



Manage application consistency group Snapshot copies

ONTAP 9.15.1 REST API reference

NetApp
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Manage application consistency group Snapshot copies

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Overview

Consistency groups support Snapshot copy create, inventory, and restore. Snapshot copies can be created on a specified schedule or on-demand. On-demand Snapshot copies can have a type of application consistent or crash consistent. Crash consistent is the default. Scheduled Snapshot copies are always crash consistent. There is no functional difference in ONTAP between crash consistent or application consistent Snapshot copies.

The functionality provided by these APIs is not integrated with the host application. Snapshot copies have limited value without host coordination, so the use of the SnapCenter Backup Management suite is recommended to ensure correct interaction between host applications and ONTAP.

On-Demand Snapshot Copies

A manual Snapshot copy may be created on-demand for a parent consistency group and for any of the children consistency groups within it.

Scheduled and manual Snapshot copy creation operations are subject to a pre-defined seven second internal timeout. If the Snapshot copy creation operation does not complete within this time, it is aborted.

Individual volume Snapshot copies within a consistency group Snapshot copies can be accessed and used with native volume Snapshot copy operations.

When an individual volume Snapshot copy is deleted that is part of a consistency group Snapshot copy, then that consistency group Snapshot copy becomes invalid and which cannot be used for restoring the consistency group.

Restoring to a Previous Snapshot Copy

A Snapshot copy restores to a parent consistency group from an existing parent consistency group's Snapshot copy. A Snapshot copy restores to any of the children's consistency groups within it from an existing children's consistency group. Granular Snapshot copies are supported. This is performed by a PATCH operation on the specific consistency group for the restore. An example is shown in [PATCH /application/consistency-groups](#) .

Any existing Snapshot copies that were created chronologically after the time of the Snapshot copy used in a successful restore operation is deleted, in compliance with existing ONTAP "future-snapshot" handling principles.

On failures during consistency group restores, any volumes that have been restored will remain so and will not be rolled back. The user must retry the failed restore operation until it is successful. The user can retry with consistency group restore or individual volume-granular restore.

Consistency group Snapshot APIs

The following APIs are used to perform operations related to consistency group Snapshot copies:

– GET /api/application/consistency-groups/{consistency_group.uuid}/snapshots

– POST /api/application/consistency-groups/{consistency_group.uuid}/snapshots

– POST /api/application/consistency-groups/{consistency_group.uuid}/snapshots?action=start

– GET /api/application/consistency-groups/{consistency_group.uuid}/snapshots/{uuid}

– PATCH /api/application/consistency-groups/{consistency_group.uuid}/snapshots/{uuid}?action=commit

– DELETE /api/application/consistency-groups/{consistency_group.uuid}/snapshots/{uuid}

Examples

Required properties

- `consistency_group.uuid` - Existing consistency group UUID in which to create the Snapshot copy.

Retrieving the list of existing Snapshot copies for a consistency group

Retrieves the list of consistency group granular Snapshot copies for a specific consistency group.

```
curl -X GET 'https://<mgmt-ip>/api/application/consistency-  
groups/92c6c770-17a1-11eb-b141-005056acd498/snapshots'
```

```
#### Response:
```

```
{  
  "records": [  
    {  
      "uuid": "92c6c770-17a1-11eb-b141-005056acd498",  
      "name": "sa3s1",  
      "_links": {  
        "self": {  
          "href": "/api/application/consistency-groups/a8d0626a-17a0-11eb-  
b141-005056acd498/snapshots/92c6c770-17a1-11eb-b141-005056acd498"  
        }  
      }  
    },  
    {  
      "uuid": "c5a250ba-17a1-11eb-b141-005056acd498",  
      "name": "sa3s2",  
      "_links": {  
        "self": {  
          "href": "/api/application/consistency-groups/a8d0626a-17a0-11eb-  
b141-005056acd498/snapshots/c5a250ba-17a1-11eb-b141-005056acd498"  
        }  
      }  
    }  
  ],  
  "num_records": 2,  
  "_links": {  
    "self": {  
      "href": "/api/application/consistency-groups/a8d0626a-17a0-11eb-b141-  
005056acd498/snapshots"  
    }  
  }  
}
```

Retrieves details of a specific Snapshot copy for a consistency group

Retrieves details for a specific Snapshot copy in a consistency group.

```
curl -X GET 'https://<mgmt-ip>/api/application/consistency-
groups/92c6c770-17a1-11eb-b141-005056acd498/snapshots/a175c021-4199-11ec-
8674-005056accf3f'
```

