



Application

ONTAP 9.11.1 REST API reference

NetApp
April 02, 2024

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Application

Application overview

Overview

ONTAP application APIs simplify storage management by using terminology specific to a type of application. This application-specific terminology can be used to provision and manage ONTAP storage objects. A single call using application-specific parameters provisions storage and enables protocol access for an application following NetApp best practices. You can view and manage the ONTAP objects making up the application as a group using the application APIs. The library of available application templates already includes several database and virtualization applications.

APIs

There are several application APIs that must be used to fully manage an application. Templates are used to represent any parameters specific to a given application. Some APIs expose applications in terms of their specific template, while others only expose a generic view that all applications share. The template view is present on the *templates* and *applications* APIs (although these APIs do also include some generic fields). The *components* and *snapshots* APIs are entirely generic and do not differ across types of applications.

The following section provides an overview of each API, followed by a lifecycle example of managing an application to demonstrate how the APIs can be used together.

Template

A template is an ONTAP representation of a specific type of application. Each template represents one type of application, the parameters that can be used to customize it, the layout of its storage, and how it can be accessed. Templates are intended to expose an application in terms specifically applicable to an administrator of a given application. As such, traditional ONTAP storage elements are generally not included in an application template.

The template APIs can be used to discover what templates are currently available. The ONTAP API documentation also includes a model of the templates. The template APIs generally provide the same information as the documentation, but the template APIs might provide more up-to-date details about the default values of template parameters based on the current ONTAP configuration. However, only the ONTAP API documentation includes a full description of each template parameter, its usage, and whether it is optional.

Application

The application APIs are the only interfaces that allow management of an application using template properties.

The application object includes the following three sections:

1. Generic metadata about the application, including common fields such as the name of the application, the template used to provision it, and the generation number of the application.
 2. Statistics information about the application, including space and IOPS details about the entire application
-

and each of its components. These are expensive to collect and should only be requested when needed using a *fields=* query.

3. A template view of the application. The application object itself presents a mutually exclusive list of all possible templates. Only one of these fields can be used per application. The name of the field corresponds to the name of the template used by the application. Currently, the creation of a new application and the modification of the storage service for an existing application are supported through the template parameters.

Component

The component API offers a generic view of the application and how to access the application from the host application. This is the only API that exposes the underlying ONTAP storage elements of which the application is composed. It is read-only; it cannot support modifications specific to the type of application it is presenting.

The component object includes the following details for an application:

1. The NFS export rules for accessing the application from the host.
2. The CIFS share and users that can access the application from the host.
3. The SAN initiators that can access the application from the host.
4. For IP-based protocols, the IP addresses that are best suited for accessing the component.
5. The underlying storage elements that make up the component, such as volumes or LUNs.

Snapshot copy

The Snapshot copy APIs offer full CRUD for application-level Snapshot copies. Application Snapshot copies can be flagged as either crash-consistent or application-consistent. From the perspective of ONTAP, there is no difference between the two. It is the responsibility of the administrator to ensure that the application is in a consistent state before flagging a Snapshot copy as application-consistent. Use of the SnapCenter Backup Management suite is recommended to ensure correct interaction between host applications and ONTAP.

Example

The following example outlines the APIs necessary to manage applications and how they fit together. However, this example does not provide detailed information on each API. See the documentation for the individual APIs for more information.

1) Discover the templates

This documentation, which includes the model of each template as part of the *templates* and *applications* APIs, is the easiest and most comprehensive way to discover the available templates. The *templates* API can also be used to query the system for templates in a programmatic way.

To discover the templates available to provision an Oracle application, the following query is used.

```

# The API:
/api/application/templates

# The query:
name=oracle*

# The call:
curl -X GET "https://<mgmt-ip>/api/application/templates?name=oracle*" -H
"accept: application/json"

# The response:
{
  "records": [
    {
      "name": "oracle_on_nfs", "description": "Oracle using NFS."
    },
    {
      "name": "oracle_on_san", "description": "Oracle using SAN."
    },
    {
      "name": "oracle_rac_on_nfs", "description": "Oracle RAC using NFS."
    },
    {
      "name": "oracle_rac_on_san", "description": "Oracle RAC using SAN."
    }
  ],
  "num_records": 4
}

```

2) Create an application

Now that we know the possible templates, we use one to create an application. The template properties differ from template to template, and can be found by exploring the model of the application object in this documentation. Each call to create an application must include the properties for exactly one template. These properties are provided under the property with the same name as the template. Other than the template properties, the only other required properties to create an application are the SVM and name.



In the following call example, not all of the template properties are included. Where a property is not needed or the default is sufficient, the property can be excluded. In this case using the *oracle_on_nfs* template, the *archive_log*, and *protection_type* are not included. The template name, *oracle_on_nfs*, is specified above the group of template properties, after the names of the application and the SVM.

Creating an application is asynchronous, so the response for this API includes information about the job doing the work. The response header also includes the *location* of where the application can be found if the job is

successful.

Prior to creating an application, the following prerequisites must be met for the protocols associated with the template:

- Licences must be installed.
 - [POST /cluster/licensing/licenses](#)
- Aggregates must exist with enough available space and IOPS to satisfy the requested size.
 - [POST /storage/aggregates](#)
- An SVM must exist with protocol services enabled.
 - [POST /svm/svms](#)
- LIFs must exist. For SAN applications, only High Availability groups where each node has at least one LIF will be considered for placement of storage objects.
 - [POST /network/ip/interfaces](#)
 - [POST /network/fc/interfaces](#)

The following are not required prior to creating an application, but might be necessary before connecting to the application:

- Network routes must be created to access ethernet based LIFs.
 - [POST /network/ip/routes](#)
- For volumes created by this operation to be successfully mounted, ONTAP requirements related to mounting must be met.

```
# The API:
/api/application/applications

# The query:
No query is needed for this command. Optionally, you can specify the
return_timeout or set the return_records flag to alter the behavior of the
command.

# The body:
{
  "name": "my_ora_app",
  "svm": {
    "name": "svm1"
  },
  "oracle_on_nfs": {
    "db": {
      "size": "2GB",
```

```

    "storage_service": {
        "name": "value"
    },
    "nfs_access": [
        {
            "access": "rw",
            "host": "0.0.0.0/0"
        }
    ]
},
"redo_log": {
    "size": "1GB"
},
"ora_home": {
    "size": "1GB"
}
}
}

# The call:
curl -X POST "https://<mgmt-ip>/api/application/applications" -H
"accept: application/hal+json" -H "content-type: application/json" -d '{
"name": "my_ora_app", "svm": { "name": "vs1" }, "oracle_on_nfs": { "db": {
"size": "2GB", "storage_service": { "name": "value" }, "nfs_access": [ {
"access": "rw", "host": "0.0.0.0/0" } ] }, "redo_log": { "size": "1GB" },
"ora_home": { "size": "1GB" } } }'

# The response:
{
"job": {
    "uuid": "dc0d01dd-df5a-11e7-b5d2-005056b47eb2",
    "id": 94,
    "_links": {
        "self": {
            "href": "/api/cluster/jobs/dc0d01dd-df5a-11e7-b5d2-005056b47eb2"
        }
    }
}
}

# The response header:
date: Tue, 12 Dec 2017 16:38:18 GMT
server: libzapid-httpd
content-type: application/hal+json
location: /api/application/applications/dbc10d87-df5a-11e7-b5d2-
005056b47eb2

```

```
cache-control: no-cache,no-store,must-revalidate
connection: Keep-Alive
keep-alive: timeout=5, max=100
content-length: 203
```

3) Wait for the application to be created

The call to create the application returns information about the job, including a HAL link to retrieve details about the job. The job object includes a state and a message to indicate the progress of the job. When the job is complete, and the application has been fully created, the message indicates success and the *state* of the job property is *success*.

For brevity purposes, the successful job response is shown here. On a real cluster, an application might take several seconds to several minutes to be created, depending on the system load. If the job is not complete, the *message* property includes a short description on the progress of the job, and the *state* indicates *running*.

```
# The API:
/api/cluster/jobs/{uuid}

# The call, provided by the HAL link from step 3:
curl -X GET "https://<mgmt-ip>/api/cluster/jobs/dc0d01dd-df5a-11e7-b5d2-005056b47eb2" -H "accept: application/hal+json"

# The response:
{
  "uuid": "dc0d01dd-df5a-11e7-b5d2-005056b47eb2",
  "state": "success",
  "message": "Complete: Success [0]",
  "code": 0,
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/dc0d01dd-df5a-11e7-b5d2-005056b47eb2"
    }
  }
}
```

4) Retrieve the new application

You can look up the application directly without listing all the applications. Use the *location* header that is included in the response when the application is created.



The following example uses a query to retrieve only a small number of the application's properties.

```
# The API:
/api/application/applications/{uuid}

# The query:
fields=name,template.name,generation,state

# The call:
curl -X GET "https://<mgmt-ip>/api/application/applications/dbc10d87-df5a-11e7-b5d2-005056b47eb2?fields=name,template.name,generation,state" -H
"accept: application/json"

# The response:
{
  "uuid": "dbc10d87-df5a-11e7-b5d2-005056b47eb2",
  "name": "my_ora_app",
  "template": { "name": "oracle_on_nfs" },
  "generation": 2,
  "state": "online"
}
```

5) Discover how to access the application

The components API provides information on how to access the storage that is provisioned for the application.

For brevity, only the names of the components are requested. See the API documentation for more information on the other available fields.

```
# The API:
api/application/applications/{application.uuid}/components

# The query:
fields=name

# The call:
curl -X GET "https://<mgmt-ip>/api/application/applications/dbc10d87-df5a-11e7-b5d2-005056b47eb2/components?fields=name" -H "accept: application/json"

# The response:
{
  "records": [
    { "uuid": "e06fb407-df5a-11e7-b5d2-005056b47eb2", "name": "db" },
    { "uuid": "e0709732-df5a-11e7-b5d2-005056b47eb2", "name": "ora_home" },
    { "uuid": "e07158eb-df5a-11e7-b5d2-005056b47eb2", "name": "redo_log" }
  ],
  "num_records": 3
}
```

6) Update the application

To update the storage service, the same template that is used for creating the application is reused, but with only the `storage_service` properties set. In the generic SAN and NAS templates, the name of each component must also be specified.

In this example, the cluster only supports the *value* storage service, so modifications of the application to a faster storage service fail. Note how the error message indicates the parameter that caused the problem.

Application modification, like application creation, is an asynchronous operation. If a valid command is passed, the API returns information about the job instead of an error.

```
# The API:
/api/application/applications/{uuid}

# The body:
{
  "oracle_on_nfs": { "db": { "storage_service": { "name": "extreme" } } }
}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/application/applications/dbc10d87-
df5a-11e7-b5d2-005056b47eb2" -H "accept: application/hal+json" -H
"content-type: application/json" -d '{ "oracle_on_nfs": { "db": {
"storage_service": { "name": "extreme" } } } }'

# The response:
{
  "error": {
    "message": "Invalid value for parameter \"oracle_on_nfs.db.storage-
service.name\": extreme. Supported values are: value.",
    "code": "65995152"
  }
}
```

7) Manage Snapshot copies

For applications created with the *local protection_type* set to *hourly*, Snapshot copies are automatically taken every hour. These Snapshot copies can be retrieved or restored using the Snapshot copy APIs. Snapshot copies can also be taken on demand using these APIs. It is important to note that the *consistency_type* flag of the Snapshot copy is for record-keeping only: it is the responsibility of the administrator to ensure that the application is in a consistent state prior to flagging a Snapshot copy as *application* consistent.

Take a Snapshot copy manually:

```
# The API:
/api/application/applications/{uuid}/snapshots

# The body:
{
  "name": "little_bobby_tables",
  "consistency_type": "crash"
}

# The call:
curl -X POST "https://<mgmt-ip>/api/application/applications/dbc10d87-
df5a-11e7-b5d2-005056b47eb2/snapshots" -H "accept: application/hal+json"
-H "content-type: application/json" -d '{"name": "little_bobby_tables",
"consistency_type": "crash"}'

# The response:
{}

# The response header:
date: Tue, 12 Dec 2017 17:40:10 GMT
server: libzapid-httpd
content-type: application/hal+json
location: /api/application/applications/dbc10d87-df5a-11e7-b5d2-
005056b47eb2/snapshots/dbc10d87-df5a-11e7-b5d2-
005056b47eb2_13_little_bobby_tables
cache-control: no-cache,no-store,must-revalidate
connection: Keep-Alive
keep-alive: timeout=5, max=100
content-length: 3
```

In the above example, the response body is empty, and the response header includes the *location* of the newly created Snapshot copy. By default, all POST calls return an empty body unless a job is used to process the creation asynchronously. This behavior can be changed with the query flag *return_records*.

Restoring a Snapshot copy uses an action API. Action paths can also be performed asynchronously as jobs, as with creating or modifying an application. The response header does not include a *location*, because this action is not creating a resource.

```
# The API:
/api/application/applications/{application.uuid}/snapshots/{snapshot.uuid}
/restore

# The call:
curl -X POST "https://<mgmt-ip>/api/application/applications/dbc10d87-
df5a-11e7-b5d2-005056b47eb2/snapshots/dbc10d87-df5a-11e7-b5d2-
005056b47eb2_13_little_bobby_tables/restore" -H "accept:
application/hal+json"

# The response:
{
"job": {
  "uuid": "00e81690-df64-11e7-b5d2-005056b47eb2",
  "id": 100,
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/00e81690-df64-11e7-b5d2-005056b47eb2"
    }
  }
}
}

# The response header:
date: Tue, 12 Dec 2017 17:43:46 GMT
cache-control: no-cache,no-store,must-revalidate
server: libzapid-httpd
connection: Keep-Alive
keep-alive: timeout=5, max=100
content-length: 204
content-type: application/hal+json
```

Smart containers

Smart containers are traditional ONTAP storage objects such as FlexVol or FlexGroup created using the application REST API.

- NAS - FlexVolume, FlexGroup, and FlexCache objects
- SAN - LUNs
- NVME - Namespaces
- S3 - Object Store S3 Buckets

The benefits of creating a Smart Container are as follows:

- ONTAP determines the best placement for the storage object based on available performance and space capacity.
 - Access controls can be optionally set.
 - Snapshot copy schedules can be optionally set.
 - A single atomic job that does all the above.
-

Smart containers are similar to generic enterprise applications (NAS, SAN, NVME), but with certain restrictions. Smart containers are restricted to 1 application-component. Any post-provisioning data management operations on smart containers must be performed via PATCH operations corresponding to the object created. However, the POST, GET and DELETE operations that exist for applications will also operate for smart containers.

To create a Smart Container the "smart_container:true" parameter must be provided.

Prior to creating a smart container, the following prerequisites must be met for the protocols associated with the template:

- Licences must be installed.
 - [POST /cluster/licensing/licenses](#)
 - Aggregates must exist with enough available space to satisfy the requested size.
 - [POST /storage/aggregates](#)
 - An SVM must exist with protocol services enabled.
 - [POST /svm/svms](#)
 - LIFs must exist. For SAN objects, only High Availability groups where each node has at least one LIF to be considered for placement of storage objects.
 - [POST /network/ip/interfaces](#)
 - [POST /network/fc/interfaces](#)
-

The following are not required prior to creating a smart container:

- Network routes must be created to access Ethernet-based LIFs.
 - [POST /network/ip/routes](#)
 - To mount volumes by this operation successfully, all ONTAP requirements related to mounting must be met.
-

Example

The following examples outline the APIs necessary to create a smart container. Two types of smart container creation are supported:

- A smart container with new ONTAP storage objects as specified in the JSON body.
- An existing ONTAP volume can be converted into a smart container (supported only on generic SAN and NVME templates). This is an addendum to the example provided on how to create an application.

```
# The API:
/api/application/applications

# The query:
No query is needed for this command. Optionally, you can specify the
return_timeout or set the return_records flag to alter the behavior of the
command.

# The body:
Creates a smart container with new ONTAP storage objects:
{
  "name": "my_container",
  "svm": {
    "name": "vs1"
  },
  "template": {
    "name": "nas"
  },
  "smart_container": "true"
  "nas": {
    "application_components": [
      {
        "share_count": "1",
        "name": "myVolume",
        "storage_service": {
          "name": "value"
        },
        "total_size": "100mb"
      }
    ]
  }
}
}

Converting an existing volume into a smart container:
{
  "name": "my_container",
  "svm": {
    "name": "vs1"
  },
  "template": {
    "name": "san"
  },
  "smart_container": "true"
}
```

```

"san": {
  "application_components": [
    {
      "name": "existingVolume" #name of an existing volume
    }
  ]
}
}

# The call:
Creates a smart container with new ONTAP storage objects:
curl -X POST "https://<mgmt-ip>/api/application/applications" -H "accept:
application/hal+json" -H "Content-Type: application/json" -d '{"name":
"my_container", "svm": {"name": "vs1"} , "smart_container": true ,
"template": {"name": "nas"} , "nas": {"application_components":
[{"share_count": "1", "name": "myVolume", "storage_service": {"name":
"value"} , "total_size": "100mb"} ] } }'
Converting an existing volume into a smart container:
curl -X POST "https://<mgmt-ip>/api/application/applications" -H "accept:
application/hal+json" -H "Content-Type: application/json" -d '{"name":
"my_container", "svm": {"name": "vs1"} , "smart_container": true ,
"template": {"name": "san"} , "san": {"application_components": [{"name":
"existingVolume"} ] } }'

# The response:
{
  "job": {
    "uuid": "5440db05-77f0-11e9-a5a0-005056bba32f",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/5440db05-77f0-11e9-a5a0-
005056bba32f"
      }
    }
  }
}

# The response header:
date: Tue, 23 May 2019 16:38:18 GMT
server: libzapid-httpd
content-type: application/hal+json
location: /api/application/applications/5440db05-77f0-11e9-a5a0-
005056bba32f
cache-control: no-cache,no-store,must-revalidate
connection: Keep-Alive
keep-alive: timeout=5, max=100

```



```
content-length: 203
```

Smart Container Properties

- `exclude_aggregates` - This property is available for SAN, NAS and S3 Smart Containers. The list of aggregates specified in this property will be excluded while provisioning the storage object. If no suitable aggregate can be found to place the storage object, smart container provisioning will fail.

These sections are only allowed for smart containers and will return an error when provided on traditional applications. The following is an example of the error returned:

```
{
  "error": {
    "message": "Field \"<field>\" is only supported on smart containers.",
    "code": "65996161"
  }
}
```

Updating the smart container

A smart container can be updated to add more LUNS and/or namespaces, with the same template used to create a smart container being reused, and with the following fields set:

- `lun_count/namespace_count` - represents the total number of LUNS/namespaces in the smart container.
- `os_type` - represents the OS type of the new LUNS/namespaces.
- `total_size` - represents the total size of the new LUNS/namespaces to be added.
- `igroup_name/subsystem` - represents the igroup/subsystem mapping for the new LUNS/namespaces. Updates are allowed only on generic SAN and NVME templates.

```

# The API:
/api/application/applications/{uuid}

# The body:
{
  "san": {
    "application_components": [
      {
        "name": "myVolume",
        "lun_count": 4
        "total_size": "1gb"
        "os-type": "linux",
        "igroup_name": "igroup1"
      }
    ]
  }
}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/application/applications/dbc10d87-
df5a-11e7-b5d2-005056b47eb2" -H "accept: application/hal+json" -H
"content-type: application/json" -d '{ "san": { "application_components":
[{"name": "myVolume", "total_size": "1GB", "lun_count": 4, "os_type":
"linux", "igroup_name": "igroup1"}]}}'

```

Application API limitations

Application API limitations

Template versus generic

Applications can be represented in either template or generic terms. All applications can be represented in generic terms as a list of components. Each component generally maps to a field in the template. For example, Microsoft SQL Server applications have a component named *sql/data* that corresponds to the *db* parameter in the *sql_on_san* template. These mappings are usually straightforward and allow the templates to present application terminology, while the generic view uses the traditional naming schemes for ONTAP storage elements.

The current release supports the creation and modification of applications in template terms, but retrieval is not supported. The mapping from template to generic terms is left to your own discretion.[za](#)

ONTAP feature support

Application APIs are interfaces layered on top of traditional ONTAP storage. While the intent is to provide a full management suite through application APIs, some features of the underlying ONTAP objects are not directly supported through application APIs. Applications are provisioned using ONTAP best practices, so the need for additional modifications of the underlying objects should be minimal. If such modifications are necessary, the traditional ONTAP APIs can be used. The `/api/application/{application.uuid}/components` API provides a

backing_storage field that can be used to locate the storage objects associated with an application. This API also provides details of the NFS, CIFS, or SAN protocol access objects associated with the application.

The application APIs use the extra information known about the application to coordinate multiple ONTAP objects in unison. When using non-application APIs, certain settings might interfere with the ONTAP object coordination and cause the application APIs to behave unexpectedly. To continue to supply the full ONTAP feature set, these modifications on the underlying objects are allowed, but there is no guarantee that these modifications will not adversely affect the application experience. You should use this feature with caution.

Retrieve applications

GET /application/applications

Introduced In: 9.6

Retrieves applications.

Expensive properties

There is an added 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.

- `<template>` the property corresponding to the `template.name` of the application

Query examples

Numerous queries are available for classifying and sorting applications:

1. Return a list of applications sorted by name.

```
GET /application/applications?order_by=name
```

2. Return a list of applications for a specific SVM.

```
GET /application/applications?svm.name=<name>
```

3. Return a list of all SQL applications.

```
GET /application/applications?template.name=sql*
```

4. Return a list of all applications that can be accessed via SAN.

```
GET /application/applications?template.protocol=san
```

5. Return the top five applications consuming the most IOPS.

```
GET /application/applications?order_by=statistics.iops.total
desc&max_records=5
```

The above examples are not comprehensive. There are many more properties available for queries. Also, multiple queries can be mixed and matched with other query parameters for a large variety of requests. See the per-property documentation below for the full list of supported query parameters.

Learn more

- [DOC /application](#)

Parameters

Name	Type	In	Required	Description
uuid	string	query	False	Filter by UUID
name	string	query	False	Filter by name
svm.name	string	query	False	Filter by svm.name
svm.uuid	string	query	False	Filter by svm.uuid
template.name	string	query	False	Filter by template.name
template.version	string	query	False	Filter by template.version
template.protocol	string	query	False	Filter by template.protocol
generation	string	query	False	Filter by generation
state	string	query	False	Filter by state
protection_granularity	string	query	False	Filter by protection granularity
rpo.is_supported	string	query	False	Filter by rpo.is_supported
rpo.local.name	string	query	False	Filter by rpo.local.name

Name	Type	In	Required	Description
rpo.local.description	string	query	False	Filter by rpo.local.description
rpo.remote.name	string	query	False	Filter by rpo.remote.name
rpo.remote.description	string	query	False	Filter by rpo.remote.description
rpo.components.name	string	query	False	Filter by rpo.components.name
rpo.components.uuid	string	query	False	Filter by rpo.components.uuid
rpo.components.rpo.local.name	string	query	False	Filter by rpo.components.rpo.local.name • Introduced in: 9.7
rpo.components.rpo.local.description	string	query	False	Filter by rpo.components.rpo.local.description
rpo.components.rpo.remote.name	string	query	False	Filter by rpo.components.rpo.remote.name
rpo.components.rpo.remote.description	string	query	False	Filter by rpo.components.rpo.remote.description
statistics.space.provisioned	string	query	False	Filter by statistics.space.provisioned
statistics.space.used	string	query	False	Filter by statistics.space.used
statistics.space.used_percent	string	query	False	Filter by statistics.space.used_percent

Name	Type	In	Required	Description
statistics.space.used_excluding_reserves	string	query	False	Filter by statistics.space.used_excluding_reserves
statistics.space.logical_used	string	query	False	Filter by statistics.space.logical_used
statistics.space.reserved_unused	string	query	False	Filter by statistics.space.reserved_unused
statistics.space.available	string	query	False	Filter by statistics.space.available
statistics.space.savings	string	query	False	Filter by statistics.space.savings
statistics.iops.total	string	query	False	Filter by statistics.iops.total
statistics.iops.per_tb	string	query	False	Filter by statistics.iops.per_tb
statistics.snapshot.reserve	string	query	False	Filter by statistics.snapshot.reserve
statistics.snapshot.used	string	query	False	Filter by statistics.snapshot.used
statistics.latency.raw	string	query	False	Filter by statistics.latency.raw
statistics.latency.average	string	query	False	Filter by statistics.latency.average
statistics.statistics_incomplete	string	query	False	Filter by statistics.statistics_incomplete

Name	Type	In	Required	Description
statistics.shared_storage_pool	string	query	False	Filter by statistics.shared_storage_pool
statistics.components.name	string	query	False	Filter by statistics.components.name
statistics.components.uuid	string	query	False	Filter by statistics.components.uuid
statistics.components.storage_service.name	string	query	False	Filter by statistics.components.storage_service.name
statistics.components.space.provisioned	string	query	False	Filter by statistics.components.space.provisioned
statistics.components.space.used	string	query	False	Filter by statistics.components.space.used
statistics.components.space.used_percent	string	query	False	Filter by statistics.components.space.used_percent
statistics.components.space.used_excluding_reserves	string	query	False	Filter by statistics.components.space.used_excluding_reserves
statistics.components.space.logical_used	string	query	False	Filter by statistics.components.space.logical_used
statistics.components.space.reserved_unused	string	query	False	Filter by statistics.components.space.reserved_unused

Name	Type	In	Required	Description
statistics.component s.space.available	string	query	False	Filter by statistics.component s.space.available
statistics.component s.space.savings	string	query	False	Filter by statistics.component s.space.savings
statistics.component s.iops.total	string	query	False	Filter by statistics.component s.iops.total
statistics.component s.iops.per_tb	string	query	False	Filter by statistics.component s.iops.per_tb
statistics.component s.snapshot.reserve	string	query	False	Filter by statistics.component s.snapshot.reserve
statistics.component s.snapshot.used	string	query	False	Filter by statistics.component s.snapshot.used
statistics.component s.latency.raw	string	query	False	Filter by statistics.component s.latency.raw
statistics.component s.latency.average	string	query	False	Filter by statistics.component s.latency.average
statistics.component s.statistics_incomplete	string	query	False	Filter by statistics.component s.statistics_incomplete
statistics.component s.shared_storage_pool	string	query	False	Filter by statistics.component s.shared_storage_pool
smart_container	string	query	False	Filter by smart_container • Introduced in: 9.7

Name	Type	In	Required	Description
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
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
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. <ul style="list-style-type: none"> • Default value: 1
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

