



Manage application consistency group snapshots

REST API reference

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Manage application consistency group snapshots

Application consistency-groups consistency_group.uuid snapshots endpoint overview

Overview

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

The functionality provided by these APIs is not integrated with the host application. Snapshots 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 Snapshots

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

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

Individual volume snapshots within a consistency group snapshots can be accessed and used with native volume snapshot operations.

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

Restoring to a Previous Snapshot

A snapshot restores to a parent consistency group from an existing parent consistency group's snapshot. A snapshot restores to any of the children's consistency groups within it from an existing children's consistency group. Granular snapshots 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 snapshots that were created chronologically after the time of the snapshot 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 snapshots:

– 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.

Retrieving the list of existing snapshots for a consistency group

Retrieves the list of consistency group granular snapshots 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 for a consistency group

Retrieves details for a specific snapshot 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 snapshots

Retrieves the list of consistency group granular snapshots 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": "cgl",
    "_links": {
      "self": {
        "href": "/api/application/consistency-groups/1c101d17-c124-11ee-
bbfe-005056acb65e"
      }
    },
    "uuid": "87d0e49c-c12e-11ee-bbfe-005056acb65e",
    "name": "cglss",
    "_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 of a consistency group

Creates an on-demand crash-consistent snapshot 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 of a consistency group

Creates an on-demand crash-consistent snapshot 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 creation for a consistency group

Starts a two-phase on-demand crash-consistent snapshot 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 creation for a consistency group

Commits a previously started two-phase on-demand crash-consistent snapshot 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 from a consistency group

Deletes an existing snapshot 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 snapshots

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

Introduced In: 9.10

Retrieves snapshots 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.
is_partial	boolean	query	False	Filter by is_partial
comment	string	query	False	Filter by comment
missing_volumes.uuid	string	query	False	Filter by missing_volumes.uuid
missing_volumes.name	string	query	False	Filter by missing_volumes.name

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
snapshot_volumes.snapshot.uuid	string	query	False	Filter by snapshot_volumes.snapshot.uuid • Introduced in: 9.12
snapshot_volumes.snapshot.name	string	query	False	Filter by snapshot_volumes.snapshot.name • Introduced in: 9.12
reclaimable_space	integer	query	False	Filter by reclaimable_space • Introduced in: 9.16
namespaces.name	string	query	False	Filter by namespaces.name • Introduced in: 9.16
namespaces.uuid	string	query	False	Filter by namespaces.uuid • Introduced in: 9.16

Name	Type	In	Required	Description
write_fence	boolean	query	False	Filter by write_fence • Introduced in: 9.14
create_time	string	query	False	Filter by create_time
restore_size	integer	query	False	Filter by restore_size • Introduced in: 9.16
uuid	string	query	False	Filter by uuid
missing_luns.name	string	query	False	Filter by missing_luns.name • Introduced in: 9.16
missing_luns.uuid	string	query	False	Filter by missing_luns.uuid • Introduced in: 9.16
svm.name	string	query	False	Filter by svm.name
svm.uuid	string	query	False	Filter by svm.uuid
luns.name	string	query	False	Filter by luns.name • Introduced in: 9.16
luns.uuid	string	query	False	Filter by luns.uuid • Introduced in: 9.16
missing_namespace.s.name	string	query	False	Filter by missing_namespace.s.name • Introduced in: 9.16

Name	Type	In	Required	Description
missing_namespace.s.uuid	string	query	False	Filter by missing_namespace.s.uuid Introduced in: 9.16
name	string	query	False	Filter by name
consistency_group.name	string	query	False	Filter by consistency_group.name
consistency_type	string	query	False	Filter by consistency_type
snapmirror_label	string	query	False	Filter by snapmirror_label
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. Default value: 1

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

Response

Status: 200, Ok

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

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "comment": "My snapshot 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_luns": [
        {
          "_links": {
```

```

        "self": {
            "href": "/api/resourcelink"
        }
    },
    "name": "/vol/volume1/lun1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
}
],
"missing_namespaces": [
    {
        "_links": {
            "self": {
                "href": "/api/resourcelink"
            }
        },
        "name": "/vol/volume1/namespace1",
        "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"
    }
],
"reclaimable_space": 0,
"restore_size": 4096,
"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"
    },
    "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.

