



Manage FlexCache volumes

ONTAP 9.13.1 REST API reference

NetApp
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Manage FlexCache volumes

Storage flexcache flexcaches endpoint overview

Overview

FlexCache is a persistent cache of an origin volume. An origin volume can only be a FlexVol while a FlexCache is always a FlexGroup.

The following relationship configurations are supported:

– Intra-Vserver where FlexCache and the corresponding origin volume reside in the same Vserver.

– Cross-Vserver but intra-cluster where FlexCache and the origin volume reside in the same cluster but belong to different Vservers.

– Cross-cluster where FlexCache and the origin volume reside in different clusters.

FlexCache supports fan-out and more than one FlexCache can be created from one origin volume. This API retrieves and manages FlexCache configurations in the cache cluster.

FlexCache APIs

The following APIs can be used to perform operations related with FlexCache:

– GET `/api/storage/flexcache/flexcaches`

– GET `/api/storage/flexcache/flexcaches/{uuid}`

– POST `/api/storage/flexcache/flexcaches`

– DELETE `/api/storage/flexcache/flexcaches/{uuid}`

Examples

Creating a FlexCache

The POST request is used to create a FlexCache.

```

# The API:
/api/storage/flexcache/flexcaches

# The call:
curl -X POST "https://<mgmt-ip>/api/storage/flexcache/flexcaches" -H
"accept: application/json" -H "Content-Type: application/json" -d "{
\"aggregates\": [ { \"name\": \"aggr_1\" } ], \"name\": \"fc_333\",
\"origins\": [ { \"svm\": { \"name\": \"vs_3\" }, \"volume\": {
\"name\": \"vol_o1\" } } ], \"svm\": { \"name\": \"vs_1\" } }"

# The response:
{
"job": {
  "uuid": "e751dd5d-0f3c-11e9-8b2b-0050568e0b79",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/e751dd5d-0f3c-11e9-8b2b-0050568e0b79"
    }
  }
}
}
}

```

```

curl -X POST "https://<mgmt-ip>/api/storage/flexcache/flexcaches" -H "accept: application/json" -H "Content-Type: application/json" -d "{ \"aggregates\": [ { \"name\": \"aggr_1\" } ], \"name\": \"fc_333\", \"origins\": [ { \"svm\": { \"name\": \"vs_3\" }, \"volume\": { \"name\": \"vol_o1\" } } ], \"svm\": { \"name\": \"vs_1\" }, \"path\": \"/fc_333\", \"prepopulate\": { \"dir_paths\": [ \"/dir1\" ] } }" </mgmt-ip>

```

The response:

```

{ "job": { "uuid": "e751dd5d-0f3c-11e9-8b2b-0050568e0b79", "_links": { "self": { "href":
"/api/cluster/jobs/e751dd5d-0f3c-11e9-8b2b-0050568e0b79" } } } }

```

```

curl -X POST "https://<mgmt-ip>/api/storage/flexcache/flexcaches" -H
"accept: application/json" -H "Content-Type: application/json" -d "{
  \"aggregates\": [ { \"name\": \"aggr_1\" } ], \"name\":
  \"fc_333\", \"origins\": [ { \"svm\": { \"name\": \"vs_3\" },
  \"volume\": { \"name\": \"vol_o1\" } } ], \"svm\": { \"name\": \"vs_1\" },
  \"path\": \"/\
  fc_333\", \"prepopulate\": { \"dir_paths\": [
  \"/dir1\" ], \"exclude_dir_paths\": [ \"/dir1/dir11\" ] } }"

# The response:
{
  \"job\": {
    \"uuid\": \"5afe9ea4-1dcf-11eb-b006-005056ac6a93\",
    \"_links\": {
      \"self\": {
        \"href\": \"/api/cluster/jobs/5afe9ea4-1dcf-11eb-b006-005056ac6a93\"
      }
    }
  }
}

```

```

curl -X POST "https://<mgmt-ip>/api/storage/flexcache/flexcaches" -H "accept: application/json" -H "Content-
Type: application/json" -d "{ \"aggregates\": [ { \"name\": \"aggr_1\" } ], \"name\": \"fc_333\", \"origins\": [ {
  \"svm\": { \"name\": \"vs_3\" }, \"volume\": { \"name\": \"vol_o1\" } } ], \"svm\": { \"name\": \"vs_1\" }, \"dr_cache\":
true, \"path\": \"/\
fc_333\", \"prepopulate\": { \"dir_paths\": [ \"/dir1\" ] } }" </mgmt-ip>

```

The response:

```

{ \"job\": { \"uuid\": \"e751dd5d-0f3c-11e9-8b2b-0050568e0b79\", \"_links\": { \"self\": { \"href\":
\"/api/cluster/jobs/e751dd5d-0f3c-11e9-8b2b-0050568e0b79\" } } } }

```

Retrieving FlexCache attributes

The GET request is used to retrieve FlexCache attributes. The object includes a large set of fields which can be expensive to retrieve. Most notably, the fields `size`, `guarantee.type`, `aggregates`, `path`, `origins.ip_address`, `origins.size`, and `origins.state` are expensive to retrieve. The recommended method to use this API is to filter and retrieve only the required fields.

The API:

`/api/storage/flexcache/flexcaches`

The call:

```
curl -X GET "https://<mgmt-ip>/api/storage/flexcache/flexcaches?" -H "accept: application/json"</mgmt-ip>
```

The response:

```
{ "records": [ { "uuid": "04d5e07b-0ebe-11e9-8180-0050568e0b79", "name": "fc_322", "_links": { "self": { "href": "/api/storage/flexcache/flexcaches/04d5e07b-0ebe-11e9-8180-0050568e0b79" } } }, { "uuid": "47902654-0ea4-11e9-8180-0050568e0b79", "name": "fc_321", "_links": { "self": { "href": "/api/storage/flexcache/flexcaches/47902654-0ea4-11e9-8180-0050568e0b79" } } }, { "uuid": "77e911ff-0ebe-11e9-8180-0050568e0b79", "name": "fc_323", "_links": { "self": { "href": "/api/storage/flexcache/flexcaches/77e911ff-0ebe-11e9-8180-0050568e0b79" } } }, { "uuid": "ddb42bbc-0e95-11e9-8180-0050568e0b79", "name": "fc_32", "_links": { "self": { "href": "/api/storage/flexcache/flexcaches/ddb42bbc-0e95-11e9-8180-0050568e0b79" } } }, { "uuid": "ec774932-0f3c-11e9-8b2b-0050568e0b79", "name": "fc_333", "_links": { "self": { "href": "/api/storage/flexcache/flexcaches/ec774932-0f3c-11e9-8b2b-0050568e0b79" } } } ], "num_records": 5, "_links": { "self": { "href": "/api/storage/flexcache/flexcaches?" } } }
```

```
### Retrieving the attributes of a FlexCache
```

The GET request is used to retrieve the attributes of a FlexCache. The object includes a large set of fields which can be expensive to retrieve. Most notably, the fields `size`, `guarantee.type`, `aggregates`, `path`, `origins.ip_address`, `origins.size`, and `origins.state` are expensive to retrieve. The recommended method to use this API is to filter and retrieve only the required fields.