Response:

```
{
  "consistency_group": {
    "uuid": "ddabc6a5-4196-11ec-8674-005056accf3f",
    "name": "CG_1",
    "_links": {
      "self": {
        "href": "/api/application/consistency-groups/ddabc6a5-4196-11ec-
8674-005056accf3f"
      }
    }
  },
  "uuid": "a175c021-4199-11ec-8674-005056accf3f",
  "name": "sa3s2",
  "consistency_type": "crash",
  "comment": "manually created snapshot",
  "create_time": "2021-11-09T15:14:23-05:00",
  "svm": {
    "uuid": "7379fecb-4195-11ec-8674-005056accf3f",
    "name": "vs1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/7379fecb-4195-11ec-8674-005056accf3f"
      }
    }
  },
  "_links": {
    "self": {
      "href": "/api/application/consistency-groups/ddabc6a5-4196-11ec-8674-
005056accf3f/snapshots/a175c021-4199-11ec-8674-005056accf3f"
    }
  }
}
```

Retrieving bulk Snapshot copies

Retrieves the list of consistency group granular Snapshot copies for all consistency groups on the cluster.

```
curl -X GET 'https://<mgmt-ip>/api/application/consistency-
groups/*/snapshots'
```

```
#### Response:
{
  "records": [
    {
      "consistency_group": {
        "uuid": "1218f900-c124-11ee-bbfe-005056acb65e",
        "name": "cg3",
        "_links": {
          "self": {
            "href": "/api/application/consistency-groups/1218f900-c124-11ee-
bbfe-005056acb65e"
          }
        }
      },
      "uuid": "7da4d364-c12e-11ee-bbfe-005056acb65e",
      "name": "cg3ss",
      "_links": {
        "self": {
          "href": "/api/application/consistency-groups/1218f900-c124-11ee-
bbfe-005056acb65e/snapshots/7da4d364-c12e-11ee-bbfe-005056acb65e"
        }
      }
    },
    {
      "consistency_group": {
        "uuid": "15a8f66e-c124-11ee-bbfe-005056acb65e",
        "name": "cg2",
        "_links": {
          "self": {
            "href": "/api/application/consistency-groups/15a8f66e-c124-11ee-
bbfe-005056acb65e"
          }
        }
      },
      "uuid": "83595384-c12e-11ee-bbfe-005056acb65e",
      "name": "cg2ss",
      "_links": {
        "self": {
          "href": "/api/application/consistency-groups/15a8f66e-c124-11ee-
bbfe-005056acb65e/snapshots/83595384-c12e-11ee-bbfe-005056acb65e"
        }
      }
    },
    {
      "consistency_group": {
        "uuid": "1c101d17-c124-11ee-bbfe-005056acb65e",
```

```

    "name": "cg1",
    "_links": {
      "self": {
        "href": "/api/application/consistency-groups/1c101d17-c124-11ee-
bbfe-005056acb65e"
      }
    }
  },
  "uuid": "87d0e49c-c12e-11ee-bbfe-005056acb65e",
  "name": "cg1ss",
  "_links": {
    "self": {
      "href": "/api/application/consistency-groups/1c101d17-c124-11ee-
bbfe-005056acb65e/snapshots/87d0e49c-c12e-11ee-bbfe-005056acb65e"
    }
  }
},
"num_records": 3,
"_links": {
  "self": {
    "href": "/api/application/consistency-groups/*/snapshots"
  }
}
}
}

```

Creating a crash-consistent Snapshot copy of a consistency group

Creates an on-demand crash-consistent Snapshot copy of an existing consistency group.

```

curl -X POST 'https://<mgmt-ip>/api/application/consistency-
groups/a8d0626a-17a0-11eb-b141-005056acd498/snapshots' -d '{ "name":
"name_of_this_snapshot", "consistency_type": "crash", "comment": "this is
a manually created on-demand snapshot", "snapmirror_label":
"my_special_sm_label" }' -H "accept: application/hal+json"

```

Response:

```

{
}

```

Creating a app-consistent Snapshot copy of a consistency group

Creates an on-demand crash-consistent Snapshot copy of an existing consistency group.


```
curl -X POST 'https://<mgmt-ip>/api/application/consistency-
groups/a8d0626a-17a0-11eb-b141-005056acd498/snapshots' -d '{ "name":
"name_of_this_snapshot", "consistency_type": "application", "comment":
"this is a manually created on-demand snapshot", "snapmirror_label":
"my_special_sm_label" }' -H "accept: application/hal+json"
```