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

A reference to a LUN.

Name	Type	Description
_links	_links	

Name	Type	Description
name	string	The name of a LUN. A LUN is located within a volume. Optionally, it can be located within a qtree in a volume. LUN names are paths of the form "/vol/<volume>[/<qtree>]/<namespace>" where the qtree name is optional.
uuid	string	The unique identifier of the LUN.

lun_reference

A reference to a LUN.

Name	Type	Description
_links	_links	
name	string	The name of a LUN. A LUN is located within a volume. Optionally, it can be located within a qtree in a volume. LUN names are paths of the form "/vol/<volume>[/<qtree>]/<namespace>" where the qtree name is optional.
uuid	string	The unique identifier of the LUN.

missing_namespaces

A reference to a namespace.

Name	Type	Description
_links	_links	

Name	Type	Description
name	string	The name of an NVMe namespace. An NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume. NVMe namespace names are paths of the form <code>"/vol/<volume>[/<qtree>]/<namespace>"</code> where the qtree name is optional.
uuid	string	The unique identifier of the NVMe namespace.

volume_reference

Name	Type	Description
_links	_links	
name	string	The name of the volume. This field cannot be specified in a PATCH method.
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6 • x-nullable: true

namespaces

A reference to a namespace.

Name	Type	Description
_links	_links	

Name	Type	Description
name	string	The name of an NVMe namespace. An NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume. NVMe namespace names are paths of the form <code>"/vol/<volume>[/<qtree>]/<namespace>"</code> where the qtree name is optional.
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.

records

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

Name	Type	Description
snapshot_volumes	array[consistency_group_volume_snapshot]	List of volume and snapshot identifiers for each volume in the snapshot.
svm	svm_reference	SVM, applies only to SVM-scoped objects.
uuid	string	The unique identifier of the snapshot. The UUID is generated by ONTAP when the snapshot is created. • 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. 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

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

Introduced In: 9.10

Creates a snapshot of an existing consistency group.

Required properties

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

Parameters

Name	Type	In	Required	Description
consistency_group.uuid	string	path	True	The unique identifier of the consistency group to retrieve.
action	string	query	False	Initiates the snapshot create operation. The start of the snapshot operation can optionally use a timeout value specified by "action_timeout". The snapshot is committed by calling PATCH on the snapshot href link with action specified as "commit". • Introduced in: 9.11 • enum: ["start"]

Name	Type	In	Required	Description
action_timeout	integer	query	False	Duration to complete the 2-phase snapshot 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. • Introduced in: 9.11
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

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
comment	string	Comment for the snapshot.
consistency_group	consistency_group	The consistency group of the snapshot.
consistency_type	string	Consistency type. This is for categorization purposes only. A snapshot should not be set to 'application consistent' unless the host application is quiesced for the snapshot. Valid in POST.
create_time	string	Time the snapshot copy was created
is_partial	boolean	Indicates whether the snapshot taken is partial or not.
luns	array[luns]	The list of LUNs in this snapshot.
missing_luns	array[lun_reference]	List of LUNs that are not in the snapshot.
missing_namespaces	array[missing_namespaces]	List of NVMe namespaces that are not in the snapshot.
missing_volumes	array[volume_reference]	List of volumes which are not in the snapshot.
name	string	Name of the snapshot.
namespaces	array[namespaces]	The list of NVMe namespaces in this snapshot.

Name	Type	Description
reclaimable_space	integer	Space reclaimed when the snapshot is deleted, in bytes.
restore_size	integer	Size of the consistency group if this snapshot is restored.
snapmirror_label	string	Snapmirror Label for the snapshot.
snapshot_volumes	array[consistency_group_volume_snapshot]	List of volume and snapshot identifiers for each volume in the snapshot.
svm	svm_reference	SVM, applies only to SVM-scoped objects.
uuid	string	The unique identifier of the snapshot. The UUID is generated by ONTAP when the snapshot is created. • 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. The default is false if there is only one volume in the consistency group, otherwise the default is true.