The API:

```
/api/storage/flexcache/flexcaches/{uuid}
```

The call:

```
curl -X GET "https://<mgmt-ip>/api/storage/flexcache/flexcaches/ec774932-0f3c-11e9-8b2b-0050568e0b79" -H "accept: application/json"</mgmt-ip>
```

The response:

```
{ "uuid": "ec774932-0f3c-11e9-8b2b-0050568e0b79", "name": "fc_333", "svm": { "name": "vs_1", "uuid": "e708fbe2-0e92-11e9-8180-0050568e0b79" }, "size": 4294967296, "guarantee": { "type": "volume" }, "dr_cache": "true", "aggregates": [ { "name": "aggr_1", "uuid": "26f34b76-88f8-4a47-b5e0-d8e901fb1114" } ], "origins": [ { "ip_address": "10.140.103.175", "size": 20971520, "create_time": "2019-01-03T15:19:55+05:30", "state": "online", "volume": { "name": "vol_o1", "uuid": "2bc957dd-2617-4afb-8d2f-66ac6070d313" }, "svm": { "name": "vs_3", "uuid": "8aa2cd28-0e92-11e9-b391-0050568e4115" }, "cluster": { "name": "node2", "uuid": "50733f81-0e90-11e9-b391-0050568e4115" } } ], "_links": { "self": { "href": "/api/storage/flexcache/flexcaches/ec774932-0f3c-11e9-8b2b-0050568e0b79" } } }
```

```
### Deleting a FlexCache
The DELETE request is used to delete a FlexCache.
```

The API:

/api/storage/flexcache/flexcaches

The call:

```
curl -X DELETE "https://<mgmt-ip>/api/storage/flexcache/flexcaches/ec774932-0f3c-11e9-8b2b-0050568e0b79" -H "accept: application/json"</mgmt-ip>
```

The response:

```
{ "job": { "uuid": "e17994f2-0f3e-11e9-8b2b-0050568e0b79", "_links": { "self": { "href":
"/api/cluster/jobs/e17994f2-0f3e-11e9-8b2b-0050568e0b79" } } } }
```

```
### Modifying a FlexCache volume
Use the PATCH request to update a FlexCache volume.
```

the API:

/api/storage/flexcache/flexcaches/{uuid}

The call:

```
curl -X PATCH "https://<mgmt-ip>/api/storage/flexcache/flexcaches/ec774932-0f3c-11e9-8b2b-0050568e0b79"
-H "accept: application/json" -H "Content-Type: application/json" -d "{ \"prepopulate\": { \"dir_paths\": [ \"/dir1\" ]
} }"</mgmt-ip>
```

The response:

```
{ "job": { "uuid": "e751dd5d-0f3c-11e9-8b2b-0050568e0b79", "_links": { "self": { "href":
"/api/cluster/jobs/e751dd5d-0f3c-11e9-8b2b-0050568e0b79" } } } }
```

```
# The call
curl -X PATCH "https://<mgmt-
ip>/api/storage/flexcache/flexcaches/ec774932-0f3c-11e9-8b2b-0050568e0b79"
-H "accept: application/json" -H "Content-Type: application/json" -d "{
 \"prepopulate\": { \"dir_paths\": [ \"/dir1\" ], \"exclude_dir_paths\": [
 \"/dir1/dir11\" ] } }"

# The response:
{
  "job": {
    "uuid": "b574c48c-1da7-11eb-b006-005056ac6a93",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/b574c48c-1da7-11eb-b006-005056ac6a93"
      }
    }
  }
}
```

The call

```
curl -X PATCH "https://<mgmt-ip>/api/storage/flexcache/flexcaches/28f9734a-2fc2-11ed-a5d5-005056bb2b7"
-H "accept: application/json" -H "Content-Type: application/json" -d "{ \"writeback\" : { \"enabled\" : true }
}"</mgmt-ip>
```

The response:

```
{ "job": { "uuid": "c521a541-3046-11ed-a5d5-005056bbb2b7", "_links": { "self": { "href":
"/api/cluster/jobs/c521a541-3046-11ed-a5d5-005056bbb2b7" } } } }
```



```
# The call
curl -X PATCH "https://<mgmt-
ip>/api/storage/flexcache/flexcaches/28f9734a-2fc2-11ed-a5d5-005056bb2b7"
-H "accept: application/json" -H "Content-Type: application/json" -d '{
\ "writeback\ " : { \ "enabled\ " : false } }'

# The response:
{
"job": {
  "uuid": "17e193f3-304b-11ed-a5d5-005056bbb2b7",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/17e193f3-304b-11ed-a5d5-005056bbb2b7"
    }
  }
}
}
```

The call

```
curl -X PATCH "https://<mgmt-ip>/api/storage/flexcache/flexcaches/885dfd0f-ac37-11ed-a2ca-005056bb5573"
-H "accept: application/json" -d '{"relative_size" : {"enabled":true, "percentage" : 50}}'</mgmt-ip>
```

The response:

```
{ "job": { "uuid": "34d9c90d-ac38-11ed-a2ca-005056bb5573", "_links": { "self": { "href":
"/api/cluster/jobs/34d9c90d-ac38-11ed-a2ca-005056bb5573" } } } }
```

```
# The call
curl -X PATCH "https://<mgmt-
ip>/api/storage/flexcache/flexcaches/885dfd0f-ac37-11ed-a2ca-005056bb5573"
-H "accept: application/json" -d '{"relative_size" : {"enabled":false}}'

# The response:
{
"job": {
  "uuid": "14bfcc28-ac82-11ed-83bd-005056bb5573",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/14bfcc28-ac82-11ed-83bd-005056bb5573"
    }
  }
}
}
```

Retrieve a FlexCache volume in the cluster

GET `/storage/flexcache/flexcaches`

Introduced In: 9.6

Retrieves FlexCache in the cluster.