Response:

```
{
}
```

Starting a two-phase crash-consistent Snapshot copy creation for a consistency group

Starts a two-phase on-demand crash-consistent Snapshot copy creation for an existing consistency group.

```
curl -X POST 'https://<mgmt-ip>/api/application/consistency-
groups/a8d0626a-17a0-11eb-b141-
005056acd498/snapshots?action=start&action_timeout=7' -d '{ "name":
"name_of_this_snapshot", "consistency_type": "application", "comment":
"this is a manually created on-demand snapshot", "snapmirror_label":
"my_special_sm_label" }' -H "accept: application/hal+json"
```

Response:

```
Location: /api/application/consistency-groups/a8d0626a-17a0-11eb-b141-
005056acd498/snapshots/7aac0607-0c4d-11ee-ad32-005056a73101
{
}
```

Committing a previously started two-phase crash-consistent Snapshot copy creation for a consistency group

Commits a previously started two-phase on-demand crash-consistent Snapshot copy creation for an existing consistency group.

```
curl -X PATCH 'https://<mgmt-ip>/api/application/consistency-
groups/a8d0626a-17a0-11eb-b141-005056acd498/snapshots/7aac0607-0c4d-11ee-
ad32-005056a73101?action=commit' -H "accept: application/hal+json"
```

Response:

```
{
}
```

Deleting a Snapshot copy from a consistency group

Deletes an existing Snapshot copy from a consistency group.

```
curl -X DELETE 'https://<mgmt-ip>/api/application/consistency-
groups/a8d0626a-17a0-11eb-b141-005056acd498/snapshots/92c6c770-17a1-11eb-
b141-005056acd498'
```

```
#### Response:
```

```
{
}
```

Retrieve consistency group Snapshot copies

GET /application/consistency-groups/{consistency_group.uuid}/snapshots

Introduced In: 9.10

Retrieves Snapshot copies for a consistency group.

Expensive properties

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

- `is_partial`
- `missing_volumes.uuid`
- `missing_volumes.name`

Parameters

Name	Type	In	Required	Description
consistency_group.uuid	string	path	True	The unique identifier of the consistency group to retrieve.
snapshot_volumes.snapshot.name	string	query	False	Filter by <code>snapshot_volumes.snapshot.name</code> <ul style="list-style-type: none">• Introduced in: 9.12
snapshot_volumes.snapshot.uuid	string	query	False	Filter by <code>snapshot_volumes.snapshot.uuid</code> <ul style="list-style-type: none">• Introduced in: 9.12

Name	Type	In	Required	Description
snapshot_volumes.volume.uuid	string	query	False	Filter by snapshot_volumes.volume.uuid • Introduced in: 9.12
snapshot_volumes.volume.name	string	query	False	Filter by snapshot_volumes.volume.name • Introduced in: 9.12
uuid	string	query	False	Filter by uuid
comment	string	query	False	Filter by comment
consistency_type	string	query	False	Filter by consistency_type
missing_volumes.uuid	string	query	False	Filter by missing_volumes.uuid
missing_volumes.name	string	query	False	Filter by missing_volumes.name
create_time	string	query	False	Filter by create_time
consistency_group.name	string	query	False	Filter by consistency_group.name
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
is_partial	boolean	query	False	Filter by is_partial
name	string	query	False	Filter by name
snapmirror_label	string	query	False	Filter by snapmirror_label

Name	Type	In	Required	Description
write_fence	boolean	query	False	Filter by write_fence <ul style="list-style-type: none"> Introduced in: 9.14
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
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. <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	collection_links	
num_records	integer	Number of records.
records	array[records]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "comment": "My Snapshot copy comment",
      "consistency_group": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "my_consistency_group",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "consistency_type": "crash",
      "create_time": "2020-10-25 07:20:00 -0400",
      "is_partial": "",
      "luns": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "/vol/volume1/lun1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "missing_volumes": [
        {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          }
        }
      ]
    }
  ]
}
```

```

    }
    },
    "name": "volumel",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  }
],
"name": "string",
"namespaces": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "/vol/volumel/namespace1",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"restore_size": 4096,
"size": 4096,
"snaplock_expiry_time": "2019-02-04 14:00:00 -0500",
"snapmirror_label": "sm_label",
"snapshot_volumes": [
  {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "snapshot": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "this_snapshot",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "volume": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "volumel",
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
  }
]
}

```