Status: 200, Ok

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

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
  }
}
```

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	
snapshots	href	

metadata

Name	Type	Description
key	string	Key to look up metadata associated with an application component.
value	string	Value associated with the key.

protection_type

Name	Type	Description
local_rpo	string	The local rpo of the application component.
remote_rpo	string	The remote rpo of the application component.

storage_service

Name	Type	Description
name	string	The storage service of the application component.

object_stores

Name	Type	Description
name	string	The name of the object-store to use.

maxdata_on_san_application_components_tiering

tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

maxdata_on_san_application_components

The list of application components to be created.

Name	Type	Description
file_system	string	Defines the type of file system that will be installed on this application component.
host_management_url	string	The host management URL for this application component.
host_name	string	FQDN of the L2 host that contains the hot tier of this application component.
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
lun_count	integer	The number of LUNs in the application component.
metadata	array[metadata]	

Name	Type	Description
name	string	The name of the application component.
protection_type	protection_type	
storage_service	storage_service	
tiering	maxdata_on_san_application_components_tiering	tiering
total_size	integer	The total size of the application component, split across the member LUNs. Usage: {<integer>[KB MB GB TB PB]}

metadata

Name	Type	Description
key	string	Key to look up metadata associated with an application.
value	string	Value associated with the key.

igroups

Name	Type	Description
name	string	The name of an igroup to nest within a parent igroup. Mutually exclusive with initiators and initiator_objects.
uuid	string	The UUID of an igroup to nest within a parent igroup Usage: <UUID>

initiator_objects

Name	Type	Description
comment	string	A comment available for use by the administrator.
name	string	The WWPN, IQN, or Alias of the initiator. Mutually exclusive with nested igroups and the initiators array.

maxdata_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

maxdata_on_san

MAX Data application using SAN.

Name	Type	Description
app_type	string	Type of the application that is being deployed on the L2.
application_components	array[maxdata_on_san_application_components]	The list of application components to be created.
metadata	array[metadata]	
new_igroups	array[maxdata_on_san_new_igroups]	The list of initiator groups to create.
ocsm_url	string	The OnCommand System Manager URL for this application.
os_type	string	The name of the host OS running the application.

storage_service

Name	Type	Description
name	string	The storage service of the database.

dataset

Name	Type	Description
element_count	integer	The number of storage elements (LUNs for SAN) of the database to maintain. Must be an even number between 2 and 16. Odd numbers will be rounded up to the next even number within range.
replication_factor	integer	The number of data bearing members of the replicaset, including 1 primary and at least 1 secondary.
size	integer	The size of the database. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

mongo_db_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.

Name	Type	Description
protocol	string	The protocol of the new initiator group.

protection_type

Name	Type	Description
local_rpo	string	The local RPO of the application.
remote_rpo	string	The remote RPO of the application.

secondary_igroups

Name	Type	Description
name	string	The name of the initiator group for each secondary.

mongo_db_on_san

MongoDB using SAN.

Name	Type	Description
dataset	dataset	
new_igroups	array[mongo_db_on_san_new_igroups]	The list of initiator groups to create.
os_type	string	The name of the host OS running the application.
primary_igroup_name	string	The initiator group for the primary.
protection_type	protection_type	
secondary_igroups	array[secondary_igroups]	

export_policy

Name	Type	Description
id	integer	The ID of an existing NFS export policy.
name	string	The name of an existing NFS export policy.

component

Name	Type	Description
name	string	Name of the source component.

svm

Name	Type	Description
name	string	Name of the source SVM.

origin

Name	Type	Description
component	component	
svm	svm	

flexcache

Name	Type	Description
dr_cache	boolean	Dr-cache is a FlexCache volume create time option that has the same flexgroup-msid as that of the origin of a FlexCache volume. By default, dr-cache is disabled. The flexgroup-msid of the FlexCache volume does not need to be same as that of the origin of a FlexCache volume.
origin	origin	

policy

Name	Type	Description
name	string	The name of an existing QoS policy.
uuid	string	The UUID of an existing QoS policy. Usage: <UUID>

qos

Name	Type	Description
policy	policy	

nas_application_components_tiering

application-components.tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

application_components

Name	Type	Description
export_policy	export_policy	
flexcache	flexcache	
name	string	The name of the application component.
qos	qos	
scale_out	boolean	Denotes a Flexgroup.
share_count	integer	The number of shares in the application component.
storage_service	storage_service	
tiering	nas_application_components_tiering	application-components.tiering
total_size	integer	The total size of the application component, split across the member shares. Usage: {<integer>[KB MB GB TB PB]}

app_cifs_access

The list of CIFS access controls. You must provide either 'user_or_group' or 'access' to enable CIFS access.

Name	Type	Description
access	string	The CIFS access granted to the user or group.

Name	Type	Description
user_or_group	string	The name of the CIFS user or group that will be granted access.

exclude_aggregates

Name	Type	Description
name	string	The name of the aggregate to exclude. Usage: <aggregate name>
uuid	string	The ID of the aggregate to exclude. Usage: <UUID>

app_nfs_access

The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.

Name	Type	Description
access	string	The NFS access granted.
host	string	The name of the NFS entity granted access.

protection_type

Name	Type	Description
local_policy	string	The Snapshot copy policy to apply to each volume in the smart container. This property is only supported for smart containers. Usage: <snapshot policy>
local_rpo	string	The local RPO of the application.
remote_rpo	string	The remote RPO of the application.

nas

A generic NAS application.

Name	Type	Description
application_components	array[application_components]	

Name	Type	Description
cifs_access	array[app_cifs_access]	The list of CIFS access controls. You must provide either 'user_or_group' or 'access' to enable CIFS access.
cifs_share_name	string	The name of the CIFS share. Usage: <Share>
exclude_aggregates	array[exclude_aggregates]	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
protection_type	protection_type	

performance

Name	Type	Description
storage_service	storage_service	

hosts

Name	Type	Description
nqn	string	The host NQN.

zapp_nvme_components_subsystem

components.subsystem

Name	Type	Description
hosts	array[hosts]	
name	string	The name of the subsystem accessing the component. If neither the name nor the UUID is provided, the name defaults to <application-name>_<component-name>, whether that subsystem already exists or not.
os_type	string	The name of the host OS accessing the component. The default value is the host OS that is running the application.

Name	Type	Description
uuid	string	The UUID of an existing subsystem to be granted access to the component. Usage: <UUID>

zapp_nvme_components_tiering

application-components.tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

components

Name	Type	Description
name	string	The name of the application component.
namespace_count	integer	The number of namespaces in the component.
os_type	string	The name of the host OS running the application.
performance	performance	
qos	qos	
subsystem	zapp_nvme_components_subsystem	components.subsystem
tiering	zapp_nvme_components_tiering	application-components.tiering
total_size	integer	The total size of the component, spread across member namespaces. Usage: {<integer>[KB MB GB TB PB]}

local

Name	Type	Description
name	string	The local RPO of the application.
policy	string	The Snapshot copy policy to apply to each volume in the smart container. This property is only supported for smart containers. Usage: <snapshot policy>

rpo

Name	Type	Description
local	local	

zapp_nvme

An NVME application.

Name	Type	Description
components	array[components]	
os_type	string	The name of the host OS running the application.
rpo	rpo	

storage_service

Name	Type	Description
name	string	The storage service of the archive log.

archive_log

Name	Type	Description
size	integer	The size of the archive log. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

db

Name	Type	Description
size	integer	The size of the database. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the ORACLE_HOME storage volume.

ora_home

Name	Type	Description
size	integer	The size of the ORACLE_HOME storage volume. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the redo log group.

redo_log

Name	Type	Description
mirrored	boolean	Specifies whether the redo log group should be mirrored.
size	integer	The size of the redo log group. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

oracle_on_nfs

Oracle using NFS.

Name	Type	Description
archive_log	archive_log	
db	db	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
ora_home	ora_home	
protection_type	protection_type	
redo_log	redo_log	

oracle_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

oracle_on_san

Oracle using SAN.

Name	Type	Description
archive_log	archive_log	
db	db	

Name	Type	Description
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
new_igroups	array[oracle_on_san_new_igroups]	The list of initiator groups to create.
ora_home	ora_home	
os_type	string	The name of the host OS running the application.
protection_type	protection_type	
redo_log	redo_log	

storage_service

Name	Type	Description
name	string	The storage service of the Oracle grid binary storage volume.

grid_binary

Name	Type	Description
size	integer	The size of the Oracle grid binary storage volume. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the Oracle CRS volume.

oracle_crs

Name	Type	Description
copies	integer	The number of CRS volumes.
size	integer	The size of the Oracle CRS/voting storage volume. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

oracle_rac_on_nfs

Oracle RAC using NFS.

Name	Type	Description
archive_log	archive_log	
db	db	
grid_binary	grid_binary	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
ora_home	ora_home	
oracle_crs	oracle_crs	
protection_type	protection_type	
redo_log	redo_log	

db_sids

Name	Type	Description
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.

oracle_rac_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

oracle_rac_on_san

Oracle RAC using SAN.

Name	Type	Description
archive_log	archive_log	
db	db	
db_sids	array[db_sids]	
grid_binary	grid_binary	
new_igroups	array[oracle_rac_on_san_new_igroups]	The list of initiator groups to create.
ora_home	ora_home	
oracle_crs	oracle_crs	
os_type	string	The name of the host OS running the application.
protection_type	protection_type	
redo_log	redo_log	

local

Name	Type	Description
description	string	A detailed description of the local RPO. This will include details about the Snapshot copy schedule.
name	string	The local RPO of the component. This indicates how often component Snapshot copies are automatically created.

remote

Name	Type	Description
description	string	A detailed description of the remote RPO.
name	string	The remote RPO of the component. A remote RPO of zero indicates that the component is synchronously replicated to another cluster.

rpo

Name	Type	Description
local	local	
remote	remote	

components

Name	Type	Description
name	string	Component Name.
rpo	rpo	
uuid	string	Component UUID.

local

Name	Type	Description
description	string	A detailed description of the local RPO. This will include details about the Snapshot copy schedule.
name	string	The local RPO of the application. This indicates how often application Snapshot copies are automatically created.

remote

Name	Type	Description
description	string	A detailed description of the remote RPO.
name	string	The remote RPO of the application. A remote RPO of zero indicates that the application is synchronously replicated to another cluster.

rpo

Name	Type	Description
components	array[components]	
is_supported	boolean	Is RPO supported for this application? Generation 1 applications did not support Snapshot copies or MetroCluster.
local	local	
remote	remote	

zapp_s3_bucket_application_components_access_policies_conditions

conditions

Name	Type	Description
delimiters	array[string]	
max_keys	array[integer]	
operator	string	Policy Condition Operator.
prefixes	array[string]	

Name	Type	Description
source_ips	array[string]	
usernames	array[string]	

zapp_s3_bucket_application_components_access_policies

The list of S3 objectstore policies to be created.

Name	Type	Description
actions	array[string]	
conditions	array[zapp_s3_bucket_application_components_access_policies_conditions]	conditions.
effect	string	Allow or Deny Access.
principals	array[string]	
resources	array[string]	
sid	string	Statement Identifier Usage: <(size 1..256)>

zapp_s3_bucket_application_components

The list of application components to be created.

Name	Type	Description
access_policies	array[zapp_s3_bucket_application_components_access_policies]	The list of S3 objectstore policies to be created.
capacity_tier	boolean	Prefer lower latency storage under similar media costs.
comment	string	Object Store Server Bucket Description Usage: <(size 1..256)>
exclude_aggregates	array[exclude_aggregates]	
name	string	The name of the application component.
qos	qos	
size	integer	The total size of the S3 Bucket, split across the member components. Usage: {<integer>[KB MB GB TB PB]}

Name	Type	Description
storage_service	storage_service	
uuid	string	Object Store Server Bucket UUID Usage: <UUID>
versioning_state	string	Bucket Versioning State.

zapp_s3_bucket

A generic S3 bucket application.

Name	Type	Description
application_components	array[zapp_s3_bucket_application_components]	The list of application components to be created.

san_application_components_tiering

application-components.tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

application_components

Name	Type	Description
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
lun_count	integer	The number of LUNs in the application component.

Name	Type	Description
name	string	The name of the application component.
os_type	string	The name of the host OS running the application.
qos	qos	
storage_service	storage_service	
tiering	san_application_components_tiering	application-components.tiering
total_size	integer	The total size of the application component, split across the member LUNs. Usage: {<integer>[KB MB GB TB PB]}

san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

san

A generic SAN application.

Name	Type	Description
application_components	array[application_components]	

Name	Type	Description
exclude_aggregates	array[exclude_aggregates]	
new_igroups	array[san_new_igroups]	The list of initiator groups to create.
os_type	string	The name of the host OS running the application.
protection_type	protection_type	

storage_service

Name	Type	Description
name	string	The storage service of the DB.

db

Name	Type	Description
size	integer	The size of the DB. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the log DB.

log

Name	Type	Description
size	integer	The size of the log DB. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

sql_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

storage_service

Name	Type	Description
name	string	The storage service of the temp DB.

temp_db

Name	Type	Description
size	integer	The size of the temp DB. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

sql_on_san

Microsoft SQL using SAN.

Name	Type	Description
db	db	

Name	Type	Description
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
log	log	
new_igroups	array[sql_on_san_new_igroups]	The list of initiator groups to create.
os_type	string	The name of the host OS running the application.
protection_type	protection_type	
server_cores_count	integer	The number of server cores for the DB.
temp_db	temp_db	

access

Name	Type	Description
installer	string	SQL installer admin user name.
service_account	string	SQL service account user name.

sql_on_smb

Microsoft SQL using SMB.

Name	Type	Description
access	access	
db	db	
log	log	
protection_type	protection_type	
server_cores_count	integer	The number of server cores for the DB.
temp_db	temp_db	

iops

Name	Type	Description
per_tb	integer	The number of IOPS per terabyte of logical space currently being used by the application component.
total	integer	The total number of IOPS being used by the application component.

latency

Name	Type	Description
average	integer	The cumulative average response time in microseconds for this component.
raw	integer	The cumulative response time in microseconds for this component.

snapshot

Name	Type	Description
reserve	integer	The amount of space reserved by the system for Snapshot copies.
used	integer	The amount of spacing currently in use by the system to store Snapshot copies.

space

Name	Type	Description
available	integer	<p>The available amount of space left in the application component. Note that this field has limited meaning for SAN applications. Space may be considered used from ONTAP's perspective while the host filesystem still considers it available.</p> <ul style="list-style-type: none"> • readOnly: 1 • Introduced in: 9.6
logical_used	integer	<p>The amount of space that would currently be used if no space saving features were enabled. For example, if compression were the only space saving feature enabled, this field would represent the uncompressed amount of space used.</p>
provisioned	integer	<p>The originally requested amount of space that was provisioned for the application component.</p>
reserved_unused	integer	<p>The amount of space reserved for system features such as Snapshot copies that has not yet been used.</p>
savings	integer	<p>The amount of space saved by all enabled space saving features.</p>
used	integer	<p>The amount of space that is currently being used by the application component. Note that this includes any space reserved by the system for features such as Snapshot copies.</p>
used_excluding_reserves	integer	<p>The amount of space that is currently being used, excluding any space that is reserved by the system for features such as Snapshot copies.</p>

Name	Type	Description
used_percent	integer	The percentage of the originally provisioned space that is currently being used by the application component.

storage_service

Name	Type	Description
name	string	The storage service name. AFF systems support the extreme storage service. All other systems only support value.
uuid	string	The storage service UUID.

components

Name	Type	Description
iops	iops	
latency	latency	
name	string	Component Name.
shared_storage_pool	boolean	An application component is considered to use a shared storage pool if storage elements for other components reside on the same aggregate as storage elements for this component.
snapshot	snapshot	
space	space	
statistics_incomplete	boolean	If not all storage elements of the application component are currently available, the returned statistics might only include data from those elements that were available.
storage_service	storage_service	
uuid	string	Component UUID.

iops

Name	Type	Description
per_tb	integer	The number of IOPS per terabyte of logical space currently being used by the application.
total	integer	The total number of IOPS being used by the application.

latency

Name	Type	Description
average	integer	The cumulative average response time in microseconds for this application.
raw	integer	The cumulative response time in microseconds for this application.

space

Name	Type	Description
available	integer	The available amount of space left in the application. Note that this field has limited meaning for SAN applications. Space may be considered used from ONTAP's perspective while the host filesystem still considers it available. <ul style="list-style-type: none"> • readOnly: 1 • Introduced in: 9.6
logical_used	integer	The amount of space that would currently be used if no space saving features were enabled. For example, if compression were the only space saving feature enabled, this field would represent the uncompressed amount of space used.
provisioned	integer	The originally requested amount of space that was provisioned for the application.

Name	Type	Description
reserved_unused	integer	The amount of space reserved for system features such as Snapshot copies that has not yet been used.
savings	integer	The amount of space saved by all enabled space saving features.
used	integer	The amount of space that is currently being used by the application. Note that this includes any space reserved by the system for features such as Snapshot copies.
used_excluding_reserves	integer	The amount of space that is currently being used, excluding any space that is reserved by the system for features such as Snapshot copies.
used_percent	integer	The percentage of the originally provisioned space that is currently being used by the application.

statistics

Name	Type	Description
components	array[components]	
iops	iops	
latency	latency	
shared_storage_pool	boolean	An application is considered to use a shared storage pool if storage elements for multiple components reside on the same aggregate.
snapshot	snapshot	
space	space	

Name	Type	Description
statistics_incomplete	boolean	If not all storage elements of the application are currently available, the returned statistics might only include data from those elements that were available.

svm

Name	Type	Description
name	string	SVM Name. Either the SVM name or UUID must be provided to create an application.
uuid	string	SVM UUID. Either the SVM name or UUID must be provided to create an application.

self_link

Name	Type	Description
self	href	

template

Name	Type	Description
_links	self_link	
name	string	The name of the template that was used to provision this application.
protocol	string	The protocol access of the template that was used to provision this application.

Name	Type	Description
version	integer	<p>The version of the template that was used to provision this application. The template version changes only if the layout of the application changes over time. For example, redo logs in Oracle RAC templates were updated and provisioned differently in DATA ONTAP 9.3.0 compared to prior releases, so the version number was increased. If layouts change in the future, the changes will be documented along with the corresponding version numbers.</p> <ul style="list-style-type: none"> • readOnly: 1 • Introduced in: 9.6

storage_service

Name	Type	Description
name	string	The storage service of the desktops.

desktops

Name	Type	Description
count	integer	The number of desktops to support.
size	integer	The size of the desktops. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

hyper_v_access

Name	Type	Description
service_account	string	Hyper-V service account.

vdi_on_nas

A VDI application using NAS.

Name	Type	Description
desktops	desktops	
hyper_v_access	hyper_v_access	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
protection_type	protection_type	

vdi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
protocol	string	The protocol of the new initiator group.

vdi_on_san

A VDI application using SAN.

Name	Type	Description
desktops	desktops	
hypervisor	string	The name of the hypervisor hosting the application.
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.

Name	Type	Description
new_igroups	array[vdi_on_san_new_igroups]	The list of initiator groups to create.
protection_type	protection_type	

storage_service

Name	Type	Description
name	string	The storage service of the datastore.

datastore

Name	Type	Description
count	integer	The number of datastores to support.
size	integer	The size of the datastore. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

vsi_on_nas

A VSI application using NAS.

Name	Type	Description
datastore	datastore	
hyper_v_access	hyper_v_access	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
protection_type	protection_type	

vsi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	

Name	Type	Description
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
protocol	string	The protocol of the new initiator group.

vsi_on_san

A VSI application using SAN.

Name	Type	Description
datastore	datastore	
hypervisor	string	The name of the hypervisor hosting the application.
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
new_igroups	array[vsi_on_san_new_igroups]	The list of initiator groups to create.
protection_type	protection_type	

application

Applications

Name	Type	Description
_links	_links	
creation_timestamp	string	The time when the application was created.

Name	Type	Description
delete_data	boolean	Should application storage elements be deleted? An application is considered to use storage elements from a shared storage pool. Possible values are 'true' and 'false'. If the value is 'true', the application will be deleted in its entirety. If the value is 'false', the storage elements will be disassociated from the application and preserved. The application will then be deleted.
generation	integer	The generation number of the application. This indicates which features are supported on the application. For example, generation 1 applications do not support Snapshot copies. Support for Snapshot copies was added at generation 2. Any future generation numbers and their feature set will be documented.
maxdata_on_san	maxdata_on_san	MAX Data application using SAN.
mongo_db_on_san	mongo_db_on_san	MongoDB using SAN.
name	string	Application Name. This field is user supplied when the application is created.
nas	nas	A generic NAS application.
nvme	zapp_nvme	An NVME application.
oracle_on_nfs	oracle_on_nfs	Oracle using NFS.
oracle_on_san	oracle_on_san	Oracle using SAN.
oracle_rac_on_nfs	oracle_rac_on_nfs	Oracle RAC using NFS.
oracle_rac_on_san	oracle_rac_on_san	Oracle RAC using SAN.

Name	Type	Description
protection_granularity	string	Protection granularity determines the scope of Snapshot copy operations for the application. Possible values are "application" and "component". If the value is "application", Snapshot copy operations are performed on the entire application. If the value is "component", Snapshot copy operations are performed separately on the application components.
rpo	rpo	
s3_bucket	zapp_s3_bucket	A generic S3 bucket application.
san	san	A generic SAN application.
smart_container	boolean	Identifies if this is a smart container or not.
sql_on_san	sql_on_san	Microsoft SQL using SAN.
sql_on_smb	sql_on_smb	Microsoft SQL using SMB.
state	string	The state of the application. For full functionality, applications must be in the online state. Other states indicate that the application is in a transient state and not all operations are supported.
statistics	statistics	
svm	svm	
template	template	
uuid	string	Application UUID. This field is generated when the application is created.
vdi_on_nas	vdi_on_nas	A VDI application using NAS.
vdi_on_san	vdi_on_san	A VDI application using SAN.
vsi_on_nas	vsi_on_nas	A VSI application using NAS.

Name	Type	Description
vsi_on_san	vsi_on_san	A VSI application using SAN.

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 an application

POST `/application/applications`

Introduced In: 9.6

Creates an application.

Template properties

The application APIs appear to be complex and long in this documentation because we document every possible template, of which there are currently 14. When creating an application, only a single template is used, so it is best to focus only on the template of interest. Other than the properties for the chosen template, only the `name` and `svm` of the application must be provided. The following three sections provided guidelines on using the properties of the templates, but the whole idea behind the templates is to automatically follow the best practices of the given application, so the only way to determine the exact list of required properties and default values is to dig in to the model section of the template. The templates are all top level properties of the application object with names matching the values returned by [GET /application/templates](#) .

Required properties

- `svm.uuid` or `svm.name` - The existing SVM in which to create the application.

- `name` - The name for the application.
- `<template>` - Properties for one template must be provided. In general, the following properties are required, however the naming of these may vary slightly from template to template.
 - `<template>.name` - The generic templates require names for the components of the application. Other templates name the components automatically.
 - `<template>.application_component.size` - This generally refers to the size of an application component, which may be spread across multiple underlying storage objects (volumes, LUNs, etc...).
 - One of the following must be specified:
 - `nas.nfs_access` or an identifier (name or id) of an existing `export-policy`.
 - `nas.cifs_access`
 - `san.application_application.igroup_name`
 - To specify that a NAS application is not to be exposed via NFS nor CIFS:
 - `nas.application_component.export_policy.name` is 'none', and
 - `nas.application.cifs_share_name` is 'none'.
 - The name of the CIFS share can be provided through the `nas.application.cifs_share_name` attribute. If not provided, the CIFS share name will be the same as the `nas.application_component.name` attribute, including any suffix applied due to creating multiple application components in one post.
 - `san.os_type` - All SAN applications require an `os_type` to be specified in some way. Some templates refer to this as the `hypervisor`.

Recommended optional properties

- `<template>` - The following properties are available in some templates.
 - `san.new_igroups.*` - SAN applications can use existing initiator groups or create new ones. When creating new initiator groups, `new_igroups.name` is required and the other properties may be used to fully specify the new initiator group.

Default property values

If not specified in POST, the follow default property values are assigned. It is recommended that most of these properties be provided explicitly rather than relying upon the defaults. The defaults are intended to make it as easy as possible to provision and connect to an application.

- `template.name` - Defaults to match the `<template>` provided. If specified, the value of this property must match the provided template properties.
- `<template>` - The majority of template properties have default values. The defaults may vary from template to template. See the model of each template for complete details. In general the following patterns are common across all template properties. The location of these properties varies from template to template.
 - `<template>.storage_service.name` - *value*
 - `<template>.protection_type.local_rpo` - *hourly* (Hourly Snapshot copies)
 - `<template>.protection_type.remote_rpo` - *none* (Not MetroCluster)

- `san.new_igroups.os_type` - Defaults to match the `os_type` provided for the application, but may need to be provided explicitly when using virtualization.

Optional components

A common pattern across many templates are objects that are optional, but once any property in the object is specified, other properties within the object become required. Many applications have optional components. For example, provisioning a database without a component to store the logs is supported. If the properties related to the logs are omitted, no storage will be provisioned for logs. But when the additional component is desired, the size is required. Specifying any other property of a component without specifying the size is not supported. In the model of each template, the required components are indicated with a red '*'. When a `size` property is listed as optional, that means the component itself is optional, and the size should be specified to include that component in the application.

POST body examples

1. Create a generic SAN application that exposes four LUNs to an existing initiator group, *igroup_1*.

```
{
  "name": "app1",
  "svm": { "name": "svm1" },
  "san": {
    "os_type": "linux",
    "application_components": [
      { "name": "component1", "total_size": "10GB", "lun_count": 4,
"igroup_name": "igroup_1" }
    ]
  }
}
```

1. Create an SQL application that can be accessed via initiator *iqn.2017-01.com.example:foo* from a new initiator group, *igroup_2*.

```

{
  "name": "app2",
  "svm": { "name": "svm1" },
  "sql_on_san": {
    "db": { "size": "5GB" },
    "log": { "size": "1GB" },
    "temp_db": { "size": "2GB" },
    "igroup_name": "igroup_2",
    "new_igroups": [
      { "name": "igroup_2", "initiators": [ "iqn.2017-
01.com.example:foo" ] }
    ]
  }
}

```

1. The following body creates the exact same SQL application, but manually provides all the defaults that were excluded from the previous call.



The model of a *sql_on_san* application documents all these default values.

```

{
  "name": "app3",
  "svm": { "name": "svm1" },
  "template": { "name": "sql_on_san" },
  "sql_on_san": {
    "os_type": "windows_2008",
    "server_cores_count": 8,
    "db": { "size": "5GB", "storage_service": { "name": "value" } },
    "log": { "size": "1GB", "storage_service": { "name": "value" } },
    "temp_db": { "size": "2GB", "storage_service": { "name": "value" } }
  },
  "igroup_name": "igroup_2",
  "new_igroups": [
    {
      "name": "igroup_2",
      "protocol": "mixed",
      "os_type": "windows",
      "initiators": [ "iqn.a.new.initiator" ]
    }
  ],
  "protection_type": { "local_rpo": "none" }
}

```

Learn more

- [DOC /application](#)
- [Asynchronous operations](#)

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	
creation_timestamp	string	The time when the application was created.
delete_data	boolean	Should application storage elements be deleted? An application is considered to use storage elements from a shared storage pool. Possible values are 'true' and 'false'. If the value is 'true', the application will be deleted in its entirety. If the value is 'false', the storage elements will be disassociated from the application and preserved. The application will then be deleted.
generation	integer	The generation number of the application. This indicates which features are supported on the application. For example, generation 1 applications do not support Snapshot copies. Support for Snapshot copies was added at generation 2. Any future generation numbers and their feature set will be documented.
maxdata_on_san	maxdata_on_san	MAX Data application using SAN.
mongo_db_on_san	mongo_db_on_san	MongoDB using SAN.
name	string	Application Name. This field is user supplied when the application is created.
nas	nas	A generic NAS application.
nvme	zapp_nvme	An NVME application.
oracle_on_nfs	oracle_on_nfs	Oracle using NFS.
oracle_on_san	oracle_on_san	Oracle using SAN.
oracle_rac_on_nfs	oracle_rac_on_nfs	Oracle RAC using NFS.

Name	Type	Description
oracle_rac_on_san	oracle_rac_on_san	Oracle RAC using SAN.
protection_granularity	string	Protection granularity determines the scope of Snapshot copy operations for the application. Possible values are "application" and "component". If the value is "application", Snapshot copy operations are performed on the entire application. If the value is "component", Snapshot copy operations are performed separately on the application components.
rpo	rpo	
s3_bucket	zapp_s3_bucket	A generic S3 bucket application.
san	san	A generic SAN application.
smart_container	boolean	Identifies if this is a smart container or not.
sql_on_san	sql_on_san	Microsoft SQL using SAN.
sql_on_smb	sql_on_smb	Microsoft SQL using SMB.
state	string	The state of the application. For full functionality, applications must be in the online state. Other states indicate that the application is in a transient state and not all operations are supported.
statistics	statistics	
svm	svm	
template	template	
uuid	string	Application UUID. This field is generated when the application is created.
vdi_on_nas	vdi_on_nas	A VDI application using NAS.
vdi_on_san	vdi_on_san	A VDI application using SAN.

Name	Type	Description
vsi_on_nas	vsi_on_nas	A VSI application using NAS.
vsi_on_san	vsi_on_san	A VSI application using SAN.

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

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

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	
snapshots	href	

metadata

Name	Type	Description
key	string	Key to look up metadata associated with an application component.
value	string	Value associated with the key.

protection_type

Name	Type	Description
local_rpo	string	The local rpo of the application component.
remote_rpo	string	The remote rpo of the application component.

storage_service

Name	Type	Description
name	string	The storage service of the application component.

object_stores

Name	Type	Description
name	string	The name of the object-store to use.

maxdata_on_san_application_components_tiering

tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

maxdata_on_san_application_components

The list of application components to be created.

Name	Type	Description
file_system	string	Defines the type of file system that will be installed on this application component.
host_management_url	string	The host management URL for this application component.
host_name	string	FQDN of the L2 host that contains the hot tier of this application component.
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
lun_count	integer	The number of LUNs in the application component.
metadata	array[metadata]	
name	string	The name of the application component.
protection_type	protection_type	
storage_service	storage_service	

Name	Type	Description
tiering	maxdata_on_san_application_components_tiering	tiering
total_size	integer	The total size of the application component, split across the member LUNs. Usage: {<integer>[KB MB GB TB PB]}

metadata

Name	Type	Description
key	string	Key to look up metadata associated with an application.
value	string	Value associated with the key.

igroups

Name	Type	Description
name	string	The name of an igroup to nest within a parent igroup. Mutually exclusive with initiators and initiator_objects.
uuid	string	The UUID of an igroup to nest within a parent igroup Usage: <UUID>

initiator_objects

Name	Type	Description
comment	string	A comment available for use by the administrator.
name	string	The WWPN, IQN, or Alias of the initiator. Mutually exclusive with nested igroups and the initiators array.

maxdata_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

maxdata_on_san

MAX Data application using SAN.

Name	Type	Description
app_type	string	Type of the application that is being deployed on the L2.
application_components	array[maxdata_on_san_application_components]	The list of application components to be created.
metadata	array[metadata]	
new_igroups	array[maxdata_on_san_new_igroups]	The list of initiator groups to create.
ocsm_url	string	The OnCommand System Manager URL for this application.
os_type	string	The name of the host OS running the application.

storage_service

Name	Type	Description
name	string	The storage service of the database.

dataset

Name	Type	Description
element_count	integer	The number of storage elements (LUNs for SAN) of the database to maintain. Must be an even number between 2 and 16. Odd numbers will be rounded up to the next even number within range.
replication_factor	integer	The number of data bearing members of the replicaset, including 1 primary and at least 1 secondary.
size	integer	The size of the database. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

mongo_db_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

protection_type

Name	Type	Description
local_rpo	string	The local RPO of the application.
remote_rpo	string	The remote RPO of the application.

secondary_igroups

Name	Type	Description
name	string	The name of the initiator group for each secondary.

mongo_db_on_san

MongoDB using SAN.

Name	Type	Description
dataset	dataset	
new_igroups	array[mongo_db_on_san_new_igroups]	The list of initiator groups to create.
os_type	string	The name of the host OS running the application.
primary_igroup_name	string	The initiator group for the primary.
protection_type	protection_type	
secondary_igroups	array[secondary_igroups]	

export_policy

Name	Type	Description
id	integer	The ID of an existing NFS export policy.
name	string	The name of an existing NFS export policy.

component

Name	Type	Description
name	string	Name of the source component.

svm

Name	Type	Description
name	string	Name of the source SVM.

origin

Name	Type	Description
component	component	
svm	svm	

flexcache

Name	Type	Description
dr_cache	boolean	Dr-cache is a FlexCache volume create time option that has the same flexgroup-msid as that of the origin of a FlexCache volume. By default, dr-cache is disabled. The flexgroup-msid of the FlexCache volume does not need to be same as that of the origin of a FlexCache volume.
origin	origin	

policy

Name	Type	Description
name	string	The name of an existing QoS policy.
uuid	string	The UUID of an existing QoS policy. Usage: <UUID>

qos

Name	Type	Description
policy	policy	

nas_application_components_tiering

application-components.tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

application_components

Name	Type	Description
export_policy	export_policy	
flexcache	flexcache	
name	string	The name of the application component.
qos	qos	
scale_out	boolean	Denotes a Flexgroup.
share_count	integer	The number of shares in the application component.
storage_service	storage_service	
tiering	nas_application_components_tiering	application-components.tiering
total_size	integer	The total size of the application component, split across the member shares. Usage: {<integer>[KB MB GB TB PB]}

app_cifs_access

The list of CIFS access controls. You must provide either 'user_or_group' or 'access' to enable CIFS access.

Name	Type	Description
access	string	The CIFS access granted to the user or group.
user_or_group	string	The name of the CIFS user or group that will be granted access.

exclude_aggregates

Name	Type	Description
name	string	The name of the aggregate to exclude. Usage: <aggregate name>
uuid	string	The ID of the aggregate to exclude. Usage: <UUID>

app_nfs_access

The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.

Name	Type	Description
access	string	The NFS access granted.
host	string	The name of the NFS entity granted access.

protection_type

Name	Type	Description
local_policy	string	The Snapshot copy policy to apply to each volume in the smart container. This property is only supported for smart containers. Usage: <snapshot policy>
local_rpo	string	The local RPO of the application.
remote_rpo	string	The remote RPO of the application.

nas

A generic NAS application.

Name	Type	Description
application_components	array[application_components]	
cifs_access	array[app_cifs_access]	The list of CIFS access controls. You must provide either 'user_or_group' or 'access' to enable CIFS access.

Name	Type	Description
cifs_share_name	string	The name of the CIFS share. Usage: <Share>
exclude_aggregates	array[exclude_aggregates]	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
protection_type	protection_type	

performance

Name	Type	Description
storage_service	storage_service	

hosts

Name	Type	Description
nqn	string	The host NQN.

zapp_nvme_components_subsystem

components.subsystem

Name	Type	Description
hosts	array[hosts]	
name	string	The name of the subsystem accessing the component. If neither the name nor the UUID is provided, the name defaults to <application-name>_<component-name>, whether that subsystem already exists or not.
os_type	string	The name of the host OS accessing the component. The default value is the host OS that is running the application.
uuid	string	The UUID of an existing subsystem to be granted access to the component. Usage: <UUID>

zapp_nvme_components_tiering

application-components.tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

components

Name	Type	Description
name	string	The name of the application component.
namespace_count	integer	The number of namespaces in the component.
os_type	string	The name of the host OS running the application.
performance	performance	
qos	qos	
subsystem	zapp_nvme_components_subsystem	components.subsystem
tiering	zapp_nvme_components_tiering	application-components.tiering
total_size	integer	The total size of the component, spread across member namespaces. Usage: {<integer>[KB MB GB TB PB]}

local

Name	Type	Description
name	string	The local RPO of the application.

Name	Type	Description
policy	string	The Snapshot copy policy to apply to each volume in the smart container. This property is only supported for smart containers. Usage: <snapshot policy>

rpo

Name	Type	Description
local	local	

zapp_nvme

An NVME application.

Name	Type	Description
components	array[components]	
os_type	string	The name of the host OS running the application.
rpo	rpo	

storage_service

Name	Type	Description
name	string	The storage service of the archive log.

archive_log

Name	Type	Description
size	integer	The size of the archive log. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

db

Name	Type	Description
size	integer	The size of the database. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the ORACLE_HOME storage volume.

ora_home

Name	Type	Description
size	integer	The size of the ORACLE_HOME storage volume. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the redo log group.

redo_log

Name	Type	Description
mirrored	boolean	Specifies whether the redo log group should be mirrored.
size	integer	The size of the redo log group. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

oracle_on_nfs

Oracle using NFS.

Name	Type	Description
archive_log	archive_log	
db	db	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.

Name	Type	Description
ora_home	ora_home	
protection_type	protection_type	
redo_log	redo_log	

oracle_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

oracle_on_san

Oracle using SAN.

Name	Type	Description
archive_log	archive_log	
db	db	
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.

Name	Type	Description
new_igroups	array[oracle_on_san_new_igroups]	The list of initiator groups to create.
ora_home	ora_home	
os_type	string	The name of the host OS running the application.
protection_type	protection_type	
redo_log	redo_log	

storage_service

Name	Type	Description
name	string	The storage service of the Oracle grid binary storage volume.

grid_binary

Name	Type	Description
size	integer	The size of the Oracle grid binary storage volume. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the Oracle CRS volume.

oracle_crs

Name	Type	Description
copies	integer	The number of CRS volumes.
size	integer	The size of the Oracle CRS/voting storage volume. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

oracle_rac_on_nfs

Oracle RAC using NFS.

Name	Type	Description
archive_log	archive_log	
db	db	
grid_binary	grid_binary	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
ora_home	ora_home	
oracle_crs	oracle_crs	
protection_type	protection_type	
redo_log	redo_log	

db_sids

Name	Type	Description
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.

oracle_rac_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.

Name	Type	Description
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

oracle_rac_on_san

Oracle RAC using SAN.

Name	Type	Description
archive_log	archive_log	
db	db	
db_sids	array[db_sids]	
grid_binary	grid_binary	
new_igroups	array[oracle_rac_on_san_new_igroups]	The list of initiator groups to create.
ora_home	ora_home	
oracle_crs	oracle_crs	
os_type	string	The name of the host OS running the application.
protection_type	protection_type	
redo_log	redo_log	

local

Name	Type	Description
description	string	A detailed description of the local RPO. This will include details about the Snapshot copy schedule.
name	string	The local RPO of the component. This indicates how often component Snapshot copies are automatically created.

remote

Name	Type	Description
description	string	A detailed description of the remote RPO.
name	string	The remote RPO of the component. A remote RPO of zero indicates that the component is synchronously replicated to another cluster.

rpo

Name	Type	Description
local	local	
remote	remote	

components

Name	Type	Description
name	string	Component Name.
rpo	rpo	
uuid	string	Component UUID.

local

Name	Type	Description
description	string	A detailed description of the local RPO. This will include details about the Snapshot copy schedule.
name	string	The local RPO of the application. This indicates how often application Snapshot copies are automatically created.

remote

Name	Type	Description
description	string	A detailed description of the remote RPO.

Name	Type	Description
name	string	The remote RPO of the application. A remote RPO of zero indicates that the application is synchronously replicated to another cluster.

rpo

Name	Type	Description
components	array[components]	
is_supported	boolean	Is RPO supported for this application? Generation 1 applications did not support Snapshot copies or MetroCluster.
local	local	
remote	remote	

zapp_s3_bucket_application_components_access_policies_conditions

conditions

Name	Type	Description
delimiters	array[string]	
max_keys	array[integer]	
operator	string	Policy Condition Operator.
prefixes	array[string]	
source_ips	array[string]	
usernames	array[string]	

zapp_s3_bucket_application_components_access_policies

The list of S3 objectstore policies to be created.

Name	Type	Description
actions	array[string]	
conditions	array[zapp_s3_bucket_application_components_access_policies_conditions]	conditions.
effect	string	Allow or Deny Access.
principals	array[string]	

Name	Type	Description
resources	array[string]	
sid	string	Statement Identifier Usage: <(size 1..256)>

zapp_s3_bucket_application_components

The list of application components to be created.

Name	Type	Description
access_policies	array[zapp_s3_bucket_application_components_access_policies]	The list of S3 objectstore policies to be created.
capacity_tier	boolean	Prefer lower latency storage under similar media costs.
comment	string	Object Store Server Bucket Description Usage: <(size 1..256)>
exclude_aggregates	array[exclude_aggregates]	
name	string	The name of the application component.
qos	qos	
size	integer	The total size of the S3 Bucket, split across the member components. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	
uuid	string	Object Store Server Bucket UUID Usage: <UUID>
versioning_state	string	Bucket Versioning State.

zapp_s3_bucket

A generic S3 bucket application.

Name	Type	Description
application_components	array[zapp_s3_bucket_application_components]	The list of application components to be created.

san_application_components_tiering

application-components.tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

application_components

Name	Type	Description
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
lun_count	integer	The number of LUNs in the application component.
name	string	The name of the application component.
os_type	string	The name of the host OS running the application.
qos	qos	
storage_service	storage_service	
tiering	san_application_components_tiering	application-components.tiering
total_size	integer	The total size of the application component, split across the member LUNs. Usage: {<integer>[KB MB GB TB PB]}

san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

san

A generic SAN application.

Name	Type	Description
application_components	array[application_components]	
exclude_aggregates	array[exclude_aggregates]	
new_igroups	array[san_new_igroups]	The list of initiator groups to create.
os_type	string	The name of the host OS running the application.
protection_type	protection_type	

storage_service

Name	Type	Description
name	string	The storage service of the DB.

db

Name	Type	Description
size	integer	The size of the DB. Usage: {<integer>[KB MB GB TB PB]}

Name	Type	Description
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the log DB.

log

Name	Type	Description
size	integer	The size of the log DB. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

sql_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

storage_service

Name	Type	Description
name	string	The storage service of the temp DB.

temp_db

Name	Type	Description
size	integer	The size of the temp DB. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

sql_on_san

Microsoft SQL using SAN.

Name	Type	Description
db	db	
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
log	log	
new_igroups	array[sql_on_san_new_igroups]	The list of initiator groups to create.
os_type	string	The name of the host OS running the application.
protection_type	protection_type	
server_cores_count	integer	The number of server cores for the DB.
temp_db	temp_db	

access

Name	Type	Description
installer	string	SQL installer admin user name.

Name	Type	Description
service_account	string	SQL service account user name.

sql_on_smb

Microsoft SQL using SMB.

Name	Type	Description
access	access	
db	db	
log	log	
protection_type	protection_type	
server_cores_count	integer	The number of server cores for the DB.
temp_db	temp_db	

iops

Name	Type	Description
per_tb	integer	The number of IOPS per terabyte of logical space currently being used by the application component.
total	integer	The total number of IOPS being used by the application component.

latency

Name	Type	Description
average	integer	The cumulative average response time in microseconds for this component.
raw	integer	The cumulative response time in microseconds for this component.

snapshot

Name	Type	Description
reserve	integer	The amount of space reserved by the system for Snapshot copies.
used	integer	The amount of spacing currently in use by the system to store Snapshot copies.

space

Name	Type	Description
available	integer	The available amount of space left in the application component. Note that this field has limited meaning for SAN applications. Space may be considered used from ONTAP's perspective while the host filesystem still considers it available. <ul style="list-style-type: none"> • readOnly: 1 • Introduced in: 9.6
logical_used	integer	The amount of space that would currently be used if no space saving features were enabled. For example, if compression were the only space saving feature enabled, this field would represent the uncompressed amount of space used.
provisioned	integer	The originally requested amount of space that was provisioned for the application component.
reserved_unused	integer	The amount of space reserved for system features such as Snapshot copies that has not yet been used.
savings	integer	The amount of space saved by all enabled space saving features.

Name	Type	Description
used	integer	The amount of space that is currently being used by the application component. Note that this includes any space reserved by the system for features such as Snapshot copies.
used_excluding_reserves	integer	The amount of space that is currently being used, excluding any space that is reserved by the system for features such as Snapshot copies.
used_percent	integer	The percentage of the originally provisioned space that is currently being used by the application component.

storage_service

Name	Type	Description
name	string	The storage service name. AFF systems support the extreme storage service. All other systems only support value.
uuid	string	The storage service UUID.

components

Name	Type	Description
iops	iops	
latency	latency	
name	string	Component Name.
shared_storage_pool	boolean	An application component is considered to use a shared storage pool if storage elements for other components reside on the same aggregate as storage elements for this component.
snapshot	snapshot	
space	space	

Name	Type	Description
statistics_incomplete	boolean	If not all storage elements of the application component are currently available, the returned statistics might only include data from those elements that were available.
storage_service	storage_service	
uuid	string	Component UUID.

iops

Name	Type	Description
per_tb	integer	The number of IOPS per terabyte of logical space currently being used by the application.
total	integer	The total number of IOPS being used by the application.

latency

Name	Type	Description
average	integer	The cumulative average response time in microseconds for this application.
raw	integer	The cumulative response time in microseconds for this application.

space

Name	Type	Description
available	integer	<p>The available amount of space left in the application. Note that this field has limited meaning for SAN applications. Space may be considered used from ONTAP's perspective while the host filesystem still considers it available.</p> <ul style="list-style-type: none"> • readOnly: 1 • Introduced in: 9.6

Name	Type	Description
logical_used	integer	The amount of space that would currently be used if no space saving features were enabled. For example, if compression were the only space saving feature enabled, this field would represent the uncompressed amount of space used.
provisioned	integer	The originally requested amount of space that was provisioned for the application.
reserved_unused	integer	The amount of space reserved for system features such as Snapshot copies that has not yet been used.
savings	integer	The amount of space saved by all enabled space saving features.
used	integer	The amount of space that is currently being used by the application. Note that this includes any space reserved by the system for features such as Snapshot copies.
used_excluding_reserves	integer	The amount of space that is currently being used, excluding any space that is reserved by the system for features such as Snapshot copies.
used_percent	integer	The percentage of the originally provisioned space that is currently being used by the application.

statistics

Name	Type	Description
components	array[components]	
iops	iops	
latency	latency	

Name	Type	Description
shared_storage_pool	boolean	An application is considered to use a shared storage pool if storage elements for multiple components reside on the same aggregate.
snapshot	snapshot	
space	space	
statistics_incomplete	boolean	If not all storage elements of the application are currently available, the returned statistics might only include data from those elements that were available.

svm

Name	Type	Description
name	string	SVM Name. Either the SVM name or UUID must be provided to create an application.
uuid	string	SVM UUID. Either the SVM name or UUID must be provided to create an application.

self_link

Name	Type	Description
self	href	

template

Name	Type	Description
_links	self_link	
name	string	The name of the template that was used to provision this application.
protocol	string	The protocol access of the template that was used to provision this application.

Name	Type	Description
version	integer	<p>The version of the template that was used to provision this application. The template version changes only if the layout of the application changes over time. For example, redo logs in Oracle RAC templates were updated and provisioned differently in DATA ONTAP 9.3.0 compared to prior releases, so the version number was increased. If layouts change in the future, the changes will be documented along with the corresponding version numbers.</p> <ul style="list-style-type: none"> • readOnly: 1 • Introduced in: 9.6

storage_service

Name	Type	Description
name	string	The storage service of the desktops.

desktops

Name	Type	Description
count	integer	The number of desktops to support.
size	integer	The size of the desktops. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

hyper_v_access

Name	Type	Description
service_account	string	Hyper-V service account.

vdi_on_nas

A VDI application using NAS.

Name	Type	Description
desktops	desktops	
hyper_v_access	hyper_v_access	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
protection_type	protection_type	

vdi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
protocol	string	The protocol of the new initiator group.

vdi_on_san

A VDI application using SAN.

Name	Type	Description
desktops	desktops	
hypervisor	string	The name of the hypervisor hosting the application.
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.

Name	Type	Description
new_igroups	array[vdi_on_san_new_igroups]	The list of initiator groups to create.
protection_type	protection_type	

storage_service

Name	Type	Description
name	string	The storage service of the datastore.

datastore

Name	Type	Description
count	integer	The number of datastores to support.
size	integer	The size of the datastore. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

vsi_on_nas

A VSI application using NAS.

Name	Type	Description
datastore	datastore	
hyper_v_access	hyper_v_access	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
protection_type	protection_type	

vsi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	

Name	Type	Description
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
protocol	string	The protocol of the new initiator group.

vsi_on_san

A VSI application using SAN.

Name	Type	Description
datastore	datastore	
hypervisor	string	The name of the hypervisor hosting the application.
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
new_igroups	array[vsi_on_san_new_igroups]	The list of initiator groups to create.
protection_type	protection_type	

application

Applications

Name	Type	Description
_links	_links	
creation_timestamp	string	The time when the application was created.

Name	Type	Description
delete_data	boolean	Should application storage elements be deleted? An application is considered to use storage elements from a shared storage pool. Possible values are 'true' and 'false'. If the value is 'true', the application will be deleted in its entirety. If the value is 'false', the storage elements will be disassociated from the application and preserved. The application will then be deleted.
generation	integer	The generation number of the application. This indicates which features are supported on the application. For example, generation 1 applications do not support Snapshot copies. Support for Snapshot copies was added at generation 2. Any future generation numbers and their feature set will be documented.
maxdata_on_san	maxdata_on_san	MAX Data application using SAN.
mongo_db_on_san	mongo_db_on_san	MongoDB using SAN.
name	string	Application Name. This field is user supplied when the application is created.
nas	nas	A generic NAS application.
nvme	zapp_nvme	An NVME application.
oracle_on_nfs	oracle_on_nfs	Oracle using NFS.
oracle_on_san	oracle_on_san	Oracle using SAN.
oracle_rac_on_nfs	oracle_rac_on_nfs	Oracle RAC using NFS.
oracle_rac_on_san	oracle_rac_on_san	Oracle RAC using SAN.

Name	Type	Description
protection_granularity	string	Protection granularity determines the scope of Snapshot copy operations for the application. Possible values are "application" and "component". If the value is "application", Snapshot copy operations are performed on the entire application. If the value is "component", Snapshot copy operations are performed separately on the application components.
rpo	rpo	
s3_bucket	zapp_s3_bucket	A generic S3 bucket application.
san	san	A generic SAN application.
smart_container	boolean	Identifies if this is a smart container or not.
sql_on_san	sql_on_san	Microsoft SQL using SAN.
sql_on_smb	sql_on_smb	Microsoft SQL using SMB.
state	string	The state of the application. For full functionality, applications must be in the online state. Other states indicate that the application is in a transient state and not all operations are supported.
statistics	statistics	
svm	svm	
template	template	
uuid	string	Application UUID. This field is generated when the application is created.
vdi_on_nas	vdi_on_nas	A VDI application using NAS.
vdi_on_san	vdi_on_san	A VDI application using SAN.
vsi_on_nas	vsi_on_nas	A VSI application using NAS.

Name	Type	Description
vsi_on_san	vsi_on_san	A VSI application using SAN.

[_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 application components

GET /application/applications/{application.uuid}/components

Introduced In: 9.6

Retrieves application components.

Overview

The application component object exposes how to access an application. Most application interfaces abstract away the underlying ONTAP storage elements, but this interface exposes what is necessary to connect to and uses the storage that is provisioned for an application. See the application component model for a detailed description of each property.

Query examples

Queries are limited on this API. Most of the details are nested under the `nfs_access`, `cifs_access`, or `san_access` properties, but those properties do not support queries, and properties nested under those properties cannot be requested individually in the current release.

The following query returns all application components with names beginning in *secondary*.

