



Manage SnapMirror relationship transfers

ONTAP 9.6 REST API reference

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Manage SnapMirror relationship transfers

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 and it only manages the active transfers on the specified relationship. 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

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
snapshot	string	query	False	Filter by snapshot
uuid	string	query	False	Filter by uuid

Name	Type	In	Required	Description
checkpoint_size	integer	query	False	Filter by checkpoint_size
relationship.uuid	string	query	False	Filter by relationship.uuid
relationship.restore	boolean	query	False	Filter by relationship.restore
relationship.destination.svm.uuid	string	query	False	Filter by relationship.destination.svm.uuid
relationship.destination.svm.name	string	query	False	Filter by relationship.destination.svm.name
relationship.destination.path	string	query	False	Filter by relationship.destination.path
state	string	query	False	Filter by state
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.

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached.
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]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "bytes_transferred": 0,
      "checkpoint_size": 0,
      "files": [
        {
          "destination_path": "/dirb/file2",
          "source_path": "/dira/file1"
        }
      ],
      "relationship": {
        "destination": {
          "path": "svm1:volumel",
          "svm": {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
            }
          },
          "name": "svm1",
          "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
        }
      },
      "uuid": "d2d7ceea-ab52-11e8-855e-00505682a4c7"
    },
    "snapshot": "string",
    "source_snapshot": "string",
    "state": "string",
    "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	

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.

Name	Type	Description
destination_path	string	
source_path	string	

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.

Name	Type	Description
path	string	ONTAP FlexVol/FlexGroup - svm1:volume1 ONTAP SVM - svm1: <ul style="list-style-type: none"> • example: svm1:volume1 • readCreate: 1
svm	svm	

relationship

Name	Type	Description
destination	snapmirror_endpoint	Endpoint of a SnapMirror relationship.
restore	boolean	Is the relationship for restore?
uuid	string	

snapmirror_transfer

Snapmirror transfer information

Name	Type	Description
_links	_links	
bytes_transferred	integer	Bytes transferred
checkpoint_size	integer	Amount of data transferred in bytes as recorded in the restart checkpoint.
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.
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 field to 'false' to turn off storage efficiency for data transferred over the wire and written to the destination.
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

Starts a SnapMirror transfer operation. This API initiates a restore operation if the SnapMirror relationship is of type "restore". Otherwise, it initiates 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`

Examples

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

Performing a SnapMirror initialize or update

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

Performing a SnapMirror restore transfer

```
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"]}]}'
```

Learn more

- [DOC /snapmirror/relationships/{relationship.uuid}/transfers](#)

Parameters

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

Request Body

Name	Type	Description
_links	_links	
bytes_transferred	integer	Bytes transferred
checkpoint_size	integer	Amount of data transferred in bytes as recorded in the restart checkpoint.
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	

Name	Type	Description
snapshot	string	Name of Snapshot copy being transferred.
source_snapshot	string	Specifies the Snapshot copy on the source to be transferred to the destination.
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 field to 'false' to turn off storage efficiency for data transferred over the wire and written to the destination.
uuid	string	

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "bytes_transferred": 0,
  "checkpoint_size": 0,
  "files": [
    {
      "destination_path": "/dirb/file2",
      "source_path": "/dira/file1"
    }
  ],
  "relationship": {
    "destination": {
      "path": "svm1:volumel",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    },
    "uuid": "d2d7ceea-ab52-11e8-855e-00505682a4c7"
  },
  "snapshot": "string",
  "source_snapshot": "string",
  "state": "string",
  "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
6620237	SnapMirror relationship database write failed
6620238	SnapMirror relationship database read failed

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	

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.

Name	Type	Description
destination_path	string	
source_path	string	

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.