```

    ],
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "svm_dr": {
      "label": {
        "name": "string"
      }
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  }
]
}

```

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	

collection_links

Name	Type	Description
next	href	
self	href	

self_link

Name	Type	Description
self	href	

consistency_group

The consistency group of the Snapshot copy.

Name	Type	Description
_links	self_link	
name	string	The name of the consistency group.
uuid	string	The unique identifier of the consistency group.

_links

Name	Type	Description
self	href	

luns

The list of LUNs in this Snapshot copy.

Name	Type	Description
_links	_links	

Name	Type	Description
name	string	The fully qualified path name of the LUN composed of the "/vol" prefix, the volume name, the (optional) qtree name, and base name of the LUN. Valid in POST and PATCH.
uuid	string	The unique identifier of the LUN.

volume_reference

Name	Type	Description
_links	_links	
name	string	The name of the volume. This field cannot be specified in a POST or PATCH method.
uuid	string	<p>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.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6 • x-nullable: true

namespaces

The list of NVMe namespaces in this Snapshot copy.

Name	Type	Description
_links	_links	
name	string	The fully qualified path name of the NVMe namespace composed from the volume name, qtree name and base name of the namespace.
uuid	string	The unique identifier of the NVMe namespace.

snapshot_reference

Name	Type	Description
_links	_links	
name	string	
uuid	string	

consistency_group_volume_snapshot

Name	Type	Description
_links	self_link	
snapshot	snapshot_reference	
volume	volume_reference	

svm_reference

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.

label

SVM DR label and attributes for the Snapshot copy.

Name	Type	Description
hold	boolean	Specifies if the SVM DR label's hold attributes must be set. The default is false.
name	string	The SVM DR label for the Snapshot copy.

svm_dr

SVM DR attributes.

Name	Type	Description
label	label	SVM DR label and attributes for the Snapshot copy.

records

Name	Type	Description
_links	self_link	
comment	string	Comment for the Snapshot copy.
consistency_group	consistency_group	The consistency group of the Snapshot copy.
consistency_type	string	Consistency type. This is for categorization purposes only. A Snapshot copy should not be set to 'application consistent' unless the host application is quiesced for the Snapshot copy. Valid in POST.
create_time	string	Time the snapshot copy was created
is_partial	boolean	Indicates whether the Snapshot copy taken is partial or not.
luns	luns	The list of LUNs in this Snapshot copy.
missing_volumes	array[volume_reference]	List of volumes which are not in the Snapshot copy.
name	string	Name of the Snapshot copy.
namespaces	namespaces	The list of NVMe namespaces in this Snapshot copy.
reclaimable_space	integer	Space reclaimed when the Snapshot copy is deleted, in bytes.
restore_size	integer	Size of the consistency group if this Snapshot copy is restored.

Name	Type	Description
size	integer	Size of the active file system at the time the Snapshot copy is captured. The actual size of the Snapshot copy also includes those blocks trapped by other Snapshot copies. On a Snapshot copy deletion, the "size" amount of blocks is the maximum number of blocks available. On a Snapshot copy restore, the "afs-used size" value will match the Snapshot copy "size" value.
snaplock_expiry_time	string	SnapLock expiry time for the Snapshot copy, if the Snapshot copy is taken on a SnapLock consistency group. A Snapshot copy is not allowed to be deleted or renamed until the SnapLock ComplianceClock time goes beyond its retention time. This option can be set during Snapshot copy POST and Snapshot copy PATCH on Snapshot copy locking enabled consistency groups.
snapmirror_label	string	Snapmirror Label for the Snapshot copy.
snapshot_volumes	array[consistency_group_volume_snapshot]	List of volume and snapshot identifiers for each volume in the Snapshot copy.
svm	svm_reference	SVM, applies only to SVM-scoped objects.
svm_dr	svm_dr	SVM DR attributes.

Name	Type	Description
uuid	string	The unique identifier of the Snapshot copy. The UUID is generated by ONTAP when the Snapshot copy is created. <ul style="list-style-type: none"> • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • readOnly: 1 • Introduced in: 9.6 • x-nullable: true
write_fence	boolean	Specifies whether a write fence will be taken when creating the Snapshot copy. The default is false if there is only one volume in the consistency group, otherwise the default is true.

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 consistency group Snapshot copy

POST /application/consistency-groups/{consistency_group.uuid}/snapshots

Introduced In: 9.10

Creates a Snapshot copy of an existing consistency group.

Required properties

- `consistency_group.uuid` - Existing consistency group UUID in which to create the Snapshot copy.