```
GET
/application/applications/{application.uuid}/components?name=secondary*
```

The following query returns all application components at the *extreme* storage service.

```
GET
/application/applications/{application.uuid}/components?storage_service.name=extreme
```

Learn more

- [DOC /application](#)

Parameters

Name	Type	In	Required	Description
application.uuid	string	path	True	Application UUID
uuid	string	query	False	Filter by UUID
name	string	query	False	Filter by name
storage_service.name	string	query	False	Filter by storage_service.name
storage_service.uuid	string	query	False	Filter by storage_service.uuid
fields	array[string]	query	False	Specify the fields to return.

Name	Type	In	Required	Description
max_records	integer	query	False	Limit the number of records returned.
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
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. <ul style="list-style-type: none"> • Default value: 1
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

Status: 200, Ok

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

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "application": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "string",
      "uuid": "string"
    },
    "backing_storage": {
      "luns": {
        "creation_timestamp": "string",
        "path": "string",
        "size": 0,
        "uuid": "string"
      },
      "namespaces": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "creation_timestamp": "string",
        "name": "string",
        "size": 0,
        "uuid": "string"
      },
      "volumes": {
        "creation_timestamp": "string",
```



```

    "name": "string",
    "size": 0,
    "uuid": "string"
  }
},
"cifs_access": {
  "backing_storage": {
    "type": "volume",
    "uuid": "string"
  },
  "ips": {
  },
  "path": "string",
  "permissions": {
    "access": "string",
    "user_or_group": "string"
  },
  "server": {
    "name": "string"
  },
  "share": {
    "name": "string"
  }
},
"file_system": "mlfs",
"host_management_url": "string",
"host_name": "string",
"name": "string",
"nfs_access": {
  "backing_storage": {
    "type": "volume",
    "uuid": "string"
  },
  "export_policy": {
    "name": "string"
  },
  "ips": {
  },
  "path": "string",
  "permissions": {
    "access": "string",
    "host": "string"
  }
},
"nvme_access": {
  "backing_storage": {

```

```

    "type": "namespace",
    "uuid": "string"
  },
  "subsystem_map": {
    "anagrpid": "string",
    "nsid": "string",
    "subsystem": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "hosts": {
        "_links": {
          "self": {
            "self": {
              "href": "/api/resourcelink"
            }
          }
        }
      },
      "nqn": "string"
    },
    "name": "string",
    "uuid": "string"
  }
},
"protection_groups": {
  "name": "string",
  "rpo": {
    "local": {
      "description": "string",
      "name": "none"
    },
    "remote": {
      "description": "string",
      "name": "none"
    }
  },
  "uuid": "string"
},
"san_access": {
  "backing_storage": {
    "type": "lun",
    "uuid": "string"
  },

```

```

"lun_mappings": {
  "fc": {
    "interface": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "fc_lif1",
      "uuid": "3a09ab42-4da1-32cf-9d35-3385a6101a0b",
      "wwpn": "20:00:00:50:56:b4:13:a8"
    },
    "igroup": {
      "initiators": {
      },
      "name": "string",
      "uuid": "string"
    },
    "iscsi": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "interface": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "ip": {
          "address": "10.10.10.7"
        },
        "name": "lif1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "port": 3260
    },
    "lun_id": 0
  },
  "serial_number": "string"
},
"storage_service": {
  "name": "string",
  "uuid": "string"
}

```

```
    },
    "svm": {
      "name": "string",
      "uuid": "string"
    },
    "uuid": "string"
  }
}
```

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	

application

Name	Type	Description
_links	_links	
name	string	Application name
uuid	string	The application UUID. Valid in URL.

application_lun_object

LUN object

Name	Type	Description
creation_timestamp	string	LUN creation time
path	string	LUN path
size	integer	LUN size
uuid	string	LUN UUID

application_namespace_object

Namespace object

Name	Type	Description
_links	_links	
creation_timestamp	string	Namespace creation time
name	string	Namespace name
size	integer	Namespace size
uuid	string	Namespace UUID

application_volume_object

Volume object

Name	Type	Description
creation_timestamp	string	Creation time
name	string	Name
size	integer	Size
uuid	string	UUID

application_backing_storage

Name	Type	Description
luns	array[application_lun_object]	
namespaces	array[application_namespace_object]	
volumes	array[application_volume_object]	

backing_storage

Name	Type	Description
type	string	Backing storage type
uuid	string	Backing storage UUID

permissions

Name	Type	Description
access	string	Access granted to the user or group
user_or_group	string	User or group

server

Name	Type	Description
name	string	Server name

share

Name	Type	Description
name	string	Share name

application_cifs_properties

Name	Type	Description
backing_storage	backing_storage	
ips	array[string]	
path	string	Junction path
permissions	array[permissions]	
server	server	
share	share	

export_policy

Name	Type	Description
name	string	Export policy name

permissions

Name	Type	Description
access	string	Access granted to the host
host	string	Host granted access

application_nfs_properties

Name	Type	Description
backing_storage	backing_storage	
export_policy	export_policy	
ips	array[string]	
path	string	Junction path
permissions	array[permissions]	

self

Name	Type	Description
self	href	

[_links](#)

Name	Type	Description
self	self	

hosts

Name	Type	Description
_links	_links	
nqn	string	Host

subsystem

Name	Type	Description
_links	_links	
hosts	array[hosts]	
name	string	Subsystem name
uuid	string	Subsystem UUID

subsystem_map

Subsystem map object

Name	Type	Description
anagrpid	string	Subsystem ANA group ID
nsid	string	Subsystem namespace ID

Name	Type	Description
subsystem	subsystem	

application_nvme_access

Application NVME access

Name	Type	Description
backing_storage	backing_storage	
is_clone	boolean	Clone
subsystem_map	subsystem_map	Subsystem map object

local

Name	Type	Description
description	string	A detailed description of the local RPO. This includes details on the Snapshot copy schedule.
name	string	The local RPO of the component. This indicates how often component Snapshot copies are automatically created.

remote

Name	Type	Description
description	string	A detailed description of the remote RPO.
name	string	The remote RPO of the component. A remote RPO of zero indicates that the component is synchronously replicated to another cluster.

rpo

Name	Type	Description
local	local	
remote	remote	

application_protection_groups

Name	Type	Description
name	string	Protection group name
rpo	rpo	
uuid	string	Protection group UUID

fc_interface_reference

An FC interface.

Name	Type	Description
_links	_links	
name	string	The name of the FC interface.
uuid	string	The unique identifier of the FC interface.
wwpn	string	The WWPN of the FC interface.

application_san_access_fcp_endpoint

A Fibre Channel Protocol (FCP) access endpoint for the LUN.

Name	Type	Description
interface	fc_interface_reference	An FC interface.

igroup

Name	Type	Description
initiators	array[string]	
name	string	Igroup name
uuid	string	Igroup UUID

ip

IP information

Name	Type	Description
address	string	IPv4 or IPv6 address

interface

Name	Type	Description
_links	_links	
ip	ip	IP information
name	string	The name of the interface. If only the name is provided, the SVM scope must be provided by the object this object is embedded in.
uuid	string	The UUID that uniquely identifies the interface.

application_san_access_iscsi_endpoint

An iSCSI access endpoint for the LUN.

Name	Type	Description
_links	_links	
interface	interface	
port	integer	The TCP port number of the iSCSI access endpoint.

application_lun_mapping_object

Name	Type	Description
fcp	array[application_san_access_fcp_endpoint]	All possible Fibre Channel Protocol (FCP) access endpoints for the LUN.
igroup	igroup	
iscsi	array[application_san_access_iscsi_endpoint]	All possible iSCSI access endpoints for the LUN.
lun_id	integer	LUN ID

application_san_access

Name	Type	Description
backing_storage	backing_storage	
is_clone	boolean	Clone
lun_mappings	array[application_lun_mapping_object]	

Name	Type	Description
serial_number	string	LUN serial number

storage_service

Name	Type	Description
name	string	Storage service name
uuid	string	Storage service UUID

svm

Name	Type	Description
name	string	SVM name
uuid	string	SVM UUID

application_component

Application component

Name	Type	Description
_links	_links	
application	application	
backing_storage	application_backing_storage	
cifs_access	array[application_cifs_properties]	
file_system	string	Defines the type of file system that will be installed on this application component.
host_management_url	string	Host management URL
host_name	string	L2 Host FQDN
name	string	Application component name
nfs_access	array[application_nfs_properties]	
nvme_access	array[application_nvme_access]	
protection_groups	array[application_protection_groups]	
san_access	array[application_san_access]	

Name	Type	Description
storage_service	storage_service	
svm	svm	
uuid	string	The application component UUID. Valid in URL.

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 application component Snapshot copies

GET

/application/applications/{application.uuid}/components/{component.uuid}/snapshots

Introduced In: 9.6

Retrieves Snapshot copies of an application component.

This endpoint is only supported for Maxdata template applications.

Component Snapshot copies are essentially more granular application Snapshot copies. There is no difference beyond the scope of the operation.

Learn more

- [DOC /application/applications/{application.uuid}/snapshots](#)
- [GET /application/applications/{uuid}/snapshots](#)

Parameters

Name	Type	In	Required	Description
application.uuid	string	path	True	Application UUID
component.uuid	string	path	True	Application Component UUID
component.name	string	query	False	Filter by Application Component Name
uuid	string	query	False	Filter by uuid
name	string	query	False	Filter by name
consistency_type	string	query	False	Filter by consistency_type
comment	string	query	False	Filter by comment
create_time	string	query	False	Filter by create_time
is_partial	string	query	False	Filter by is_partial
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_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0
return_records	boolean	query	False	<p>The default is true for GET calls. When set to false, only the number of records is returned.</p> <ul style="list-style-type: none"> • Default value: 1
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

Status: 200, Ok

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[application_component_snap shot]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "application": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "string",
      "uuid": "string"
    },
    "comment": "string",
    "component": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "string",
      "uuid": "string"
    },
    "consistency_type": "crash",
    "create_time": "string",
    "svm": {
      "name": "string",
      "uuid": "string"
    },
    "uuid": "string"
  }
}
```


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	

application

Name	Type	Description
_links	_links	
name	string	Application Name
uuid	string	Application UUID. Valid in URL

component

Name	Type	Description
_links	_links	
name	string	Component Name
uuid	string	Component UUID

svm

Name	Type	Description
name	string	SVM Name
uuid	string	SVM UUID

application_component_snapshot

Name	Type	Description
_links	_links	
application	application	
comment	string	Comment. Valid in POST
component	component	
consistency_type	string	Consistency Type. This is for categorization only. A Snapshot copy should not be set to application consistent unless the host application is quiesced for the Snapshot copy. Valid in POST
create_time	string	Creation Time
is_partial	boolean	A partial Snapshot copy means that not all volumes in an application component were included in the Snapshot copy.
name	string	Snapshot copy name. Valid in POST
svm	svm	
uuid	string	Snapshot copy UUID. Valid in URL

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

Name	Type	Description
target	string	The target parameter that caused the error.

Create an application component Snapshot copy

POST

/application/applications/{application.uuid}/components/{component.uuid}/snapshots

Introduced In: 9.6

Creates a Snapshot copy of an application component.

This endpoint is only supported for Maxdata template applications.

Required properties

- name

Recommended optional properties

- `consistency_type` - Track whether this snapshot is *application* or *crash* consistent. Component Snapshot copies are essentially more granular application Snapshot copies. There is no difference beyond the scope of the operation.

Learn more

- [DOC /application/applications/{application.uuid}/snapshots](#)
- [GET /application/applications/{uuid}/snapshots](#)
- [DOC /application](#)

Parameters

Name	Type	In	Required	Description
application.uuid	string	path	True	Application UUID
component.uuid	string	path	True	Application Component UUID

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	
application	application	
comment	string	Comment. Valid in POST

Name	Type	Description
component	component	
consistency_type	string	Consistency Type. This is for categorization only. A Snapshot copy should not be set to application consistent unless the host application is quiesced for the Snapshot copy. Valid in POST
create_time	string	Creation Time
is_partial	boolean	A partial Snapshot copy means that not all volumes in an application component were included in the Snapshot copy.
name	string	Snapshot copy name. Valid in POST
svm	svm	
uuid	string	Snapshot copy UUID. Valid in URL

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "application": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "string",
    "uuid": "string"
  },
  "comment": "string",
  "component": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "string",
    "uuid": "string"
  },
  "consistency_type": "crash",
  "create_time": "string",
  "svm": {
    "name": "string",
    "uuid": "string"
  },
  "uuid": "string"
}
```

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

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

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	

application

Name	Type	Description
_links	_links	
name	string	Application Name
uuid	string	Application UUID. Valid in URL

component

Name	Type	Description
_links	_links	
name	string	Component Name
uuid	string	Component UUID

svm

Name	Type	Description
name	string	SVM Name
uuid	string	SVM UUID

application_component_snapshot

Name	Type	Description
_links	_links	
application	application	
comment	string	Comment. Valid in POST

Name	Type	Description
component	component	
consistency_type	string	Consistency Type. This is for categorization only. A Snapshot copy should not be set to application consistent unless the host application is quiesced for the Snapshot copy. Valid in POST
create_time	string	Creation Time
is_partial	boolean	A partial Snapshot copy means that not all volumes in an application component were included in the Snapshot copy.
name	string	Snapshot copy name. Valid in POST
svm	svm	
uuid	string	Snapshot copy UUID. Valid in URL

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

Name	Type	Description
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete an application component Snapshot copy

DELETE

/application/applications/{application.uuid}/components/{component.uuid}/snapshots/{uuid}

Introduced In: 9.6

Delete a Snapshot copy of an application component.

This endpoint is only supported for Maxdata template applications.

Component Snapshot copies are essentially more granular application Snapshot copies. There is no difference beyond the scope of the operation.

Learn more

- [DOC /application/applications/{application.uuid}/snapshots](#)
- [DELETE /application/applications/{application.uuid}/snapshots/{uuid}](#)
- [DOC /application](#)

Parameters

Name	Type	In	Required	Description
application.uuid	string	path	True	Application UUID
component.uuid	string	path	True	Application Component UUID
uuid	string	path	True	Snapshot UUID

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, 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	

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 a Snapshot copy for a specific application component

GET

/application/applications/{application.uuid}/components/{component.uuid}/snapshots/{uuid}

Introduced In: 9.6

Retrieve a Snapshot copy of an application component.

This endpoint is only supported for Maxdata template applications.

Component Snapshot copies are essentially more granular application Snapshot copies. There is no difference beyond the scope of the operation.

Learn more

- [DOC /application/applications/{application.uuid}/snapshots](#)
- [GET /application/applications/{uuid}/snapshots](#)
- [DOC /application](#)

Parameters

Name	Type	In	Required	Description
application.uuid	string	path	True	Application UUID
component.uuid	string	path	True	Application Component UUID
uuid	string	path	True	Snapshot UUID
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
_links	_links	
application	application	
comment	string	Comment. Valid in POST

Name	Type	Description
component	component	
consistency_type	string	Consistency Type. This is for categorization only. A Snapshot copy should not be set to application consistent unless the host application is quiesced for the Snapshot copy. Valid in POST
create_time	string	Creation Time
is_partial	boolean	A partial Snapshot copy means that not all volumes in an application component were included in the Snapshot copy.
name	string	Snapshot copy name. Valid in POST
svm	svm	
uuid	string	Snapshot copy UUID. Valid in URL

Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "application": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "string",
    "uuid": "string"
  },
  "comment": "string",
  "component": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "string",
    "uuid": "string"
  },
  "consistency_type": "crash",
  "create_time": "string",
  "svm": {
    "name": "string",
    "uuid": "string"
  },
  "uuid": "string"
}
```

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	

application

Name	Type	Description
_links	_links	
name	string	Application Name
uuid	string	Application UUID. Valid in URL

component

Name	Type	Description
_links	_links	
name	string	Component Name
uuid	string	Component UUID

svm

Name	Type	Description
name	string	SVM Name
uuid	string	SVM UUID

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.

Restore an application component Snapshot copy

POST

`/application/applications/{application.uuid}/components/{component.uuid}/snapshots/{uuid}/restore`

Introduced In: 9.6

Restore a Snapshot copy of an application component.

This endpoint is only supported for Maxdata template applications.

Component Snapshot copies are essentially more granular application Snapshot copies. There is no difference beyond the scope of the operation.

Learn more

- [DOC /application/applications/{application.uuid}/snapshots](#)
- [POST /application/applications/{application.uuid}/snapshots/{uuid}/restore](#)
- [DOC /application](#)
- [Asynchronous operations](#)

Parameters

Name	Type	In	Required	Description
application.uuid	string	path	True	Application UUID
component.uuid	string	path	True	Application Component UUID
uuid	string	path	True	Snapshot copy UUID

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:

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

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

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	

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 an application component

GET /application/applications/{application.uuid}/components/{uuid}

Introduced In: 9.6

Retrieves an application component.

Overview

The application component object exposes how to access an application. Most application interfaces abstract away the underlying ONTAP storage elements, but this interface exposes what is necessary to connect to and uses the storage that is provisioned for an application. See the application component model for a detailed description of each property.

Access

Each application component can be accessed via NFS, CIFS, or SAN. NFS and CIFS access can be enabled simultaneously. Each access section includes a `backing_storage` property. This property is used to correlate the storage elements with the access elements of the application. The `backing_storage` portion of the access section provides the `type` and `uuid` of the backing storage. There is another `backing_storage` property at the same level as the access properties which contains lists of backing storage elements corresponding to the types listed in the access section.

Learn more

- [DOC /application](#)

Parameters

Name	Type	In	Required	Description
application.uuid	string	path	True	Application UUID
uuid	string	path	True	Application component UUID
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
<code>_links</code>	_links	
<code>application</code>	application	
<code>backing_storage</code>	application_backing_storage	
<code>cifs_access</code>	array[application_cifs_properties]	

Name	Type	Description
file_system	string	Defines the type of file system that will be installed on this application component.
host_management_url	string	Host management URL
host_name	string	L2 Host FQDN
name	string	Application component name
nfs_access	array[application_nfs_properties]	
nvme_access	array[application_nvme_access]	
protection_groups	array[application_protection_groups]	
san_access	array[application_san_access]	
storage_service	storage_service	
svm	svm	
uuid	string	The application component UUID. Valid in URL.

Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "application": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "string",
    "uuid": "string"
  },
  "backing_storage": {
    "luns": {
      "creation_timestamp": "string",
      "path": "string",
      "size": 0,
      "uuid": "string"
    },
    "namespaces": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "creation_timestamp": "string",
      "name": "string",
      "size": 0,
      "uuid": "string"
    },
    "volumes": {
      "creation_timestamp": "string",
      "name": "string",
      "size": 0,
      "uuid": "string"
    }
  },
  "cifs_access": {
    "backing_storage": {
      "type": "volume",
      "uuid": "string"
    }
  }
}
```

```

    },
    "ips": {
    },
    "path": "string",
    "permissions": {
        "access": "string",
        "user_or_group": "string"
    },
    "server": {
        "name": "string"
    },
    "share": {
        "name": "string"
    }
},
"file_system": "mlfs",
"host_management_url": "string",
"host_name": "string",
"name": "string",
"nfs_access": {
    "backing_storage": {
        "type": "volume",
        "uuid": "string"
    },
    "export_policy": {
        "name": "string"
    },
    "ips": {
    },
    "path": "string",
    "permissions": {
        "access": "string",
        "host": "string"
    }
},
"nvme_access": {
    "backing_storage": {
        "type": "namespace",
        "uuid": "string"
    },
    "subsystem_map": {
        "anagrpid": "string",
        "nsid": "string",
        "subsystem": {
            "_links": {
                "self": {

```

```

        "href": "/api/resourcelink"
    }
},
"hosts": {
    "_links": {
        "self": {
            "self": {
                "href": "/api/resourcelink"
            }
        }
    },
    "nqn": "string"
},
"name": "string",
"uuid": "string"
}
},
"protection_groups": {
    "name": "string",
    "rpo": {
        "local": {
            "description": "string",
            "name": "none"
        },
        "remote": {
            "description": "string",
            "name": "none"
        }
    },
    "uuid": "string"
},
"san_access": {
    "backing_storage": {
        "type": "lun",
        "uuid": "string"
    },
    "lun_mappings": {
        "fcp": {
            "interface": {
                "_links": {
                    "self": {
                        "href": "/api/resourcelink"
                    }
                }
            },
            "name": "fc_lif1",

```

```

        "uuid": "3a09ab42-4da1-32cf-9d35-3385a6101a0b",
        "wwpn": "20:00:00:50:56:b4:13:a8"
    },
    },
    "igroup": {
        "initiators": {
        },
        "name": "string",
        "uuid": "string"
    },
    "iscsi": {
        "_links": {
            "self": {
                "href": "/api/resourcelink"
            }
        },
        },
        "interface": {
            "_links": {
                "self": {
                    "href": "/api/resourcelink"
                }
            },
            },
            "ip": {
                "address": "10.10.10.7"
            },
            },
            "name": "lif1",
            "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        },
        "port": 3260
    },
    "lun_id": 0
},
"serial_number": "string"
},
"storage_service": {
    "name": "string",
    "uuid": "string"
},
"svm": {
    "name": "string",
    "uuid": "string"
},
"uuid": "string"
}

```

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	

application

Name	Type	Description
_links	_links	
name	string	Application name
uuid	string	The application UUID. Valid in URL.

application_lun_object

LUN object

Name	Type	Description
creation_timestamp	string	LUN creation time
path	string	LUN path
size	integer	LUN size
uuid	string	LUN UUID

application_namespace_object

Namespace object

Name	Type	Description
_links	_links	
creation_timestamp	string	Namespace creation time
name	string	Namespace name

Name	Type	Description
size	integer	Namespace size
uuid	string	Namespace UUID

application_volume_object

Volume object

Name	Type	Description
creation_timestamp	string	Creation time
name	string	Name
size	integer	Size
uuid	string	UUID

application_backing_storage

Name	Type	Description
luns	array[application_lun_object]	
namespaces	array[application_namespace_object]	
volumes	array[application_volume_object]	

backing_storage

Name	Type	Description
type	string	Backing storage type
uuid	string	Backing storage UUID

permissions

Name	Type	Description
access	string	Access granted to the user or group
user_or_group	string	User or group

server

Name	Type	Description
name	string	Server name

share

Name	Type	Description
name	string	Share name

application_cifs_properties

Name	Type	Description
backing_storage	backing_storage	
ips	array[string]	
path	string	Junction path
permissions	array[permissions]	
server	server	
share	share	

export_policy

Name	Type	Description
name	string	Export policy name

permissions

Name	Type	Description
access	string	Access granted to the host
host	string	Host granted access

application_nfs_properties

Name	Type	Description
backing_storage	backing_storage	
export_policy	export_policy	
ips	array[string]	
path	string	Junction path

Name	Type	Description
permissions	array[permissions]	

self

Name	Type	Description
self	href	

_links

Name	Type	Description
self	self	

hosts

Name	Type	Description
_links	_links	
nqn	string	Host

subsystem

Name	Type	Description
_links	_links	
hosts	array[hosts]	
name	string	Subsystem name
uuid	string	Subsystem UUID

subsystem_map

Subsystem map object

Name	Type	Description
anagrpId	string	Subsystem ANA group ID
nsid	string	Subsystem namespace ID
subsystem	subsystem	

application_nvme_access

Application NVME access

Name	Type	Description
backing_storage	backing_storage	
is_clone	boolean	Clone
subsystem_map	subsystem_map	Subsystem map object

local

Name	Type	Description
description	string	A detailed description of the local RPO. This includes details on the Snapshot copy schedule.
name	string	The local RPO of the component. This indicates how often component Snapshot copies are automatically created.

remote

Name	Type	Description
description	string	A detailed description of the remote RPO.
name	string	The remote RPO of the component. A remote RPO of zero indicates that the component is synchronously replicated to another cluster.

rpo

Name	Type	Description
local	local	
remote	remote	

application_protection_groups

Name	Type	Description
name	string	Protection group name
rpo	rpo	

Name	Type	Description
uuid	string	Protection group UUID

fc_interface_reference

An FC interface.

Name	Type	Description
_links	_links	
name	string	The name of the FC interface.
uuid	string	The unique identifier of the FC interface.
wwpn	string	The WWPN of the FC interface.

application_san_access_fcp_endpoint

A Fibre Channel Protocol (FCP) access endpoint for the LUN.

Name	Type	Description
interface	fc_interface_reference	An FC interface.

igroup

Name	Type	Description
initiators	array[string]	
name	string	Igroup name
uuid	string	Igroup UUID

ip

IP information

Name	Type	Description
address	string	IPv4 or IPv6 address

interface

Name	Type	Description
_links	_links	

Name	Type	Description
ip	ip	IP information
name	string	The name of the interface. If only the name is provided, the SVM scope must be provided by the object this object is embedded in.
uuid	string	The UUID that uniquely identifies the interface.

application_san_access_iscsi_endpoint

An iSCSI access endpoint for the LUN.

Name	Type	Description
_links	_links	
interface	interface	
port	integer	The TCP port number of the iSCSI access endpoint.

application_lun_mapping_object

Name	Type	Description
fcp	array[application_san_access_fcp_endpoint]	All possible Fibre Channel Protocol (FCP) access endpoints for the LUN.
igroup	igroup	
iscsi	array[application_san_access_iscsi_endpoint]	All possible iSCSI access endpoints for the LUN.
lun_id	integer	LUN ID

application_san_access

Name	Type	Description
backing_storage	backing_storage	
is_clone	boolean	Clone
lun_mappings	array[application_lun_mapping_object]	

Name	Type	Description
serial_number	string	LUN serial number

storage_service

Name	Type	Description
name	string	Storage service name
uuid	string	Storage service UUID

svm

Name	Type	Description
name	string	SVM name
uuid	string	SVM UUID

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.

Manage application Snapshot copies

Application applications application.uuid snapshots endpoint overview

Overview

Applications support Snapshot copies across all member storage elements. These Snapshot copies can be created and restored at any time or as scheduled. Most applications have hourly Snapshot copies enabled by default, unless the RPO setting is overridden during the creation of the application. An application Snapshot copy can be flagged as either *application consistent*, or *crash consistent*. From an ONTAP perspective, there is no difference between these two consistency types. These types are available for record keeping so that Snapshot copies taken after the application is quiesced (application consistent) can be tracked separately from those Snapshot copies taken without first quiescing the application (crash consistent). By default, all application Snapshot copies are flagged to be *crash consistent*, and Snapshot copies taken at a scheduled time are also considered *crash consistent*.

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

Retrieve an application Snapshot copy

```
GET /application/applications/{application.uuid}/snapshots
```

Introduced In: 9.6

Retrieves Snapshot copies of an application.

Query examples

The following query returns all Snapshot copies from May 4, 2017 EST. For readability, the colon (:) is left in this example. For an actual call, they should be escaped as %3A.

```
GET
/application/applications/{application.uuid}/snapshots?create_time=2017-
05-04T00:00:00-05:00..2017-05-04T23:59:59-05:00
```

The following query returns all Snapshot copies that have been flagged as *application consistent*.

```
GET
/application/applications/{application.uuid}/snapshots?consistency_type=ap
plication
```

Learn more

- [DOC /application/applications/{application.uuid}/snapshots](#)
- [DOC /application](#)

Parameters

Name	Type	In	Required	Description
application.uuid	string	path	True	Application UUID
uuid	string	query	False	Filter by UUID
name	string	query	False	Filter by name
consistency_type	string	query	False	Filter by consistency_type
components.name	string	query	False	Filter by components.name
components.uuid	string	query	False	Filter by components.uuid
comment	string	query	False	Filter by comment
create_time	string	query	False	Filter by create_time
is_partial	string	query	False	Filter by is_partial
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0

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
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

Status: 200, Ok

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

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "application": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "string",
      "uuid": "string"
    },
    "comment": "string",
    "components": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "string",
      "uuid": "string"
    },
    "consistency_type": "crash",
    "create_time": "string",
    "svm": {
      "name": "string",
      "uuid": "string"
    },
    "uuid": "string"
  }
}
```

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	

application

Name	Type	Description
_links	_links	
name	string	Application name
uuid	string	The application UUID. Valid in URL.

components

Name	Type	Description
_links	_links	
name	string	Component name
uuid	string	Component UUID

svm

Name	Type	Description
name	string	SVM name
uuid	string	SVM UUID

application_snapshot

Name	Type	Description
_links	_links	
application	application	
comment	string	Comment. Valid in POST.
components	array[components]	
consistency_type	string	Consistency type. This is for categorization purposes only. A Snapshot copy should not be set to 'application consistent' unless the host application is quiesced for the Snapshot copy. Valid in POST.
create_time	string	Creation time
is_partial	boolean	A partial Snapshot copy means that not all volumes in an application component were included in the Snapshot copy.
name	string	The Snapshot copy name. Valid in POST.
svm	svm	
uuid	string	The Snapshot copy UUID. Valid in URL.

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

Name	Type	Description
target	string	The target parameter that caused the error.

Create an application Snapshot copy

POST /application/applications/{application.uuid}/snapshots

Introduced In: 9.6

Creates a Snapshot copy of the application.

Required properties

- name

Recommended optional properties

- `consistency_type` - Track whether this snapshot is *application* or *crash* consistent.

Learn more

- [DOC /application/applications/{application.uuid}/snapshots](#)
- [DOC /application](#)

Parameters

Name	Type	In	Required	Description
application.uuid	string	path	True	Application UUID

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	
application	application	
comment	string	Comment. Valid in POST.

Name	Type	Description
components	array[components]	
consistency_type	string	Consistency type. This is for categorization purposes only. A Snapshot copy should not be set to 'application consistent' unless the host application is quiesced for the Snapshot copy. Valid in POST.
create_time	string	Creation time
is_partial	boolean	A partial Snapshot copy means that not all volumes in an application component were included in the Snapshot copy.
name	string	The Snapshot copy name. Valid in POST.
svm	svm	
uuid	string	The Snapshot copy UUID. Valid in URL.

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "application": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "string",
    "uuid": "string"
  },
  "comment": "string",
  "components": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "string",
    "uuid": "string"
  },
  "consistency_type": "crash",
  "create_time": "string",
  "svm": {
    "name": "string",
    "uuid": "string"
  },
  "uuid": "string"
}
```

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

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

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	

application

Name	Type	Description
_links	_links	
name	string	Application name
uuid	string	The application UUID. Valid in URL.

components

Name	Type	Description
_links	_links	
name	string	Component name
uuid	string	Component UUID

svm

Name	Type	Description
name	string	SVM name
uuid	string	SVM UUID

application_snapshot

Name	Type	Description
_links	_links	
application	application	

Name	Type	Description
comment	string	Comment. Valid in POST.
components	array[components]	
consistency_type	string	Consistency type. This is for categorization purposes only. A Snapshot copy should not be set to 'application consistent' unless the host application is quiesced for the Snapshot copy. Valid in POST.
create_time	string	Creation time
is_partial	boolean	A partial Snapshot copy means that not all volumes in an application component were included in the Snapshot copy.
name	string	The Snapshot copy name. Valid in POST.
svm	svm	
uuid	string	The Snapshot copy UUID. Valid in URL.