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 [Requesting specific fields](#) to learn more.

- `origins.ip_address` - IP address of origin.
- `origins.size` - Physical size of origin.
- `origins.state` - State of origin.
- `size` - Physical size of FlexCache.
- `guarantee.type` - Space guarantee style of FlexCache.
- `aggregates.name` or `aggregates.uuid` - Name or UUID of aggregate of FlexCache volume.
- `path` - Fully-qualified path of the owning SVM's namespace where the FlexCache is mounted.

Related ONTAP commands

- `volume flexcache show`

Learn more

- [DOC /storage/flexcache/flexcaches](#)

Parameters

| Name | Type | In | Required | Description |
|----------------------------------|---------|-------|----------|--|
| <code>origins.state</code> | string | query | False | Filter by <code>origins.state</code> |
| <code>origins.create_time</code> | string | query | False | Filter by <code>origins.create_time</code> |
| <code>origins.size</code> | integer | query | False | Filter by <code>origins.size</code> |
| <code>origins.volume.uuid</code> | string | query | False | Filter by <code>origins.volume.uuid</code> |
| <code>origins.volume.name</code> | string | query | False | Filter by <code>origins.volume.name</code> |

| Name | Type | In | Required | Description |
|--------------------------|---------|-------|----------|---|
| origins.ip_address | string | query | False | Filter by origins.ip_address |
| origins.cluster.name | string | query | False | Filter by origins.cluster.name |
| origins.cluster.uuid | string | query | False | Filter by origins.cluster.uuid |
| origins.svm.uuid | string | query | False | Filter by origins.svm.uuid |
| origins.svm.name | string | query | False | Filter by origins.svm.name |
| path | string | query | False | Filter by path |
| uuid | string | query | False | Filter by uuid |
| guarantee.type | string | query | False | Filter by guarantee.type • Introduced in: 9.7 |
| name | string | query | False | Filter by name • maxLength: 203 • minLength: 1 |
| relative_size.percentage | integer | query | False | Filter by relative_size.percentage • Introduced in: 9.13 |
| relative_size.enabled | boolean | query | False | Filter by relative_size.enabled • Introduced in: 9.13 |

| Name | Type | In | Required | Description |
|-----------------------------|---------|-------|----------|---|
| writeback.enabled | boolean | query | False | Filter by writeback.enabled • Introduced in: 9.12 |
| aggregates.name | string | query | False | Filter by aggregates.name |
| aggregates.uuid | string | query | False | Filter by aggregates.uuid |
| constituents_per_aggregate | integer | query | False | Filter by constituents_per_aggregate |
| dr_cache | boolean | query | False | Filter by dr_cache • Introduced in: 9.9 |
| svm.uuid | string | query | False | Filter by svm.uuid |
| svm.name | string | query | False | Filter by svm.name |
| use_tiered_aggregate | boolean | query | False | Filter by use_tiered_aggregate • Introduced in: 9.8 |
| size | integer | query | False | Filter by size |
| global_file_locking_enabled | boolean | query | False | Filter by global_file_locking_enabled • Introduced in: 9.9 |

| 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. <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0 |
| fields | array[string] | query | False | Specify the fields to return. |
| max_records | integer | query | False | Limit the number of records returned. |
| order_by | array[string] | query | False | Order results by specified fields and optional [asc |
| desc] direction. Default direction is 'asc' for ascending. | return_records | boolean | query | False |

Response

Status: 200, Ok

| Name | Type | Description |
|-------------|------------------------------------|-------------------|
| _links | _links | |
| num_records | integer | Number of records |
| records | array[flexcache] | |

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "aggregates": [
        {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "aggr1",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        }
      ],
      "guarantee": {
        "type": "string"
      },
      "name": "voll",
      "origins": [
        {
          "cluster": {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
            },
            "name": "cluster1",
            "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
          },
          "create_time": "2018-06-04 15:00:00 -0400",
```

```

    "ip_address": "10.10.10.7",
    "size": 0,
    "state": "string",
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "volume": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "volume1",
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
  ],
  "path": "/user/my_fc",
  "prepopulate": {
    "dir_paths": [
      "/dir1"
    ],
    "exclude_dir_paths": [
      "/dir1/dir2"
    ]
  },
  "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 | error | |

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

| Name | Type | Description |
|------|--------|-------------|
| href | string | |

_links

| Name | Type | Description |
|------|----------------------|-------------|
| next | href | |
| self | href | |

_links

| Name | Type | Description |
|------|----------------------|-------------|
| self | href | |

aggregates

| Name | Type | Description |
|--------|------------------------|-------------|
| _links | _links | |
| name | string | |
| uuid | string | |

guarantee

| Name | Type | Description |
|------|--------|--|
| type | string | The type of space guarantee of this volume in the aggregate. |

cluster

| Name | Type | Description |
|--------|------------------------|-------------|
| _links | _links | |
| name | string | |
| uuid | string | |

svm

| Name | Type | Description |
|--------|------------------------|-------------|
| _links | _links | |

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

volume

| Name | Type | Description |
|------------------------|------------------------|--|
| _links | _links | |
| name | string | The name of the volume. |
| 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 |

flexcache_relationship

| Name | Type | Description |
|-------------|-------------------------|--|
| cluster | cluster | |
| create_time | string | Creation time of the relationship. |
| ip_address | string | Cluster management IP of the remote cluster. |
| size | integer | Size of the remote volume. |
| state | string | Volume state |
| svm | svm | |
| volume | volume | |

prepopulate

FlexCache prepopulate

| Name | Type | Description |
|-----------|---------------|-------------|
| dir_paths | array[string] | |

| Name | Type | Description |
|-------------------|---------------|--|
| exclude_dir_paths | array[string] | |
| recurse | boolean | Specifies whether or not the prepopulate action should search through the <code>dir_paths</code> recursively. If not set, the default value <i>true</i> is used. |

relative_size

FlexCache Relative Size

| Name | Type | Description |
|------------|---------|--|
| enabled | boolean | Specifies whether the relative sizing is enabled for the FlexCache volume. Relative sizing is introduced as a part of follow the origin feature. When relative sizing is enabled, it blocks any modifications done manually in the absolute size of the FlexCache volume. The size of the FlexCache volume is calculated and entered automatically based on the size of the origin volume. |
| percentage | integer | Specifies the percent size the FlexCache volume should have relative to the total size of the origin volume. This property is only relevant to a FlexCache volume that has the relative size property enabled. |

svm

FlexCache SVM

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

writeback

FlexCache Writeback

| Name | Type | Description |
|---------|---------|---|
| enabled | boolean | Indicates whether or not writeback is enabled for the FlexCache volume. Writeback is a storage method where data is first written to the FlexCache volume and then written to the origin of a FlexCache volume. |

flexcache

Defines the cache endpoint of FlexCache.