Parameters

Name	Type	In	Required	Description
<code>consistency_group.uuid</code>	string	path	True	The unique identifier of the consistency group to retrieve.
<code>action</code>	string	query	False	Initiates the Snapshot copy create operation. The start of the Snapshot copy operation can optionally use a timeout value specified by "action_timeout". The Snapshot copy is committed by calling PATCH on the Snapshot copy href link with action specified as "commit". <ul style="list-style-type: none">• Introduced in: 9.11• enum: ["start"]

Name	Type	In	Required	Description
action_timeout	integer	query	False	<p>Duration to complete the 2-phase Snapshot copy operation. This also specifies the maximum duration that the write-fence remains in effect on the volumes associated with this consistency group. Default is 7 seconds with a valid range of 5 to 120 seconds.</p> <ul style="list-style-type: none"> • Introduced in: 9.11
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

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

Request Body

Name	Type	Description
_links	self_link	
comment	string	Comment for the Snapshot copy.
consistency_group	consistency_group	The consistency group of the Snapshot copy.
consistency_type	string	Consistency type. This is for categorization purposes only. A Snapshot copy should not be set to 'application consistent' unless the host application is quiesced for the Snapshot copy. Valid in POST.
create_time	string	Time the snapshot copy was created
is_partial	boolean	Indicates whether the Snapshot copy taken is partial or not.
luns	luns	The list of LUNs in this Snapshot copy.
missing_volumes	array[volume_reference]	List of volumes which are not in the Snapshot copy.
name	string	Name of the Snapshot copy.
namespaces	namespaces	The list of NVMe namespaces in this Snapshot copy.
reclaimable_space	integer	Space reclaimed when the Snapshot copy is deleted, in bytes.
restore_size	integer	Size of the consistency group if this Snapshot copy is restored.

Name	Type	Description
size	integer	Size of the active file system at the time the Snapshot copy is captured. The actual size of the Snapshot copy also includes those blocks trapped by other Snapshot copies. On a Snapshot copy deletion, the "size" amount of blocks is the maximum number of blocks available. On a Snapshot copy restore, the "afs-used size" value will match the Snapshot copy "size" value.
snaplock_expiry_time	string	SnapLock expiry time for the Snapshot copy, if the Snapshot copy is taken on a SnapLock consistency group. A Snapshot copy is not allowed to be deleted or renamed until the SnapLock ComplianceClock time goes beyond its retention time. This option can be set during Snapshot copy POST and Snapshot copy PATCH on Snapshot copy locking enabled consistency groups.
snapmirror_label	string	Snapmirror Label for the Snapshot copy.
snapshot_volumes	array[consistency_group_volume_snapshot]	List of volume and snapshot identifiers for each volume in the Snapshot copy.
svm	svm_reference	SVM, applies only to SVM-scoped objects.
svm_dr	svm_dr	SVM DR attributes.
uuid	string	The unique identifier of the Snapshot copy. The UUID is generated by ONTAP when the Snapshot copy is created. <ul style="list-style-type: none"> • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • readOnly: 1 • Introduced in: 9.10 • x-nullable: true

Name	Type	Description
write_fence	boolean	Specifies whether a write fence will be taken when creating the Snapshot copy. The default is false if there is only one volume in the consistency group, otherwise the default is true.

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "comment": "My Snapshot copy comment",
  "consistency_group": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "my_consistency_group",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "consistency_type": "crash",
  "create_time": "2020-10-25 07:20:00 -0400",
  "is_partial": "",
  "luns": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "/vol/volume1/lun1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "missing_volumes": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "volume1",
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
  ],
  "name": "string",
  "namespaces": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  }
}
```

```

    }
  },
  "name": "/vol/volume1/namespace1",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"restore_size": 4096,
"size": 4096,
"snaplock_expiry_time": "2019-02-04 14:00:00 -0500",
"snapmirror_label": "sm_label",
"snapshot_volumes": [
  {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "snapshot": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "this_snapshot",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "volume": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "volume1",
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
  }
],
"svm": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "svm1",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"svm_dr": {