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.

Delete an application Snapshot copy

DELETE /application/applications/{application.uuid}/snapshots/{uuid}

Introduced In: 9.6

Delete a Snapshot copy of an application

Query examples

Individual Snapshot copies can be destroyed with no query parameters, or a range of Snapshot copies can be destroyed at one time using a query.

The following query deletes all application Snapshot copies created before May 4, 2017

```
DELETE
/application/applications/{application.uuid}/snapshots?create_time=<2017-
05-04T00:00:00-05:00
```

Parameters

Name	Type	In	Required	Description
application.uuid	string	path	True	Application UUID
uuid	string	path	True	Snapshot copy UUID

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, 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	

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 an application Snapshot copy

GET /application/applications/{application.uuid}/snapshots/{uuid}

Introduced In: 9.6

Retrieve a Snapshot copy of an application component.

This endpoint is only supported for Maxdata template applications.

Component Snapshot copies are essentially more granular application Snapshot copies. There is no difference beyond the scope of the operation.

Learn more

- [DOC /application/applications/{application.uuid}/snapshots](#)
- [GET /application/applications/{uuid}/snapshots](#)
- [DOC /application](#)

Parameters

Name	Type	In	Required	Description
application.uuid	string	path	True	Application UUID
uuid	string	path	True	Snapshot copy UUID
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
_links	_links	
application	application	
comment	string	Comment. Valid in POST.
components	array[components]	
consistency_type	string	Consistency type. This is for categorization purposes only. A Snapshot copy should not be set to 'application consistent' unless the host application is quiesced for the Snapshot copy. Valid in POST.
create_time	string	Creation time

Name	Type	Description
is_partial	boolean	A partial Snapshot copy means that not all volumes in an application component were included in the Snapshot copy.
name	string	The Snapshot copy name. Valid in POST.
svm	svm	
uuid	string	The Snapshot copy UUID. Valid in URL.

Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "application": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "string",
    "uuid": "string"
  },
  "comment": "string",
  "components": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "string",
    "uuid": "string"
  },
  "consistency_type": "crash",
  "create_time": "string",
  "svm": {
    "name": "string",
    "uuid": "string"
  },
  "uuid": "string"
}
```

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	

application

Name	Type	Description
_links	_links	
name	string	Application name
uuid	string	The application UUID. Valid in URL.

components

Name	Type	Description
_links	_links	
name	string	Component name
uuid	string	Component UUID

svm

Name	Type	Description
name	string	SVM name
uuid	string	SVM UUID

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.

Restore an application Snapshot copy

POST /application/applications/{application.uuid}/snapshots/{uuid}/restore

Introduced In: 9.6

Restore an application snapshot

Restoring an application Snapshot copy reverts all storage elements in the Snapshot copy to the state in which the Snapshot copy was in when the Snapshot copy was taken. This restoration does not apply to access settings that might have changed since the Snapshot copy was created.

Learn more

- [DOC /application](#)
- [Asynchronous operations](#)

Parameters

Name	Type	In	Required	Description
application.uuid	string	path	True	Application UUID
uuid	string	path	True	Snapshot copy UUID

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:

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

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

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	

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.

Delete an application and all associated data

DELETE /application/applications/{uuid}

Introduced In: 9.6

Deletes an application and all associated data.

Warning - this deletes it all, including your data

This deletes everything created with the application, including any volumes, LUNs, NFS export policies, CIFS shares, and initiator groups. Initiator groups are only destroyed if they were created as part of an application and are no longer in use by other applications.

Learn more

- [DOC /application](#)
- [Asynchronous operations](#)

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	Application UUID
delete_data	boolean	query	False	<p>By default, deleting an application deletes all of the application's data. By setting this parameter to "false", the application's data is preserved, but can no longer be managed through application APIs.</p> <ul style="list-style-type: none">• Introduced in: 9.8• Default value: 1

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When 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, 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	

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 an application

GET /application/applications/{uuid}

Introduced In: 9.6

Retrieves an application

Expensive properties

There is an added 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.

- `<template>` the property corresponding to the `template.name` of the application

Property overview

An application includes three main groups or properties.

- Generic properties - such as the `name`, `template.name`, and `state` of the application. These properties are all inexpensive to retrieve and their meaning is consistent for every type of application.
- `statistics.*` - application statistics report live usage data about the application and its components. Various space and IOPS details are included at both the application level and at a per component level. The application model includes a detailed description of each property. These properties are slightly more expensive than the generic properties because live data must be collected from every storage element in the application.
- `<template>` - the property corresponding to the value of the `template.name` returns the contents of the application in the same layout that was used to provision the application. This information is very expensive to retrieve because it requires collecting information about all the storage and access settings for every element of the application. There are a few notable limitations to what can be returned in the `<template>` section:
 - The `new_igroups` array of many SAN templates is not returned by GET. This property allows igroup creation in the same call that creates an application, but is not a property of the application itself. The `new_igroups` array is allowed during PATCH operations, but that does not modify the `new_igroups` of the application. It is another way to allow igroup creation while updating the application to use a different igroup.
 - The `vdi_on_san` and `vdi_on_nas` `desktops.count` property is rounded to the nearest 1000 during creation, and is reported with that rounding applied.
 - The `mongo_db_on_san` `dataset.element_count` property is rounded up to an even number, and is reported with that rounding applied.
 - The `sql_on_san` and `sql_on_smb` `server_cores_count` property is limited to 8 for GET operations. Higher values are accepted by POST, but the impact of the `server_cores_count` property on the application layout currently reaches its limit at 8.

Learn more

- [DOC /application](#)

Parameters

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

Response

Status: 200, Ok

Name	Type	Description
_links	_links	
creation_timestamp	string	The time when the application was created.
delete_data	boolean	Should application storage elements be deleted? An application is considered to use storage elements from a shared storage pool. Possible values are 'true' and 'false'. If the value is 'true', the application will be deleted in its entirety. If the value is 'false', the storage elements will be disassociated from the application and preserved. The application will then be deleted.
generation	integer	The generation number of the application. This indicates which features are supported on the application. For example, generation 1 applications do not support Snapshot copies. Support for Snapshot copies was added at generation 2. Any future generation numbers and their feature set will be documented.
maxdata_on_san	maxdata_on_san	MAX Data application using SAN.
mongo_db_on_san	mongo_db_on_san	MongoDB using SAN.

Name	Type	Description
name	string	Application Name. This field is user supplied when the application is created.
nas	nas	A generic NAS application.
nvme	zapp_nvme	An NVME application.
oracle_on_nfs	oracle_on_nfs	Oracle using NFS.
oracle_on_san	oracle_on_san	Oracle using SAN.
oracle_rac_on_nfs	oracle_rac_on_nfs	Oracle RAC using NFS.
oracle_rac_on_san	oracle_rac_on_san	Oracle RAC using SAN.
protection_granularity	string	Protection granularity determines the scope of Snapshot copy operations for the application. Possible values are "application" and "component". If the value is "application", Snapshot copy operations are performed on the entire application. If the value is "component", Snapshot copy operations are performed separately on the application components.
rpo	rpo	
s3_bucket	zapp_s3_bucket	A generic S3 bucket application.
san	san	A generic SAN application.
smart_container	boolean	Identifies if this is a smart container or not.
sql_on_san	sql_on_san	Microsoft SQL using SAN.
sql_on_smb	sql_on_smb	Microsoft SQL using SMB.

Name	Type	Description
state	string	The state of the application. For full functionality, applications must be in the online state. Other states indicate that the application is in a transient state and not all operations are supported.
statistics	statistics	
svm	svm	
template	template	
uuid	string	Application UUID. This field is generated when the application is created.
vdi_on_nas	vdi_on_nas	A VDI application using NAS.
vdi_on_san	vdi_on_san	A VDI application using SAN.
vsi_on_nas	vsi_on_nas	A VSI application using NAS.
vsi_on_san	vsi_on_san	A VSI application using SAN.

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	
snapshots	href	

metadata

Name	Type	Description
key	string	Key to look up metadata associated with an application component.
value	string	Value associated with the key.

protection_type

Name	Type	Description
local_rpo	string	The local rpo of the application component.
remote_rpo	string	The remote rpo of the application component.

storage_service

Name	Type	Description
name	string	The storage service of the application component.

object_stores

Name	Type	Description
name	string	The name of the object-store to use.

maxdata_on_san_application_components_tiering

tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

maxdata_on_san_application_components

The list of application components to be created.

Name	Type	Description
file_system	string	Defines the type of file system that will be installed on this application component.
host_management_url	string	The host management URL for this application component.
host_name	string	FQDN of the L2 host that contains the hot tier of this application component.
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
lun_count	integer	The number of LUNs in the application component.
metadata	array[metadata]	
name	string	The name of the application component.
protection_type	protection_type	
storage_service	storage_service	

Name	Type	Description
tiering	maxdata_on_san_application_components_tiering	tiering
total_size	integer	The total size of the application component, split across the member LUNs. Usage: {<integer>[KB MB GB TB PB]}

metadata

Name	Type	Description
key	string	Key to look up metadata associated with an application.
value	string	Value associated with the key.

igroups

Name	Type	Description
name	string	The name of an igroup to nest within a parent igroup. Mutually exclusive with initiators and initiator_objects.
uuid	string	The UUID of an igroup to nest within a parent igroup Usage: <UUID>

initiator_objects

Name	Type	Description
comment	string	A comment available for use by the administrator.
name	string	The WWPN, IQN, or Alias of the initiator. Mutually exclusive with nested igroups and the initiators array.

maxdata_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

maxdata_on_san

MAX Data application using SAN.

Name	Type	Description
app_type	string	Type of the application that is being deployed on the L2.
application_components	array[maxdata_on_san_application_components]	The list of application components to be created.
metadata	array[metadata]	
new_igroups	array[maxdata_on_san_new_igroups]	The list of initiator groups to create.
ocsm_url	string	The OnCommand System Manager URL for this application.
os_type	string	The name of the host OS running the application.

storage_service

Name	Type	Description
name	string	The storage service of the database.

dataset

Name	Type	Description
element_count	integer	The number of storage elements (LUNs for SAN) of the database to maintain. Must be an even number between 2 and 16. Odd numbers will be rounded up to the next even number within range.
replication_factor	integer	The number of data bearing members of the replicaset, including 1 primary and at least 1 secondary.
size	integer	The size of the database. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

mongo_db_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

protection_type

Name	Type	Description
local_rpo	string	The local RPO of the application.
remote_rpo	string	The remote RPO of the application.

secondary_igroups

Name	Type	Description
name	string	The name of the initiator group for each secondary.

mongo_db_on_san

MongoDB using SAN.

Name	Type	Description
dataset	dataset	
new_igroups	array[mongo_db_on_san_new_igroups]	The list of initiator groups to create.
os_type	string	The name of the host OS running the application.
primary_igroup_name	string	The initiator group for the primary.
protection_type	protection_type	
secondary_igroups	array[secondary_igroups]	

export_policy

Name	Type	Description
id	integer	The ID of an existing NFS export policy.
name	string	The name of an existing NFS export policy.

component

Name	Type	Description
name	string	Name of the source component.

svm

Name	Type	Description
name	string	Name of the source SVM.

origin

Name	Type	Description
component	component	
svm	svm	

flexcache

Name	Type	Description
dr_cache	boolean	Dr-cache is a FlexCache volume create time option that has the same flexgroup-msid as that of the origin of a FlexCache volume. By default, dr-cache is disabled. The flexgroup-msid of the FlexCache volume does not need to be same as that of the origin of a FlexCache volume.
origin	origin	

policy

Name	Type	Description
name	string	The name of an existing QoS policy.
uuid	string	The UUID of an existing QoS policy. Usage: <UUID>

qos

Name	Type	Description
policy	policy	

nas_application_components_tiering

application-components.tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

application_components

Name	Type	Description
export_policy	export_policy	
flexcache	flexcache	
name	string	The name of the application component.
qos	qos	
scale_out	boolean	Denotes a Flexgroup.
share_count	integer	The number of shares in the application component.
storage_service	storage_service	
tiering	nas_application_components_tiering	application-components.tiering
total_size	integer	The total size of the application component, split across the member shares. Usage: {<integer>[KB MB GB TB PB]}

app_cifs_access

The list of CIFS access controls. You must provide either 'user_or_group' or 'access' to enable CIFS access.

Name	Type	Description
access	string	The CIFS access granted to the user or group.
user_or_group	string	The name of the CIFS user or group that will be granted access.

exclude_aggregates

Name	Type	Description
name	string	The name of the aggregate to exclude. Usage: <aggregate name>
uuid	string	The ID of the aggregate to exclude. Usage: <UUID>

app_nfs_access

The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.

Name	Type	Description
access	string	The NFS access granted.
host	string	The name of the NFS entity granted access.

protection_type

Name	Type	Description
local_policy	string	The Snapshot copy policy to apply to each volume in the smart container. This property is only supported for smart containers. Usage: <snapshot policy>
local_rpo	string	The local RPO of the application.
remote_rpo	string	The remote RPO of the application.

nas

A generic NAS application.

Name	Type	Description
application_components	array[application_components]	
cifs_access	array[app_cifs_access]	The list of CIFS access controls. You must provide either 'user_or_group' or 'access' to enable CIFS access.

Name	Type	Description
cifs_share_name	string	The name of the CIFS share. Usage: <Share>
exclude_aggregates	array[exclude_aggregates]	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
protection_type	protection_type	

performance

Name	Type	Description
storage_service	storage_service	

hosts

Name	Type	Description
nqn	string	The host NQN.

zapp_nvme_components_subsystem

components.subsystem

Name	Type	Description
hosts	array[hosts]	
name	string	The name of the subsystem accessing the component. If neither the name nor the UUID is provided, the name defaults to <application-name>_<component-name>, whether that subsystem already exists or not.
os_type	string	The name of the host OS accessing the component. The default value is the host OS that is running the application.
uuid	string	The UUID of an existing subsystem to be granted access to the component. Usage: <UUID>

zapp_nvme_components_tiering

application-components.tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

components

Name	Type	Description
name	string	The name of the application component.
namespace_count	integer	The number of namespaces in the component.
os_type	string	The name of the host OS running the application.
performance	performance	
qos	qos	
subsystem	zapp_nvme_components_subsystem	components.subsystem
tiering	zapp_nvme_components_tiering	application-components.tiering
total_size	integer	The total size of the component, spread across member namespaces. Usage: {<integer>[KB MB GB TB PB]}

local

Name	Type	Description
name	string	The local RPO of the application.

Name	Type	Description
policy	string	The Snapshot copy policy to apply to each volume in the smart container. This property is only supported for smart containers. Usage: <snapshot policy>

rpo

Name	Type	Description
local	local	

zapp_nvme

An NVME application.

Name	Type	Description
components	array[components]	
os_type	string	The name of the host OS running the application.
rpo	rpo	

storage_service

Name	Type	Description
name	string	The storage service of the archive log.

archive_log

Name	Type	Description
size	integer	The size of the archive log. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

db

Name	Type	Description
size	integer	The size of the database. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the ORACLE_HOME storage volume.

ora_home

Name	Type	Description
size	integer	The size of the ORACLE_HOME storage volume. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the redo log group.

redo_log

Name	Type	Description
mirrored	boolean	Specifies whether the redo log group should be mirrored.
size	integer	The size of the redo log group. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

oracle_on_nfs

Oracle using NFS.

Name	Type	Description
archive_log	archive_log	
db	db	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.

Name	Type	Description
ora_home	ora_home	
protection_type	protection_type	
redo_log	redo_log	

oracle_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

oracle_on_san

Oracle using SAN.

Name	Type	Description
archive_log	archive_log	
db	db	
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.

Name	Type	Description
new_igroups	array[oracle_on_san_new_igroups]	The list of initiator groups to create.
ora_home	ora_home	
os_type	string	The name of the host OS running the application.
protection_type	protection_type	
redo_log	redo_log	

storage_service

Name	Type	Description
name	string	The storage service of the Oracle grid binary storage volume.

grid_binary

Name	Type	Description
size	integer	The size of the Oracle grid binary storage volume. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the Oracle CRS volume.

oracle_crs

Name	Type	Description
copies	integer	The number of CRS volumes.
size	integer	The size of the Oracle CRS/voting storage volume. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

oracle_rac_on_nfs

Oracle RAC using NFS.

Name	Type	Description
archive_log	archive_log	
db	db	
grid_binary	grid_binary	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
ora_home	ora_home	
oracle_crs	oracle_crs	
protection_type	protection_type	
redo_log	redo_log	

db_sids

Name	Type	Description
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.

oracle_rac_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.

Name	Type	Description
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

oracle_rac_on_san

Oracle RAC using SAN.

Name	Type	Description
archive_log	archive_log	
db	db	
db_sids	array[db_sids]	
grid_binary	grid_binary	
new_igroups	array[oracle_rac_on_san_new_igroups]	The list of initiator groups to create.
ora_home	ora_home	
oracle_crs	oracle_crs	
os_type	string	The name of the host OS running the application.
protection_type	protection_type	
redo_log	redo_log	

local

Name	Type	Description
description	string	A detailed description of the local RPO. This will include details about the Snapshot copy schedule.
name	string	The local RPO of the component. This indicates how often component Snapshot copies are automatically created.

remote

Name	Type	Description
description	string	A detailed description of the remote RPO.
name	string	The remote RPO of the component. A remote RPO of zero indicates that the component is synchronously replicated to another cluster.

rpo

Name	Type	Description
local	local	
remote	remote	

components

Name	Type	Description
name	string	Component Name.
rpo	rpo	
uuid	string	Component UUID.

local

Name	Type	Description
description	string	A detailed description of the local RPO. This will include details about the Snapshot copy schedule.
name	string	The local RPO of the application. This indicates how often application Snapshot copies are automatically created.

remote

Name	Type	Description
description	string	A detailed description of the remote RPO.

Name	Type	Description
name	string	The remote RPO of the application. A remote RPO of zero indicates that the application is synchronously replicated to another cluster.

rpo

Name	Type	Description
components	array[components]	
is_supported	boolean	Is RPO supported for this application? Generation 1 applications did not support Snapshot copies or MetroCluster.
local	local	
remote	remote	

zapp_s3_bucket_application_components_access_policies_conditions

conditions

Name	Type	Description
delimiters	array[string]	
max_keys	array[integer]	
operator	string	Policy Condition Operator.
prefixes	array[string]	
source_ips	array[string]	
usernames	array[string]	

zapp_s3_bucket_application_components_access_policies

The list of S3 objectstore policies to be created.

Name	Type	Description
actions	array[string]	
conditions	array[zapp_s3_bucket_application_components_access_policies_conditions]	conditions.
effect	string	Allow or Deny Access.
principals	array[string]	

Name	Type	Description
resources	array[string]	
sid	string	Statement Identifier Usage: <(size 1..256)>

zapp_s3_bucket_application_components

The list of application components to be created.

Name	Type	Description
access_policies	array[zapp_s3_bucket_application_components_access_policies]	The list of S3 objectstore policies to be created.
capacity_tier	boolean	Prefer lower latency storage under similar media costs.
comment	string	Object Store Server Bucket Description Usage: <(size 1..256)>
exclude_aggregates	array[exclude_aggregates]	
name	string	The name of the application component.
qos	qos	
size	integer	The total size of the S3 Bucket, split across the member components. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	
uuid	string	Object Store Server Bucket UUID Usage: <UUID>
versioning_state	string	Bucket Versioning State.

zapp_s3_bucket

A generic S3 bucket application.

Name	Type	Description
application_components	array[zapp_s3_bucket_application_components]	The list of application components to be created.

san_application_components_tiering

application-components.tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

application_components

Name	Type	Description
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
lun_count	integer	The number of LUNs in the application component.
name	string	The name of the application component.
os_type	string	The name of the host OS running the application.
qos	qos	
storage_service	storage_service	
tiering	san_application_components_tiering	application-components.tiering
total_size	integer	The total size of the application component, split across the member LUNs. Usage: {<integer>[KB MB GB TB PB]}

san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

san

A generic SAN application.

Name	Type	Description
application_components	array[application_components]	
exclude_aggregates	array[exclude_aggregates]	
new_igroups	array[san_new_igroups]	The list of initiator groups to create.
os_type	string	The name of the host OS running the application.
protection_type	protection_type	

storage_service

Name	Type	Description
name	string	The storage service of the DB.

db

Name	Type	Description
size	integer	The size of the DB. Usage: {<integer>[KB MB GB TB PB]}

Name	Type	Description
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the log DB.

log

Name	Type	Description
size	integer	The size of the log DB. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

sql_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

storage_service

Name	Type	Description
name	string	The storage service of the temp DB.

temp_db

Name	Type	Description
size	integer	The size of the temp DB. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

sql_on_san

Microsoft SQL using SAN.

Name	Type	Description
db	db	
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
log	log	
new_igroups	array[sql_on_san_new_igroups]	The list of initiator groups to create.
os_type	string	The name of the host OS running the application.
protection_type	protection_type	
server_cores_count	integer	The number of server cores for the DB.
temp_db	temp_db	

access

Name	Type	Description
installer	string	SQL installer admin user name.

Name	Type	Description
service_account	string	SQL service account user name.

sql_on_smb

Microsoft SQL using SMB.

Name	Type	Description
access	access	
db	db	
log	log	
protection_type	protection_type	
server_cores_count	integer	The number of server cores for the DB.
temp_db	temp_db	

iops

Name	Type	Description
per_tb	integer	The number of IOPS per terabyte of logical space currently being used by the application component.
total	integer	The total number of IOPS being used by the application component.

latency

Name	Type	Description
average	integer	The cumulative average response time in microseconds for this component.
raw	integer	The cumulative response time in microseconds for this component.

snapshot

Name	Type	Description
reserve	integer	The amount of space reserved by the system for Snapshot copies.
used	integer	The amount of spacing currently in use by the system to store Snapshot copies.

space

Name	Type	Description
available	integer	The available amount of space left in the application component. Note that this field has limited meaning for SAN applications. Space may be considered used from ONTAP's perspective while the host filesystem still considers it available. <ul style="list-style-type: none"> • readOnly: 1 • Introduced in: 9.6
logical_used	integer	The amount of space that would currently be used if no space saving features were enabled. For example, if compression were the only space saving feature enabled, this field would represent the uncompressed amount of space used.
provisioned	integer	The originally requested amount of space that was provisioned for the application component.
reserved_unused	integer	The amount of space reserved for system features such as Snapshot copies that has not yet been used.
savings	integer	The amount of space saved by all enabled space saving features.

Name	Type	Description
used	integer	The amount of space that is currently being used by the application component. Note that this includes any space reserved by the system for features such as Snapshot copies.
used_excluding_reserves	integer	The amount of space that is currently being used, excluding any space that is reserved by the system for features such as Snapshot copies.
used_percent	integer	The percentage of the originally provisioned space that is currently being used by the application component.

storage_service

Name	Type	Description
name	string	The storage service name. AFF systems support the extreme storage service. All other systems only support value.
uuid	string	The storage service UUID.

components

Name	Type	Description
iops	iops	
latency	latency	
name	string	Component Name.
shared_storage_pool	boolean	An application component is considered to use a shared storage pool if storage elements for other components reside on the same aggregate as storage elements for this component.
snapshot	snapshot	
space	space	

Name	Type	Description
statistics_incomplete	boolean	If not all storage elements of the application component are currently available, the returned statistics might only include data from those elements that were available.
storage_service	storage_service	
uuid	string	Component UUID.

iops

Name	Type	Description
per_tb	integer	The number of IOPS per terabyte of logical space currently being used by the application.
total	integer	The total number of IOPS being used by the application.

latency

Name	Type	Description
average	integer	The cumulative average response time in microseconds for this application.
raw	integer	The cumulative response time in microseconds for this application.

space

Name	Type	Description
available	integer	<p>The available amount of space left in the application. Note that this field has limited meaning for SAN applications. Space may be considered used from ONTAP's perspective while the host filesystem still considers it available.</p> <ul style="list-style-type: none"> • readOnly: 1 • Introduced in: 9.6

Name	Type	Description
logical_used	integer	The amount of space that would currently be used if no space saving features were enabled. For example, if compression were the only space saving feature enabled, this field would represent the uncompressed amount of space used.
provisioned	integer	The originally requested amount of space that was provisioned for the application.
reserved_unused	integer	The amount of space reserved for system features such as Snapshot copies that has not yet been used.
savings	integer	The amount of space saved by all enabled space saving features.
used	integer	The amount of space that is currently being used by the application. Note that this includes any space reserved by the system for features such as Snapshot copies.
used_excluding_reserves	integer	The amount of space that is currently being used, excluding any space that is reserved by the system for features such as Snapshot copies.
used_percent	integer	The percentage of the originally provisioned space that is currently being used by the application.

statistics

Name	Type	Description
components	array[components]	
iops	iops	
latency	latency	

Name	Type	Description
shared_storage_pool	boolean	An application is considered to use a shared storage pool if storage elements for multiple components reside on the same aggregate.
snapshot	snapshot	
space	space	
statistics_incomplete	boolean	If not all storage elements of the application are currently available, the returned statistics might only include data from those elements that were available.

svm

Name	Type	Description
name	string	SVM Name. Either the SVM name or UUID must be provided to create an application.
uuid	string	SVM UUID. Either the SVM name or UUID must be provided to create an application.

self_link

Name	Type	Description
self	href	

template

Name	Type	Description
_links	self_link	
name	string	The name of the template that was used to provision this application.
protocol	string	The protocol access of the template that was used to provision this application.

Name	Type	Description
version	integer	<p>The version of the template that was used to provision this application. The template version changes only if the layout of the application changes over time. For example, redo logs in Oracle RAC templates were updated and provisioned differently in DATA ONTAP 9.3.0 compared to prior releases, so the version number was increased. If layouts change in the future, the changes will be documented along with the corresponding version numbers.</p> <ul style="list-style-type: none"> • readOnly: 1 • Introduced in: 9.6

storage_service

Name	Type	Description
name	string	The storage service of the desktops.

desktops

Name	Type	Description
count	integer	The number of desktops to support.
size	integer	The size of the desktops. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

hyper_v_access

Name	Type	Description
service_account	string	Hyper-V service account.

vdi_on_nas

A VDI application using NAS.

Name	Type	Description
desktops	desktops	
hyper_v_access	hyper_v_access	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
protection_type	protection_type	

vdi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
protocol	string	The protocol of the new initiator group.

vdi_on_san

A VDI application using SAN.

Name	Type	Description
desktops	desktops	
hypervisor	string	The name of the hypervisor hosting the application.
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.

Name	Type	Description
new_igroups	array[vdi_on_san_new_igroups]	The list of initiator groups to create.
protection_type	protection_type	

storage_service

Name	Type	Description
name	string	The storage service of the datastore.

datastore

Name	Type	Description
count	integer	The number of datastores to support.
size	integer	The size of the datastore. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

vsi_on_nas

A VSI application using NAS.

Name	Type	Description
datastore	datastore	
hyper_v_access	hyper_v_access	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
protection_type	protection_type	

vsi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	

Name	Type	Description
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
protocol	string	The protocol of the new initiator group.

vsi_on_san

A VSI application using SAN.

Name	Type	Description
datastore	datastore	
hypervisor	string	The name of the hypervisor hosting the application.
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
new_igroups	array[vsi_on_san_new_igroups]	The list of initiator groups to create.
protection_type	protection_type	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments

Name	Type	Description
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update application properties

PATCH /application/applications/{uuid}

Introduced In: 9.6

Updates the properties of an application.

Overview

Similar to creating an application, modification is done using the template properties of an application. The `storage_service`, `size`, and `igroup_name` of an application may be modified.

`storage_service`

Storage service modifications are processed in place, meaning that the storage can not be moved to a location with more performance headroom to accommodate the request. If the current backing storage of the application is in a location that can support increased performance, the QoS policies associated with the application will be modified to allow it. If not, an error will be returned. A storage service modification to a lower tier of performance is always allowed, but the reverse modification may not be supported if the cluster is over provisioned and the cluster is unlikely to be able to fulfil the original storage service.

`size`

Size modifications are processed in a variety of ways depending on the type of application. For NAS applications, volumes are grown or new volumes are added. For SAN applications, LUNs are grown, new LUNs are added to existing volumes, or new LUNs are added to new volumes. If new storage elements are created, they can be found using the [GET /application/applications/{application.uuid}/components](#) interface. The creation time of each storage object is included, and the newly created objects will use the same naming scheme as the previous objects. Resize follows the best practices associated with the type of application being expanded. Reducing the size of an application is not supported.

`igroup_name`

Modification of the `igroup` name allows an entire application to be mapped from one initiator group to another. Data access will be interrupted as the LUNs are unmapped from the original `igroup` and remapped to the new one.

Application state

During a modification, the `state` property of the application updates to indicate `modifying`. In `modifying` state, statistics are not available and Snapshot copy operations are not allowed. If the modification fails, it is possible for the application to be left in an inconsistent state, with the underlying ONTAP storage elements not matching across a component. When this occurs, the application is left in the `modifying` state until the command is either retried and succeeds or a call to restore the original state is successful.

Examples

1. Change the storage service of the database of the Oracle application to *extreme* and resize the redo logs to *100GB*.

```
{
  "oracle_on_nfs": {
    "db": {
      "storage_service": {
        "name": "extreme"
      }
    },
    "redo_log": {
      "size": "100GB"
    }
  }
}
```

2. Change the storage service, size, and igroup of a generic application by component name.

