolean	This is supported for transfer of restore relationship only. Set this property to "false" to turn off storage efficiency for data transferred over the wire and written to the destination.
throttle	integer	Throttle, in KBs per second. This "throttle" overrides the "throttle" set on the SnapMirror relationship or SnapMirror relationship's policy. If neither of these are set, defaults to 0, which is interpreted as unlimited.
total_duration	string	Elapsed transfer time.
uuid	string	

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 attributes of an ongoing SnapMirror transfer

GET /snapmirror/relationships/{relationship.uuid}/transfers/{uuid}

Introduced In: 9.6

Retrieves the attributes of a specific ongoing SnapMirror transfer.

Related ONTAP commands

- snapmirror show

Example

```
GET "/api/snapmirror/relationships/293baa53-e63d-11e8-bff1-
005056a793dd/transfers/293baa53-e63d-11e8-bff1-005056a793dd"
```

Learn more

- DOC /snapmirror/relationships/{relationship.uuid}/transfers

Parameters

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

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	

Name	Type	Description
archive_retrieval_priority	string	This is supported for transfer of restore relationship only. Priority level at which objects are restored from the archival storage. The value can be high, standard or low. The cloud provider's lowest priority will be used as the default. It is only supported for object store SnapMirror relationships. If the objects were not archived, the property will be ignored.
bytes_transferred	integer	Bytes transferred
checkpoint_size	integer	Amount of data transferred in bytes as recorded in the restart checkpoint.
end_time	string	End time of the transfer.
error_info	error_info	Error information for the transfer.
files	array[files]	This is supported for transfer of restore relationship only. This specifies the list of files or LUNs to be restored. Can contain up to eight files or LUNs.
relationship	relationship	
snapshot	string	Name of Snapshot copy being transferred.

Name	Type	Description
snapshot_retention_period	string	Specifies the duration for which the Snapshot copy specified in the 'source_snapshot' property is locked in the object store. The retention period value represents a duration and must be specified in the ISO-8601 duration format. The retention period can be in years, months, or days. A period specified for years, months, or days is represented in the ISO-8601 format as "P<num>Y", "P<num>M", or "P<num>D" respectively. For example, "P10Y" represents a duration of 10 years. The period string must contain only a single time element, that is, either years, months, or days. A duration which combines different periods is not supported, for example "P1Y10M" is not supported. Years, if specified, must be less than or equal to 100. Months, if specified, must be less than or equal to 1200. Days, if specified, must be between and including 30 and 36500. This property is valid only if the 'source_snapshot' property is specified and when the property 'snapshot_lock_mode' in the policy associated with the SnapMirror relationship is set to enterprise or compliance. If this property is not specified and the source Snapshot copy being transferred does not match a policy rule, then a default retention period of "P30D" is set. This property is supported only for non-restore transfers and for object store SnapMirror relationships.</num></num></num>
source_snapshot	string	Specifies the Snapshot copy on the source to be transferred to the destination.

Name	Type	Description
state	string	Status of the transfer. Set PATCH state to "aborted" to abort the transfer. Set PATCH state to "hard_aborted" to abort the transfer and discard the restart checkpoint.
storage_efficiency_enabled	boolean	This is supported for transfer of restore relationship only. Set this property to "false" to turn off storage efficiency for data transferred over the wire and written to the destination.
throttle	integer	Throttle, in KBs per second. This "throttle" overrides the "throttle" set on the SnapMirror relationship or SnapMirror relationship's policy. If neither of these are set, defaults to 0, which is interpreted as unlimited.
total_duration	string	Elapsed transfer time.
uuid	string	

Example response

```json
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "archive_retrieval_priority": "high",
  "bytes_transferred": 0,
  "checkpoint_size": 0,
  "end_time": "2020-12-02T18:36:19-08:00",
  "error_info": {
    "code": 6620046,
    "message": "Transfer aborted"
  },
  "files": {
    "destination_path": "/dirb/file2",
    "source_path": "/dira/file1"
  },
  "relationship": {
    "destination": {
      "cluster": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "cluster1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "consistency_group_volumes": {
        "name": "volume1",
        "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
      },
      "ipspace": "Default",
      "path": "svm1:volume1",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
```

```
        "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
      },
      "uuid": "d2d7ceea-ab52-11e8-855e-00505682a4c7"
    },
    "snapshot": "string",
    "snapshot_retention_period": "P30D",
    "state": "aborted",
    "throttle": 0,
    "total_duration": "PT28M41S",
    "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
  }
```

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	

error_info

Error information for the transfer.