Example request

```
{
  "comment": "My snapshot comment",
  "consistency_group": {
    "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": [
    {
      "name": "/vol/volume1/lun1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  ],
  "missing_luns": [
    {
      "name": "/vol/volume1/lun1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  ],
  "missing_namespaces": [
    {
      "name": "/vol/volume1/namespace1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  ],
  "missing_volumes": [
    {
      "name": "volume1",
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
  ],
  "name": "string",
  "namespaces": [
    {
      "name": "/vol/volume1/namespace1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  ],
  "reclaimable_space": 0,
  "restore_size": 4096,
  "snapmirror_label": "sm_label",
  "snapshot_volumes": [
```

```
{
  "snapshot": {
    "name": "this_snapshot",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "volume": {
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  }
},
"svm": {
  "name": "svm1",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
}
```

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

```
{
  "job": {
    "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 operation not permitted.
53411921	Failed to create snapshot for consistency group.

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

Definitions

See Definitions

href

Name	Type	Description
href	string	

self_link

consistency_group

The consistency group of the snapshot.

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

_links

luns

A reference to a LUN.

Name	Type	Description
name	string	The name of a LUN. A LUN is located within a volume. Optionally, it can be located within a qtree in a volume. LUN names are paths of the form "/vol/<volume>[/<qtree>]/<namespace>" where the qtree name is optional.
uuid	string	The unique identifier of the LUN.

lun_reference

A reference to a LUN.

Name	Type	Description
name	string	The name of a LUN. A LUN is located within a volume. Optionally, it can be located within a qtree in a volume. LUN names are paths of the form <code>"/vol/<volume>[/<qtree>]/<namespace>"</code> where the qtree name is optional.
uuid	string	The unique identifier of the LUN.

missing_namespaces

A reference to a namespace.

Name	Type	Description
name	string	The name of an NVMe namespace. An NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume. NVMe namespace names are paths of the form <code>"/vol/<volume>[/<qtree>]/<namespace>"</code> where the qtree name is optional.
uuid	string	The unique identifier of the NVMe namespace.

volume_reference

Name	Type	Description
name	string	The name of the volume. This field cannot be specified in a PATCH method.

Name	Type	Description
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6 • x-nullable: true

namespaces

A reference to a namespace.

Name	Type	Description
name	string	The name of an NVMe namespace. An NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume. NVMe namespace names are paths of the form <code>"/vol/<volume>[/<qtree>]/<namespace>"</code> where the qtree name is optional.
uuid	string	The unique identifier of the NVMe namespace.

snapshot_reference

Name	Type	Description
name	string	
uuid	string	

consistency_group_volume_snapshot

Name	Type	Description
snapshot	snapshot_reference	
volume	volume_reference	

svm_reference

SVM, applies only to SVM-scoped objects.

Name	Type	Description
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.

consistency_group_snapshot

Name	Type	Description
comment	string	Comment for the snapshot.
consistency_group	consistency_group	The consistency group of the snapshot.
consistency_type	string	Consistency type. This is for categorization purposes only. A snapshot should not be set to 'application consistent' unless the host application is quiesced for the snapshot. Valid in POST.
create_time	string	Time the snapshot copy was created
is_partial	boolean	Indicates whether the snapshot taken is partial or not.
luns	array[luns]	The list of LUNs in this snapshot.
missing_luns	array[lun_reference]	List of LUNs that are not in the snapshot.
missing_namespaces	array[missing_namespaces]	List of NVMe namespaces that are not in the snapshot.
missing_volumes	array[volume_reference]	List of volumes which are not in the snapshot.
name	string	Name of the snapshot.

Name	Type	Description
namespaces	array[namespaces]	The list of NVMe namespaces in this snapshot.
reclaimable_space	integer	Space reclaimed when the snapshot is deleted, in bytes.
restore_size	integer	Size of the consistency group if this snapshot is restored.
snapmirror_label	string	Snapmirror Label for the snapshot.
snapshot_volumes	array[consistency_group_volume_snapshot]	List of volume and snapshot identifiers for each volume in the snapshot.
svm	svm_reference	SVM, applies only to SVM-scoped objects.
uuid	string	The unique identifier of the snapshot. The UUID is generated by ONTAP when the snapshot is created. • 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. The default is false if there is only one volume in the consistency group, otherwise the default is true.

job_link

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

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

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

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

Introduced In: 9.10

Deletes a snapshot of a consistency group.

Examples

Parameters

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

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

Response

Status: 200, Ok

Response

Status: 202, Accepted

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
53412007	Failed to delete the snapshot because it has not expired or is locked.
53412008	Failed to delete the consistency group snapshot because it is currently used as a reference for a replication relationship.

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.

Retrieve a consistency group snapshot

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 of the consistency group to retrieve.
is_partial	boolean	query	False	Filter by is_partial
comment	string	query	False	Filter by comment