| Name | Type | Description |
|-----------------------------|---|---|
| _links | _links | |
| aggregates | array[aggregates] | |
| constituents_per_aggregate | integer | Number of FlexCache constituents per aggregate when the 'aggregates' field is mentioned. |
| dr_cache | boolean | If set to true, a DR cache is created. |
| global_file_locking_enabled | boolean | Specifies whether or not a FlexCache volume has global file locking mode enabled. Global file locking mode is a mode where protocol read locking semantics are enforced across all FlexCaches and origins of a FlexCache volume. When global file locking mode is enabled, the "is_disconnected_mode_off_for_locks" flag is always set to "true". |
| guarantee | guarantee | |
| name | string | FlexCache name |
| origins | array[flexcache_relationship] | |

| Name | Type | Description |
|----------------------|-------------------------------|---|
| path | string | The fully-qualified path in the owning SVM's namespace at which the FlexCache is mounted. The path is case insensitive and must be unique within a SVM's namespace. Path must begin with '/' and must not end with '/'. Only one FlexCache be mounted at any given junction path. |
| prepopulate | prepopulate | FlexCache prepopulate |
| relative_size | relative_size | FlexCache Relative Size |
| size | integer | Physical size of the FlexCache. The recommended size for a FlexCache is 10% of the origin volume. The minimum FlexCache constituent size is 1GB. |
| svm | svm | FlexCache SVM |
| use_tiered_aggregate | boolean | Specifies whether or not a Fabricpool-enabled aggregate can be used in FlexCache creation. The use_tiered_aggregate is only used when auto-provisioning a FlexCache volume. |
| uuid | string | FlexCache UUID. Unique identifier for the FlexCache. |
| writeback | writeback | FlexCache Writeback |

error_arguments

| Name | Type | Description |
|---------|--------|------------------|
| code | string | Argument code |
| message | string | Message argument |

error

| Name | Type | Description |
|-----------|--|---|
| arguments | array[error_arguments] | Message arguments |
| code | string | Error code |
| message | string | Error message |
| target | string | The target parameter that caused the error. |

Create a FlexCache volume in the cluster

POST /storage/flexcache/flexcaches

Introduced In: 9.6

Creates a FlexCache in the cluster.

Required properties

- `name` - Name of FlexCache volume.
- `origins.volume.name` or `origins.volume.uuid` - Name or UUID of origin volume.
- `origins.svm.name` - Name of origin Vserver.
- `svm.name` or `svm.uuid` - Name or UUID of Vserver where FlexCache will be created.

Recommended optional properties

- `path` - Path to mount the FlexCache volume
- `prepopulate.dir_paths` - List of directory-paths to be prepopulated for the FlexCache volume.
- `prepopulate.exclude_dir_paths` - List of directory-paths to be excluded from prepopulation for the FlexCache volume.

Default property values

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

- `size` - 10% of origin volume size or 1GB per constituent, whichever is greater.
- `guarantee.type` - none. FlexCache is thin provisioned by default.
- `constituents_per_aggregate` - 4 if `aggregates.name` or `aggregates.uuid` is used.
- `use_tiered_aggregate` - false if `aggr-list` is not used. This property is only used when auto-provisioning a FlexCache volume.
- `is_disconnected_mode_off_for_locks` - false. This property specifies if the origin will honor the cache side locks when doing the lock checks in the disconnected mode.

- `dr_cache` - false if FlexCache is not a DR cache. This property is used to create a DR FlexCache.
- `global_file_locking_enabled` - false. This property specifies whether global file locking is enabled on the FlexCache volume.
- `writeback.enabled` - false. This property specifies whether writeback is enabled for the FlexCache volume.

#* `writeback.per_inode_dirty_limit` - 2500. This property specifies the amount of data in 4KB blocks that the system can write per inode in a FlexCache volume before a writeback is initiated for that inode.

#* `writeback.transfer_limit` - 200. This property specifies the maximum number of 4KB data blocks the system can transfer, at one time, from the cache to the origin. This process will keep on recurring until all the dirty blocks for the inode are transferred to the origin volume.

#* `writeback.scrub_threshold` - 2000000. This property specifies the threshold value in 4KB data blocks which when hit will trigger a scrub that will initiate writeback for all dirty inodes on the FlexCache volume.

- `relative_size.enabled` - false. This property specifies whether the relative sizing is enabled for the FlexCache volume.
- `relative_size.percentage` - 10. This property specifies the percent size FlexCache volume should have relative to the total size of the origin volume.

Related ONTAP commands

- `volume flexcache create`
- `volume flexcache prepopulate start`

Learn more

- [DOC /storage/flexcache/flexcaches](#)

Parameters

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

Request Body

| Name | Type | Description |
|------------|-------------------------------------|-------------|
| _links | _links | |
| aggregates | array[aggregates] | |

| Name | Type | Description |
|-----------------------------|---|---|
| constituents_per_aggregate | integer | Number of FlexCache constituents per aggregate when the 'aggregates' field is mentioned. |
| dr_cache | boolean | If set to true, a DR cache is created. |
| global_file_locking_enabled | boolean | Specifies whether or not a FlexCache volume has global file locking mode enabled. Global file locking mode is a mode where protocol read locking semantics are enforced across all FlexCaches and origins of a FlexCache volume. When global file locking mode is enabled, the "is_disconnected_mode_off_for_locks" flag is always set to "true". |
| guarantee | guarantee | |
| name | string | FlexCache name |
| origins | array[flexcache_relationship] | |
| path | string | The fully-qualified path in the owning SVM's namespace at which the FlexCache is mounted. The path is case insensitive and must be unique within a SVM's namespace. Path must begin with '/' and must not end with '/'. Only one FlexCache be mounted at any given junction path. |
| prepopulate | prepopulate | FlexCache prepopulate |
| relative_size | relative_size | FlexCache Relative Size |
| size | integer | Physical size of the FlexCache. The recommended size for a FlexCache is 10% of the origin volume. The minimum FlexCache constituent size is 1GB. |
| svm | svm | FlexCache SVM |

| Name | Type | Description |
|----------------------|---------------------------|---|
| use_tiered_aggregate | boolean | Specifies whether or not a Fabricpool-enabled aggregate can be used in FlexCache creation. The use_tiered_aggregate is only used when auto-provisioning a FlexCache volume. |
| uuid | string | FlexCache UUID. Unique identifier for the FlexCache. |
| writeback | writeback | FlexCache Writeback |