Name	Type	Description
code	integer	Error code
message	string	Error message

files

Specifies a file or LUN consisting of a source_path and an optional destination_path. If not specified, the destination_path is the same as the source_path. File restore is not supported if the source_path or destination_path contains commas in its directory or file name.

Name	Type	Description
destination_path	string	
source_path	string	

cluster

Name	Type	Description
_links	_links	
name	string	
uuid	string	

consistency_group_volumes

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 • x-ntap-createOnly: true • Introduced in: 9.8

svm

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

snapmirror_endpoint

Endpoint of a SnapMirror relationship. For a GET request, the property "cluster" is populated when the endpoint is on a remote cluster. A POST request to create the destination SVM endpoint or to establish an SVM DR relationship must have the property "cluster" populated with the remote cluster details. A POST request to create the destination FlexVol volume, FlexGroup volume, Consistency Group, ONTAP S3 bucket and NON-ONTAP object-store endpoints can optionally specify the "cluster" property when the source SVM and the destination SVM are peered. A POST request to establish a SnapMirror relationship between the source endpoint and destination endpoint and when the source SVM and the destination SVM are not peered, must specify the "cluster" property for the remote endpoint.

Name	Type	Description
cluster	cluster	
consistency_group_volumes	array[consistency_group_volumes]	Mandatory property for a Consistency Group endpoint. Specifies the list of FlexVol volumes for a Consistency Group.
ipspace	string	Optional property to specify the IPSpace of the SVM.

Name	Type	Description
path	string	ONTAP FlexVol/FlexGroup - svm1:volume1 ONTAP SVM - svm1: ONTAP Consistency Group - svm1:/cg/cg_name ONTAP S3 - svm1:/bucket/bucket1 NON-ONTAP - objstore1:/objstore • example: svm1:volume1 • Introduced in: 9.6
svm	svm	
uuid	string	UUID of the endpoint. Applicable for object store SnapMirror relationships only.

relationship

Name	Type	Description
destination	snapmirror_endpoint	Endpoint of a SnapMirror relationship. For a GET request, the property "cluster" is populated when the endpoint is on a remote cluster. A POST request to create the destination SVM endpoint or to establish an SVM DR relationship must have the property "cluster" populated with the remote cluster details. A POST request to create the destination FlexVol volume, FlexGroup volume, Consistency Group, ONTAP S3 bucket and NON-ONTAP object-store endpoints can optionally specify the "cluster" property when the source SVM and the destination SVM are peered. A POST request to establish a SnapMirror relationship between the source endpoint and destination endpoint and when the source SVM and the destination SVM are not peered, must specify the "cluster" property for the remote endpoint. • Introduced in: 9.6

Name	Type	Description
restore	boolean	Is the relationship for restore?
uuid	string	

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.

Cancel an ongoing SnapMirror transfer

PATCH /snapmirror/relationships/{relationship.uuid}/transfers/{uuid}

Introduced In: 9.6

Aborts an ongoing SnapMirror transfer. This operation is applicable on asynchronous SnapMirror relationships.

Related ONTAP commands

- `snapmirror abort`

Example

```
PATCH "/api/snapmirror/relationships/293baa53-e63d-11e8-bff1-
005056a793dd/transfers/293baa53-e63d-11e8-bff1-005056a793dd"
'{"state":"aborted"}'
```

Learn more

* DOC /snapmirror/relationships/{relationship.uuid}/transfers

Parameters

Name	Type	In	Required	Description
relationship.uuid	string	path	True	Relationship UUID
uuid	string	path	True	Transfer UUID

Request Body

Name	Type	Description
_links	_links	
archive_retrieval_priority	string	This is supported for transfer of restore relationship only. Priority level at which objects are restored from the archival storage. The value can be high, standard or low. The cloud provider's lowest priority will be used as the default. It is only supported for object store SnapMirror relationships. If the objects were not archived, the property will be ignored.
bytes_transferred	integer	Bytes transferred
checkpoint_size	integer	Amount of data transferred in bytes as recorded in the restart checkpoint.
end_time	string	End time of the transfer.
error_info	error_info	Error information for the transfer.
files	array[files]	This is supported for transfer of restore relationship only. This specifies the list of files or LUNs to be restored. Can contain up to eight files or LUNs.
relationship	relationship	
snapshot	string	Name of Snapshot copy being transferred.