```

```
"label": {
  "name": "string"
},
"uuid": "1cd8a442-86d1-11e0-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
53411918	Snapshot copy operation not permitted.
53411921	Failed to create Snapshot copy for consistency group.

Also see the table of common errors in the [Response body](#) overview section of this documentation.

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	

self_link

Name	Type	Description
self	href	

consistency_group

The consistency group of the Snapshot copy.

Name	Type	Description
_links	self_link	
name	string	The name of the consistency group.
uuid	string	The unique identifier of the consistency group.

_links

Name	Type	Description
self	href	

luns

The list of LUNs in this Snapshot copy.

Name	Type	Description
_links	_links	
name	string	The fully qualified path name of the LUN composed of the "/vol" prefix, the volume name, the (optional) qtree name, and base name of the LUN. Valid in POST and PATCH.
uuid	string	The unique identifier of the LUN.

volume_reference

Name	Type	Description
_links	_links	
name	string	The name of the volume. This field cannot be specified in a POST or PATCH method.
uuid	string	<p>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.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6 • x-nullable: true

namespaces

The list of NVMe namespaces in this Snapshot copy.

Name	Type	Description
_links	_links	
name	string	The fully qualified path name of the NVMe namespace composed from the volume name, qtree name and base name of the namespace.
uuid	string	The unique identifier of the NVMe namespace.

snapshot_reference

Name	Type	Description
_links	_links	
name	string	
uuid	string	

consistency_group_volume_snapshot

Name	Type	Description
_links	self_link	
snapshot	snapshot_reference	

Name	Type	Description
volume	volume_reference	

svm_reference

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.

label

SVM DR label and attributes for the Snapshot copy.

Name	Type	Description
hold	boolean	Specifies if the SVM DR label's hold attributes must be set. The default is false.
name	string	The SVM DR label for the Snapshot copy.

svm_dr

SVM DR attributes.

Name	Type	Description
label	label	SVM DR label and attributes for the Snapshot copy.

consistency_group_snapshot

Name	Type	Description
_links	self_link	
comment	string	Comment for the Snapshot copy.

Name	Type	Description
consistency_group	consistency_group	The consistency group of the Snapshot copy.
consistency_type	string	Consistency type. This is for categorization purposes only. A Snapshot copy should not be set to 'application consistent' unless the host application is quiesced for the Snapshot copy. Valid in POST.
create_time	string	Time the snapshot copy was created
is_partial	boolean	Indicates whether the Snapshot copy taken is partial or not.
luns	luns	The list of LUNs in this Snapshot copy.
missing_volumes	array[volume_reference]	List of volumes which are not in the Snapshot copy.
name	string	Name of the Snapshot copy.
namespaces	namespaces	The list of NVMe namespaces in this Snapshot copy.
reclaimable_space	integer	Space reclaimed when the Snapshot copy is deleted, in bytes.
restore_size	integer	Size of the consistency group if this Snapshot copy is restored.
size	integer	Size of the active file system at the time the Snapshot copy is captured. The actual size of the Snapshot copy also includes those blocks trapped by other Snapshot copies. On a Snapshot copy deletion, the "size" amount of blocks is the maximum number of blocks available. On a Snapshot copy restore, the "afs-used size" value will match the Snapshot copy "size" value.

Name	Type	Description
snaplock_expiry_time	string	SnapLock expiry time for the Snapshot copy, if the Snapshot copy is taken on a SnapLock consistency group. A Snapshot copy is not allowed to be deleted or renamed until the SnapLock ComplianceClock time goes beyond its retention time. This option can be set during Snapshot copy POST and Snapshot copy PATCH on Snapshot copy locking enabled consistency groups.
snapmirror_label	string	Snapmirror Label for the Snapshot copy.
snapshot_volumes	array[consistency_group_volume_snapshot]	List of volume and snapshot identifiers for each volume in the Snapshot copy.
svm	svm_reference	SVM, applies only to SVM-scoped objects.
svm_dr	svm_dr	SVM DR attributes.
uuid	string	The unique identifier of the Snapshot copy. The UUID is generated by ONTAP when the Snapshot copy is created. <ul style="list-style-type: none"> • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • readOnly: 1 • Introduced in: 9.10 • x-nullable: true
write_fence	boolean	Specifies whether a write fence will be taken when creating the Snapshot copy. The default is false if there is only one volume in the consistency group, otherwise the default is true.

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 consistency group Snapshot copy

DELETE /application/consistency-groups/{consistency_group.uuid}/snapshots/{uuid}

Introduced In: 9.10

Deletes a Snapshot copy of a consistency group.

Examples

Parameters

Name	Type	In	Required	Description
consistency_group.uuid	string	path	True	The unique identifier of the Snapshot copy of the consistency group to delete.
uuid	string	path	True	Snapshot copy 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

Response

Status: 200, Ok

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

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 consistency group Snapshot copy

GET /application/consistency-groups/{consistency_group.uuid}/snapshots/{uuid}

Introduced In: 9.10

Retrieves details of a specific snapshot for a consistency group.

Expensive properties