```
{
  "san": {
    "application_components": [
      {
        "name": "component1",
        "storage_service": {
          "name": "value"
        }
      },
      {
        "name": "component2",
        "size": "200GB"
      },
      {
        "name": "component3",
        "igroup_name": "igroup5"
      }
    ]
  }
}
```

Learn more

- [DOC /application](#)
- [Asynchronous operations](#)

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	Application UUID

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	
creation_timestamp	string	The time when the application was created.

Name	Type	Description
delete_data	boolean	Should application storage elements be deleted? An application is considered to use storage elements from a shared storage pool. Possible values are 'true' and 'false'. If the value is 'true', the application will be deleted in its entirety. If the value is 'false', the storage elements will be disassociated from the application and preserved. The application will then be deleted.
generation	integer	The generation number of the application. This indicates which features are supported on the application. For example, generation 1 applications do not support Snapshot copies. Support for Snapshot copies was added at generation 2. Any future generation numbers and their feature set will be documented.
maxdata_on_san	maxdata_on_san	MAX Data application using SAN.
mongo_db_on_san	mongo_db_on_san	MongoDB using SAN.
name	string	Application Name. This field is user supplied when the application is created.
nas	nas	A generic NAS application.
nvme	zapp_nvme	An NVME application.
oracle_on_nfs	oracle_on_nfs	Oracle using NFS.
oracle_on_san	oracle_on_san	Oracle using SAN.
oracle_rac_on_nfs	oracle_rac_on_nfs	Oracle RAC using NFS.
oracle_rac_on_san	oracle_rac_on_san	Oracle RAC using SAN.

Name	Type	Description
protection_granularity	string	Protection granularity determines the scope of Snapshot copy operations for the application. Possible values are "application" and "component". If the value is "application", Snapshot copy operations are performed on the entire application. If the value is "component", Snapshot copy operations are performed separately on the application components.
rpo	rpo	
s3_bucket	zapp_s3_bucket	A generic S3 bucket application.
san	san	A generic SAN application.
smart_container	boolean	Identifies if this is a smart container or not.
sql_on_san	sql_on_san	Microsoft SQL using SAN.
sql_on_smb	sql_on_smb	Microsoft SQL using SMB.
state	string	The state of the application. For full functionality, applications must be in the online state. Other states indicate that the application is in a transient state and not all operations are supported.
statistics	statistics	
svm	svm	
template	template	
uuid	string	Application UUID. This field is generated when the application is created.
vdi_on_nas	vdi_on_nas	A VDI application using NAS.
vdi_on_san	vdi_on_san	A VDI application using SAN.
vsi_on_nas	vsi_on_nas	A VSI application using NAS.

Name	Type	Description
vsi_on_san	vsi_on_san	A VSI application using SAN.

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

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

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	
snapshots	href	

metadata

Name	Type	Description
key	string	Key to look up metadata associated with an application component.
value	string	Value associated with the key.

protection_type

Name	Type	Description
local_rpo	string	The local rpo of the application component.
remote_rpo	string	The remote rpo of the application component.

storage_service

Name	Type	Description
name	string	The storage service of the application component.

object_stores

Name	Type	Description
name	string	The name of the object-store to use.

maxdata_on_san_application_components_tiering

tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

maxdata_on_san_application_components

The list of application components to be created.

Name	Type	Description
file_system	string	Defines the type of file system that will be installed on this application component.
host_management_url	string	The host management URL for this application component.
host_name	string	FQDN of the L2 host that contains the hot tier of this application component.
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
lun_count	integer	The number of LUNs in the application component.
metadata	array[metadata]	
name	string	The name of the application component.
protection_type	protection_type	
storage_service	storage_service	

Name	Type	Description
tiering	maxdata_on_san_application_components_tiering	tiering
total_size	integer	The total size of the application component, split across the member LUNs. Usage: {<integer>[KB MB GB TB PB]}

metadata

Name	Type	Description
key	string	Key to look up metadata associated with an application.
value	string	Value associated with the key.

igroups

Name	Type	Description
name	string	The name of an igroup to nest within a parent igroup. Mutually exclusive with initiators and initiator_objects.
uuid	string	The UUID of an igroup to nest within a parent igroup Usage: <UUID>

initiator_objects

Name	Type	Description
comment	string	A comment available for use by the administrator.
name	string	The WWPN, IQN, or Alias of the initiator. Mutually exclusive with nested igroups and the initiators array.

maxdata_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

maxdata_on_san

MAX Data application using SAN.

Name	Type	Description
app_type	string	Type of the application that is being deployed on the L2.
application_components	array[maxdata_on_san_application_components]	The list of application components to be created.
metadata	array[metadata]	
new_igroups	array[maxdata_on_san_new_igroups]	The list of initiator groups to create.
ocsm_url	string	The OnCommand System Manager URL for this application.
os_type	string	The name of the host OS running the application.

storage_service

Name	Type	Description
name	string	The storage service of the database.

dataset

Name	Type	Description
element_count	integer	The number of storage elements (LUNs for SAN) of the database to maintain. Must be an even number between 2 and 16. Odd numbers will be rounded up to the next even number within range.
replication_factor	integer	The number of data bearing members of the replicaset, including 1 primary and at least 1 secondary.
size	integer	The size of the database. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

mongo_db_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

protection_type

Name	Type	Description
local_rpo	string	The local RPO of the application.
remote_rpo	string	The remote RPO of the application.

secondary_igroups

Name	Type	Description
name	string	The name of the initiator group for each secondary.

mongo_db_on_san

MongoDB using SAN.

Name	Type	Description
dataset	dataset	
new_igroups	array[mongo_db_on_san_new_igroups]	The list of initiator groups to create.
os_type	string	The name of the host OS running the application.
primary_igroup_name	string	The initiator group for the primary.
protection_type	protection_type	
secondary_igroups	array[secondary_igroups]	

export_policy

Name	Type	Description
id	integer	The ID of an existing NFS export policy.
name	string	The name of an existing NFS export policy.

component

Name	Type	Description
name	string	Name of the source component.

svm

Name	Type	Description
name	string	Name of the source SVM.

origin

Name	Type	Description
component	component	
svm	svm	

flexcache

Name	Type	Description
dr_cache	boolean	Dr-cache is a FlexCache volume create time option that has the same flexgroup-msid as that of the origin of a FlexCache volume. By default, dr-cache is disabled. The flexgroup-msid of the FlexCache volume does not need to be same as that of the origin of a FlexCache volume.
origin	origin	

policy

Name	Type	Description
name	string	The name of an existing QoS policy.
uuid	string	The UUID of an existing QoS policy. Usage: <UUID>

qos

Name	Type	Description
policy	policy	

nas_application_components_tiering

application-components.tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

application_components

Name	Type	Description
export_policy	export_policy	
flexcache	flexcache	
name	string	The name of the application component.
qos	qos	
scale_out	boolean	Denotes a Flexgroup.
share_count	integer	The number of shares in the application component.
storage_service	storage_service	
tiering	nas_application_components_tiering	application-components.tiering
total_size	integer	The total size of the application component, split across the member shares. Usage: {<integer>[KB MB GB TB PB]}

app_cifs_access

The list of CIFS access controls. You must provide either 'user_or_group' or 'access' to enable CIFS access.

Name	Type	Description
access	string	The CIFS access granted to the user or group.
user_or_group	string	The name of the CIFS user or group that will be granted access.

exclude_aggregates

Name	Type	Description
name	string	The name of the aggregate to exclude. Usage: <aggregate name>
uuid	string	The ID of the aggregate to exclude. Usage: <UUID>

app_nfs_access

The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.

Name	Type	Description
access	string	The NFS access granted.
host	string	The name of the NFS entity granted access.

protection_type

Name	Type	Description
local_policy	string	The Snapshot copy policy to apply to each volume in the smart container. This property is only supported for smart containers. Usage: <snapshot policy>
local_rpo	string	The local RPO of the application.
remote_rpo	string	The remote RPO of the application.

nas

A generic NAS application.

Name	Type	Description
application_components	array[application_components]	
cifs_access	array[app_cifs_access]	The list of CIFS access controls. You must provide either 'user_or_group' or 'access' to enable CIFS access.

Name	Type	Description
cifs_share_name	string	The name of the CIFS share. Usage: <Share>
exclude_aggregates	array[exclude_aggregates]	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
protection_type	protection_type	

performance

Name	Type	Description
storage_service	storage_service	

hosts

Name	Type	Description
nqn	string	The host NQN.

zapp_nvme_components_subsystem

components.subsystem

Name	Type	Description
hosts	array[hosts]	
name	string	The name of the subsystem accessing the component. If neither the name nor the UUID is provided, the name defaults to <application-name>_<component-name>, whether that subsystem already exists or not.
os_type	string	The name of the host OS accessing the component. The default value is the host OS that is running the application.
uuid	string	The UUID of an existing subsystem to be granted access to the component. Usage: <UUID>

zapp_nvme_components_tiering

application-components.tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

components

Name	Type	Description
name	string	The name of the application component.
namespace_count	integer	The number of namespaces in the component.
os_type	string	The name of the host OS running the application.
performance	performance	
qos	qos	
subsystem	zapp_nvme_components_subsystem	components.subsystem
tiering	zapp_nvme_components_tiering	application-components.tiering
total_size	integer	The total size of the component, spread across member namespaces. Usage: {<integer>[KB MB GB TB PB]}

local

Name	Type	Description
name	string	The local RPO of the application.

Name	Type	Description
policy	string	The Snapshot copy policy to apply to each volume in the smart container. This property is only supported for smart containers. Usage: <snapshot policy>

rpo

Name	Type	Description
local	local	

zapp_nvme

An NVME application.

Name	Type	Description
components	array[components]	
os_type	string	The name of the host OS running the application.
rpo	rpo	

storage_service

Name	Type	Description
name	string	The storage service of the archive log.

archive_log

Name	Type	Description
size	integer	The size of the archive log. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

db

Name	Type	Description
size	integer	The size of the database. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the ORACLE_HOME storage volume.

ora_home

Name	Type	Description
size	integer	The size of the ORACLE_HOME storage volume. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the redo log group.

redo_log

Name	Type	Description
mirrored	boolean	Specifies whether the redo log group should be mirrored.
size	integer	The size of the redo log group. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

oracle_on_nfs

Oracle using NFS.

Name	Type	Description
archive_log	archive_log	
db	db	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.

Name	Type	Description
ora_home	ora_home	
protection_type	protection_type	
redo_log	redo_log	

oracle_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

oracle_on_san

Oracle using SAN.

Name	Type	Description
archive_log	archive_log	
db	db	
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.

Name	Type	Description
new_igroups	array[oracle_on_san_new_igroups]	The list of initiator groups to create.
ora_home	ora_home	
os_type	string	The name of the host OS running the application.
protection_type	protection_type	
redo_log	redo_log	

storage_service

Name	Type	Description
name	string	The storage service of the Oracle grid binary storage volume.

grid_binary

Name	Type	Description
size	integer	The size of the Oracle grid binary storage volume. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the Oracle CRS volume.

oracle_crs

Name	Type	Description
copies	integer	The number of CRS volumes.
size	integer	The size of the Oracle CRS/voting storage volume. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

oracle_rac_on_nfs

Oracle RAC using NFS.

Name	Type	Description
archive_log	archive_log	
db	db	
grid_binary	grid_binary	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
ora_home	ora_home	
oracle_crs	oracle_crs	
protection_type	protection_type	
redo_log	redo_log	

db_sids

Name	Type	Description
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.

oracle_rac_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.

Name	Type	Description
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

oracle_rac_on_san

Oracle RAC using SAN.

Name	Type	Description
archive_log	archive_log	
db	db	
db_sids	array[db_sids]	
grid_binary	grid_binary	
new_igroups	array[oracle_rac_on_san_new_igroups]	The list of initiator groups to create.
ora_home	ora_home	
oracle_crs	oracle_crs	
os_type	string	The name of the host OS running the application.
protection_type	protection_type	
redo_log	redo_log	

local

Name	Type	Description
description	string	A detailed description of the local RPO. This will include details about the Snapshot copy schedule.
name	string	The local RPO of the component. This indicates how often component Snapshot copies are automatically created.

remote

Name	Type	Description
description	string	A detailed description of the remote RPO.
name	string	The remote RPO of the component. A remote RPO of zero indicates that the component is synchronously replicated to another cluster.

rpo

Name	Type	Description
local	local	
remote	remote	

components

Name	Type	Description
name	string	Component Name.
rpo	rpo	
uuid	string	Component UUID.

local

Name	Type	Description
description	string	A detailed description of the local RPO. This will include details about the Snapshot copy schedule.
name	string	The local RPO of the application. This indicates how often application Snapshot copies are automatically created.

remote

Name	Type	Description
description	string	A detailed description of the remote RPO.

Name	Type	Description
name	string	The remote RPO of the application. A remote RPO of zero indicates that the application is synchronously replicated to another cluster.

rpo

Name	Type	Description
components	array[components]	
is_supported	boolean	Is RPO supported for this application? Generation 1 applications did not support Snapshot copies or MetroCluster.
local	local	
remote	remote	

zapp_s3_bucket_application_components_access_policies_conditions

conditions

Name	Type	Description
delimiters	array[string]	
max_keys	array[integer]	
operator	string	Policy Condition Operator.
prefixes	array[string]	
source_ips	array[string]	
usernames	array[string]	

zapp_s3_bucket_application_components_access_policies

The list of S3 objectstore policies to be created.

Name	Type	Description
actions	array[string]	
conditions	array[zapp_s3_bucket_application_components_access_policies_conditions]	conditions.
effect	string	Allow or Deny Access.
principals	array[string]	

Name	Type	Description
resources	array[string]	
sid	string	Statement Identifier Usage: <(size 1..256)>

zapp_s3_bucket_application_components

The list of application components to be created.

Name	Type	Description
access_policies	array[zapp_s3_bucket_application_components_access_policies]	The list of S3 objectstore policies to be created.
capacity_tier	boolean	Prefer lower latency storage under similar media costs.
comment	string	Object Store Server Bucket Description Usage: <(size 1..256)>
exclude_aggregates	array[exclude_aggregates]	
name	string	The name of the application component.
qos	qos	
size	integer	The total size of the S3 Bucket, split across the member components. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	
uuid	string	Object Store Server Bucket UUID Usage: <UUID>
versioning_state	string	Bucket Versioning State.

zapp_s3_bucket

A generic S3 bucket application.

Name	Type	Description
application_components	array[zapp_s3_bucket_application_components]	The list of application components to be created.

san_application_components_tiering

application-components.tiering

Name	Type	Description
control	string	Storage tiering placement rules for the container(s)
object_stores	array[object_stores]	
policy	string	The storage tiering type of the application component.

application_components

Name	Type	Description
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
lun_count	integer	The number of LUNs in the application component.
name	string	The name of the application component.
os_type	string	The name of the host OS running the application.
qos	qos	
storage_service	storage_service	
tiering	san_application_components_tiering	application-components.tiering
total_size	integer	The total size of the application component, split across the member LUNs. Usage: {<integer>[KB MB GB TB PB]}

san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

san

A generic SAN application.

Name	Type	Description
application_components	array[application_components]	
exclude_aggregates	array[exclude_aggregates]	
new_igroups	array[san_new_igroups]	The list of initiator groups to create.
os_type	string	The name of the host OS running the application.
protection_type	protection_type	

storage_service

Name	Type	Description
name	string	The storage service of the DB.

db

Name	Type	Description
size	integer	The size of the DB. Usage: {<integer>[KB MB GB TB PB]}

Name	Type	Description
storage_service	storage_service	

storage_service

Name	Type	Description
name	string	The storage service of the log DB.

log

Name	Type	Description
size	integer	The size of the log DB. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

sql_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
os_type	string	The name of the host OS accessing the application. The default value is the host OS that is running the application.
protocol	string	The protocol of the new initiator group.

storage_service

Name	Type	Description
name	string	The storage service of the temp DB.

temp_db

Name	Type	Description
size	integer	The size of the temp DB. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

sql_on_san

Microsoft SQL using SAN.

Name	Type	Description
db	db	
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
log	log	
new_igroups	array[sql_on_san_new_igroups]	The list of initiator groups to create.
os_type	string	The name of the host OS running the application.
protection_type	protection_type	
server_cores_count	integer	The number of server cores for the DB.
temp_db	temp_db	

access

Name	Type	Description
installer	string	SQL installer admin user name.

Name	Type	Description
service_account	string	SQL service account user name.

sql_on_smb

Microsoft SQL using SMB.

Name	Type	Description
access	access	
db	db	
log	log	
protection_type	protection_type	
server_cores_count	integer	The number of server cores for the DB.
temp_db	temp_db	

iops

Name	Type	Description
per_tb	integer	The number of IOPS per terabyte of logical space currently being used by the application component.
total	integer	The total number of IOPS being used by the application component.

latency

Name	Type	Description
average	integer	The cumulative average response time in microseconds for this component.
raw	integer	The cumulative response time in microseconds for this component.

snapshot

Name	Type	Description
reserve	integer	The amount of space reserved by the system for Snapshot copies.
used	integer	The amount of spacing currently in use by the system to store Snapshot copies.

space

Name	Type	Description
available	integer	The available amount of space left in the application component. Note that this field has limited meaning for SAN applications. Space may be considered used from ONTAP's perspective while the host filesystem still considers it available. <ul style="list-style-type: none"> • readOnly: 1 • Introduced in: 9.6
logical_used	integer	The amount of space that would currently be used if no space saving features were enabled. For example, if compression were the only space saving feature enabled, this field would represent the uncompressed amount of space used.
provisioned	integer	The originally requested amount of space that was provisioned for the application component.
reserved_unused	integer	The amount of space reserved for system features such as Snapshot copies that has not yet been used.
savings	integer	The amount of space saved by all enabled space saving features.

Name	Type	Description
used	integer	The amount of space that is currently being used by the application component. Note that this includes any space reserved by the system for features such as Snapshot copies.
used_excluding_reserves	integer	The amount of space that is currently being used, excluding any space that is reserved by the system for features such as Snapshot copies.
used_percent	integer	The percentage of the originally provisioned space that is currently being used by the application component.

storage_service

Name	Type	Description
name	string	The storage service name. AFF systems support the extreme storage service. All other systems only support value.
uuid	string	The storage service UUID.

components

Name	Type	Description
iops	iops	
latency	latency	
name	string	Component Name.
shared_storage_pool	boolean	An application component is considered to use a shared storage pool if storage elements for other components reside on the same aggregate as storage elements for this component.
snapshot	snapshot	
space	space	

Name	Type	Description
statistics_incomplete	boolean	If not all storage elements of the application component are currently available, the returned statistics might only include data from those elements that were available.
storage_service	storage_service	
uuid	string	Component UUID.

iops

Name	Type	Description
per_tb	integer	The number of IOPS per terabyte of logical space currently being used by the application.
total	integer	The total number of IOPS being used by the application.

latency

Name	Type	Description
average	integer	The cumulative average response time in microseconds for this application.
raw	integer	The cumulative response time in microseconds for this application.

space

Name	Type	Description
available	integer	<p>The available amount of space left in the application. Note that this field has limited meaning for SAN applications. Space may be considered used from ONTAP's perspective while the host filesystem still considers it available.</p> <ul style="list-style-type: none"> • readOnly: 1 • Introduced in: 9.6

Name	Type	Description
logical_used	integer	The amount of space that would currently be used if no space saving features were enabled. For example, if compression were the only space saving feature enabled, this field would represent the uncompressed amount of space used.
provisioned	integer	The originally requested amount of space that was provisioned for the application.
reserved_unused	integer	The amount of space reserved for system features such as Snapshot copies that has not yet been used.
savings	integer	The amount of space saved by all enabled space saving features.
used	integer	The amount of space that is currently being used by the application. Note that this includes any space reserved by the system for features such as Snapshot copies.
used_excluding_reserves	integer	The amount of space that is currently being used, excluding any space that is reserved by the system for features such as Snapshot copies.
used_percent	integer	The percentage of the originally provisioned space that is currently being used by the application.

statistics

Name	Type	Description
components	array[components]	
iops	iops	
latency	latency	

Name	Type	Description
shared_storage_pool	boolean	An application is considered to use a shared storage pool if storage elements for multiple components reside on the same aggregate.
snapshot	snapshot	
space	space	
statistics_incomplete	boolean	If not all storage elements of the application are currently available, the returned statistics might only include data from those elements that were available.

svm

Name	Type	Description
name	string	SVM Name. Either the SVM name or UUID must be provided to create an application.
uuid	string	SVM UUID. Either the SVM name or UUID must be provided to create an application.

self_link

Name	Type	Description
self	href	

template

Name	Type	Description
_links	self_link	
name	string	The name of the template that was used to provision this application.
protocol	string	The protocol access of the template that was used to provision this application.

Name	Type	Description
version	integer	<p>The version of the template that was used to provision this application. The template version changes only if the layout of the application changes over time. For example, redo logs in Oracle RAC templates were updated and provisioned differently in DATA ONTAP 9.3.0 compared to prior releases, so the version number was increased. If layouts change in the future, the changes will be documented along with the corresponding version numbers.</p> <ul style="list-style-type: none"> • readOnly: 1 • Introduced in: 9.6

storage_service

Name	Type	Description
name	string	The storage service of the desktops.

desktops

Name	Type	Description
count	integer	The number of desktops to support.
size	integer	The size of the desktops. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

hyper_v_access

Name	Type	Description
service_account	string	Hyper-V service account.

vdi_on_nas

A VDI application using NAS.

Name	Type	Description
desktops	desktops	
hyper_v_access	hyper_v_access	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
protection_type	protection_type	

vdi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
protocol	string	The protocol of the new initiator group.

vdi_on_san

A VDI application using SAN.

Name	Type	Description
desktops	desktops	
hypervisor	string	The name of the hypervisor hosting the application.
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.

Name	Type	Description
new_igroups	array[vdi_on_san_new_igroups]	The list of initiator groups to create.
protection_type	protection_type	

storage_service

Name	Type	Description
name	string	The storage service of the datastore.

datastore

Name	Type	Description
count	integer	The number of datastores to support.
size	integer	The size of the datastore. Usage: {<integer>[KB MB GB TB PB]}
storage_service	storage_service	

vsi_on_nas

A VSI application using NAS.

Name	Type	Description
datastore	datastore	
hyper_v_access	hyper_v_access	
nfs_access	array[app_nfs_access]	The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
protection_type	protection_type	

vsi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
comment	string	A comment available for use by the administrator.
igroups	array[igroups]	

Name	Type	Description
initiator_objects	array[initiator_objects]	
initiators	array[string]	
name	string	The name of the new initiator group.
protocol	string	The protocol of the new initiator group.

vsi_on_san

A VSI application using SAN.

Name	Type	Description
datastore	datastore	
hypervisor	string	The name of the hypervisor hosting the application.
igroup_name	string	The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
new_igroups	array[vsi_on_san_new_igroups]	The list of initiator groups to create.
protection_type	protection_type	

application

Applications

Name	Type	Description
_links	_links	
creation_timestamp	string	The time when the application was created.

Name	Type	Description
delete_data	boolean	Should application storage elements be deleted? An application is considered to use storage elements from a shared storage pool. Possible values are 'true' and 'false'. If the value is 'true', the application will be deleted in its entirety. If the value is 'false', the storage elements will be disassociated from the application and preserved. The application will then be deleted.
generation	integer	The generation number of the application. This indicates which features are supported on the application. For example, generation 1 applications do not support Snapshot copies. Support for Snapshot copies was added at generation 2. Any future generation numbers and their feature set will be documented.
maxdata_on_san	maxdata_on_san	MAX Data application using SAN.
mongo_db_on_san	mongo_db_on_san	MongoDB using SAN.
name	string	Application Name. This field is user supplied when the application is created.
nas	nas	A generic NAS application.
nvme	zapp_nvme	An NVME application.
oracle_on_nfs	oracle_on_nfs	Oracle using NFS.
oracle_on_san	oracle_on_san	Oracle using SAN.
oracle_rac_on_nfs	oracle_rac_on_nfs	Oracle RAC using NFS.
oracle_rac_on_san	oracle_rac_on_san	Oracle RAC using SAN.

Name	Type	Description
protection_granularity	string	Protection granularity determines the scope of Snapshot copy operations for the application. Possible values are "application" and "component". If the value is "application", Snapshot copy operations are performed on the entire application. If the value is "component", Snapshot copy operations are performed separately on the application components.
rpo	rpo	
s3_bucket	zapp_s3_bucket	A generic S3 bucket application.
san	san	A generic SAN application.
smart_container	boolean	Identifies if this is a smart container or not.
sql_on_san	sql_on_san	Microsoft SQL using SAN.
sql_on_smb	sql_on_smb	Microsoft SQL using SMB.
state	string	The state of the application. For full functionality, applications must be in the online state. Other states indicate that the application is in a transient state and not all operations are supported.
statistics	statistics	
svm	svm	
template	template	
uuid	string	Application UUID. This field is generated when the application is created.
vdi_on_nas	vdi_on_nas	A VDI application using NAS.
vdi_on_san	vdi_on_san	A VDI application using SAN.
vsi_on_nas	vsi_on_nas	A VSI application using NAS.

Name	Type	Description
vsi_on_san	vsi_on_san	A VSI application using SAN.

[_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.

Manage application consistency groups

Application consistency-groups endpoint overview

Overview

A consistency group is a group of volumes that supports capabilities such as creating a snapshot of all of its member volumes at the same point-in-time with a write-fence, thus ensuring a consistent image of the volumes at that time.

Applications with datasets scoped to a single volume can have its contents saved to a Snapshot copy, replicated, or cloned in a crash-consistent manner implicitly with corresponding native ONTAP volume-granular operations. Applications with datasets spanning a group of multiple volumes must have such operations performed on the group. Typically, by first fencing writes to all the volumes in the group, flushing any writes pending in queues, executing the intended operation, that is, take Snapshot copy of every volume in the group and when that is complete, unfence and resume writes. A consistency group is the conventional mechanism for providing such group semantics.

Consistency group APIs

The following APIs are used to perform operations related to consistency groups:

- – GET /api/application/consistency-groups
- – POST /api/application/consistency-groups
- – GET /api/application/consistency-groups/{uuid}
- – PATCH /api/application/consistency-groups/{uuid}
- – DELETE /api/application/consistency-groups/{uuid}

Examples

Retrieving all consistency groups of an SVM

```
# The API:
/api/application/consistency-groups

# The call:
curl -X GET "https://<mgmt-ip>/api/application/consistency-
groups?svm.name=vs1" -H "accept: application/hal+json"

# The response:
{
  "records": [
    {
      "uuid": "6f48d798-0a7f-11ec-a449-005056bbcf9f",
      "name": "voll",
      "_links": {
        "self": {
          "href": "/api/application/consistency-groups/6f48d798-0a7f-11ec-
a449-005056bbcf9f"
        }
      }
    }
  ]
}
```

```

},
{
  "uuid": "c1b22c85-0a82-11ec-a449-005056bbcf9f",
  "name": "parent_cg",
  "_links": {
    "self": {
      "href": "/api/application/consistency-groups/c1b22c85-0a82-11ec-
a449-005056bbcf9f"
    }
  }
},
{
  "uuid": "c1b270b1-0a82-11ec-a449-005056bbcf9f",
  "name": "child_1",
  "_links": {
    "self": {
      "href": "/api/application/consistency-groups/c1b270b1-0a82-11ec-
a449-005056bbcf9f"
    }
  }
},
{
  "uuid": "c1b270c3-0a82-11ec-a449-005056bbcf9f",
  "name": "child_2",
  "_links": {
    "self": {
      "href": "/api/application/consistency-groups/c1b270c3-0a82-11ec-
a449-005056bbcf9f"
    }
  }
}
],
"num_records": 4,
"_links": {
  "self": {
    "href": "/api/application/consistency-groups"
  }
}
}
}

```

Retrieving details of all consistency groups of an SVM

Retrieving details of the consistency groups for a specified SVM. These details are considered to be performant and will return within 1 second when 40 records or less are requested.

```
curl -X GET "https://<mgmt-ip>/api/application/consistency-
```

```
groups?svm.name=vs1&fields=*&max_records=40"
```

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

```
{  
  "records": [  
    {  
      "uuid": "6f48d798-0a7f-11ec-a449-005056bbcf9f",  
      "name": "voll",  
      "svm": {  
        "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",  
        "name": "vs1",  
        "_links": {  
          "self": {  
            "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"  
          }  
        }  
      },  
      "space": {  
        "size": 108003328,  
        "available": 107704320,  
        "used": 299008  
      },  
      "replicated": false,  
      "_links": {  
        "self": {  
          "href": "/api/application/consistency-groups/6f48d798-0a7f-11ec-a449-005056bbcf9f"  
        }  
      }  
    },  
    {  
      "uuid": "c1b22c85-0a82-11ec-a449-005056bbcf9f",  
      "name": "parent_cg",  
      "svm": {  
        "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",  
        "name": "vs1",  
        "_links": {  
          "self": {  
            "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"  
          }  
        }  
      },  
      "snapshot_policy": {  
        "name": "default-1weekly",  
        "uuid": "a30bd0fe-067d-11ec-a449-005056bbcf9f",  
        "_links": {
```

```
    "self": {
      "href": "/api/storage/snapshot-policies/a30bd0fe-067d-11ec-a449-005056bbcf9f"
    }
  },
  "consistency_groups": [
    {
      "uuid": "c1b270b1-0a82-11ec-a449-005056bbcf9f",
      "name": "child_1",
      "space": {
        "size": 41943040,
        "available": 39346176,
        "used": 499712
      },
      "_links": {
        "self": {
          "href": "/api/application/consistency-groups/c1b270b1-0a82-11ec-a449-005056bbcf9f"
        }
      }
    },
    {
      "uuid": "c1b270c3-0a82-11ec-a449-005056bbcf9f",
      "name": "child_2",
      "space": {
        "size": 41943040,
        "available": 39350272,
        "used": 495616
      },
      "_links": {
        "self": {
          "href": "/api/application/consistency-groups/c1b270c3-0a82-11ec-a449-005056bbcf9f"
        }
      }
    }
  ],
  "space": {
    "size": 83886080,
    "available": 78696448,
    "used": 995328
  },
  "replicated": false,
  "_links": {
    "self": {
```

```
    "href": "/api/application/consistency-groups/c1b22c85-0a82-11ec-
a449-005056bbcf9f"
  }
}
},
{
  "uuid": "c1b270b1-0a82-11ec-a449-005056bbcf9f",
  "name": "child_1",
  "parent_consistency_group": {
    "uuid": "c1b22c85-0a82-11ec-a449-005056bbcf9f",
    "name": "parent_cg",
    "_links": {
      "self": {
        "href": "/api/application/consistency-groups/c1b22c85-0a82-11ec-
a449-005056bbcf9f"
      }
    }
  },
  "svm": {
    "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",
    "name": "vs1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"
      }
    }
  },
  "snapshot_policy": {
    "name": "default",
    "uuid": "a30b60a4-067d-11ec-a449-005056bbcf9f",
    "_links": {
      "self": {
        "href": "/api/storage/snapshot-policies/a30b60a4-067d-11ec-a449-
005056bbcf9f"
      }
    }
  },
  "space": {
    "size": 41943040,
    "available": 39346176,
    "used": 499712
  },
  "_links": {
    "self": {
      "href": "/api/application/consistency-groups/c1b270b1-0a82-11ec-
a449-005056bbcf9f"
    }
  }
}
```

```

    }
  },
  {
    "uuid": "c1b270c3-0a82-11ec-a449-005056bbcf9f",
    "name": "child_2",
    "parent_consistency_group": {
      "uuid": "c1b22c85-0a82-11ec-a449-005056bbcf9f",
      "name": "parent_cg",
      "_links": {
        "self": {
          "href": "/api/application/consistency-groups/c1b22c85-0a82-11ec-
a449-005056bbcf9f"
        }
      }
    },
    "svm": {
      "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",
      "name": "vs1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"
        }
      }
    },
    "snapshot_policy": {
      "name": "default",
      "uuid": "a30b60a4-067d-11ec-a449-005056bbcf9f",
      "_links": {
        "self": {
          "href": "/api/storage/snapshot-policies/a30b60a4-067d-11ec-a449-
005056bbcf9f"
        }
      }
    },
    "space": {
      "size": 41943040,
      "available": 39350272,
      "used": 495616
    },
    "_links": {
      "self": {
        "href": "/api/application/consistency-groups/c1b270c3-0a82-11ec-
a449-005056bbcf9f"
      }
    }
  }
}

```

```
    }  
  ],  
  "num_records": 4,  
  "_links": {  
    "self": {  
      "href": "/api/application/consistency-  
groups?svm.name=vs1&fields=*&max_records=40"  
    }  
  }  
}
```

Retrieving details of non-nested consistency groups

Retrieves details of the consistency groups without nested consistency groups, or only the parent consistency group for a number of consistency groups of a specified SVM.


```
curl -X GET "https://<mgmt-ip>/api/application/consistency-
groups?svm.name=vs1&parent_consistency_group.uid=null"
```

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

```
{
"records": [
  {
    "uuid": "6f48d798-0a7f-11ec-a449-005056bbcf9f",
    "name": "voll",
    "svm": {
      "name": "vs1"
    },
    "_links": {
      "self": {
        "href": "/api/application/consistency-groups/6f48d798-0a7f-11ec-
a449-005056bbcf9f"
      }
    }
  },
  {
    "uuid": "c1b22c85-0a82-11ec-a449-005056bbcf9f",
    "name": "parent_cg",
    "svm": {
      "name": "vs1"
    },
    "_links": {
      "self": {
        "href": "/api/application/consistency-groups/c1b22c85-0a82-11ec-
a449-005056bbcf9f"
      }
    }
  }
],
"num_records": 2,
"_links": {
  "self": {
    "href": "/api/application/consistency-
groups?svm.name=vs1&parent_consistency_group.uid=null"
  }
}
}
```

Creating a single consistency group with a new SAN volume

Provisions an application with one consistency group, each with one new SAN volumes, with one LUN, an igrp and no explicit Snapshot copy policy, FabricPool tiering policy, storage service, and QoS policy

specification. The igroup to map a LUN to is specified at LUN-granularity.

```
curl -X POST https://<mgmt-ip>/api/application/consistency-
groups?return_records=true -d '{ "svm": { "name": "vs1" }, "luns": [ {
"name": "/vol/vol1/lun1", "space": { "size": "100mb" }, "os_type":
"linux", "lun_maps": [ { "igroup": { "name": "igroup1", "initiators": [ {
"name": "iqn.2021-07.com.netapp.englab.gdl:scspr2429998001" } ] } ] } ] } ]
}'

#### Response:
{
"num_records": 1,
"records": [
{
  "uuid": "6f48d798-0a7f-11ec-a449-005056bbcf9f",
  "name": "vol1",
  "svm": {
    "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",
    "name": "vs1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"
      }
    }
  },
  "luns": [
    {
      "lun_maps": [
        {
          "igroup": {
            "name": "igroup1",
            "initiators": [
              {
                "name": "iqn.2021-
07.com.netapp.englab.gdl:scspr2429998001"
              }
            ]
          }
        }
      ],
      "name": "/vol/vol1/lun1",
      "os_type": "linux",
      "space": {
        "size": 104857600
      }
    }
  ]
}
```

```

    ]
  }
],
"job": {
  "uuid": "6f4907ae-0a7f-11ec-a449-005056bbcf9f",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/6f4907ae-0a7f-11ec-a449-005056bbcf9f"
    }
  }
}
}
}

```

Creating an Application with two consistency groups with existing SAN volumes

Provisions an application with two consistency groups, each with two existing SAN volumes, a Snapshot copy policy at application-granularity, and a distinct consistency group granular Snapshot copy policy.

```

curl -X POST https://<mgmt-ip>/api/application/consistency-
groups?return_records=true -d '{ "svm": { "name": "vs1" }, "name":
"parent_cg", "snapshot_policy": { "name": "default-1weekly" },
"consistency_groups": [ { "name": "child_1", "snapshot_policy": { "name":
"default" }, "volumes": [ { "name": "existing_vol1",
"provisioning_options": { "action": "add" } }, { "name": "existing_vol2",
"provisioning_options": { "action": "add" } } ] }, { "name": "child_2",
"snapshot_policy": { "name": "default" }, "volumes": [ { "name":
"existing_vol3", "provisioning_options": { "action": "add" } }, { "name":
"existing_vol4", "provisioning_options": { "action": "add" } } ] } ] }'

#### Response:
{
"num_records": 1,
"records": [
  {
    "uuid": "c1b22c85-0a82-11ec-a449-005056bbcf9f",
    "name": "parent_cg",
    "svm": {
      "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",
      "name": "vs1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"
        }
      }
    }
  },
  "snapshot_policy": {

```

```

    "name": "default-1weekly"
  },
  "consistency_groups": [
    {
      "uuid": "c1b270b1-0a82-11ec-a449-005056bbcf9f",
      "name": "child_1",
      "snapshot_policy": {
        "name": "default"
      },
      "volumes": [
        {
          "name": "existing_vol1"
        },
        {
          "name": "existing_vol2"
        }
      ]
    },
    {
      "uuid": "c1b270c3-0a82-11ec-a449-005056bbcf9f",
      "name": "child_2",
      "snapshot_policy": {
        "name": "default"
      },
      "volumes": [
        {
          "name": "existing_vol3"
        },
        {
          "name": "existing_vol4"
        }
      ]
    }
  ]
},
"job": {
  "uuid": "c1b272b9-0a82-11ec-a449-005056bbcf9f",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/c1b272b9-0a82-11ec-a449-005056bbcf9f"
    }
  }
}
}
}

```

Retrieving specific details of an existing consistency group

Retrieves the details of an existing consistency group.

```
curl -X GET https://<mgmt-ip>/api/application/consistency-groups/6f48d798-0a7f-11ec-a449-005056bbcf9f

#### Response:
{
  "uuid": "6f48d798-0a7f-11ec-a449-005056bbcf9f",
  "name": "vol1",
  "svm": {
    "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",
    "name": "vs1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"
      }
    }
  },
  "space": {
    "size": 108003328,
    "available": 107724800,
    "used": 278528
  },
  "replicated": false,
  "_links": {
    "self": {
      "href": "/api/application/consistency-groups/6f48d798-0a7f-11ec-a449-005056bbcf9f"
    }
  }
}
```

Retrieving all details of an existing consistency group

Retrieves all details of an existing consistency group. These details are not considered to be performant and are not guaranteed to return within one second.

```
curl -X GET https://<mgmt-ip>/api/application/consistency-groups/6f48d798-0a7f-11ec-a449-005056bbcf9f?fields=**

#### Response:
{
  "uuid": "6f48d798-0a7f-11ec-a449-005056bbcf9f",
  "name": "vol1",
```

```

"svm": {
  "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",
  "name": "vs1",
  "_links": {
    "self": {
      "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"
    }
  }
},
"qos": {
  "policy": {
    "uuid": "b7189398-e572-48ab-8f69-82cd46580812",
    "name": "extreme-fixed",
    "_links": {
      "self": {
        "href": "/api/storage/qos/policies/b7189398-e572-48ab-8f69-82cd46580812"
      }
    }
  }
},
"tiering": {
  "policy": "none"
},
"create_time": "2021-08-31T13:18:24-04:00",
"volumes": [
  {
    "uuid": "6f516c6c-0a7f-11ec-a449-005056bbcf9f",
    "qos": {
      "policy": {
        "uuid": "b7189398-e572-48ab-8f69-82cd46580812",
        "name": "extreme-fixed",
        "_links": {
          "self": {
            "href": "/api/storage/qos/policies/b7189398-e572-48ab-8f69-82cd46580812"
          }
        }
      }
    }
  },
  {
    "tiering": {
      "policy": "none"
    }
  },
  "comment": "",
  "create_time": "2021-08-31T13:18:22-04:00",
  "name": "voll",

```

```

"snapshot_policy": {
  "name": "default",
  "uuid": "a30b60a4-067d-11ec-a449-005056bbcf9f"
},
"space": {
  "size": 108003328,
  "available": 107569152,
  "used": 434176,
  "snapshot": {
    "used": 151552,
    "reserve_percent": 0,
    "autodelete_enabled": false
  }
},
"activity_tracking": {
  "supported": false,
  "unsupported_reason": {
    "message": "Volume activity tracking is not supported on volumes
that contain LUNs.",
    "code": "124518405"
  },
  "state": "off"
},
"_links": {
  "self": {
    "href": "/api/storage/volumes/6f516c6c-0a7f-11ec-a449-
005056bbcf9f"
  }
}
],
"luns": [
  {
    "uuid": "6f51748a-0a7f-11ec-a449-005056bbcf9f",
    "location": {
      "logical_unit": "lun1",
      "node": {
        "name": "johnhil-vsimg1",
        "uuid": "6eb682f2-067d-11ec-a449-005056bbcf9f",
        "_links": {
          "self": {
            "href": "/api/cluster/nodes/6eb682f2-067d-11ec-a449-
005056bbcf9f"
          }
        }
      }
    }
  },

```

```

    "volume": {
      "uuid": "6f516c6c-0a7f-11ec-a449-005056bbcf9f",
      "name": "vol1",
      "_links": {
        "self": {
          "href": "/api/storage/volumes/6f516c6c-0a7f-11ec-a449-
005056bbcf9f"
        }
      }
    },
    "lun_maps": [
      {
        "igroup": {
          "uuid": "6f4a4b86-0a7f-11ec-a449-005056bbcf9f",
          "name": "igroup1",
          "os_type": "linux",
          "protocol": "mixed",
          "initiators": [
            {
              "name": "iqn.2021-07.com.netapp.englab.gdl:scspr2429998001"
            }
          ],
          "_links": {
            "self": {
              "href": "/api/protocols/san/igroups/6f4a4b86-0a7f-11ec-a449-
005056bbcf9f"
            }
          }
        },
        "logical_unit_number": 0
      }
    ],
    "name": "/vol/vol1/lun1",
    "auto_delete": false,
    "class": "regular",
    "create_time": "2021-08-31T13:18:24-04:00",
    "os_type": "linux",
    "serial_number": "wIqM6]RfQK3t",
    "space": {
      "size": 104857600,
      "used": 0,
      "guarantee": {
        "requested": false,
        "reserved": false
      }
    }
  }
}

```



```

    },
    "status": {
      "container_state": "online",
      "mapped": true,
      "read_only": false,
      "state": "online"
    },
    "_links": {
      "self": {
        "href": "/api/storage/luns/6f51748a-0a7f-11ec-a449-005056bbcf9f"
      }
    }
  },
  ],
  "space": {
    "size": 108003328,
    "available": 107569152,
    "used": 434176
  },
  "replicated": false,
  "_links": {
    "self": {
      "href": "/api/application/consistency-groups/6f48d798-0a7f-11ec-a449-005056bbcf9f?fields=**"
    }
  }
}

```

Adding LUNs to an existing volume in an existing consistency group

Adds two NVMe namespaces to an existing volume in an existing consistency group, creates a new subsystem, and binds the new namespaces to it.