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "aggregates": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "aggr1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  ],
  "guarantee": {
    "type": "string"
  },
  "name": "vol1",
  "origins": [
    {
      "cluster": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "cluster1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "create_time": "2018-06-04 15:00:00 -0400",
      "ip_address": "10.10.10.7",
      "size": 0,
      "state": "string",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```

```

    },
    "volume": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "volume1",
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
  ],
  "path": "/user/my_fc",
  "prepopulate": {
    "dir_paths": [
      "/dir1"
    ],
    "exclude_dir_paths": [
      "/dir1/dir2"
    ]
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "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": {
    "_links": {
      "self": {
        "href": "/api/resourceLink"
      }
    },
    "uuid": "string"
  }
}
```

Headers

| Name | Description | Type |
|----------|---|--------|
| Location | Useful for tracking the resource location | string |

Error

Status: Default

ONTAP Error Response Codes

| Error Code | Description |
|------------|--|
| 66846870 | Either the SVM name or origin volume name is missing |
| 66846871 | Constituents per aggregate are specified but aggregate name is missing |
| 66846872 | More than one origin volume is specified |
| 66846873 | The specified SVM UUID is incorrect for the specified SVM name |
| 66846874 | The specified aggregate UUID is incorrect for the specified aggregate name |
| 66846875 | The specified aggregate name does not exist |
| 66846876 | The specified SVM does not exist or is not peered |
| 66846877 | The specified origin SVM name is of zero length |
| 66846878 | The specified SVM UUID is invalid |
| 66846730 | Failed to create a FlexCache volume |

| Error Code | Description |
|------------|--|
| 66846760 | The specified SVM is not a data Vserver |
| 66846787 | The specified aggregate is a SnapLock aggregate |
| 66846812 | The specified aggregate is a Composite aggregate |
| 66846812 | The specified junction path is under a FlexCache volume |
| 66846834 | FlexCache encryption requires a cluster version of 9.6 or higher |
| 66846835 | A volume encryption license is not found |

| Name | Type | Description |
|-------|-------|-------------|
| error | error | |

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

| Name | Type | Description |
|------|--------|-------------|
| href | string | |

_links

| Name | Type | Description |
|------|----------------------|-------------|
| self | href | |

aggregates

| Name | Type | Description |
|--------|------------------------|-------------|
| _links | _links | |
| name | string | |
| uuid | string | |

guarantee

| Name | Type | Description |
|------|--------|--|
| type | string | The type of space guarantee of this volume in the aggregate. |

cluster

| Name | Type | Description |
|--------|------------------------|-------------|
| _links | _links | |
| name | string | |
| uuid | string | |

svm

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

volume

| Name | Type | Description |
|---------------------|------------------------|--|
| <code>_links</code> | _links | |
| <code>name</code> | string | The name of the volume. |
| <code>uuid</code> | 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 |

flexcache_relationship

| Name | Type | Description |
|--------------------------|-------------------------|--|
| <code>cluster</code> | cluster | |
| <code>create_time</code> | string | Creation time of the relationship. |
| <code>ip_address</code> | string | Cluster management IP of the remote cluster. |
| <code>size</code> | integer | Size of the remote volume. |
| <code>state</code> | string | Volume state |
| <code>svm</code> | svm | |
| <code>volume</code> | volume | |

prepopulate

FlexCache prepopulate

| Name | Type | Description |
|--------------------------------|---------------|--|
| <code>dir_paths</code> | array[string] | |
| <code>exclude_dir_paths</code> | array[string] | |
| <code>recurse</code> | boolean | Specifies whether or not the prepopulate action should search through the <code>dir_paths</code> recursively. If not set, the default value <i>true</i> is used. |

relative_size

FlexCache Relative Size

| Name | Type | Description |
|------------|---------|--|
| enabled | boolean | Specifies whether the relative sizing is enabled for the FlexCache volume. Relative sizing is introduced as a part of follow the origin feature. When relative sizing is enabled, it blocks any modifications done manually in the absolute size of the FlexCache volume. The size of the FlexCache volume is calculated and entered automatically based on the size of the origin volume. |
| percentage | integer | Specifies the percent size the FlexCache volume should have relative to the total size of the origin volume. This property is only relevant to a FlexCache volume that has the relative size property enabled. |

svm

FlexCache SVM

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

writeback

FlexCache Writeback

| Name | Type | Description |
|---------|---------|---|
| enabled | boolean | Indicates whether or not writeback is enabled for the FlexCache volume. Writeback is a storage method where data is first written to the FlexCache volume and then written to the origin of a FlexCache volume. |

flexcache

Defines the cache endpoint of FlexCache.