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

- `is_partial`
- `missing_volumes.uuid`
- `missing_volumes.name`

Parameters

Name	Type	In	Required	Description
consistency_group.uuid	string	path	True	The unique identifier of the consistency group to retrieve.
uuid	string	path	True	The unique identifier of the Snapshot copy of the consistency group to retrieve.
snapshot_volumes.snapshot.name	string	query	False	Filter by snapshot_volumes.snapshot.name • Introduced in: 9.12
snapshot_volumes.snapshot.uuid	string	query	False	Filter by snapshot_volumes.snapshot.uuid • Introduced in: 9.12
snapshot_volumes.volume.uuid	string	query	False	Filter by snapshot_volumes.volume.uuid • Introduced in: 9.12
snapshot_volumes.volume.name	string	query	False	Filter by snapshot_volumes.volume.name • Introduced in: 9.12
comment	string	query	False	Filter by comment
consistency_type	string	query	False	Filter by consistency_type
missing_volumes.uuid	string	query	False	Filter by missing_volumes.uuid

Name	Type	In	Required	Description
missing_volumes.name	string	query	False	Filter by missing_volumes.name
create_time	string	query	False	Filter by create_time
consistency_group.name	string	query	False	Filter by consistency_group.name
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
is_partial	boolean	query	False	Filter by is_partial
name	string	query	False	Filter by name
snapmirror_label	string	query	False	Filter by snapmirror_label
write_fence	boolean	query	False	Filter by write_fence <ul style="list-style-type: none"> • Introduced in: 9.14
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	self_link	
comment	string	Comment for the Snapshot copy.
consistency_group	consistency_group	The consistency group of the Snapshot copy.
consistency_type	string	Consistency type. This is for categorization purposes only. A Snapshot copy should not be set to 'application consistent' unless the host application is quiesced for the Snapshot copy. Valid in POST.
create_time	string	Time the snapshot copy was created

Name	Type	Description
is_partial	boolean	Indicates whether the Snapshot copy taken is partial or not.
luns	luns	The list of LUNs in this Snapshot copy.
missing_volumes	array[volume_reference]	List of volumes which are not in the Snapshot copy.
name	string	Name of the Snapshot copy.
namespaces	namespaces	The list of NVMe namespaces in this Snapshot copy.
reclaimable_space	integer	Space reclaimed when the Snapshot copy is deleted, in bytes.
restore_size	integer	Size of the consistency group if this Snapshot copy is restored.
size	integer	Size of the active file system at the time the Snapshot copy is captured. The actual size of the Snapshot copy also includes those blocks trapped by other Snapshot copies. On a Snapshot copy deletion, the "size" amount of blocks is the maximum number of blocks available. On a Snapshot copy restore, the "afs-used size" value will match the Snapshot copy "size" value.
snaplock_expiry_time	string	SnapLock expiry time for the Snapshot copy, if the Snapshot copy is taken on a SnapLock consistency group. A Snapshot copy is not allowed to be deleted or renamed until the SnapLock ComplianceClock time goes beyond its retention time. This option can be set during Snapshot copy POST and Snapshot copy PATCH on Snapshot copy locking enabled consistency groups.
snapmirror_label	string	Snapmirror Label for the Snapshot copy.

Name	Type	Description
snapshot_volumes	array[consistency_group_volume_snapshot]	List of volume and snapshot identifiers for each volume in the Snapshot copy.
svm	svm_reference	SVM, applies only to SVM-scoped objects.
svm_dr	svm_dr	SVM DR attributes.
uuid	string	<p>The unique identifier of the Snapshot copy. The UUID is generated by ONTAP when the Snapshot copy is created.</p> <ul style="list-style-type: none"> • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • readOnly: 1 • Introduced in: 9.10 • x-nullable: true
write_fence	boolean	Specifies whether a write fence will be taken when creating the Snapshot copy. The default is false if there is only one volume in the consistency group, otherwise the default is true.

Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "comment": "My Snapshot copy comment",
  "consistency_group": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "my_consistency_group",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "consistency_type": "crash",
  "create_time": "2020-10-25 07:20:00 -0400",
  "is_partial": "",
  "luns": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "/vol/volume1/lun1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "missing_volumes": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "volume1",
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
  ],
  "name": "string",
  "namespaces": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  }
}
```

```

    }
  },
  "name": "/vol/volume1/namespace1",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"restore_size": 4096,
"size": 4096,
"snaplock_expiry_time": "2019-02-04 14:00:00 -0500",
"snapmirror_label": "sm_label",
"snapshot_volumes": [
  {
    "_links": {
      "self": {
        "href": "/api/resource/link"
      }
    },
    "snapshot": {
      "_links": {
        "self": {
          "href": "/api/resource/link"
        }
      },
      "name": "this_snapshot",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "volume": {
      "_links": {
        "self": {
          "href": "/api/resource/link"
        }
      },
      "name": "volume1",
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
  }
],
"svm": {
  "_links": {
    "self": {
      "href": "/api/resource/link"
    }
  },
  "name": "svm1",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"svm_dr": {