Name	Type	Description
path	string	ONTAP FlexVol/FlexGroup - svm1:volume1 ONTAP SVM - svm1: <ul style="list-style-type: none">• example: svm1:volume1• readCreate: 1
svm	svm	

relationship

Name	Type	Description
destination	snapmirror_endpoint	Endpoint of a SnapMirror relationship.
restore	boolean	Is the relationship for restore?
uuid	string	

snapmirror_transfer

Snapmirror transfer information

Name	Type	Description
_links	_links	
bytes_transferred	integer	Bytes transferred
checkpoint_size	integer	Amount of data transferred in bytes as recorded in the restart checkpoint.
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.
source_snapshot	string	Specifies the Snapshot copy on the source to be transferred to the destination.
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 field to 'false' to turn off storage efficiency for data transferred over the wire and written to the destination.

Name	Type	Description
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}
```

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	
bytes_transferred	integer	Bytes transferred
checkpoint_size	integer	Amount of data transferred in bytes as recorded in the restart checkpoint.
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.
source_snapshot	string	Specifies the Snapshot copy on the source to be transferred to the destination.
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.

Name	Type	Description
storage_efficiency_enabled	boolean	This is supported for transfer of restore relationship only. Set this field to 'false' to turn off storage efficiency for data transferred over the wire and written to the destination.
uuid	string	

Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "bytes_transferred": 0,
  "checkpoint_size": 0,
  "files": [
    {
      "destination_path": "/dirb/file2",
      "source_path": "/dira/file1"
    }
  ],
  "relationship": {
    "destination": {
      "path": "svm1:volumel",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    },
    "uuid": "d2d7ceea-ab52-11e8-855e-00505682a4c7"
  },
  "snapshot": "string",
  "source_snapshot": "string",
  "state": "string",
  "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	

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.

Name	Type	Description
destination_path	string	
source_path	string	

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.

Name	Type	Description
path	string	ONTAP FlexVol/FlexGroup - svm1:volume1 ONTAP SVM - svm1: <ul style="list-style-type: none">• example: svm1:volume1• readCreate: 1
svm	svm	

relationship

Name	Type	Description
destination	snapmirror_endpoint	Endpoint of a SnapMirror relationship.
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}

Aborts an ongoing SnapMirror transfer.

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	
bytes_transferred	integer	Bytes transferred
checkpoint_size	integer	Amount of data transferred in bytes as recorded in the restart checkpoint.
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.
source_snapshot	string	Specifies the Snapshot copy on the source to be transferred to the destination.
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.

Name	Type	Description
storage_efficiency_enabled	boolean	This is supported for transfer of restore relationship only. Set this field to 'false' to turn off storage efficiency for data transferred over the wire and written to the destination.
uuid	string	

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "bytes_transferred": 0,
  "checkpoint_size": 0,
  "files": [
    {
      "destination_path": "/dirb/file2",
      "source_path": "/dira/file1"
    }
  ],
  "relationship": {
    "destination": {
      "path": "svm1:volumel",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    },
    "uuid": "d2d7ceea-ab52-11e8-855e-00505682a4c7"
  },
  "snapshot": "string",
  "source_snapshot": "string",
  "state": "string",
  "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

```
{
  "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	

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.

Name	Type	Description
destination_path	string	
source_path	string	

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.

Name	Type	Description
path	string	ONTAP FlexVol/FlexGroup - svm1:volume1 ONTAP SVM - svm1: <ul style="list-style-type: none">• example: svm1:volume1• readCreate: 1
svm	svm	

relationship

Name	Type	Description
destination	snapmirror_endpoint	Endpoint of a SnapMirror relationship.
restore	boolean	Is the relationship for restore?
uuid	string	

snapmirror_transfer

Snapmirror transfer information

Name	Type	Description
_links	_links	
bytes_transferred	integer	Bytes transferred
checkpoint_size	integer	Amount of data transferred in bytes as recorded in the restart checkpoint.
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.
source_snapshot	string	Specifies the Snapshot copy on the source to be transferred to the destination.
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 field to 'false' to turn off storage efficiency for data transferred over the wire and written to the destination.

Name	Type	Description
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.

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