Name	Type	Description
snapshot_retention_period	string	Specifies the duration for which the Snapshot copy specified in the 'source_snapshot' property is locked in the object store. The retention period value represents a duration and must be specified in the ISO-8601 duration format. The retention period can be in years, months, or days. A period specified for years, months, or days is represented in the ISO-8601 format as "P<num>Y", "P<num>M", or "P<num>D" respectively. For example, "P10Y" represents a duration of 10 years. The period string must contain only a single time element, that is, either years, months, or days. A duration which combines different periods is not supported, for example "P1Y10M" is not supported. Years, if specified, must be less than or equal to 100. Months, if specified, must be less than or equal to 1200. Days, if specified, must be between and including 30 and 36500. This property is valid only if the 'source_snapshot' property is specified and when the property 'snapshot_lock_mode' in the policy associated with the SnapMirror relationship is set to enterprise or compliance. If this property is not specified and the source Snapshot copy being transferred does not match a policy rule, then a default retention period of "P30D" is set. This property is supported only for non-restore transfers and for object store SnapMirror relationships.</num></num></num>
source_snapshot	string	Specifies the Snapshot copy on the source to be transferred to the destination.

Name	Type	Description
state	string	Status of the transfer. Set PATCH state to "aborted" to abort the transfer. Set PATCH state to "hard_aborted" to abort the transfer and discard the restart checkpoint.
storage_efficiency_enabled	boolean	This is supported for transfer of restore relationship only. Set this property to "false" to turn off storage efficiency for data transferred over the wire and written to the destination.
throttle	integer	Throttle, in KBs per second. This "throttle" overrides the "throttle" set on the SnapMirror relationship or SnapMirror relationship's policy. If neither of these are set, defaults to 0, which is interpreted as unlimited.
total_duration	string	Elapsed transfer time.
uuid	string	

```json
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "archive_retrieval_priority": "high",
  "bytes_transferred": 0,
  "checkpoint_size": 0,
  "end_time": "2020-12-02T18:36:19-08:00",
  "error_info": {
    "code": 6620046,
    "message": "Transfer aborted"
  },
  "files": {
    "destination_path": "/dirb/file2",
    "source_path": "/dira/file1"
  },
  "relationship": {
    "destination": {
      "cluster": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "cluster1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "consistency_group_volumes": {
        "name": "volume1",
        "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
      },
      "ipspace": "Default",
      "path": "svm1:volume1",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
```

```
        "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
      },
        "uuid": "d2d7ceea-ab52-11e8-855e-00505682a4c7"
    },
    "snapshot": "string",
    "snapshot_retention_period": "P30D",
    "state": "aborted",
    "throttle": 0,
    "total_duration": "PT28M41S",
    "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
  }
```

Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response codes

Error code	Description
13303848	Abort of sync SnapMirror is not allowed
13303849	SnapMirror transfer state is invalid