| Name | Type | Description |
|-----------------------------|---|---|
| _links | _links | |
| aggregates | array[aggregates] | |
| constituents_per_aggregate | integer | Number of FlexCache constituents per aggregate when the 'aggregates' field is mentioned. |
| dr_cache | boolean | If set to true, a DR cache is created. |
| global_file_locking_enabled | boolean | Specifies whether or not a FlexCache volume has global file locking mode enabled. Global file locking mode is a mode where protocol read locking semantics are enforced across all FlexCaches and origins of a FlexCache volume. When global file locking mode is enabled, the "is_disconnected_mode_off_for_locks" flag is always set to "true". |
| guarantee | guarantee | |
| name | string | FlexCache name |
| origins | array[flexcache_relationship] | |

| Name | Type | Description |
|----------------------|-------------------------------|---|
| path | string | The fully-qualified path in the owning SVM's namespace at which the FlexCache is mounted. The path is case insensitive and must be unique within a SVM's namespace. Path must begin with '/' and must not end with '/'. Only one FlexCache be mounted at any given junction path. |
| prepopulate | prepopulate | FlexCache prepopulate |
| relative_size | relative_size | FlexCache Relative Size |
| size | integer | Physical size of the FlexCache. The recommended size for a FlexCache is 10% of the origin volume. The minimum FlexCache constituent size is 1GB. |
| svm | svm | FlexCache SVM |
| use_tiered_aggregate | boolean | Specifies whether or not a Fabricpool-enabled aggregate can be used in FlexCache creation. The <code>use_tiered_aggregate</code> is only used when auto-provisioning a FlexCache volume. |
| uuid | string | FlexCache UUID. Unique identifier for the FlexCache. |
| writeback | writeback | FlexCache Writeback |

job_link

| Name | Type | Description |
|---------------------|------------------------|---|
| <code>_links</code> | _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 |

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 FlexCache volume

DELETE /storage/flexcache/flexcaches/{uuid}

Introduced In: 9.6

Deletes a FlexCache. If a FlexCache volume is online, it is offlined before deletion.

Related ONTAP commands

- `volume flexcache delete`

Learn more

- [DOC /storage/flexcache/flexcaches](#)

Parameters

| Name | Type | In | Required | Description |
|------|--------|------|----------|-------------------------------------|
| uuid | string | path | True | Unique identifier of the FlexCache. |

| 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: 202, Accepted

| Name | Type | Description |
|------|--------------------------|-------------|
| job | job_link | |

Example response

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

Error

Status: Default

ONTAP Error Response Codes

| Error Code | Description |
|------------|---|
| 66846879 | The specified volume UUID is not a FlexCache volume |
| 66846731 | Failed to delete the FlexCache volume |
| 524546 | Failed to delete the FlexCache volume because the FlexCache volume is not unmounted |

| Name | Type | Description |
|-------|-------|-------------|
| error | error | |

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

| Name | Type | Description |
|------|--------|-------------|
| href | string | |

_links

| Name | Type | Description |
|------|----------------------|-------------|
| self | href | |

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 |

error

| Name | Type | Description |
|-----------|--|---|
| arguments | array[error_arguments] | Message arguments |
| code | string | Error code |
| message | string | Error message |
| target | string | The target parameter that caused the error. |

Retrieve attributes of the FlexCache volume in the cluster

GET /storage/flexcache/flexcaches/{uuid}

Introduced In: 9.6

Retrieves attributes of the FlexCache in the cluster.

Expensive properties

There is an added computational cost to retrieving values for these properties. They are included by default in GET. The recommended method to use this API is to filter and retrieve only the required fields. See [Requesting specific fields](#) to learn more.

- `origins.ip_address` - IP address of origin.
- `origins.size` - Physical size of origin.
- `origins.state` - State of origin.
- `size` - Physical size of FlexCache.
- `guarantee.type` - Space guarantee style of FlexCache.
- `aggregates.name` or `aggregates.uuid` - Name or UUID of aggregate of FlexCache volume.
- `path` - Fully-qualified path of the owning SVM's namespace where the FlexCache is mounted.

Related ONTAP commands

- `volume flexcache show`

Learn more

- [DOC /storage/flexcache/flexcaches](#)

Parameters

| Name | Type | In | Required | Description |
|---------------------|---------------|-------|----------|---------------------------------|
| <code>uuid</code> | string | path | True | Unique identifier of FlexCache. |
| <code>fields</code> | array[string] | query | False | Specify the fields to return. |

Response

```
Status: 200, Ok
```

| Name | Type | Description |
|-------------------------|-------------------------------------|-------------|
| <code>_links</code> | _links | |
| <code>aggregates</code> | array[aggregates] | |

| Name | Type | Description |
|-----------------------------|---|---|
| constituents_per_aggregate | integer | Number of FlexCache constituents per aggregate when the 'aggregates' field is mentioned. |
| dr_cache | boolean | If set to true, a DR cache is created. |
| global_file_locking_enabled | boolean | Specifies whether or not a FlexCache volume has global file locking mode enabled. Global file locking mode is a mode where protocol read locking semantics are enforced across all FlexCaches and origins of a FlexCache volume. When global file locking mode is enabled, the "is_disconnected_mode_off_for_locks" flag is always set to "true". |
| guarantee | guarantee | |
| name | string | FlexCache name |
| origins | array[flexcache_relationship] | |
| path | string | The fully-qualified path in the owning SVM's namespace at which the FlexCache is mounted. The path is case insensitive and must be unique within a SVM's namespace. Path must begin with '/' and must not end with '/'. Only one FlexCache be mounted at any given junction path. |
| prepopulate | prepopulate | FlexCache prepopulate |
| relative_size | relative_size | FlexCache Relative Size |
| size | integer | Physical size of the FlexCache. The recommended size for a FlexCache is 10% of the origin volume. The minimum FlexCache constituent size is 1GB. |
| svm | svm | FlexCache SVM |

| Name | Type | Description |
|----------------------|---------------------------|---|
| use_tiered_aggregate | boolean | Specifies whether or not a Fabricpool-enabled aggregate can be used in FlexCache creation. The use_tiered_aggregate is only used when auto-provisioning a FlexCache volume. |
| uuid | string | FlexCache UUID. Unique identifier for the FlexCache. |
| writeback | writeback | FlexCache Writeback |

Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "aggregates": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "aggr1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  ],
  "guarantee": {
    "type": "string"
  },
  "name": "vol1",
  "origins": [
    {
      "cluster": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "cluster1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "create_time": "2018-06-04 15:00:00 -0400",
      "ip_address": "10.10.10.7",
      "size": 0,
      "state": "string",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```

```

    },
    "volume": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "volume1",
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
  ],
  "path": "/user/my_fc",
  "prepopulate": {
    "dir_paths": [
      "/dir1"
    ],
    "exclude_dir_paths": [
      "/dir1/dir2"
    ]
  },
  "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 | error | |

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

| Name | Type | Description |
|------|--------|-------------|
| href | string | |

_links

| Name | Type | Description |
|------|----------------------|-------------|
| self | href | |

aggregates

| Name | Type | Description |
|--------|------------------------|-------------|
| _links | _links | |
| name | string | |
| uuid | string | |

guarantee

| Name | Type | Description |
|------|--------|--|
| type | string | The type of space guarantee of this volume in the aggregate. |

cluster

| Name | Type | Description |
|--------|------------------------|-------------|
| _links | _links | |
| name | string | |
| uuid | string | |

svm

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

volume

| Name | Type | Description |
|------------------------|------------------------|--|
| _links | _links | |
| name | string | The name of the volume. |
| 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 |

flexcache_relationship

| Name | Type | Description |
|-------------|-------------------------|--|
| cluster | cluster | |
| create_time | string | Creation time of the relationship. |
| ip_address | string | Cluster management IP of the remote cluster. |
| size | integer | Size of the remote volume. |
| state | string | Volume state |
| svm | svm | |
| volume | volume | |

prepopulate

FlexCache prepopulate

| Name | Type | Description |
|-------------------|---------------|--|
| dir_paths | array[string] | |
| exclude_dir_paths | array[string] | |
| recurse | boolean | Specifies whether or not the prepopulate action should search through the <code>dir_paths</code> recursively. If not set, the default value <code>true</code> is used. |

relative_size

FlexCache Relative Size

| Name | Type | Description |
|------------|---------|--|
| enabled | boolean | Specifies whether the relative sizing is enabled for the FlexCache volume. Relative sizing is introduced as a part of follow the origin feature. When relative sizing is enabled, it blocks any modifications done manually in the absolute size of the FlexCache volume. The size of the FlexCache volume is calculated and entered automatically based on the size of the origin volume. |
| percentage | integer | Specifies the percent size the FlexCache volume should have relative to the total size of the origin volume. This property is only relevant to a FlexCache volume that has the relative size property enabled. |

svm

FlexCache SVM

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

writeback

FlexCache Writeback

| Name | Type | Description |
|---------|---------|---|
| enabled | boolean | Indicates whether or not writeback is enabled for the FlexCache volume. Writeback is a storage method where data is first written to the FlexCache volume and then written to the origin of a FlexCache volume. |

error_arguments

| Name | Type | Description |
|---------|--------|------------------|
| code | string | Argument code |
| message | string | Message argument |

error

| Name | Type | Description |
|-----------|--|---|
| arguments | array[error_arguments] | Message arguments |
| code | string | Error code |
| message | string | Error message |
| target | string | The target parameter that caused the error. |

Pre-populate a FlexCache volume in the cluster

PATCH /storage/flexcache/flexcaches/{uuid}

Introduced In: 9.8

Prepopulates a FlexCache volume in the cluster, or modifies configuration of the FlexCache volume.

Required properties

- `uuid` - FlexCache volume UUID.

Recommended optional properties

- `prepopulate.exclude_dir_paths` - List of directory-paths to be excluded from prepopulation for the FlexCache volume.

- `prepopulate.dir_paths` - List of directory-paths to be prepopulated for the FlexCache volume.
- `writeback.enabled` - `false`. This property specifies whether writeback is enabled for the FlexCache volume.

#* `writeback.per_inode_dirty_limit` - This property specifies the amount of data in 4KB blocks that the system can write per inode in a FlexCache volume before a writeback is initiated for that inode.

#* `writeback.transfer_limit` - This property specifies the maximum number of 4KB data blocks the system can transfer, at one time, from the cache to the origin. This process will keep on recurring until all the dirty blocks for the inode are transferred to the origin volume.

#* `writeback.scrub_threshold` - This property specifies the threshold value in 4KB data blocks which when hit will trigger a scrub that will initiate writeback for all dirty inodes on the FlexCache volume.

- `relative_size.enabled` - This property specifies whether the relative sizing is enabled for the FlexCache volume.
- `relative_size.percentage` - This property specifies the percent size FlexCache volume should have relative to the total size of the origin volume.

Default property values

If not specified in PATCH, the following default property value is assigned:

- `prepopulate.recurse` - Default value is "true".

Related ONTAP commands

- `volume flexcache prepopulate start`
- `volume flexcache config modify`

Learn more

- [DOC /storage/flexcache/flexcaches](#)

Parameters

| Name | Type | In | Required | Description |
|------|--------|------|----------|--|
| uuid | string | path | True | Unique identifier of the FlexCache volume. |

| Name | Type | In | Required | Description |
|----------------|---------|-------|----------|--|
| return_timeout | integer | query | False | <p>The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0 |

Request Body

| Name | Type | Description |
|----------------------------|-------------------------------------|--|
| _links | _links | |
| aggregates | array[aggregates] | |
| constituents_per_aggregate | integer | Number of FlexCache constituents per aggregate when the 'aggregates' field is mentioned. |
| dr_cache | boolean | If set to true, a DR cache is created. |

| Name | Type | Description |
|-----------------------------|---|---|
| global_file_locking_enabled | boolean | Specifies whether or not a FlexCache volume has global file locking mode enabled. Global file locking mode is a mode where protocol read locking semantics are enforced across all FlexCaches and origins of a FlexCache volume. When global file locking mode is enabled, the "is_disconnected_mode_off_for_locks" flag is always set to "true". |
| guarantee | guarantee | |
| name | string | FlexCache name |
| origins | array[flexcache_relationship] | |
| path | string | The fully-qualified path in the owning SVM's namespace at which the FlexCache is mounted. The path is case insensitive and must be unique within a SVM's namespace. Path must begin with '/' and must not end with '/'. Only one FlexCache be mounted at any given junction path. |
| prepopulate | prepopulate | FlexCache prepopulate |
| relative_size | relative_size | FlexCache Relative Size |
| size | integer | Physical size of the FlexCache. The recommended size for a FlexCache is 10% of the origin volume. The minimum FlexCache constituent size is 1GB. |
| svm | svm | FlexCache SVM |
| use_tiered_aggregate | boolean | Specifies whether or not a Fabricpool-enabled aggregate can be used in FlexCache creation. The use_tiered_aggregate is only used when auto-provisioning a FlexCache volume. |
| uuid | string | FlexCache UUID. Unique identifier for the FlexCache. |

| Name | Type | Description |
|-----------|-----------|---------------------|
| writeback | writeback | FlexCache Writeback |

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "aggregates": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "aggr1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  ],
  "guarantee": {
    "type": "string"
  },
  "name": "vol1",
  "origins": [
    {
      "cluster": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "cluster1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "create_time": "2018-06-04 15:00:00 -0400",
      "ip_address": "10.10.10.7",
      "size": 0,
      "state": "string",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```