```
curl -X PATCH 'https://<mgmt-ip>/api/application/consistency-
groups/6f48d798-0a7f-11ec-a449-005056bbcf9f' -d '{ "luns": [ { "name":
"/vol/vol1/new_luns", "provisioning_options": { "count": 2, "action":
"create" }, "space": { "size": "100mb" }, "os_type": "linux", "lun_maps":
[ { "igroup": { "name": "igroup2", "initiators": [ { "name":
"01:02:03:04:05:06:07:01" } ] } } ] } ] }'
```

Response:

```
{
"job": {
  "uuid": "5306ea44-0a87-11ec-a449-005056bbcf9f",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/5306ea44-0a87-11ec-a449-005056bbcf9f"
    }
  }
}
}
```

Restoring a consistency group to the contents of an existing snapshot

Restores an existing consistency group to the contents of an existing snapshot of the consistency group.

```
curl -X PATCH 'https://<mgmt-ip>/api/application/consistency-
groups/6f51748a-0a7f-11ec-a449-005056bbcf9f' -d '{ "restore_to": {
"snapshot": { "uuid": "92c6c770-17a1-11eb-b141-005056acd498" } } }' -H
"Accept: Application/hal+json"
```

Response:

```
{
"job": {
  "uuid": "8907bd9e-1463-11eb-a719-005056ac70af",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/8907bd9e-1463-11eb-a719-005056ac70af"
    }
  }
}
}
```

Deleting a consistency group

Deletes a consistency group, where all storage originally associated with that consistency group remains in place.

```
curl -X DELETE 'https://<mgmt-ip>/api/application/consistency-  
groups/6f48d798-0a7f-11ec-a449-005056bbcf9f'
```

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

```
{  
}
```

Retrieve details of a collection or consistency group

GET /application/consistency-groups

Introduced In: 9.10

Retrieve details of a collection or a specific consistency group.

Notes

When volume granular properties, such as, the storage SLC, Fabric Pool tiering are not the same for all the existing volumes of a consistency group, the corresponding property is not reported at consistency group granularity. It is only reported if all the volumes of the consistency group have the same value for that property.

If this consistency group instance is part of a replication relationship, the "replicated" parameter will be true. Otherwise, it is false. Also, the "replicated" parameter will not be present in the output for Nested-consistency groups, it is included only for single and top-level consistency groups. If this consistency group instance is the source of a replication relationship, the "replication_source" parameter will be true. Otherwise, it is false.

Expensive properties

There is an added 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.

- volumes
- luns
- namespaces

Parameters

Name	Type	In	Required	Description
qos.policy.min_throughput_iops	integer	query	False	Filter by qos.policy.min_throughput_iops
qos.policy.max_throughput_iops	integer	query	False	Filter by qos.policy.max_throughput_iops

Name	Type	In	Required	Description
qos.policy.uuid	string	query	False	Filter by qos.policy.uuid
qos.policy.min_throughput_mbps	integer	query	False	Filter by qos.policy.min_throughput_mbps
qos.policy.max_throughput_mbps	integer	query	False	Filter by qos.policy.max_throughput_mbps
qos.policy.name	string	query	False	Filter by qos.policy.name
replication_source	boolean	query	False	Filter by replication_source
consistency_groups.space.used	integer	query	False	Filter by consistency_groups.space.used
consistency_groups.space.size	integer	query	False	Filter by consistency_groups.space.size
consistency_groups.space.available	integer	query	False	Filter by consistency_groups.space.available
consistency_groups.qos.policy.min_throughput_iops	integer	query	False	Filter by consistency_groups.qos.policy.min_throughput_iops
consistency_groups.qos.policy.max_throughput_iops	integer	query	False	Filter by consistency_groups.qos.policy.max_throughput_iops
consistency_groups.qos.policy.uuid	string	query	False	Filter by consistency_groups.qos.policy.uuid
consistency_groups.qos.policy.min_throughput_mbps	integer	query	False	Filter by consistency_groups.qos.policy.min_throughput_mbps

Name	Type	In	Required	Description
consistency_groups.qos.policy.max_throughput_mbps	integer	query	False	Filter by consistency_groups.qos.policy.max_throughput_mbps
consistency_groups.qos.policy.name	string	query	False	Filter by consistency_groups.qos.policy.name
consistency_groups.name	string	query	False	Filter by consistency_groups.name
consistency_groups.uuid	string	query	False	Filter by consistency_groups.uuid
consistency_groups.snapshot_policy.name	string	query	False	Filter by consistency_groups.snapshot_policy.name
consistency_groups.snapshot_policy.uuid	string	query	False	Filter by consistency_groups.snapshot_policy.uuid
consistency_groups.luns.serial_number	string	query	False	Filter by consistency_groups.luns.serial_number <ul style="list-style-type: none"> • maxLength: 12 • minLength: 12
consistency_groups.luns.qos.policy.max_throughput_iops	integer	query	False	Filter by consistency_groups.luns.qos.policy.max_throughput_iops
consistency_groups.luns.qos.policy.min_throughput_iops	integer	query	False	Filter by consistency_groups.luns.qos.policy.min_throughput_iops

Name	Type	In	Required	Description
consistency_groups.luns.qos.policy.max_throughput_mbps	integer	query	False	Filter by consistency_groups.luns.qos.policy.max_throughput_mbps
consistency_groups.luns.qos.policy.name	string	query	False	Filter by consistency_groups.luns.qos.policy.name
consistency_groups.luns.qos.policy.uuid	string	query	False	Filter by consistency_groups.luns.qos.policy.uuid
consistency_groups.luns.qos.policy.min_throughput_mbps	integer	query	False	Filter by consistency_groups.luns.qos.policy.min_throughput_mbps
consistency_groups.luns.lun_maps.igroup.os_type	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.os_type
consistency_groups.luns.lun_maps.igroup.protocol	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.protocol
consistency_groups.luns.lun_maps.igroup.igroups.uuid	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.igroups.uuid
consistency_groups.luns.lun_maps.igroup.igroups.name	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.igroups.name <ul style="list-style-type: none"> • maxLength: 96 • minLength: 1
consistency_groups.luns.lun_maps.igroup.initiators.name	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.initiators.name

Name	Type	In	Required	Description
consistency_groups.luns.lun_maps.igroup.initiators.comment	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.initiators.comment <ul style="list-style-type: none"> • maxLength: 254 • minLength: 0
consistency_groups.luns.lun_maps.igroup.comment	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.comment <ul style="list-style-type: none"> • Introduced in: 9.11 • maxLength: 254 • minLength: 0
consistency_groups.luns.lun_maps.igroup.name	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.name <ul style="list-style-type: none"> • maxLength: 96 • minLength: 1
consistency_groups.luns.lun_maps.igroup.uuid	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.uuid
consistency_groups.luns.lun_maps.logical_unit_number	integer	query	False	Filter by consistency_groups.luns.lun_maps.logical_unit_number
consistency_groups.luns.space.guarantee.reserved	boolean	query	False	Filter by consistency_groups.luns.space.guarantee.reserved <ul style="list-style-type: none"> • Introduced in: 9.11

Name	Type	In	Required	Description
consistency_groups.luns.space.guarantee.requested	boolean	query	False	Filter by consistency_groups.luns.space.guarantee.requested • Introduced in: 9.11
consistency_groups.luns.space.size	integer	query	False	Filter by consistency_groups.luns.space.size • Max value: 140737488355328 • Min value: 4096
consistency_groups.luns.space.used	integer	query	False	Filter by consistency_groups.luns.space.used
consistency_groups.luns.os_type	string	query	False	Filter by consistency_groups.luns.os_type
consistency_groups.luns.enabled	boolean	query	False	Filter by consistency_groups.luns.enabled
consistency_groups.luns.comment	string	query	False	Filter by consistency_groups.luns.comment • maxLength: 254 • minLength: 0
consistency_groups.luns.name	string	query	False	Filter by consistency_groups.luns.name
consistency_groups.luns.uuid	string	query	False	Filter by consistency_groups.luns.uuid
consistency_groups.luns.create_time	string	query	False	Filter by consistency_groups.luns.create_time

Name	Type	In	Required	Description
consistency_groups.svm.uuid	string	query	False	Filter by consistency_groups.svm.uuid
consistency_groups.svm.name	string	query	False	Filter by consistency_groups.svm.name
consistency_groups.volumes.tiering.policy	string	query	False	Filter by consistency_groups.volumes.tiering.policy
consistency_groups.volumes.name	string	query	False	Filter by consistency_groups.volumes.name <ul style="list-style-type: none"> • maxLength: 203 • minLength: 1
consistency_groups.volumes.comment	string	query	False	Filter by consistency_groups.volumes.comment <ul style="list-style-type: none"> • maxLength: 1023 • minLength: 0
consistency_groups.volumes.snapshot_policy.name	string	query	False	Filter by consistency_groups.volumes.snapshot_policy.name
consistency_groups.volumes.snapshot_policy.uuid	string	query	False	Filter by consistency_groups.volumes.snapshot_policy.uuid
consistency_groups.volumes.uuid	string	query	False	Filter by consistency_groups.volumes.uuid
consistency_groups.volumes.qos.policy.min_throughput_iops	integer	query	False	Filter by consistency_groups.volumes.qos.policy.min_throughput_iops

Name	Type	In	Required	Description
consistency_groups.volumes.qos.policy.max_throughput_iops	integer	query	False	Filter by consistency_groups.volumes.qos.policy.max_throughput_iops
consistency_groups.volumes.qos.policy.uuid	string	query	False	Filter by consistency_groups.volumes.qos.policy.uuid
consistency_groups.volumes.qos.policy.min_throughput_mbps	integer	query	False	Filter by consistency_groups.volumes.qos.policy.min_throughput_mbps
consistency_groups.volumes.qos.policy.max_throughput_mbps	integer	query	False	Filter by consistency_groups.volumes.qos.policy.max_throughput_mbps
consistency_groups.volumes.qos.policy.name	string	query	False	Filter by consistency_groups.volumes.qos.policy.name
consistency_groups.volumes.language	string	query	False	Filter by consistency_groups.volumes.language
consistency_groups.volumes.space.size	integer	query	False	Filter by consistency_groups.volumes.space.size
consistency_groups.volumes.space.available	integer	query	False	Filter by consistency_groups.volumes.space.available
consistency_groups.volumes.space.used	integer	query	False	Filter by consistency_groups.volumes.space.used

Name	Type	In	Required	Description
consistency_groups.parent_consistency_group.name	string	query	False	Filter by consistency_groups.parent_consistency_group.name
consistency_groups.parent_consistency_group.uuid	string	query	False	Filter by consistency_groups.parent_consistency_group.uuid
consistency_groups.tiering.policy	string	query	False	Filter by consistency_groups.tiering.policy
space.used	integer	query	False	Filter by space.used
space.size	integer	query	False	Filter by space.size
space.available	integer	query	False	Filter by space.available
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
parent_consistency_group.name	string	query	False	Filter by parent_consistency_group.name
parent_consistency_group.uuid	string	query	False	Filter by parent_consistency_group.uuid
name	string	query	False	Filter by name
snapshot_policy.name	string	query	False	Filter by snapshot_policy.name
snapshot_policy.uuid	string	query	False	Filter by snapshot_policy.uuid

Name	Type	In	Required	Description
luns.serial_number	string	query	False	Filter by luns.serial_number <ul style="list-style-type: none"> • maxLength: 12 • minLength: 12
luns.qos.policy.max_throughput_iops	integer	query	False	Filter by luns.qos.policy.max_throughput_iops
luns.qos.policy.min_throughput_iops	integer	query	False	Filter by luns.qos.policy.min_throughput_iops
luns.qos.policy.max_throughput_mbps	integer	query	False	Filter by luns.qos.policy.max_throughput_mbps
luns.qos.policy.name	string	query	False	Filter by luns.qos.policy.name
luns.qos.policy.uuid	string	query	False	Filter by luns.qos.policy.uuid
luns.qos.policy.min_throughput_mbps	integer	query	False	Filter by luns.qos.policy.min_throughput_mbps
luns.lun_maps.igroup.os_type	string	query	False	Filter by luns.lun_maps.igroup.os_type
luns.lun_maps.igroup.protocol	string	query	False	Filter by luns.lun_maps.igroup.protocol
luns.lun_maps.igroup.igroups.uuid	string	query	False	Filter by luns.lun_maps.igroup.igroups.uuid
luns.lun_maps.igroup.igroups.name	string	query	False	Filter by luns.lun_maps.igroup.igroups.name <ul style="list-style-type: none"> • maxLength: 96 • minLength: 1

Name	Type	In	Required	Description
luns.lun_maps.igroup.initiators.name	string	query	False	Filter by luns.lun_maps.igroup.initiators.name
luns.lun_maps.igroup.initiators.comment	string	query	False	Filter by luns.lun_maps.igroup.initiators.comment <ul style="list-style-type: none"> • maxLength: 254 • minLength: 0
luns.lun_maps.igroup.comment	string	query	False	Filter by luns.lun_maps.igroup.comment <ul style="list-style-type: none"> • Introduced in: 9.11 • maxLength: 254 • minLength: 0
luns.lun_maps.igroup.name	string	query	False	Filter by luns.lun_maps.igroup.name <ul style="list-style-type: none"> • maxLength: 96 • minLength: 1
luns.lun_maps.igroup.uuid	string	query	False	Filter by luns.lun_maps.igroup.uuid
luns.lun_maps.logical_unit_number	integer	query	False	Filter by luns.lun_maps.logical_unit_number
luns.space.guarantee.reserved	boolean	query	False	Filter by luns.space.guarantee.reserved <ul style="list-style-type: none"> • Introduced in: 9.11

Name	Type	In	Required	Description
luns.space.guarantee.requested	boolean	query	False	Filter by luns.space.guarantee.requested • Introduced in: 9.11
luns.space.size	integer	query	False	Filter by luns.space.size • Max value: 140737488355328 • Min value: 4096
luns.space.used	integer	query	False	Filter by luns.space.used
luns.os_type	string	query	False	Filter by luns.os_type
luns.enabled	boolean	query	False	Filter by luns.enabled
luns.comment	string	query	False	Filter by luns.comment • maxLength: 254 • minLength: 0
luns.name	string	query	False	Filter by luns.name
luns.uuid	string	query	False	Filter by luns.uuid
luns.create_time	string	query	False	Filter by luns.create_time
volumes.tiering.policy	string	query	False	Filter by volumes.tiering.policy
volumes.name	string	query	False	Filter by volumes.name • maxLength: 203 • minLength: 1

Name	Type	In	Required	Description
volumes.comment	string	query	False	Filter by volumes.comment <ul style="list-style-type: none"> • maxLength: 1023 • minLength: 0
volumes.snapshot_policy.name	string	query	False	Filter by volumes.snapshot_policy.name
volumes.snapshot_policy.uuid	string	query	False	Filter by volumes.snapshot_policy.uuid
volumes.uuid	string	query	False	Filter by volumes.uuid
volumes.qos.policy.min_throughput_iops	integer	query	False	Filter by volumes.qos.policy.min_throughput_iops
volumes.qos.policy.max_throughput_iops	integer	query	False	Filter by volumes.qos.policy.max_throughput_iops
volumes.qos.policy.uuid	string	query	False	Filter by volumes.qos.policy.uuid
volumes.qos.policy.min_throughput_mbps	integer	query	False	Filter by volumes.qos.policy.min_throughput_mbps
volumes.qos.policy.max_throughput_mbps	integer	query	False	Filter by volumes.qos.policy.max_throughput_mbps
volumes.qos.policy.name	string	query	False	Filter by volumes.qos.policy.name

Name	Type	In	Required	Description
volumes.language	string	query	False	Filter by volumes.language
volumes.space.size	integer	query	False	Filter by volumes.space.size
volumes.space.available	integer	query	False	Filter by volumes.space.available
volumes.space.used	integer	query	False	Filter by volumes.space.used
tiering.policy	string	query	False	Filter by tiering.policy
uuid	string	query	False	Filter by uuid
replicated	boolean	query	False	Filter by replicated
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	<p>The default is true for GET calls. When set to false, only the number of records is returned.</p> <ul style="list-style-type: none"> • Default value: 1

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached.</p> <ul style="list-style-type: none"> • Max value: 120 • Min value: 0 • Default value: 1
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"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "consistency_groups": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "luns": {
        "clone": {
          "source": {
            "name": "/vol/volume1/lun1",
            "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
          }
        },
        "comment": "string",
        "create_time": "2018-06-04T19:00:00Z",
        "lun_maps": {
          "igroup": {
            "comment": "string",
            "igroups": {
              "_links": {
                "self": {
                  "href": "/api/resourcelink"
                }
              },
              "name": "igroup1",
              "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
            },
            "initiators": {
              "comment": "my comment",

```

```

        "name": "iqn.1998-01.com.corp.iscsi:name1"
      },
      "name": "igroup1",
      "os_type": "aix",
      "protocol": "fc",
      "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    }
  },
  "name": "/vol/volume1/lun1",
  "os_type": "aix",
  "provisioning_options": {
    "action": "create"
  },
  "qos": {
    "policy": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      }
    },
    "max_throughput_iops": 10000,
    "max_throughput_mbps": 500,
    "min_throughput_iops": 2000,
    "min_throughput_mbps": 500,
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "serial_number": "string",
  "space": {
    "size": 1073741824
  },
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"namespaces": {
  "comment": "string",
  "create_time": "2018-06-04T19:00:00Z",
  "name": "/vol/volume1/qtrees/namespace1",
  "os_type": "aix",
  "provisioning_options": {
    "action": "create"
  },
  "subsystem_map": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  }
}

```

```

    }
  },
  "anagrpid": "00103050h",
  "nsid": "00000001h",
  "subsystem": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"parent_consistency_group": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  }
},
"name": "my_consistency_group",
"uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"provisioning_options": {
  "action": "create",
  "storage_service": {
    "name": "extreme"
  }
},
"qos": {
  "policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "max_throughput_iops": 10000,
  "max_throughput_mbps": 500,
  "min_throughput_iops": 2000,
  "min_throughput_mbps": 500,
  "name": "performance",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"snapshot_policy": {

```

```

    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "default",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "space": {
    "available": 5737418,
    "size": 1073741824,
    "used": 5737418
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "tiering": {
    "control": "allowed",
    "policy": "all"
  },
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
  "volumes": {
    "comment": "string",
    "language": "ar",
    "name": "vol_cs_dept",
    "provisioning_options": {
      "action": "create",
      "storage_service": {
        "name": "extreme"
      }
    }
  },
  "qos": {
    "policy": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      }
    },
    "max_throughput_iops": 10000,
    "max_throughput_mbps": 500,

```

```

        "min_throughput_iops": 2000,
        "min_throughput_mbps": 500,
        "name": "performance",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "snapshot_policy": {
        "_links": {
            "self": {
                "href": "/api/resourcelink"
            }
        },
        "name": "default",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "tiering": {
        "control": "allowed",
        "policy": "all"
    },
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
}
},
"luns": {
    "clone": {
        "source": {
            "name": "/vol/volume1/lun1",
            "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        }
    },
    "comment": "string",
    "create_time": "2018-06-04T19:00:00Z",
    "lun_maps": {
        "igroup": {
            "comment": "string",
            "igroups": {
                "_links": {
                    "self": {
                        "href": "/api/resourcelink"
                    }
                },
                "name": "igroup1",
                "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
            },
            "initiators": {
                "comment": "my comment",
                "name": "iqn.1998-01.com.corp.iscsi:name1"
            }
        }
    }
}

```

```

    },
    "name": "igroup1",
    "os_type": "aix",
    "protocol": "fc",
    "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
  }
},
"name": "/vol/volume1/lun1",
"os_type": "aix",
"provisioning_options": {
  "action": "create"
},
"qos": {
  "policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "max_throughput_iops": 10000,
  "max_throughput_mbps": 500,
  "min_throughput_iops": 2000,
  "min_throughput_mbps": 500,
  "name": "performance",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
}
},
"serial_number": "string",
"space": {
  "size": 1073741824
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"namespaces": {
  "comment": "string",
  "create_time": "2018-06-04T19:00:00Z",
  "name": "/vol/volume1/mtree1/namespacel",
  "os_type": "aix",
  "provisioning_options": {
    "action": "create"
  },
  "subsystem_map": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  }
}

```

```

    },
    "anagrpid": "00103050h",
    "nsid": "00000001h",
    "subsystem": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "parent_consistency_group": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "my_consistency_group",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "provisioning_options": {
    "action": "create",
    "storage_service": {
      "name": "extreme"
    }
  },
  "qos": {
    "policy": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "max_throughput_iops": 10000,
      "max_throughput_mbps": 500,
      "min_throughput_iops": 2000,
      "min_throughput_mbps": 500,
      "name": "performance",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  },
  "snapshot_policy": {
    "_links": {

```



```

    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "default",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"space": {
  "available": 5737418,
  "size": 1073741824,
  "used": 5737418
},
"svm": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "svm1",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"tiering": {
  "control": "allowed",
  "policy": "all"
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
"volumes": {
  "comment": "string",
  "language": "ar",
  "name": "vol_cs_dept",
  "provisioning_options": {
    "action": "create",
    "storage_service": {
      "name": "extreme"
    }
  },
  "qos": {
    "policy": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "max_throughput_iops": 10000,
      "max_throughput_mbps": 500,
      "min_throughput_iops": 2000,

```

```

        "min_throughput_mbps": 500,
        "name": "performance",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "snapshot_policy": {
        "_links": {
            "self": {
                "href": "/api/resourcelink"
            }
        },
        "name": "default",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "tiering": {
        "control": "allowed",
        "policy": "all"
    },
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
}
}
}

```

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	

collection_links

Name	Type	Description
next	href	
self	href	

self_link

Name	Type	Description
self	href	

source

The source LUN for a LUN clone operation. This can be specified using property `clone.source.uuid` or `clone.source.name`. If both properties are supplied, they must refer to the same LUN.

Valid in POST to create a new LUN as a clone of the source.

Valid in PATCH to overwrite an existing LUN's data as a clone of another.

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

clone

This sub-object is used in POST to create a new LUN as a clone of an existing LUN, or PATCH to overwrite an existing LUN as a clone of another. Setting a property in this sub-object indicates that a LUN clone is desired. Consider the following other properties when cloning a LUN: `auto_delete`, `qos_policy`, `space.guarantee.requested` and `space.scsi_thin_provisioning_support_enabled`.

When used in a PATCH, the patched LUN's data is over-written as a clone of the source and the following

properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: `class`, `auto_delete`, `lun_maps`, `serial_number`, `status.state`, and `uuid`.

Persistent reservations for the patched LUN are also preserved.

Name	Type	Description
source	source	<p>The source LUN for a LUN clone operation. This can be specified using property <code>clone.source.uuid</code> or <code>clone.source.name</code>. If both properties are supplied, they must refer to the same LUN.</p> <p>Valid in POST to create a new LUN as a clone of the source.</p> <p>Valid in PATCH to overwrite an existing LUN's data as a clone of another.</p>

igroups

Name	Type	Description
<code>_links</code>	self_link	
<code>name</code>	string	The name of the initiator group.
<code>uuid</code>	string	The unique identifier of the initiator group.

initiators

The initiators that are members of the initiator group.

Name	Type	Description
<code>comment</code>	string	A comment available for use by the administrator.
<code>name</code>	string	Name of initiator that is a member of the initiator group.

igroup

The initiator group that directly owns the initiator, which is where modification of the initiator is supported. This property will only be populated when the initiator is a member of a nested initiator group.

Name	Type	Description
comment	string	A comment available for use by the administrator. Valid in POST and PATCH.
igroups	array[igroups]	Separate igroup definitions to include in this igroup.
initiators	array[initiators]	The initiators that are members of the group.
name	string	The name of the initiator group. Required in POST; optional in PATCH.
os_type	string	The host operating system of the initiator group. All initiators in the group should be hosts of the same operating system. Required in POST; optional in PATCH.
protocol	string	The protocols supported by the initiator group. This restricts the type of initiators that can be added to the initiator group. Optional in POST; if not supplied, this defaults to <i>mixed</i> . The protocol of an initiator group cannot be changed after creation of the group.
uuid	string	The unique identifier of the initiator group.

lun_maps

A LUN map is an association between a LUN and an initiator group.

When a LUN is mapped to an initiator group, the initiator group's initiators are granted access to the LUN. The relationship between a LUN and an initiator group is many LUNs to many initiator groups.

Name	Type	Description
igroup	igroup	The initiator group that directly owns the initiator, which is where modification of the initiator is supported. This property will only be populated when the initiator is a member of a nested initiator group.
logical_unit_number	integer	The logical unit number assigned to the LUN when mapped to the specified initiator group. The number is used to identify the LUN to initiators in the initiator group when communicating through the Fibre Channel Protocol or iSCSI. Optional in POST; if no value is provided, ONTAP assigns the lowest available value. <ul style="list-style-type: none"> • Introduced in: 9.6 • readCreate: 1

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
count	integer	Number of elements to perform the operation on.

policy

The QoS policy

Name	Type	Description
_links	self_link	
max_throughput_iops	integer	Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.

Name	Type	Description
max_throughput_mbps	integer	Specifies the maximum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_iops	integer	Specifies the minimum throughput in IOPS, 0 means none. Setting "min_throughput" is supported on AFF platforms only, unless FabricPool tiering policies are set. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_mbps	integer	Specifies the minimum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
name	string	The QoS policy group name. This is mutually exclusive with UUID and other QoS attributes during POST and PATCH.
uuid	string	The QoS policy group UUID. This is mutually exclusive with name and other QoS attributes during POST and PATCH.

qos

Name	Type	Description
policy	policy	The QoS policy

guarantee

Properties that request and report the space guarantee for the LUN.

Name	Type	Description
requested	boolean	The requested space reservation policy for the LUN. If <i>true</i> , a space reservation is requested for the LUN; if <i>false</i> , the LUN is thin provisioned. Guaranteeing a space reservation request for a LUN requires that the volume in which the LUN resides is also space reserved and that the fractional reserve for the volume is 100%. Valid in POST and PATCH.
reserved	boolean	Reports if the LUN is space guaranteed. If <i>true</i> , a space guarantee is requested and the containing volume and aggregate support the request. If <i>false</i> , a space guarantee is not requested or a space guarantee is requested and either the containing volume or aggregate do not support the request.

space

The storage space related properties of the LUN.

Name	Type	Description
guarantee	guarantee	Properties that request and report the space guarantee for the LUN.

Name	Type	Description
size	integer	<p>The total provisioned size of the LUN. The LUN size can be increased but not reduced using the REST interface. The maximum and minimum sizes listed here are the absolute maximum and absolute minimum sizes, in bytes. The actual minimum and maximum sizes vary depending on the ONTAP version, ONTAP platform, and the available space in the containing volume and aggregate. For more information, see <i>Size properties</i> in the <i>docs</i> section of the ONTAP REST API documentation.</p> <ul style="list-style-type: none"> • example: 1073741824 • format: int64 • Max value: 140737488355328 • Min value: 4096 • Introduced in: 9.6

Name	Type	Description
used	integer	<p>The amount of space consumed by the main data stream of the LUN.</p> <p>This value is the total space consumed in the volume by the LUN, including filesystem overhead, but excluding prefix and suffix streams. Due to internal filesystem overhead and the many ways SAN filesystems and applications utilize blocks within a LUN, this value does not necessarily reflect actual consumption/availability from the perspective of the filesystem or application. Without specific knowledge of how the LUN blocks are utilized outside of ONTAP, this property should not be used as an indicator for an out-of-space condition.</p> <p>For more information, see <i>Size properties</i> in the <i>docs</i> section of the ONTAP REST API documentation.</p> <ul style="list-style-type: none"> • format: int64 • Introduced in: 9.6 • readOnly: 1

luns

A LUN is the logical representation of storage in a storage area network (SAN).

In ONTAP, a LUN is located within a volume. Optionally, it can be located within a qtree in a volume.

A LUN can be created to a specified size using thin or thick provisioning. A LUN can then be renamed, resized, cloned, and moved to a different volume. LUNs support the assignment of a quality of service (QoS) policy for performance management or a QoS policy can be assigned to the volume containing the LUN. See the LUN object model to learn more about each of the properties supported by the LUN REST API.

A LUN must be mapped to an initiator group to grant access to the initiator group's initiators (client hosts). Initiators can then access the LUN and perform I/O over a Fibre Channel (FC) fabric using the Fibre Channel Protocol or a TCP/IP network using iSCSI.

Name	Type	Description
clone	clone	<p>This sub-object is used in POST to create a new LUN as a clone of an existing LUN, or PATCH to overwrite an existing LUN as a clone of another. Setting a property in this sub-object indicates that a LUN clone is desired. Consider the following other properties when cloning a LUN: <code>auto_delete</code>, <code>qos_policy</code>, <code>space.guarantee.requested</code> and <code>space.scsi_thin_provisioning_support_enabled</code>.</p> <p>When used in a PATCH, the patched LUN's data is overwritten as a clone of the source and the following properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: <code>class</code>, <code>auto_delete</code>, <code>lun_maps</code>, <code>serial_number</code>, <code>status.state</code>, and <code>uuid</code>.</p> <p>Persistent reservations for the patched LUN are also preserved.</p>
comment	string	A configurable comment available for use by the administrator. Valid in POST and PATCH.
create_time	string	The time the LUN was created.

Name	Type	Description
enabled	boolean	The enabled state of the LUN. LUNs can be disabled to prevent access to the LUN. Certain error conditions also cause the LUN to become disabled. If the LUN is disabled, you can consult the <code>state</code> property to determine if the LUN is administratively disabled (<i>offline</i>) or has become disabled as a result of an error. A LUN in an error condition can be brought online by setting the <code>enabled</code> property to <i>true</i> or brought administratively offline by setting the <code>enabled</code> property to <i>false</i> . Upon creation, a LUN is enabled by default. Valid in PATCH.
lun_maps	array[lun_maps]	An array of LUN maps. A LUN map is an association between a LUN and an initiator group. When a LUN is mapped to an initiator group, the initiator group's initiators are granted access to the LUN. The relationship between a LUN and an initiator group is many LUNs to many initiator groups.
name	string	The fully qualified path name of the LUN composed of the <code>"/vol"</code> prefix, the volume name, the <code>qtree</code> name (optional), and the base name of the LUN. Valid in POST and PATCH.
os_type	string	The operating system type of the LUN. Required in POST when creating a LUN that is not a clone of another. Disallowed in POST when creating a LUN clone.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	

Name	Type	Description
serial_number	string	The LUN serial number. The serial number is generated by ONTAP when the LUN is created. <ul style="list-style-type: none"> • maxLength: 12 • minLength: 12 • readOnly: 1 • Introduced in: 9.10
space	space	The storage space related properties of the LUN.
uuid	string	The unique identifier of the LUN. The UUID is generated by ONTAP when the LUN is created. <ul style="list-style-type: none"> • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • readOnly: 1 • Introduced in: 9.10

_links

Name	Type	Description
self	href	

nvme_subsystem_reference

An NVMe subsystem maintains configuration state and NVMe namespace access control for a set of NVMe-connected hosts.

Name	Type	Description
<u>_links</u>	_links	
name	string	The name of the NVMe subsystem.
uuid	string	The unique identifier of the NVMe subsystem.

subsystem_map

The NVMe subsystem with which the NVMe namespace is associated. A namespace can be mapped to zero (0) or one (1) subsystems.

There is an added cost to retrieving property values for `subsystem_map`. They are not populated for

either a collection GET or an instance GET unless explicitly requested using the `fields` query parameter.

Name	Type	Description
<code>_links</code>	self_link	
<code>anagrpId</code>	string	The Asymmetric Namespace Access Group ID (ANAGRPID) of the NVMe namespace. The format for an ANAGRPID is 8 hexadecimal digits (zero-filled) followed by a lower case "h".
<code>nsid</code>	string	The NVMe namespace identifier. This is an identifier used by an NVMe controller to provide access to the NVMe namespace. The format for an NVMe namespace identifier is 8 hexadecimal digits (zero-filled) followed by a lower case "h".
<code>subsystem</code>	nvme_subsystem_reference	An NVMe subsystem maintains configuration state and NVMe namespace access control for a set of NVMe-connected hosts.

namespaces

An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the storage virtual machine using the NVMe over Fabrics protocol.

In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtrees in a volume.

An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.

Name	Type	Description
auto_delete	boolean	<p>This property marks the NVMe namespace for auto deletion when the volume containing the namespace runs out of space. This is most commonly set on namespace clones.</p> <p>When set to <i>true</i>, the NVMe namespace becomes eligible for automatic deletion when the volume runs out of space. Auto deletion only occurs when the volume containing the namespace is also configured for auto deletion and free space in the volume decreases below a particular threshold.</p> <p>This property is optional in POST and PATCH. The default value for a new NVMe namespace is <i>false</i>.</p> <p>There is an added cost to retrieving this property's value. It is not populated for either a collection GET or an instance GET unless it is explicitly requested using the <code>fields</code> query parameter. See Requesting specific fields to learn more.</p>
comment	string	A configurable comment available for use by the administrator. Valid in POST and PATCH.
create_time	string	The time the NVMe namespace was created.
enabled	boolean	The enabled state of the NVMe namespace. Certain error conditions cause the namespace to become disabled. If the namespace is disabled, you can check the <code>state</code> property to determine what error disabled the namespace. An NVMe namespace is enabled automatically when it is created.

Name	Type	Description
name	string	The fully qualified path name of the NVMe namespace composed of a "/vol" prefix, the volume name, the (optional) qtree name and base name of the namespace. Valid in POST. NVMe namespaces do not support rename, or movement between volumes.
os_type	string	The operating system type of the NVMe namespace. Required in POST when creating an NVMe namespace that is not a clone of another. Disallowed in POST when creating a namespace clone.
provisioning_options	provisioning_options	Options that are applied to the operation.
subsystem_map	array[subsystem_map]	The NVMe subsystem with which the NVMe namespace is associated. A namespace can be mapped to zero (0) or one (1) subsystems. There is an added cost to retrieving property values for <code>subsystem_map</code> . They are not populated for either a collection GET or an instance GET unless explicitly requested using the <code>fields</code> query parameter.
uuid	string	The unique identifier of the NVMe namespace.

parent_consistency_group

The parent consistency group.