Name	Type	Description
error	error	

Example error

```json
{
  "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	

error_info

Error information for the transfer.

Name	Type	Description
code	integer	Error code
message	string	Error message

files

Specifies a file or LUN consisting of a source_path and an optional destination_path. If not specified, the destination_path is the same as the source_path. File restore is not supported if the source_path or destination_path contains commas in its directory or file name.

Name	Type	Description
destination_path	string	
source_path	string	

cluster

Name	Type	Description
_links	_links	
name	string	
uuid	string	

consistency_group_volumes

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 • x-ntap-createOnly: true • Introduced in: 9.8

svm

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

snapmirror_endpoint

Endpoint of a SnapMirror relationship. For a GET request, the property "cluster" is populated when the endpoint is on a remote cluster. A POST request to create the destination SVM endpoint or to establish an SVM DR relationship must have the property "cluster" populated with the remote cluster details. A POST request to create the destination FlexVol volume, FlexGroup volume, Consistency Group, ONTAP S3 bucket and NON-ONTAP object-store endpoints can optionally specify the "cluster" property when the source SVM and the destination SVM are peered. A POST request to establish a SnapMirror relationship between the source endpoint and destination endpoint and when the source SVM and the destination SVM are not peered, must specify the "cluster" property for the remote endpoint.

Name	Type	Description
cluster	cluster	
consistency_group_volumes	array[consistency_group_volumes]	Mandatory property for a Consistency Group endpoint. Specifies the list of FlexVol volumes for a Consistency Group.
ipspace	string	Optional property to specify the IPSpace of the SVM.

Name	Type	Description
path	string	ONTAP FlexVol/FlexGroup - svm1:volume1 ONTAP SVM - svm1: ONTAP Consistency Group - svm1:/cg/cg_name ONTAP S3 - svm1:/bucket/bucket1 NON-ONTAP - objstore1:/objstore • example: svm1:volume1 • Introduced in: 9.6
svm	svm	
uuid	string	UUID of the endpoint. Applicable for object store SnapMirror relationships only.

relationship

Name	Type	Description
destination	snapmirror_endpoint	Endpoint of a SnapMirror relationship. For a GET request, the property "cluster" is populated when the endpoint is on a remote cluster. A POST request to create the destination SVM endpoint or to establish an SVM DR relationship must have the property "cluster" populated with the remote cluster details. A POST request to create the destination FlexVol volume, FlexGroup volume, Consistency Group, ONTAP S3 bucket and NON-ONTAP object-store endpoints can optionally specify the "cluster" property when the source SVM and the destination SVM are peered. A POST request to establish a SnapMirror relationship between the source endpoint and destination endpoint and when the source SVM and the destination SVM are not peered, must specify the "cluster" property for the remote endpoint. • Introduced in: 9.6

Name	Type	Description
restore	boolean	Is the relationship for restore?
uuid	string	

snapmirror_transfer

SnapMirror transfer information

Name	Type	Description
_links	_links	
archive_retrieval_priority	string	This is supported for transfer of restore relationship only. Priority level at which objects are restored from the archival storage. The value can be high, standard or low. The cloud provider's lowest priority will be used as the default. It is only supported for object store SnapMirror relationships. If the objects were not archived, the property will be ignored.
bytes_transferred	integer	Bytes transferred
checkpoint_size	integer	Amount of data transferred in bytes as recorded in the restart checkpoint.
end_time	string	End time of the transfer.
error_info	error_info	Error information for the transfer.
files	array[files]	This is supported for transfer of restore relationship only. This specifies the list of files or LUNs to be restored. Can contain up to eight files or LUNs.
relationship	relationship	
snapshot	string	Name of Snapshot copy being transferred.

Name	Type	Description
snapshot_retention_period	string	Specifies the duration for which the Snapshot copy specified in the 'source_snapshot' property is locked in the object store. The retention period value represents a duration and must be specified in the ISO-8601 duration format. The retention period can be in years, months, or days. A period specified for years, months, or days is represented in the ISO-8601 format as "P\<num>Y", "P\<num>M", or "P\<num>D" respectively. For example, "P10Y" represents a duration of 10 years. The period string must contain only a single time element, that is, either years, months, or days. A duration which combines different periods is not supported, for example "P1Y10M" is not supported. Years, if specified, must be less than or equal to 100. Months, if specified, must be less than or equal to 1200. Days, if specified, must be between and including 30 and 36500. This property is valid only if the 'source_snapshot' property is specified and when the property 'snapshot_lock_mode' in the policy associated with the SnapMirror relationship is set to enterprise or compliance. If this property is not specified and the source Snapshot copy being transferred does not match a policy rule, then a default retention period of "P30D" is set. This property is supported only for non-restore transfers and for object store SnapMirror relationships.\</num>\</num>\</num>
source_snapshot	string	Specifies the Snapshot copy on the source to be transferred to the destination.

Name	Type	Description
state	string	Status of the transfer. Set PATCH state to "aborted" to abort the transfer. Set PATCH state to "hard_aborted" to abort the transfer and discard the restart checkpoint.
storage_efficiency_enabled	boolean	This is supported for transfer of restore relationship only. Set this property to "false" to turn off storage efficiency for data transferred over the wire and written to the destination.
throttle	integer	Throttle, in KBs per second. This "throttle" overrides the "throttle" set on the SnapMirror relationship or SnapMirror relationship's policy. If neither of these are set, defaults to 0, which is interpreted as unlimited.
total_duration	string	Elapsed transfer time.
uuid	string	

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.