```



```
"label": {
  "name": "string"
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
}
```

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	

self_link

Name	Type	Description
self	href	

consistency_group

The consistency group of the Snapshot copy.

Name	Type	Description
_links	self_link	
name	string	The name of the consistency group.
uuid	string	The unique identifier of the consistency group.

_links

Name	Type	Description
self	href	

luns

The list of LUNs in this Snapshot copy.

Name	Type	Description
_links	_links	
name	string	The fully qualified path name of the LUN composed of the "/vol" prefix, the volume name, the (optional) qtree name, and base name of the LUN. Valid in POST and PATCH.
uuid	string	The unique identifier of the LUN.

volume_reference

Name	Type	Description
_links	_links	
name	string	The name of the volume. This field cannot be specified in a POST or PATCH method.
uuid	string	<p>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.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6 • x-nullable: true

namespaces

The list of NVMe namespaces in this Snapshot copy.

Name	Type	Description
_links	_links	
name	string	The fully qualified path name of the NVMe namespace composed from the volume name, qtree name and base name of the namespace.
uuid	string	The unique identifier of the NVMe namespace.

snapshot_reference

Name	Type	Description
_links	_links	
name	string	
uuid	string	

consistency_group_volume_snapshot

Name	Type	Description
_links	self_link	
snapshot	snapshot_reference	

Name	Type	Description
volume	volume_reference	

svm_reference

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.

label

SVM DR label and attributes for the Snapshot copy.

Name	Type	Description
hold	boolean	Specifies if the SVM DR label's hold attributes must be set. The default is false.
name	string	The SVM DR label for the Snapshot copy.

svm_dr

SVM DR attributes.

Name	Type	Description
label	label	SVM DR label and attributes for the Snapshot copy.

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.

Complete a consistency group Snapshot copy operation

PATCH /application/consistency-groups/{consistency_group.uuid}/snapshots/{uuid}

Introduced In: 9.11

Completes a Snapshot copy operation of a consistency group.

Example

Completing a Snapshot copy operation

The following example shows how to complete the Snapshot copy operation by committing an existing Snapshot copy to disk:

```
curl -X PATCH https://<mgmt-ip>/api/application/consistency-  
groups/a8d0626a-17a0-11eb-b141-005056acd498/snapshots/92c6c770-17a1-11eb-  
b141-005056acd498?action=commit
```

Response:

```
{  
}
```

Parameters

Name	Type	In	Required	Description
consistency_group.uuid	string	path	True	Unique identifier of the consistency group's Snapshot copy for deletion.

Name	Type	In	Required	Description
uuid	string	path	True	Snapshot copy UUID.
action	string	query	False	<p>Commits the Snapshot copy. The commit must be called within the timeout value specified during POST. If the commit is not called within the specified time, then the Snapshot copy create operation is aborted.</p> <ul style="list-style-type: none"> enum: ["commit"]

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

Response

Status: 202, Accepted

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
53411925	Failed to find a previously initiated two-phase Snapshot copy operation for consistency group.

Also see the table of common errors in the [Response body](#) overview section of this documentation.

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

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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