Name	Type	Description
<code>_links</code>	self_link	

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

storage_service

Determines the placement of any storage object created during this operation.

Name	Type	Description
name	string	Storage service name. If not specified, the default value is the most performant for the platform.

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
storage_service	storage_service	Determines the placement of any storage object created during this operation.

snapshot

A consistency group's Snapshot copy

Name	Type	Description
name	string	The name of the consistency group's Snapshot copy to restore to.
uuid	string	The UUID of the consistency group's Snapshot copy to restore to.

restore_to

Use to restore a consistency group to a previous Snapshot copy

Name	Type	Description
snapshot	snapshot	A consistency group's Snapshot copy

snapshot_policy_reference

This is a reference to the Snapshot copy policy.

Name	Type	Description
_links	_links	
name	string	
uuid	string	

space

Space information for the consistency group.

Name	Type	Description
available	integer	The amount of space available in the consistency group, in bytes.
size	integer	The total provisioned size of the consistency group, in bytes.
used	integer	The amount of space consumed in the consistency group, in bytes.

svm

The Storage Virtual Machine (SVM) in which the consistency group is located.

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

tiering

The tiering placement and policy definitions for volumes in this consistency group.

Name	Type	Description
control	string	Storage tiering placement rules for the object.
policy	string	<p>Policy that determines whether the user data blocks of a volume in a FabricPool will be tiered to the cloud store when they become cold.</p> <p>FabricPool combines flash (performance tier) with a cloud store into a single aggregate. Temperature of a volume block increases if it is accessed frequently and decreases when it is not. Valid in POST or PATCH.</p> <p>all &dash; Allows tiering of both Snapshot copies and active file system user data to the cloud store as soon as possible by ignoring the temperature on the volume blocks.</p> <p>auto &dash; Allows tiering of both snapshot and active file system user data to the cloud store</p> <p>none &dash; Volume blocks are not be tiered to the cloud store.</p> <p>snapshot_only &dash; Allows tiering of only the volume Snapshot copies not associated with the active file system.</p> <p>The default tiering policy is "snapshot-only" for a FlexVol volume and "none" for a FlexGroup volume. The default minimum cooling period for the "snapshot-only" tiering policy is 2 days and for the "auto" tiering policy it is 31 days.</p>

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
count	integer	Number of elements to perform the operation on.
storage_service	storage_service	Determines the placement of any storage object created during this operation.

qos

The QoS policy for this volume.

Name	Type	Description
policy	policy	The QoS policy

space

Name	Type	Description
available	integer	The available space, in bytes.
size	integer	Total provisioned size, in bytes.
used	integer	The virtual space used (includes volume reserves) before storage efficiency, in bytes.

tiering

The tiering placement and policy definitions for this volume.

Name	Type	Description
control	string	Storage tiering placement rules for the object.

Name	Type	Description
policy	string	<p>Policy that determines whether the user data blocks of a volume in a FabricPool will be tiered to the cloud store when they become cold.</p> <p>FabricPool combines flash (performance tier) with a cloud store into a single aggregate. Temperature of a volume block increases if it is accessed frequently and decreases when it is not. Valid in POST or PATCH.</p> <p>all &dash; Allows tiering of both Snapshot copies and active file system user data to the cloud store as soon as possible by ignoring the temperature on the volume blocks.</p> <p>auto &dash; Allows tiering of both snapshot and active file system user data to the cloud store</p> <p>none &dash; Volume blocks are not be tiered to the cloud store.</p> <p>snapshot_only &dash; Allows tiering of only the volume Snapshot copies not associated with the active file system.</p> <p>The default tiering policy is "snapshot-only" for a FlexVol volume and "none" for a FlexGroup volume. The default minimum cooling period for the "snapshot-only" tiering policy is 2 days and for the "auto" tiering policy it is 31 days.</p>

volumes

Name	Type	Description
comment	string	A comment for the volume. Valid in POST or PATCH.

Name	Type	Description
language	string	Language encoding setting for volume. If no language is specified, the volume inherits its SVM language encoding setting.
name	string	Volume name. The name of volume must start with an alphabetic character (a to z or A to Z) or an underscore (_). The name must be 197 or fewer characters in length for FlexGroups, and 203 or fewer characters in length for all other types of volumes. Volume names must be unique within an SVM. Required on POST.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	The QoS policy for this volume.
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	
tiering	tiering	The tiering placement and policy definitions for this 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 • readOnly: 1 • Introduced in: 9.8

consistency_groups

Name	Type	Description
_links	self_link	

Name	Type	Description
luns	array[luns]	The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.
name	string	<p>Name of the consistency group. The consistency group name must be unique within an SVM.</p> <p>If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.</p>

Name	Type	Description
namespaces	array[namespaces]	<p>An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol. In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.</p> <p>An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.</p> <p>An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.</p> <ul style="list-style-type: none"> • maxItems: 16 • minItems: 0 • uniqueItems: 1 • Introduced in: 9.10 • x-ntap-modifyOnly: true
parent_consistency_group	parent_consistency_group	The parent consistency group.
provisioning_options	provisioning_options	Options that are applied to the operation.

Name	Type	Description
qos	qos	
restore_to	restore_to	Use to restore a consistency group to a previous Snapshot copy
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	Space information for the consistency group.
svm	svm	The Storage Virtual Machine (SVM) in which the consistency group is located.
tiering	tiering	The tiering placement and policy definitions for volumes in this consistency group.
uuid	string	<p>The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created.</p> <ul style="list-style-type: none"> • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • Introduced in: 9.10 • readOnly: 1

Name	Type	Description
volumes	array[volumes]	<p>A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group.</p> <p>The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group.</p> <p>The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit.</p>

records

Name	Type	Description
_links	self_link	
consistency_groups	array[consistency_groups]	<p>A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A consistency group can only be associated with one direct parent consistency group.</p>
luns	array[luns]	<p>The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.</p>

Name	Type	Description
name	string	<p>Name of the consistency group. The consistency group name must be unique within an SVM.</p> <p>If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.</p>

Name	Type	Description
namespaces	array[namespaces]	<p>An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol. In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.</p> <p>An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.</p> <p>An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.</p> <ul style="list-style-type: none"> • maxItems: 16 • minItems: 0 • uniqueItems: 1 • Introduced in: 9.10 • x-ntap-modifyOnly: true
parent_consistency_group	parent_consistency_group	The parent consistency group.
provisioning_options	provisioning_options	Options that are applied to the operation.

Name	Type	Description
qos	qos	
replicated	boolean	Indicates whether or not replication has been enabled on this consistency group.
replication_source	boolean	Indicates whether or not this consistency group is the source for replication.
restore_to	restore_to	Use to restore a consistency group to a previous Snapshot copy
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	Space information for the consistency group.
svm	svm	The Storage Virtual Machine (SVM) in which the consistency group is located.
tiering	tiering	The tiering placement and policy definitions for volumes in this consistency group.
uuid	string	<p>The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created.</p> <ul style="list-style-type: none"> • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • Introduced in: 9.6 • readOnly: 1

Name	Type	Description
volumes	array[volumes]	<p>A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group.</p> <p>The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group.</p> <p>The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit.</p>

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 consistency group

POST /application/consistency-groups

Introduced In: 9.10

Creates a consistency group with one or more consistency groups having:

- new SAN volumes,
- existing SAN, NVMe or NAS FlexVol volumes in a new or existing consistency group

Required properties

- `svm.uuid` or `svm.name` - Existing SVM in which to create the group.
- `volumes`, `luns` or `namespaces`

Naming Conventions

Consistency groups

- `name` or `consistency_groups[].name`, if specified
- derived from `volumes[0].name`, if only one volume is specified, same as volume name

Volume

- `volumes[].name`, if specified
- derived from volume prefix in `luns[].name`
- derived from `cg[].name`, suffixed by "`_#`" where "`#`" is a system generated unique number
- suffixed by "`_#`" where "`#`" is a system generated unique number, if `provisioning_options.count` is provided

LUN

- `luns[].name`, if specified
- derived from `volumes[].name`, suffixed by "`_#`" where "`#`" is a system generated unique number
- suffixed by "`_#`" where "`#`" is a system generated unique number, if `provisioning_options.count` is provided

NVMe Namespace

- `namespaces[].name`, if specified
- derived from `volumes[].name`, suffixed by "`_#`" where "`#`" is a system generated unique number
- suffixed by "`_#`" where "`#`" is a system generated unique number, if `provisioning_options.count` is provided

Related ONTAP commands

There are no ONTAP commands for managing consistency group.

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	self_link	

Name	Type	Description
consistency_groups	array[consistency_groups]	A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A consistency group can only be associated with one direct parent consistency group.
luns	array[luns]	The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.
name	string	<p>Name of the consistency group. The consistency group name must be unique within an SVM.</p> <p>If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.</p>

Name	Type	Description
namespaces	array[namespaces]	<p>An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol. In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.</p> <p>An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.</p> <p>An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.</p> <ul style="list-style-type: none"> • maxItems: 16 • minItems: 0 • uniqueItems: 1 • Introduced in: 9.10 • x-ntap-modifyOnly: true
parent_consistency_group	parent_consistency_group	The parent consistency group.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	

Name	Type	Description
replicated	boolean	Indicates whether or not replication has been enabled on this consistency group.
replication_source	boolean	Indicates whether or not this consistency group is the source for replication.
restore_to	restore_to	Use to restore a consistency group to a previous Snapshot copy
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	Space information for the consistency group.
svm	svm	The Storage Virtual Machine (SVM) in which the consistency group is located.
tiering	tiering	The tiering placement and policy definitions for volumes in this consistency group.
uuid	string	<p>The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created.</p> <ul style="list-style-type: none"> • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • Introduced in: 9.10 • readOnly: 1

Name	Type	Description
volumes	array[volumes]	<p>A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group.</p> <p>The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group.</p> <p>The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit.</p>

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "consistency_groups": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "luns": {
    "clone": {
      "source": {
        "name": "/vol/volume1/lun1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      }
    }
  },
  "comment": "string",
  "create_time": "2018-06-04T19:00:00Z",
  "lun_maps": {
    "igroup": {
      "comment": "string",
      "igroups": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        }
      },
      "name": "igroup1",
      "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    },
    "initiators": {
      "comment": "my comment",
      "name": "iqn.1998-01.com.corp.iscsi:name1"
    },
    "name": "igroup1",
    "os_type": "aix",
    "protocol": "fc",
    "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
  }
},
"name": "/vol/volume1/lun1",
```

```

"os_type": "aix",
"provisioning_options": {
  "action": "create"
},
"qos": {
  "policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "max_throughput_iops": 10000,
    "max_throughput_mbps": 500,
    "min_throughput_iops": 2000,
    "min_throughput_mbps": 500,
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  }
},
"serial_number": "string",
"space": {
  "size": 1073741824
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"namespaces": {
  "comment": "string",
  "create_time": "2018-06-04T19:00:00Z",
  "name": "/vol/volume1/qtrees/namespace1",
  "os_type": "aix",
  "provisioning_options": {
    "action": "create"
  },
  "subsystem_map": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "anagrpid": "00103050h",
    "nsid": "00000001h",
    "subsystem": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      }
    }
  }
}

```

```

    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  }
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"parent_consistency_group": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "my_consistency_group",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"provisioning_options": {
  "action": "create",
  "storage_service": {
    "name": "extreme"
  }
},
"qos": {
  "policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "max_throughput_iops": 10000,
  "max_throughput_mbps": 500,
  "min_throughput_iops": 2000,
  "min_throughput_mbps": 500,
  "name": "performance",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"snapshot_policy": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "default",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"space": {

```



```

    "available": 5737418,
    "size": 1073741824,
    "used": 5737418
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "tiering": {
    "control": "allowed",
    "policy": "all"
  },
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
  "volumes": {
    "comment": "string",
    "language": "ar",
    "name": "vol_cs_dept",
    "provisioning_options": {
      "action": "create",
      "storage_service": {
        "name": "extreme"
      }
    }
  },
  "qos": {
    "policy": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      }
    },
    "max_throughput_iops": 10000,
    "max_throughput_mbps": 500,
    "min_throughput_iops": 2000,
    "min_throughput_mbps": 500,
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "snapshot_policy": {
    "_links": {
      "self": {

```

```

        "href": "/api/resourcelink"
    },
    },
    "name": "default",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"tiering": {
    "control": "allowed",
    "policy": "all"
},
"uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
}
},
"luns": {
    "clone": {
        "source": {
            "name": "/vol/volume1/lun1",
            "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        }
    },
    "comment": "string",
    "create_time": "2018-06-04T19:00:00Z",
    "lun_maps": {
        "igroup": {
            "comment": "string",
            "igroups": {
                "_links": {
                    "self": {
                        "href": "/api/resourcelink"
                    }
                }
            },
            "name": "igroup1",
            "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
        },
        "initiators": {
            "comment": "my comment",
            "name": "iqn.1998-01.com.corp.iscsi:name1"
        },
        "name": "igroup1",
        "os_type": "aix",
        "protocol": "fc",
        "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    }
},
"name": "/vol/volume1/lun1",
"os_type": "aix",

```

```

"provisioning_options": {
  "action": "create"
},
"qos": {
  "policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "max_throughput_iops": 10000,
    "max_throughput_mbps": 500,
    "min_throughput_iops": 2000,
    "min_throughput_mbps": 500,
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  }
},
"serial_number": "string",
"space": {
  "size": 1073741824
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"namespaces": {
  "comment": "string",
  "create_time": "2018-06-04T19:00:00Z",
  "name": "/vol/volume1/qtreen1/namespace1",
  "os_type": "aix",
  "provisioning_options": {
    "action": "create"
  },
  "subsystem_map": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "anagrpid": "00103050h",
    "nsid": "00000001h",
    "subsystem": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      }
    }
  },

```

```

    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"parent_consistency_group": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
},
"name": "my_consistency_group",
"uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"provisioning_options": {
  "action": "create",
  "storage_service": {
    "name": "extreme"
  }
},
},
"qos": {
  "policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
},
"max_throughput_iops": 10000,
"max_throughput_mbps": 500,
"min_throughput_iops": 2000,
"min_throughput_mbps": 500,
"name": "performance",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
}
},
"snapshot_policy": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  }
},
},
"name": "default",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"space": {
  "available": 5737418,

```

```

    "size": 1073741824,
    "used": 5737418
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "tiering": {
    "control": "allowed",
    "policy": "all"
  },
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
  "volumes": {
    "comment": "string",
    "language": "ar",
    "name": "vol_cs_dept",
    "provisioning_options": {
      "action": "create",
      "storage_service": {
        "name": "extreme"
      }
    }
  },
  "qos": {
    "policy": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      }
    },
    "max_throughput_iops": 10000,
    "max_throughput_mbps": 500,
    "min_throughput_iops": 2000,
    "min_throughput_mbps": 500,
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  }
},
"snapshot_policy": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  }
}

```

```
    }
  },
  "name": "default",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"tiering": {
  "control": "allowed",
  "policy": "all"
},
"uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
}
}
```

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

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

Response

Status: 201, Created

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
53411842	Consistency group does not exist.
53411843	A consistency group with specified UUID was not found.
53411844	Specified consistency group was not found in the specified SVM.
53411845	The specified UUID and name refer to different consistency groups.
53411846	Either name or UUID must be provided.
53411853	Fields provided in the request conflict with each other.
53411856	Field provided is only supported when provisioning new objects.
53411857	LUNs that are not members of the application are not supported by this API. LUNs can be added to an application by adding the volume containing the LUNs to the application.
53411860	An object with the same identifier in the same scope exists.
53411861	Volume specified does not exist in provided volume array.
53411862	Modifying existing igroups is not supported using this API.
53411864	Request content insufficient to add an existing volume to an application.
53411865	Volumes contained in one consistency group can not be added to a different consistency group.
53411866	LUNs are not supported on FlexGroups volumes.
53411867	LUN name is too long after appending a unique suffix.
53411869	Volume name is too long after appending a unique suffix.
53411870	When using the "round_robin" layout, the volume count must not be greater than the LUN count.

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	

self_link

Name	Type	Description
self	href	

source

The source LUN for a LUN clone operation. This can be specified using property `clone.source.uuid` or `clone.source.name`. If both properties are supplied, they must refer to the same LUN.

Valid in POST to create a new LUN as a clone of the source.

Valid in PATCH to overwrite an existing LUN's data as a clone of another.

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

clone

This sub-object is used in POST to create a new LUN as a clone of an existing LUN, or PATCH to overwrite an existing LUN as a clone of another. Setting a property in this sub-object indicates that a LUN clone is desired. Consider the following other properties when cloning a LUN: `auto_delete`, `qos_policy`, `space.guarantee.requested` and `space.scsi_thin_provisioning_support_enabled`.

When used in a PATCH, the patched LUN's data is over-written as a clone of the source and the following properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: `class`, `auto_delete`, `lun_maps`, `serial_number`, `status.state`, and `uuid`.

Persistent reservations for the patched LUN are also preserved.

Name	Type	Description
source	source	<p>The source LUN for a LUN clone operation. This can be specified using property <code>clone.source.uuid</code> or <code>clone.source.name</code>. If both properties are supplied, they must refer to the same LUN.</p> <p>Valid in POST to create a new LUN as a clone of the source.</p> <p>Valid in PATCH to overwrite an existing LUN's data as a clone of another.</p>

igroups

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

initiators

The initiators that are members of the initiator group.

Name	Type	Description
comment	string	A comment available for use by the administrator.
name	string	Name of initiator that is a member of the initiator group.

igroup

The initiator group that directly owns the initiator, which is where modification of the initiator is supported. This property will only be populated when the initiator is a member of a nested initiator group.

Name	Type	Description
comment	string	A comment available for use by the administrator. Valid in POST and PATCH.

Name	Type	Description
igroups	array[igroups]	Separate igroup definitions to include in this igroup.
initiators	array[initiators]	The initiators that are members of the group.
name	string	The name of the initiator group. Required in POST; optional in PATCH.
os_type	string	The host operating system of the initiator group. All initiators in the group should be hosts of the same operating system. Required in POST; optional in PATCH.
protocol	string	The protocols supported by the initiator group. This restricts the type of initiators that can be added to the initiator group. Optional in POST; if not supplied, this defaults to <i>mixed</i> . The protocol of an initiator group cannot be changed after creation of the group.
uuid	string	The unique identifier of the initiator group.

lun_maps

A LUN map is an association between a LUN and an initiator group.

When a LUN is mapped to an initiator group, the initiator group's initiators are granted access to the LUN. The relationship between a LUN and an initiator group is many LUNs to many initiator groups.

Name	Type	Description
igroup	igroup	The initiator group that directly owns the initiator, which is where modification of the initiator is supported. This property will only be populated when the initiator is a member of a nested initiator group.

Name	Type	Description
logical_unit_number	integer	<p>The logical unit number assigned to the LUN when mapped to the specified initiator group. The number is used to identify the LUN to initiators in the initiator group when communicating through the Fibre Channel Protocol or iSCSI. Optional in POST; if no value is provided, ONTAP assigns the lowest available value.</p> <ul style="list-style-type: none"> • Introduced in: 9.6 • readCreate: 1

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
count	integer	Number of elements to perform the operation on.

policy

The QoS policy

Name	Type	Description
_links	self_link	
max_throughput_iops	integer	Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
max_throughput_mbps	integer	Specifies the maximum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.

Name	Type	Description
min_throughput_iops	integer	Specifies the minimum throughput in IOPS, 0 means none. Setting "min_throughput" is supported on AFF platforms only, unless FabricPool tiering policies are set. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_mbps	integer	Specifies the minimum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
name	string	The QoS policy group name. This is mutually exclusive with UUID and other QoS attributes during POST and PATCH.
uuid	string	The QoS policy group UUID. This is mutually exclusive with name and other QoS attributes during POST and PATCH.

qos

Name	Type	Description
policy	policy	The QoS policy

guarantee

Properties that request and report the space guarantee for the LUN.

Name	Type	Description
requested	boolean	The requested space reservation policy for the LUN. If <i>true</i> , a space reservation is requested for the LUN; if <i>false</i> , the LUN is thin provisioned. Guaranteeing a space reservation request for a LUN requires that the volume in which the LUN resides is also space reserved and that the fractional reserve for the volume is 100%. Valid in POST and PATCH.

Name	Type	Description
reserved	boolean	<p>Reports if the LUN is space guaranteed.</p> <p>If <i>true</i>, a space guarantee is requested and the containing volume and aggregate support the request. If <i>false</i>, a space guarantee is not requested or a space guarantee is requested and either the containing volume or aggregate do not support the request.</p>

space

The storage space related properties of the LUN.

Name	Type	Description
guarantee	guarantee	Properties that request and report the space guarantee for the LUN.
size	integer	<p>The total provisioned size of the LUN. The LUN size can be increased but not reduced using the REST interface. The maximum and minimum sizes listed here are the absolute maximum and absolute minimum sizes, in bytes. The actual minimum and maximum sizes vary depending on the ONTAP version, ONTAP platform, and the available space in the containing volume and aggregate. For more information, see <i>Size properties</i> in the <i>docs</i> section of the ONTAP REST API documentation.</p> <ul style="list-style-type: none"> • example: 1073741824 • format: int64 • Max value: 140737488355328 • Min value: 4096 • Introduced in: 9.6

Name	Type	Description
used	integer	<p>The amount of space consumed by the main data stream of the LUN.</p> <p>This value is the total space consumed in the volume by the LUN, including filesystem overhead, but excluding prefix and suffix streams. Due to internal filesystem overhead and the many ways SAN filesystems and applications utilize blocks within a LUN, this value does not necessarily reflect actual consumption/availability from the perspective of the filesystem or application. Without specific knowledge of how the LUN blocks are utilized outside of ONTAP, this property should not be used as an indicator for an out-of-space condition.</p> <p>For more information, see <i>Size properties</i> in the <i>docs</i> section of the ONTAP REST API documentation.</p> <ul style="list-style-type: none"> • format: int64 • Introduced in: 9.6 • readOnly: 1

luns

A LUN is the logical representation of storage in a storage area network (SAN).

In ONTAP, a LUN is located within a volume. Optionally, it can be located within a qtree in a volume.

A LUN can be created to a specified size using thin or thick provisioning. A LUN can then be renamed, resized, cloned, and moved to a different volume. LUNs support the assignment of a quality of service (QoS) policy for performance management or a QoS policy can be assigned to the volume containing the LUN. See the LUN object model to learn more about each of the properties supported by the LUN REST API.

A LUN must be mapped to an initiator group to grant access to the initiator group's initiators (client hosts). Initiators can then access the LUN and perform I/O over a Fibre Channel (FC) fabric using the Fibre Channel Protocol or a TCP/IP network using iSCSI.

Name	Type	Description
clone	clone	<p>This sub-object is used in POST to create a new LUN as a clone of an existing LUN, or PATCH to overwrite an existing LUN as a clone of another. Setting a property in this sub-object indicates that a LUN clone is desired. Consider the following other properties when cloning a LUN: <code>auto_delete</code>, <code>qos_policy</code>, <code>space.guarantee.requested</code> and <code>space.scsi_thin_provisioning_support_enabled</code>.</p> <p>When used in a PATCH, the patched LUN's data is overwritten as a clone of the source and the following properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: <code>class</code>, <code>auto_delete</code>, <code>lun_maps</code>, <code>serial_number</code>, <code>status.state</code>, and <code>uuid</code>.</p> <p>Persistent reservations for the patched LUN are also preserved.</p>
comment	string	A configurable comment available for use by the administrator. Valid in POST and PATCH.
create_time	string	The time the LUN was created.

Name	Type	Description
enabled	boolean	The enabled state of the LUN. LUNs can be disabled to prevent access to the LUN. Certain error conditions also cause the LUN to become disabled. If the LUN is disabled, you can consult the <code>state</code> property to determine if the LUN is administratively disabled (<i>offline</i>) or has become disabled as a result of an error. A LUN in an error condition can be brought online by setting the <code>enabled</code> property to <i>true</i> or brought administratively offline by setting the <code>enabled</code> property to <i>false</i> . Upon creation, a LUN is enabled by default. Valid in PATCH.
lun_maps	array[lun_maps]	An array of LUN maps. A LUN map is an association between a LUN and an initiator group. When a LUN is mapped to an initiator group, the initiator group's initiators are granted access to the LUN. The relationship between a LUN and an initiator group is many LUNs to many initiator groups.
name	string	The fully qualified path name of the LUN composed of the <code>"/vol"</code> prefix, the volume name, the <code>qtree</code> name (optional), and the base name of the LUN. Valid in POST and PATCH.
os_type	string	The operating system type of the LUN. Required in POST when creating a LUN that is not a clone of another. Disallowed in POST when creating a LUN clone.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	

Name	Type	Description
serial_number	string	The LUN serial number. The serial number is generated by ONTAP when the LUN is created. <ul style="list-style-type: none"> • maxLength: 12 • minLength: 12 • readOnly: 1 • Introduced in: 9.10
space	space	The storage space related properties of the LUN.
uuid	string	The unique identifier of the LUN. The UUID is generated by ONTAP when the LUN is created. <ul style="list-style-type: none"> • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • readOnly: 1 • Introduced in: 9.10

_links

Name	Type	Description
self	href	

nvme_subsystem_reference

An NVMe subsystem maintains configuration state and NVMe namespace access control for a set of NVMe-connected hosts.

Name	Type	Description
<u>_links</u>	_links	
name	string	The name of the NVMe subsystem.
uuid	string	The unique identifier of the NVMe subsystem.

subsystem_map

The NVMe subsystem with which the NVMe namespace is associated. A namespace can be mapped to zero (0) or one (1) subsystems.

There is an added cost to retrieving property values for `subsystem_map`. They are not populated for

either a collection GET or an instance GET unless explicitly requested using the `fields` query parameter.

Name	Type	Description
<code>_links</code>	self_link	
<code>anagrpId</code>	string	The Asymmetric Namespace Access Group ID (ANAGRPID) of the NVMe namespace. The format for an ANAGRPID is 8 hexadecimal digits (zero-filled) followed by a lower case "h".
<code>nsid</code>	string	The NVMe namespace identifier. This is an identifier used by an NVMe controller to provide access to the NVMe namespace. The format for an NVMe namespace identifier is 8 hexadecimal digits (zero-filled) followed by a lower case "h".
<code>subsystem</code>	nvme_subsystem_reference	An NVMe subsystem maintains configuration state and NVMe namespace access control for a set of NVMe-connected hosts.

namespaces

An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the storage virtual machine using the NVMe over Fabrics protocol.

In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtrees in a volume.

An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.

Name	Type	Description
auto_delete	boolean	<p>This property marks the NVMe namespace for auto deletion when the volume containing the namespace runs out of space. This is most commonly set on namespace clones.</p> <p>When set to <i>true</i>, the NVMe namespace becomes eligible for automatic deletion when the volume runs out of space. Auto deletion only occurs when the volume containing the namespace is also configured for auto deletion and free space in the volume decreases below a particular threshold.</p> <p>This property is optional in POST and PATCH. The default value for a new NVMe namespace is <i>false</i>.</p> <p>There is an added cost to retrieving this property's value. It is not populated for either a collection GET or an instance GET unless it is explicitly requested using the <code>fields</code> query parameter. See Requesting specific fields to learn more.</p>
comment	string	A configurable comment available for use by the administrator. Valid in POST and PATCH.
create_time	string	The time the NVMe namespace was created.
enabled	boolean	The enabled state of the NVMe namespace. Certain error conditions cause the namespace to become disabled. If the namespace is disabled, you can check the <code>state</code> property to determine what error disabled the namespace. An NVMe namespace is enabled automatically when it is created.

Name	Type	Description
name	string	The fully qualified path name of the NVMe namespace composed of a "/vol" prefix, the volume name, the (optional) qtree name and base name of the namespace. Valid in POST. NVMe namespaces do not support rename, or movement between volumes.
os_type	string	The operating system type of the NVMe namespace. Required in POST when creating an NVMe namespace that is not a clone of another. Disallowed in POST when creating a namespace clone.
provisioning_options	provisioning_options	Options that are applied to the operation.
subsystem_map	array[subsystem_map]	The NVMe subsystem with which the NVMe namespace is associated. A namespace can be mapped to zero (0) or one (1) subsystems. There is an added cost to retrieving property values for <code>subsystem_map</code> . They are not populated for either a collection GET or an instance GET unless explicitly requested using the <code>fields</code> query parameter.
uuid	string	The unique identifier of the NVMe namespace.

parent_consistency_group

The parent consistency group.

Name	Type	Description
<code>_links</code>	self_link	

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

storage_service

Determines the placement of any storage object created during this operation.

Name	Type	Description
name	string	Storage service name. If not specified, the default value is the most performant for the platform.

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
storage_service	storage_service	Determines the placement of any storage object created during this operation.

snapshot

A consistency group's Snapshot copy

Name	Type	Description
name	string	The name of the consistency group's Snapshot copy to restore to.
uuid	string	The UUID of the consistency group's Snapshot copy to restore to.

restore_to

Use to restore a consistency group to a previous Snapshot copy

Name	Type	Description
snapshot	snapshot	A consistency group's Snapshot copy

snapshot_policy_reference

This is a reference to the Snapshot copy policy.

Name	Type	Description
_links	_links	
name	string	
uuid	string	

space

Space information for the consistency group.

Name	Type	Description
available	integer	The amount of space available in the consistency group, in bytes.
size	integer	The total provisioned size of the consistency group, in bytes.
used	integer	The amount of space consumed in the consistency group, in bytes.

svm

The Storage Virtual Machine (SVM) in which the consistency group is located.

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

tiering

The tiering placement and policy definitions for volumes in this consistency group.

Name	Type	Description
control	string	Storage tiering placement rules for the object.
policy	string	<p>Policy that determines whether the user data blocks of a volume in a FabricPool will be tiered to the cloud store when they become cold.</p> <p>FabricPool combines flash (performance tier) with a cloud store into a single aggregate. Temperature of a volume block increases if it is accessed frequently and decreases when it is not. Valid in POST or PATCH.</p> <p>all &dash; Allows tiering of both Snapshot copies and active file system user data to the cloud store as soon as possible by ignoring the temperature on the volume blocks.</p> <p>auto &dash; Allows tiering of both snapshot and active file system user data to the cloud store</p> <p>none &dash; Volume blocks are not be tiered to the cloud store.</p> <p>snapshot_only &dash; Allows tiering of only the volume Snapshot copies not associated with the active file system.</p> <p>The default tiering policy is "snapshot-only" for a FlexVol volume and "none" for a FlexGroup volume. The default minimum cooling period for the "snapshot-only" tiering policy is 2 days and for the "auto" tiering policy it is 31 days.</p>

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
count	integer	Number of elements to perform the operation on.
storage_service	storage_service	Determines the placement of any storage object created during this operation.

qos

The QoS policy for this volume.

Name	Type	Description
policy	policy	The QoS policy

space

Name	Type	Description
available	integer	The available space, in bytes.
size	integer	Total provisioned size, in bytes.
used	integer	The virtual space used (includes volume reserves) before storage efficiency, in bytes.

tiering

The tiering placement and policy definitions for this volume.

Name	Type	Description
control	string	Storage tiering placement rules for the object.

Name	Type	Description
policy	string	<p>Policy that determines whether the user data blocks of a volume in a FabricPool will be tiered to the cloud store when they become cold.</p> <p>FabricPool combines flash (performance tier) with a cloud store into a single aggregate. Temperature of a volume block increases if it is accessed frequently and decreases when it is not. Valid in POST or PATCH.</p> <p>all &dash; Allows tiering of both Snapshot copies and active file system user data to the cloud store as soon as possible by ignoring the temperature on the volume blocks.</p> <p>auto &dash; Allows tiering of both snapshot and active file system user data to the cloud store</p> <p>none &dash; Volume blocks are not be tiered to the cloud store.</p> <p>snapshot_only &dash; Allows tiering of only the volume Snapshot copies not associated with the active file system.</p> <p>The default tiering policy is "snapshot-only" for a FlexVol volume and "none" for a FlexGroup volume. The default minimum cooling period for the "snapshot-only" tiering policy is 2 days and for the "auto" tiering policy it is 31 days.</p>

volumes

Name	Type	Description
comment	string	A comment for the volume. Valid in POST or PATCH.

Name	Type	Description
language	string	Language encoding setting for volume. If no language is specified, the volume inherits its SVM language encoding setting.
name	string	Volume name. The name of volume must start with an alphabetic character (a to z or A to Z) or an underscore (_). The name must be 197 or fewer characters in length for FlexGroups, and 203 or fewer characters in length for all other types of volumes. Volume names must be unique within an SVM. Required on POST.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	The QoS policy for this volume.
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	
tiering	tiering	The tiering placement and policy definitions for this 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 • readOnly: 1 • Introduced in: 9.8

consistency_groups

Name	Type	Description
_links	self_link	

Name	Type	Description
luns	array[luns]	The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.
name	string	<p>Name of the consistency group. The consistency group name must be unique within an SVM.</p> <p>If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.</p>

Name	Type	Description
namespaces	array[namespaces]	<p>An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol. In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.</p> <p>An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.</p> <p>An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.</p> <ul style="list-style-type: none"> • maxItems: 16 • minItems: 0 • uniqueItems: 1 • Introduced in: 9.10 • x-ntap-modifyOnly: true
parent_consistency_group	parent_consistency_group	The parent consistency group.
provisioning_options	provisioning_options	Options that are applied to the operation.

Name	Type	Description
qos	qos	
restore_to	restore_to	Use to restore a consistency group to a previous Snapshot copy
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	Space information for the consistency group.
svm	svm	The Storage Virtual Machine (SVM) in which the consistency group is located.
tiering	tiering	The tiering placement and policy definitions for volumes in this consistency group.
uuid	string	<p>The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created.</p> <ul style="list-style-type: none"> • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • Introduced in: 9.10 • readOnly: 1

Name	Type	Description
volumes	array[volumes]	<p>A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group.</p> <p>The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group.</p> <p>The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit.</p>

consistency_group

Name	Type	Description
_links	self_link	
consistency_groups	array[consistency_groups]	<p>A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A consistency group can only be associated with one direct parent consistency group.</p>
luns	array[luns]	<p>The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.</p>

Name	Type	Description
name	string	<p>Name of the consistency group. The consistency group name must be unique within an SVM.</p> <p>If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.</p>

Name	Type	Description
namespaces	array[namespaces]	<p>An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol. In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.</p> <p>An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.</p> <p>An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.</p> <ul style="list-style-type: none"> • maxItems: 16 • minItems: 0 • uniqueItems: 1 • Introduced in: 9.10 • x-ntap-modifyOnly: true
parent_consistency_group	parent_consistency_group	The parent consistency group.
provisioning_options	provisioning_options	Options that are applied to the operation.

Name	Type	Description
qos	qos	
replicated	boolean	Indicates whether or not replication has been enabled on this consistency group.
replication_source	boolean	Indicates whether or not this consistency group is the source for replication.
restore_to	restore_to	Use to restore a consistency group to a previous Snapshot copy
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	Space information for the consistency group.
svm	svm	The Storage Virtual Machine (SVM) in which the consistency group is located.
tiering	tiering	The tiering placement and policy definitions for volumes in this consistency group.
uuid	string	<p>The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created.</p> <ul style="list-style-type: none"> • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • Introduced in: 9.10 • readOnly: 1

Name	Type	Description
volumes	array[volumes]	<p>A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group.</p> <p>The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group.</p> <p>The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit.</p>

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

Name	Type	Description
target	string	The target parameter that caused the error.

Delete a consistency group

DELETE /application/consistency-groups/{uuid}

Introduced In: 9.10

Deletes a consistency group.



this will not delete any associated volumes or LUNs. To remove those elements, you can use the appropriate object endpoint.

Related ONTAP commands

There are no ONTAP commands for managing consistency groups.

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	The unique identifier of the consistency group to delete.
delete_data	boolean	query	False	Delete the underlying storage as well as the consistency group association. This parameter should be used with caution. <ul style="list-style-type: none"> • Default value:

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

Response

Status: 200, Ok

Response

Status: 202, Accepted

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
53411842	Consistency group does not exist.
53411843	A consistency group with specified UUID was not found.
53411844	Specified consistency group was not found in the specified SVM.
53411845	The specified UUID and name refer to different consistency groups.
53411846	Either name or UUID must be provided.

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

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 a consistency group

GET /application/consistency-groups/{uuid}

Introduced In: 9.10

Retrieves a single consistency group.

Expensive properties

There is an added 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.

- volumes
- luns
- namespaces

Related ONTAP commands

There are no ONTAP commands for managing consistency groups.

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	The unique identifier of the group to retrieve.
qos.policy.min_throughput_iops	integer	query	False	Filter by qos.policy.min_throughput_iops
qos.policy.max_throughput_iops	integer	query	False	Filter by qos.policy.max_throughput_iops
qos.policy.uuid	string	query	False	Filter by qos.policy.uuid
qos.policy.min_throughput_mbps	integer	query	False	Filter by qos.policy.min_throughput_mbps
qos.policy.max_throughput_mbps	integer	query	False	Filter by qos.policy.max_throughput_mbps
qos.policy.name	string	query	False	Filter by qos.policy.name
replication_source	boolean	query	False	Filter by replication_source
consistency_groups.space.used	integer	query	False	Filter by consistency_groups.space.used
consistency_groups.space.size	integer	query	False	Filter by consistency_groups.space.size
consistency_groups.space.available	integer	query	False	Filter by consistency_groups.space.available
consistency_groups.qos.policy.min_throughput_iops	integer	query	False	Filter by consistency_groups.qos.policy.min_throughput_iops

Name	Type	In	Required	Description
consistency_groups.qos.policy.max_throughput_iops	integer	query	False	Filter by consistency_groups.qos.policy.max_throughput_iops
consistency_groups.qos.policy.uuid	string	query	False	Filter by consistency_groups.qos.policy.uuid
consistency_groups.qos.policy.min_throughput_mbps	integer	query	False	Filter by consistency_groups.qos.policy.min_throughput_mbps
consistency_groups.qos.policy.max_throughput_mbps	integer	query	False	Filter by consistency_groups.qos.policy.max_throughput_mbps
consistency_groups.qos.policy.name	string	query	False	Filter by consistency_groups.qos.policy.name
consistency_groups.name	string	query	False	Filter by consistency_groups.name
consistency_groups.uuid	string	query	False	Filter by consistency_groups.uuid
consistency_groups.snapshot_policy.name	string	query	False	Filter by consistency_groups.snapshot_policy.name
consistency_groups.snapshot_policy.uuid	string	query	False	Filter by consistency_groups.snapshot_policy.uuid
consistency_groups.luns.serial_number	string	query	False	Filter by consistency_groups.luns.serial_number <ul style="list-style-type: none"> • maxLength: 12 • minLength: 12

Name	Type	In	Required	Description
consistency_groups.luns.qos.policy.max_throughput_iops	integer	query	False	Filter by consistency_groups.luns.qos.policy.max_throughput_iops
consistency_groups.luns.qos.policy.min_throughput_iops	integer	query	False	Filter by consistency_groups.luns.qos.policy.min_throughput_iops
consistency_groups.luns.qos.policy.max_throughput_mbps	integer	query	False	Filter by consistency_groups.luns.qos.policy.max_throughput_mbps
consistency_groups.luns.qos.policy.name	string	query	False	Filter by consistency_groups.luns.qos.policy.name
consistency_groups.luns.qos.policy.uuid	string	query	False	Filter by consistency_groups.luns.qos.policy.uuid
consistency_groups.luns.qos.policy.min_throughput_mbps	integer	query	False	Filter by consistency_groups.luns.qos.policy.min_throughput_mbps
consistency_groups.luns.lun_maps.igroup.os_type	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.os_type
consistency_groups.luns.lun_maps.igroup.protocol	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.protocol
consistency_groups.luns.lun_maps.igroups.uuid	string	query	False	Filter by consistency_groups.luns.lun_maps.igroups.uuid

Name	Type	In	Required	Description
consistency_groups.luns.lun_maps.igroup.igroups.name	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.igroups.name <ul style="list-style-type: none"> • maxLength: 96 • minLength: 1
consistency_groups.luns.lun_maps.igroup.initiators.name	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.initiators.name
consistency_groups.luns.lun_maps.igroup.initiators.comment	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.initiators.comment <ul style="list-style-type: none"> • maxLength: 254 • minLength: 0
consistency_groups.luns.lun_maps.igroup.comment	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.comment <ul style="list-style-type: none"> • Introduced in: 9.11 • maxLength: 254 • minLength: 0
consistency_groups.luns.lun_maps.igroup.name	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.name <ul style="list-style-type: none"> • maxLength: 96 • minLength: 1
consistency_groups.luns.lun_maps.igroup.uuid	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.uuid

Name	Type	In	Required	Description
consistency_groups.luns.lun_maps.logical_unit_number	integer	query	False	Filter by consistency_groups.luns.lun_maps.logical_unit_number
consistency_groups.luns.space.guarantee_reserved	boolean	query	False	Filter by consistency_groups.luns.space.guarantee_reserved <ul style="list-style-type: none"> Introduced in: 9.11
consistency_groups.luns.space.guarantee_requested	boolean	query	False	Filter by consistency_groups.luns.space.guarantee_requested <ul style="list-style-type: none"> Introduced in: 9.11
consistency_groups.luns.space.size	integer	query	False	Filter by consistency_groups.luns.space.size <ul style="list-style-type: none"> Max value: 140737488355328 Min value: 4096
consistency_groups.luns.space.used	integer	query	False	Filter by consistency_groups.luns.space.used
consistency_groups.luns.os_type	string	query	False	Filter by consistency_groups.luns.os_type
consistency_groups.luns.enabled	boolean	query	False	Filter by consistency_groups.luns.enabled
consistency_groups.luns.comment	string	query	False	Filter by consistency_groups.luns.comment <ul style="list-style-type: none"> maxLength: 254 minLength: 0

Name	Type	In	Required	Description
consistency_groups.luns.name	string	query	False	Filter by consistency_groups.luns.name
consistency_groups.luns.uuid	string	query	False	Filter by consistency_groups.luns.uuid
consistency_groups.luns.create_time	string	query	False	Filter by consistency_groups.luns.create_time
consistency_groups.svm.uuid	string	query	False	Filter by consistency_groups.svm.uuid
consistency_groups.svm.name	string	query	False	Filter by consistency_groups.svm.name
consistency_groups.volumes.tiering.policy	string	query	False	Filter by consistency_groups.volumes.tiering.policy
consistency_groups.volumes.name	string	query	False	Filter by consistency_groups.volumes.name <ul style="list-style-type: none"> • maxLength: 203 • minLength: 1
consistency_groups.volumes.comment	string	query	False	Filter by consistency_groups.volumes.comment <ul style="list-style-type: none"> • maxLength: 1023 • minLength: 0
consistency_groups.volumes.snapshot_policy.name	string	query	False	Filter by consistency_groups.volumes.snapshot_policy.name

Name	Type	In	Required	Description
consistency_groups.volumes.snapshot_policy.uuid	string	query	False	Filter by consistency_groups.volumes.snapshot_policy.uuid
consistency_groups.volumes.uuid	string	query	False	Filter by consistency_groups.volumes.uuid
consistency_groups.volumes.qos.policy.min_throughput_iops	integer	query	False	Filter by consistency_groups.volumes.qos.policy.min_throughput_iops
consistency_groups.volumes.qos.policy.max_throughput_iops	integer	query	False	Filter by consistency_groups.volumes.qos.policy.max_throughput_iops
consistency_groups.volumes.qos.policy.uuid	string	query	False	Filter by consistency_groups.volumes.qos.policy.uuid
consistency_groups.volumes.qos.policy.min_throughput_mbps	integer	query	False	Filter by consistency_groups.volumes.qos.policy.min_throughput_mbps
consistency_groups.volumes.qos.policy.max_throughput_mbps	integer	query	False	Filter by consistency_groups.volumes.qos.policy.max_throughput_mbps
consistency_groups.volumes.qos.policy.name	string	query	False	Filter by consistency_groups.volumes.qos.policy.name
consistency_groups.volumes.language	string	query	False	Filter by consistency_groups.volumes.language

Name	Type	In	Required	Description
consistency_groups.volumes.space.size	integer	query	False	Filter by consistency_groups.volumes.space.size
consistency_groups.volumes.space.available	integer	query	False	Filter by consistency_groups.volumes.space.available
consistency_groups.volumes.space.used	integer	query	False	Filter by consistency_groups.volumes.space.used
consistency_groups.parent_consistency_group.name	string	query	False	Filter by consistency_groups.parent_consistency_group.name
consistency_groups.parent_consistency_group.uuid	string	query	False	Filter by consistency_groups.parent_consistency_group.uuid
consistency_groups.tiering.policy	string	query	False	Filter by consistency_groups.tiering.policy
space.used	integer	query	False	Filter by space.used
space.size	integer	query	False	Filter by space.size
space.available	integer	query	False	Filter by space.available
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
parent_consistency_group.name	string	query	False	Filter by parent_consistency_group.name
parent_consistency_group.uuid	string	query	False	Filter by parent_consistency_group.uuid

Name	Type	In	Required	Description
name	string	query	False	Filter by name
snapshot_policy.name	string	query	False	Filter by snapshot_policy.name
snapshot_policy.uuid	string	query	False	Filter by snapshot_policy.uuid
luns.serial_number	string	query	False	Filter by luns.serial_number <ul style="list-style-type: none"> • maxLength: 12 • minLength: 12
luns.qos.policy.max_throughput_iops	integer	query	False	Filter by luns.qos.policy.max_throughput_iops
luns.qos.policy.min_throughput_iops	integer	query	False	Filter by luns.qos.policy.min_throughput_iops
luns.qos.policy.max_throughput_mbps	integer	query	False	Filter by luns.qos.policy.max_throughput_mbps
luns.qos.policy.name	string	query	False	Filter by luns.qos.policy.name
luns.qos.policy.uuid	string	query	False	Filter by luns.qos.policy.uuid
luns.qos.policy.min_throughput_mbps	integer	query	False	Filter by luns.qos.policy.min_throughput_mbps
luns.lun_maps.igroup.os_type	string	query	False	Filter by luns.lun_maps.igroup.os_type
luns.lun_maps.igroup.protocol	string	query	False	Filter by luns.lun_maps.igroup.protocol

Name	Type	In	Required	Description
luns.lun_maps.igroup.uuid	string	query	False	Filter by luns.lun_maps.igroup.uuid
luns.lun_maps.igroup.name	string	query	False	Filter by luns.lun_maps.igroup.name <ul style="list-style-type: none"> • maxLength: 96 • minLength: 1
luns.lun_maps.igroup.initiators.name	string	query	False	Filter by luns.lun_maps.igroup.initiators.name
luns.lun_maps.igroup.initiators.comment	string	query	False	Filter by luns.lun_maps.igroup.initiators.comment <ul style="list-style-type: none"> • maxLength: 254 • minLength: 0
luns.lun_maps.igroup.comment	string	query	False	Filter by luns.lun_maps.igroup.comment <ul style="list-style-type: none"> • Introduced in: 9.11 • maxLength: 254 • minLength: 0
luns.lun_maps.igroup.name	string	query	False	Filter by luns.lun_maps.igroup.name <ul style="list-style-type: none"> • maxLength: 96 • minLength: 1
luns.lun_maps.igroup.uuid	string	query	False	Filter by luns.lun_maps.igroup.uuid
luns.lun_maps.logical_unit_number	integer	query	False	Filter by luns.lun_maps.logical_unit_number

Name	Type	In	Required	Description
luns.space.guarantee.reserved	boolean	query	False	Filter by luns.space.guarantee.reserved <ul style="list-style-type: none"> • Introduced in: 9.11
luns.space.guarantee.requested	boolean	query	False	Filter by luns.space.guarantee.requested <ul style="list-style-type: none"> • Introduced in: 9.11
luns.space.size	integer	query	False	Filter by luns.space.size <ul style="list-style-type: none"> • Max value: 140737488355328 • Min value: 4096
luns.space.used	integer	query	False	Filter by luns.space.used
luns.os_type	string	query	False	Filter by luns.os_type
luns.enabled	boolean	query	False	Filter by luns.enabled
luns.comment	string	query	False	Filter by luns.comment <ul style="list-style-type: none"> • maxLength: 254 • minLength: 0
luns.name	string	query	False	Filter by luns.name
luns.uuid	string	query	False	Filter by luns.uuid
luns.create_time	string	query	False	Filter by luns.create_time
volumes.tiering.policy	string	query	False	Filter by volumes.tiering.policy

Name	Type	In	Required	Description
volumes.name	string	query	False	Filter by volumes.name <ul style="list-style-type: none"> • maxLength: 203 • minLength: 1
volumes.comment	string	query	False	Filter by volumes.comment <ul style="list-style-type: none"> • maxLength: 1023 • minLength: 0
volumes.snapshot_policy.name	string	query	False	Filter by volumes.snapshot_policy.name
volumes.snapshot_policy.uuid	string	query	False	Filter by volumes.snapshot_policy.uuid
volumes.uuid	string	query	False	Filter by volumes.uuid
volumes.qos.policy.min_throughput_iops	integer	query	False	Filter by volumes.qos.policy.min_throughput_iops
volumes.qos.policy.max_throughput_iops	integer	query	False	Filter by volumes.qos.policy.max_throughput_iops
volumes.qos.policy.uuid	string	query	False	Filter by volumes.qos.policy.uuid
volumes.qos.policy.min_throughput_mbps	integer	query	False	Filter by volumes.qos.policy.min_throughput_mbps
volumes.qos.policy.max_throughput_mbps	integer	query	False	Filter by volumes.qos.policy.max_throughput_mbps

Name	Type	In	Required	Description
volumes.qos.policy.name	string	query	False	Filter by volumes.qos.policy.name
volumes.language	string	query	False	Filter by volumes.language
volumes.space.size	integer	query	False	Filter by volumes.space.size
volumes.space.available	integer	query	False	Filter by volumes.space.available
volumes.space.used	integer	query	False	Filter by volumes.space.used
tiering.policy	string	query	False	Filter by tiering.policy
replicated	boolean	query	False	Filter by replicated
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. <ul style="list-style-type: none"> • Default value: 1

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached.</p> <ul style="list-style-type: none"> • Max value: 120 • Min value: 0 • Default value: 1
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

Status: 200, Ok

Name	Type	Description
_links	self_link	
consistency_groups	array[consistency_groups]	A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A consistency group can only be associated with one direct parent consistency group.
luns	array[luns]	The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.

Name	Type	Description
name	string	<p>Name of the consistency group. The consistency group name must be unique within an SVM.</p> <p>If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.</p>

Name	Type	Description
namespaces	array[namespaces]	<p>An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol. In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.</p> <p>An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.</p> <p>An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.</p> <ul style="list-style-type: none"> • maxItems: 16 • minItems: 0 • uniqueItems: 1 • Introduced in: 9.10 • x-ntap-modifyOnly: true
parent_consistency_group	parent_consistency_group	The parent consistency group.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	

Name	Type	Description
replicated	boolean	Indicates whether or not replication has been enabled on this consistency group.
replication_source	boolean	Indicates whether or not this consistency group is the source for replication.
restore_to	restore_to	Use to restore a consistency group to a previous Snapshot copy
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	Space information for the consistency group.
svm	svm	The Storage Virtual Machine (SVM) in which the consistency group is located.
tiering	tiering	The tiering placement and policy definitions for volumes in this consistency group.
uuid	string	<p>The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created.</p> <ul style="list-style-type: none"> • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • Introduced in: 9.10 • readOnly: 1

Name	Type	Description
volumes	array[volumes]	<p>A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group.</p> <p>The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group.</p> <p>The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit.</p>

Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "consistency_groups": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "luns": {
    "clone": {
      "source": {
        "name": "/vol/volume1/lun1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      }
    }
  },
  "comment": "string",
  "create_time": "2018-06-04T19:00:00Z",
  "lun_maps": {
    "igroup": {
      "comment": "string",
      "igroups": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        }
      },
      "name": "igroup1",
      "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    },
    "initiators": {
      "comment": "my comment",
      "name": "iqn.1998-01.com.corp.iscsi:name1"
    },
    "name": "igroup1",
    "os_type": "aix",
    "protocol": "fc",
    "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
  }
},
  "name": "/vol/volume1/lun1",
```

```

"os_type": "aix",
"provisioning_options": {
  "action": "create"
},
"qos": {
  "policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "max_throughput_iops": 10000,
    "max_throughput_mbps": 500,
    "min_throughput_iops": 2000,
    "min_throughput_mbps": 500,
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  }
},
"serial_number": "string",
"space": {
  "size": 1073741824
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"namespaces": {
  "comment": "string",
  "create_time": "2018-06-04T19:00:00Z",
  "name": "/vol/volume1/qtrees/namespace1",
  "os_type": "aix",
  "provisioning_options": {
    "action": "create"
  },
  "subsystem_map": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "anagrpid": "00103050h",
    "nsid": "00000001h",
    "subsystem": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      }
    }
  }
}