```

    },
    "volume": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "volume1",
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
  ],
  "path": "/user/my_fc",
  "prepopulate": {
    "dir_paths": [
      "/dir1"
    ],
    "exclude_dir_paths": [
      "/dir1/dir2"
    ]
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "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": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uuid": "string"
  }
}
```

Error

Status: Default

ONTAP Error Response Codes

| Error Code | Description |
|------------|---|
| 66846922 | FlexCache volume does not exist in the SVM |
| 66846923 | Failed to prepopulate FlexCache volume because the origin volume is not reachable |
| 66846924 | FlexCache volume is offline |
| 66846925 | FlexCache volume is not mounted or the junction-path is not active |
| 66846926 | The junction-path of FlexCache volume is not active |
| 66846927 | FlexCache volume does not have an origin volume |
| 66846928 | FlexCache volume does not exist |
| 66846929 | Using FlexCache prepopulate requires an effective cluster version of 9.8.0 or later |
| 66846930 | Using FlexCache prepopulate in a MetroCluster configuration requires an effective cluster version of 9.8.0 or later on both the local and remote clusters |
| 66846931 | Internal Error. FlexCache prepopulate job queue failed. Wait a few minutes, and then try the operation again |
| 66846936 | Failed to lookup root file handle for origin of FlexCache volume. Wait a few minutes, and then try the operation again |

| Error Code | Description |
|------------|--|
| 66846937 | Internal error. Failed to initialize thread |
| 66846939 | Internal error. Failed to get the MSID of the origin volume for FlexCache volume |
| 66846943 | Failed to prepopulate because dir_path does not exist |
| 66846944 | Failed to get root constituent for FlexCache volume |
| 66846945 | Origin of FlexCache volume is not mounted or the junction-path is not active |
| 66846946 | The junction-path of origin of FlexCache volume is not active |
| 66846947 | FlexCache prepopulate job for FlexCache volume already exists |
| 66846948 | FlexCache prepopulate job for FlexCache volume could not be queued because the node is offline |

| Name | Type | Description |
|-------|-----------------------|-------------|
| error | error | |

Example error

```

{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}

```

Definitions

See Definitions

href

| Name | Type | Description |
|------|--------|-------------|
| href | string | |

_links

| Name | Type | Description |
|------|----------------------|-------------|
| self | href | |

aggregates

| Name | Type | Description |
|--------|------------------------|-------------|
| _links | _links | |
| name | string | |
| uuid | string | |

guarantee

| Name | Type | Description |
|------|--------|--|
| type | string | The type of space guarantee of this volume in the aggregate. |

cluster

| Name | Type | Description |
|--------|------------------------|-------------|
| _links | _links | |
| name | string | |
| uuid | string | |

svm

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

volume

| Name | Type | Description |
|------------------------|------------------------|--|
| _links | _links | |
| name | string | The name of the volume. |
| 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 |

flexcache_relationship

| Name | Type | Description |
|-------------|-------------------------|--|
| cluster | cluster | |
| create_time | string | Creation time of the relationship. |
| ip_address | string | Cluster management IP of the remote cluster. |
| size | integer | Size of the remote volume. |
| state | string | Volume state |
| svm | svm | |
| volume | volume | |

prepopulate

FlexCache prepopulate

| Name | Type | Description |
|-------------------|---------------|--|
| dir_paths | array[string] | |
| exclude_dir_paths | array[string] | |
| recurse | boolean | Specifies whether or not the prepopulate action should search through the <code>dir_paths</code> recursively. If not set, the default value <code>true</code> is used. |

relative_size

FlexCache Relative Size

| Name | Type | Description |
|------------|---------|--|
| enabled | boolean | Specifies whether the relative sizing is enabled for the FlexCache volume. Relative sizing is introduced as a part of follow the origin feature. When relative sizing is enabled, it blocks any modifications done manually in the absolute size of the FlexCache volume. The size of the FlexCache volume is calculated and entered automatically based on the size of the origin volume. |
| percentage | integer | Specifies the percent size the FlexCache volume should have relative to the total size of the origin volume. This property is only relevant to a FlexCache volume that has the relative size property enabled. |

svm

FlexCache SVM

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

writeback

FlexCache Writeback

| Name | Type | Description |
|---------|---------|---|
| enabled | boolean | Indicates whether or not writeback is enabled for the FlexCache volume. Writeback is a storage method where data is first written to the FlexCache volume and then written to the origin of a FlexCache volume. |

flexcache

Defines the cache endpoint of FlexCache.

| Name | Type | Description |
|-----------------------------|---|---|
| _links | _links | |
| aggregates | array[aggregates] | |
| constituents_per_aggregate | integer | Number of FlexCache constituents per aggregate when the 'aggregates' field is mentioned. |
| dr_cache | boolean | If set to true, a DR cache is created. |
| global_file_locking_enabled | boolean | Specifies whether or not a FlexCache volume has global file locking mode enabled. Global file locking mode is a mode where protocol read locking semantics are enforced across all FlexCaches and origins of a FlexCache volume. When global file locking mode is enabled, the "is_disconnected_mode_off_for_locks" flag is always set to "true". |
| guarantee | guarantee | |
| name | string | FlexCache name |
| origins | array[flexcache_relationship] | |

| Name | Type | Description |
|----------------------|-------------------------------|---|
| path | string | The fully-qualified path in the owning SVM's namespace at which the FlexCache is mounted. The path is case insensitive and must be unique within a SVM's namespace. Path must begin with '/' and must not end with '/'. Only one FlexCache be mounted at any given junction path. |
| prepopulate | prepopulate | FlexCache prepopulate |
| relative_size | relative_size | FlexCache Relative Size |
| size | integer | Physical size of the FlexCache. The recommended size for a FlexCache is 10% of the origin volume. The minimum FlexCache constituent size is 1GB. |
| svm | svm | FlexCache SVM |
| use_tiered_aggregate | boolean | Specifies whether or not a Fabricpool-enabled aggregate can be used in FlexCache creation. The <code>use_tiered_aggregate</code> is only used when auto-provisioning a FlexCache volume. |
| uuid | string | FlexCache UUID. Unique identifier for the FlexCache. |
| writeback | writeback | FlexCache Writeback |

job_link

| Name | Type | Description |
|---------------------|------------------------|---|
| <code>_links</code> | _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 |

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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