missing_volumes.uuid	string	query	False	Filter by missing_volumes.uuid
missing_volumes.name	string	query	False	Filter by missing_volumes.name
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
snapshot_volumes.snapshot.uuid	string	query	False	Filter by snapshot_volumes.snapshot.uuid • Introduced in: 9.12
snapshot_volumes.snapshot.name	string	query	False	Filter by snapshot_volumes.snapshot.name • Introduced in: 9.12

Name	Type	In	Required	Description
reclaimable_space	integer	query	False	Filter by reclaimable_space • Introduced in: 9.16
namespaces.name	string	query	False	Filter by namespaces.name • Introduced in: 9.16
namespaces.uuid	string	query	False	Filter by namespaces.uuid • Introduced in: 9.16
write_fence	boolean	query	False	Filter by write_fence • Introduced in: 9.14
create_time	string	query	False	Filter by create_time
restore_size	integer	query	False	Filter by restore_size • Introduced in: 9.16
missing_luns.name	string	query	False	Filter by missing_luns.name • Introduced in: 9.16
missing_luns.uuid	string	query	False	Filter by missing_luns.uuid • Introduced in: 9.16
svm.name	string	query	False	Filter by svm.name
svm.uuid	string	query	False	Filter by svm.uuid

Name	Type	In	Required	Description
luns.name	string	query	False	Filter by luns.name • Introduced in: 9.16
luns.uuid	string	query	False	Filter by luns.uuid • Introduced in: 9.16
missing_namespace.name	string	query	False	Filter by missing_namespace.name • Introduced in: 9.16
missing_namespace.uuid	string	query	False	Filter by missing_namespace.uuid • Introduced in: 9.16
name	string	query	False	Filter by name
consistency_group.name	string	query	False	Filter by consistency_group.name
consistency_type	string	query	False	Filter by consistency_type
snapmirror_label	string	query	False	Filter by snapmirror_label
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	self_link	
comment	string	Comment for the snapshot.
consistency_group	consistency_group	The consistency group of the snapshot.

Name	Type	Description
consistency_type	string	Consistency type. This is for categorization purposes only. A snapshot should not be set to 'application consistent' unless the host application is quiesced for the snapshot. Valid in POST.
create_time	string	Time the snapshot copy was created
is_partial	boolean	Indicates whether the snapshot taken is partial or not.
luns	array[luns]	The list of LUNs in this snapshot.
missing_luns	array[lun_reference]	List of LUNs that are not in the snapshot.
missing_namespaces	array[missing_namespaces]	List of NVMe namespaces that are not in the snapshot.
missing_volumes	array[volume_reference]	List of volumes which are not in the snapshot.
name	string	Name of the snapshot.
namespaces	array[namespaces]	The list of NVMe namespaces in this snapshot.
reclaimable_space	integer	Space reclaimed when the snapshot is deleted, in bytes.
restore_size	integer	Size of the consistency group if this snapshot is restored.
snapmirror_label	string	Snapmirror Label for the snapshot.
snapshot_volumes	array[consistency_group_volume_snapshot]	List of volume and snapshot identifiers for each volume in the snapshot.
svm	svm_reference	SVM, applies only to SVM-scoped objects.

Name	Type	Description
uuid	string	The unique identifier of the snapshot. The UUID is generated by ONTAP when the snapshot is created. • 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. 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 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_luns": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "/vol/volume1/lun1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  ],
  "missing_namespaces": [
    {
      "_links": {
```

```

        "self": {
            "href": "/api/resourcelink"
        },
    ],
    "name": "/vol/volume1/namespace1",
    "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"
    }
],
"reclaimable_space": 0,
"restore_size": 4096,
"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"
},
"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.

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

A reference to a LUN.

Name	Type	Description
_links	_links	
name	string	The name of a LUN. A LUN is located within a volume. Optionally, it can be located within a qtree in a volume. LUN names are paths of the form "/vol/<volume>[/<qtree>]/<names pace>" where the qtree name is optional.
uuid	string	The unique identifier of the LUN.

lun_reference

A reference to a LUN.

Name	Type	Description
_links	_links	
name	string	The name of a LUN. A LUN is located within a volume. Optionally, it can be located within a qtree in a volume. LUN names are paths of the form <code>"/vol/<volume>[/<qtree>]/<namespace>"</code> where the qtree name is optional.
uuid	string	The unique identifier of the LUN.

missing_namespaces

A reference to a namespace.

Name	Type	Description
_links	_links	
name	string	The name of an NVMe namespace. An NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume. NVMe namespace names are paths of the form <code>"/vol/<volume>[/<qtree>]/<namespace>"</code> where the qtree name is optional.
uuid	string	The unique identifier of the NVMe namespace.

volume_reference

Name	Type	Description
_links	_links	

Name	Type	Description
name	string	The name of the volume. This field cannot be specified in a PATCH method.
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6 • x-nullable: true

namespaces

A reference to a namespace.

Name	Type	Description
_links	_links	
name	string	The name of an NVMe namespace. An NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume. NVMe namespace names are paths of the form <code>"/vol/<volume>[/<qtree>]/<namespace>"</code> where the qtree name is optional.
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.

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 operation

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

Introduced In: 9.11

Completes a snapshot operation of a consistency group. This can also be used to modify the SnapLock expiry time of a locked snapshot in SnapLock for SnapVault destination.

Example

Completing a snapshot operation

The following example shows how to complete the snapshot operation by committing an existing snapshot 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:

```
{  
}
```

Modifying the SnapLock expiry time of a snapshot in SnapLock for SnapVault

The following example shows how to modify the SnapLock expiry time of a locked snapshot in SnapLock for SnapVault destination:

```
curl -X PATCH 'https://<mgmt-ip>/api/application/consistency-  
groups/a8d0626a-17a0-11eb-b141-005056acd498/snapshots/92c6c770-17a1-11eb-  
b141-005056acd498' -d '{"snaplock.expiry_time" : "2/28/2024 10:11:10  
+05:30"}' -H "accept: application/hal+json"
```

Response:

```
{  
  "job": {  
    "uuid": "8c9cabf3-0a88-11ec-a449-005056bbcf9f",  
    "_links": {  
      "self": {  
        "href": "/api/cluster/jobs/8c9cabf3-0a88-11ec-a449-005056bbcf9f"  
      }  
    }  
  }  
}
```

Parameters

Name	Type	In	Required	Description
consistency_group.uuid	string	path	True	Unique identifier of the consistency group's snapshot for deletion.
uuid	string	path	True	Snapshot UUID.
action	string	query	False	Commits the snapshot. 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 create operation is aborted. enum: ["commit"]

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

Response

Status: 200, Ok

Response

Status: 202, Accepted

Error

Status: Default

Error Code	Description
53411925	Failed to find a previously initiated two-phase snapshot operation for consistency group.
53412015	SnapLock expiry time cannot be before the current expiry time.
53412016	Snapshot is not retained by SnapLock.
53412017	The operation is not supported on this platform.

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

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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