```

```

    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  }
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"parent_consistency_group": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "my_consistency_group",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"provisioning_options": {
  "action": "create",
  "storage_service": {
    "name": "extreme"
  }
},
"qos": {
  "policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "max_throughput_iops": 10000,
  "max_throughput_mbps": 500,
  "min_throughput_iops": 2000,
  "min_throughput_mbps": 500,
  "name": "performance",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"snapshot_policy": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "default",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"space": {

```

```
"available": 5737418,  
"size": 1073741824,  
"used": 5737418  
,  
"svm": {  
  "_links": {  
    "self": {  
      "href": "/api/resourcelink"  
    }  
  },  
  "name": "svm1",  
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"  
,  
"tiering": {  
  "control": "allowed",  
  "policy": "all"  
,  
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",  
"volumes": {  
  "comment": "string",  
  "language": "ar",  
  "name": "vol_cs_dept",  
  "provisioning_options": {  
    "action": "create",  
    "storage_service": {  
      "name": "extreme"  
    }  
  },  
  "qos": {  
    "policy": {  
      "_links": {  
        "self": {  
          "href": "/api/resourcelink"  
        }  
      },  
      "max_throughput_iops": 10000,  
      "max_throughput_mbps": 500,  
      "min_throughput_iops": 2000,  
      "min_throughput_mbps": 500,  
      "name": "performance",  
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"  
    }  
  },  
  "snapshot_policy": {  
    "_links": {  
      "self": {
```

```

        "href": "/api/resourcelink"
    },
    "name": "default",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"tiering": {
    "control": "allowed",
    "policy": "all"
},
"uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
}
},
"luns": {
    "clone": {
        "source": {
            "name": "/vol/volume1/lun1",
            "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        }
    },
    "comment": "string",
    "create_time": "2018-06-04T19:00:00Z",
    "lun_maps": {
        "igroup": {
            "comment": "string",
            "igroups": {
                "_links": {
                    "self": {
                        "href": "/api/resourcelink"
                    }
                }
            },
            "name": "igroup1",
            "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
        },
        "initiators": {
            "comment": "my comment",
            "name": "iqn.1998-01.com.corp.iscsi:name1"
        },
        "name": "igroup1",
        "os_type": "aix",
        "protocol": "fc",
        "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    }
},
"name": "/vol/volume1/lun1",
"os_type": "aix",

```

```

"provisioning_options": {
  "action": "create"
},
"qos": {
  "policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "max_throughput_iops": 10000,
    "max_throughput_mbps": 500,
    "min_throughput_iops": 2000,
    "min_throughput_mbps": 500,
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  }
},
"serial_number": "string",
"space": {
  "size": 1073741824
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"namespaces": {
  "comment": "string",
  "create_time": "2018-06-04T19:00:00Z",
  "name": "/vol/volume1/qtreen1/namespac1",
  "os_type": "aix",
  "provisioning_options": {
    "action": "create"
  },
  "subsystem_map": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "anagrpid": "00103050h",
    "nsid": "00000001h",
    "subsystem": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      }
    }
  },

```

```

    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"parent_consistency_group": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
},
"name": "my_consistency_group",
"uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"provisioning_options": {
  "action": "create",
  "storage_service": {
    "name": "extreme"
  }
},
},
"qos": {
  "policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
},
"max_throughput_iops": 10000,
"max_throughput_mbps": 500,
"min_throughput_iops": 2000,
"min_throughput_mbps": 500,
"name": "performance",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
}
},
"snapshot_policy": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  }
},
},
"name": "default",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"space": {
  "available": 5737418,

```



```

    "size": 1073741824,
    "used": 5737418
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svml",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "tiering": {
    "control": "allowed",
    "policy": "all"
  },
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
  "volumes": {
    "comment": "string",
    "language": "ar",
    "name": "vol_cs_dept",
    "provisioning_options": {
      "action": "create",
      "storage_service": {
        "name": "extreme"
      }
    }
  },
  "qos": {
    "policy": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      }
    },
    "max_throughput_iops": 10000,
    "max_throughput_mbps": 500,
    "min_throughput_iops": 2000,
    "min_throughput_mbps": 500,
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  }
},
"snapshot_policy": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  }
}

```

```

    }
  },
  "name": "default",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"tiering": {
  "control": "allowed",
  "policy": "all"
},
"uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
}
}

```

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
53411842	Consistency group does not exist.
53411843	A consistency group with specified UUID was not found.
53411844	Specified consistency group was not found in the specified SVM.
53411845	The specified UUID and name refer to different consistency groups.
53411846	Either name or UUID must be provided.

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	

self_link

Name	Type	Description
self	href	

source

The source LUN for a LUN clone operation. This can be specified using property `clone.source.uuid` or `clone.source.name`. If both properties are supplied, they must refer to the same LUN.

Valid in POST to create a new LUN as a clone of the source.

Valid in PATCH to overwrite an existing LUN's data as a clone of another.

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

clone

This sub-object is used in POST to create a new LUN as a clone of an existing LUN, or PATCH to overwrite an existing LUN as a clone of another. Setting a property in this sub-object indicates that a LUN clone is desired. Consider the following other properties when cloning a LUN: `auto_delete`, `qos_policy`, `space.guarantee.requested` and `space.scsi_thin_provisioning_support_enabled`.

When used in a PATCH, the patched LUN's data is over-written as a clone of the source and the following properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: `class`, `auto_delete`, `lun_maps`, `serial_number`, `status.state`, and `uuid`.

Persistent reservations for the patched LUN are also preserved.

Name	Type	Description
source	source	<p>The source LUN for a LUN clone operation. This can be specified using property <code>clone.source.uuid</code> or <code>clone.source.name</code>. If both properties are supplied, they must refer to the same LUN.</p> <p>Valid in POST to create a new LUN as a clone of the source.</p> <p>Valid in PATCH to overwrite an existing LUN's data as a clone of another.</p>

igroups

Name	Type	Description
<code>_links</code>	self_link	
name	string	The name of the initiator group.
uuid	string	The unique identifier of the initiator group.

initiators

The initiators that are members of the initiator group.

Name	Type	Description
comment	string	A comment available for use by the administrator.
name	string	Name of initiator that is a member of the initiator group.

igroup

The initiator group that directly owns the initiator, which is where modification of the initiator is supported. This property will only be populated when the initiator is a member of a nested initiator group.

Name	Type	Description
comment	string	A comment available for use by the administrator. Valid in POST and PATCH.

Name	Type	Description
igroups	array[igroups]	Separate igroup definitions to include in this igroup.
initiators	array[initiators]	The initiators that are members of the group.
name	string	The name of the initiator group. Required in POST; optional in PATCH.
os_type	string	The host operating system of the initiator group. All initiators in the group should be hosts of the same operating system. Required in POST; optional in PATCH.
protocol	string	The protocols supported by the initiator group. This restricts the type of initiators that can be added to the initiator group. Optional in POST; if not supplied, this defaults to <i>mixed</i> . The protocol of an initiator group cannot be changed after creation of the group.
uuid	string	The unique identifier of the initiator group.

lun_maps

A LUN map is an association between a LUN and an initiator group.

When a LUN is mapped to an initiator group, the initiator group's initiators are granted access to the LUN. The relationship between a LUN and an initiator group is many LUNs to many initiator groups.

Name	Type	Description
igroup	igroup	The initiator group that directly owns the initiator, which is where modification of the initiator is supported. This property will only be populated when the initiator is a member of a nested initiator group.

Name	Type	Description
logical_unit_number	integer	<p>The logical unit number assigned to the LUN when mapped to the specified initiator group. The number is used to identify the LUN to initiators in the initiator group when communicating through the Fibre Channel Protocol or iSCSI. Optional in POST; if no value is provided, ONTAP assigns the lowest available value.</p> <ul style="list-style-type: none"> • Introduced in: 9.6 • readCreate: 1

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
count	integer	Number of elements to perform the operation on.

policy

The QoS policy

Name	Type	Description
_links	self_link	
max_throughput_iops	integer	Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
max_throughput_mbps	integer	Specifies the maximum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.

Name	Type	Description
min_throughput_iops	integer	Specifies the minimum throughput in IOPS, 0 means none. Setting "min_throughput" is supported on AFF platforms only, unless FabricPool tiering policies are set. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_mbps	integer	Specifies the minimum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
name	string	The QoS policy group name. This is mutually exclusive with UUID and other QoS attributes during POST and PATCH.
uuid	string	The QoS policy group UUID. This is mutually exclusive with name and other QoS attributes during POST and PATCH.

qos

Name	Type	Description
policy	policy	The QoS policy

guarantee

Properties that request and report the space guarantee for the LUN.

Name	Type	Description
requested	boolean	The requested space reservation policy for the LUN. If <i>true</i> , a space reservation is requested for the LUN; if <i>false</i> , the LUN is thin provisioned. Guaranteeing a space reservation request for a LUN requires that the volume in which the LUN resides is also space reserved and that the fractional reserve for the volume is 100%. Valid in POST and PATCH.

Name	Type	Description
reserved	boolean	<p>Reports if the LUN is space guaranteed.</p> <p>If <i>true</i>, a space guarantee is requested and the containing volume and aggregate support the request. If <i>false</i>, a space guarantee is not requested or a space guarantee is requested and either the containing volume or aggregate do not support the request.</p>

space

The storage space related properties of the LUN.

Name	Type	Description
guarantee	guarantee	Properties that request and report the space guarantee for the LUN.
size	integer	<p>The total provisioned size of the LUN. The LUN size can be increased but not reduced using the REST interface. The maximum and minimum sizes listed here are the absolute maximum and absolute minimum sizes, in bytes. The actual minimum and maximum sizes vary depending on the ONTAP version, ONTAP platform, and the available space in the containing volume and aggregate. For more information, see <i>Size properties</i> in the <i>docs</i> section of the ONTAP REST API documentation.</p> <ul style="list-style-type: none"> • example: 1073741824 • format: int64 • Max value: 140737488355328 • Min value: 4096 • Introduced in: 9.6

Name	Type	Description
used	integer	<p>The amount of space consumed by the main data stream of the LUN.</p> <p>This value is the total space consumed in the volume by the LUN, including filesystem overhead, but excluding prefix and suffix streams. Due to internal filesystem overhead and the many ways SAN filesystems and applications utilize blocks within a LUN, this value does not necessarily reflect actual consumption/availability from the perspective of the filesystem or application. Without specific knowledge of how the LUN blocks are utilized outside of ONTAP, this property should not be used as an indicator for an out-of-space condition.</p> <p>For more information, see <i>Size properties</i> in the <i>docs</i> section of the ONTAP REST API documentation.</p> <ul style="list-style-type: none"> • format: int64 • Introduced in: 9.6 • readOnly: 1

luns

A LUN is the logical representation of storage in a storage area network (SAN).

In ONTAP, a LUN is located within a volume. Optionally, it can be located within a qtree in a volume.

A LUN can be created to a specified size using thin or thick provisioning. A LUN can then be renamed, resized, cloned, and moved to a different volume. LUNs support the assignment of a quality of service (QoS) policy for performance management or a QoS policy can be assigned to the volume containing the LUN. See the LUN object model to learn more about each of the properties supported by the LUN REST API.

A LUN must be mapped to an initiator group to grant access to the initiator group's initiators (client hosts). Initiators can then access the LUN and perform I/O over a Fibre Channel (FC) fabric using the Fibre Channel Protocol or a TCP/IP network using iSCSI.

Name	Type	Description
clone	clone	<p>This sub-object is used in POST to create a new LUN as a clone of an existing LUN, or PATCH to overwrite an existing LUN as a clone of another. Setting a property in this sub-object indicates that a LUN clone is desired. Consider the following other properties when cloning a LUN: <code>auto_delete</code>, <code>qos_policy</code>, <code>space.guarantee.requested</code> and <code>space.scsi_thin_provisioning_support_enabled</code>.</p> <p>When used in a PATCH, the patched LUN's data is overwritten as a clone of the source and the following properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: <code>class</code>, <code>auto_delete</code>, <code>lun_maps</code>, <code>serial_number</code>, <code>status.state</code>, and <code>uuid</code>.</p> <p>Persistent reservations for the patched LUN are also preserved.</p>
comment	string	A configurable comment available for use by the administrator. Valid in POST and PATCH.
create_time	string	The time the LUN was created.

Name	Type	Description
enabled	boolean	The enabled state of the LUN. LUNs can be disabled to prevent access to the LUN. Certain error conditions also cause the LUN to become disabled. If the LUN is disabled, you can consult the <code>state</code> property to determine if the LUN is administratively disabled (<i>offline</i>) or has become disabled as a result of an error. A LUN in an error condition can be brought online by setting the <code>enabled</code> property to <i>true</i> or brought administratively offline by setting the <code>enabled</code> property to <i>false</i> . Upon creation, a LUN is enabled by default. Valid in PATCH.
lun_maps	array[lun_maps]	An array of LUN maps. A LUN map is an association between a LUN and an initiator group. When a LUN is mapped to an initiator group, the initiator group's initiators are granted access to the LUN. The relationship between a LUN and an initiator group is many LUNs to many initiator groups.
name	string	The fully qualified path name of the LUN composed of the <code>"/vol"</code> prefix, the volume name, the <code>qtree</code> name (optional), and the base name of the LUN. Valid in POST and PATCH.
os_type	string	The operating system type of the LUN. Required in POST when creating a LUN that is not a clone of another. Disallowed in POST when creating a LUN clone.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	

Name	Type	Description
serial_number	string	The LUN serial number. The serial number is generated by ONTAP when the LUN is created. <ul style="list-style-type: none"> • maxLength: 12 • minLength: 12 • readOnly: 1 • Introduced in: 9.10
space	space	The storage space related properties of the LUN.
uuid	string	The unique identifier of the LUN. The UUID is generated by ONTAP when the LUN is created. <ul style="list-style-type: none"> • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • readOnly: 1 • Introduced in: 9.10

_links

Name	Type	Description
self	href	

nvme_subsystem_reference

An NVMe subsystem maintains configuration state and NVMe namespace access control for a set of NVMe-connected hosts.

Name	Type	Description
<u>_links</u>	_links	
name	string	The name of the NVMe subsystem.
uuid	string	The unique identifier of the NVMe subsystem.

subsystem_map

The NVMe subsystem with which the NVMe namespace is associated. A namespace can be mapped to zero (0) or one (1) subsystems.

There is an added cost to retrieving property values for `subsystem_map`. They are not populated for

either a collection GET or an instance GET unless explicitly requested using the `fields` query parameter.

Name	Type	Description
<code>_links</code>	self_link	
<code>anagrpId</code>	string	The Asymmetric Namespace Access Group ID (ANAGRPID) of the NVMe namespace. The format for an ANAGRPID is 8 hexadecimal digits (zero-filled) followed by a lower case "h".
<code>nsid</code>	string	The NVMe namespace identifier. This is an identifier used by an NVMe controller to provide access to the NVMe namespace. The format for an NVMe namespace identifier is 8 hexadecimal digits (zero-filled) followed by a lower case "h".
<code>subsystem</code>	nvme_subsystem_reference	An NVMe subsystem maintains configuration state and NVMe namespace access control for a set of NVMe-connected hosts.

namespaces

An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the storage virtual machine using the NVMe over Fabrics protocol.

In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtrees in a volume.

An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.

Name	Type	Description
auto_delete	boolean	<p>This property marks the NVMe namespace for auto deletion when the volume containing the namespace runs out of space. This is most commonly set on namespace clones.</p> <p>When set to <i>true</i>, the NVMe namespace becomes eligible for automatic deletion when the volume runs out of space. Auto deletion only occurs when the volume containing the namespace is also configured for auto deletion and free space in the volume decreases below a particular threshold.</p> <p>This property is optional in POST and PATCH. The default value for a new NVMe namespace is <i>false</i>.</p> <p>There is an added cost to retrieving this property's value. It is not populated for either a collection GET or an instance GET unless it is explicitly requested using the <code>fields</code> query parameter. See Requesting specific fields to learn more.</p>
comment	string	A configurable comment available for use by the administrator. Valid in POST and PATCH.
create_time	string	The time the NVMe namespace was created.
enabled	boolean	The enabled state of the NVMe namespace. Certain error conditions cause the namespace to become disabled. If the namespace is disabled, you can check the <code>state</code> property to determine what error disabled the namespace. An NVMe namespace is enabled automatically when it is created.

Name	Type	Description
name	string	The fully qualified path name of the NVMe namespace composed of a "/vol" prefix, the volume name, the (optional) qtree name and base name of the namespace. Valid in POST. NVMe namespaces do not support rename, or movement between volumes.
os_type	string	The operating system type of the NVMe namespace. Required in POST when creating an NVMe namespace that is not a clone of another. Disallowed in POST when creating a namespace clone.
provisioning_options	provisioning_options	Options that are applied to the operation.
subsystem_map	array[subsystem_map]	The NVMe subsystem with which the NVMe namespace is associated. A namespace can be mapped to zero (0) or one (1) subsystems. There is an added cost to retrieving property values for <code>subsystem_map</code> . They are not populated for either a collection GET or an instance GET unless explicitly requested using the <code>fields</code> query parameter.
uuid	string	The unique identifier of the NVMe namespace.

parent_consistency_group

The parent consistency group.

Name	Type	Description
_links	self_link	

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

storage_service

Determines the placement of any storage object created during this operation.

Name	Type	Description
name	string	Storage service name. If not specified, the default value is the most performant for the platform.

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
storage_service	storage_service	Determines the placement of any storage object created during this operation.

snapshot

A consistency group's Snapshot copy

Name	Type	Description
name	string	The name of the consistency group's Snapshot copy to restore to.
uuid	string	The UUID of the consistency group's Snapshot copy to restore to.

restore_to

Use to restore a consistency group to a previous Snapshot copy

Name	Type	Description
snapshot	snapshot	A consistency group's Snapshot copy

snapshot_policy_reference

This is a reference to the Snapshot copy policy.

Name	Type	Description
_links	_links	
name	string	
uuid	string	

space

Space information for the consistency group.

Name	Type	Description
available	integer	The amount of space available in the consistency group, in bytes.
size	integer	The total provisioned size of the consistency group, in bytes.
used	integer	The amount of space consumed in the consistency group, in bytes.

svm

The Storage Virtual Machine (SVM) in which the consistency group is located.

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

tiering

The tiering placement and policy definitions for volumes in this consistency group.

Name	Type	Description
control	string	Storage tiering placement rules for the object.
policy	string	<p>Policy that determines whether the user data blocks of a volume in a FabricPool will be tiered to the cloud store when they become cold.</p> <p>FabricPool combines flash (performance tier) with a cloud store into a single aggregate. Temperature of a volume block increases if it is accessed frequently and decreases when it is not. Valid in POST or PATCH.</p> <p>all &dash; Allows tiering of both Snapshot copies and active file system user data to the cloud store as soon as possible by ignoring the temperature on the volume blocks.</p> <p>auto &dash; Allows tiering of both snapshot and active file system user data to the cloud store</p> <p>none &dash; Volume blocks are not be tiered to the cloud store.</p> <p>snapshot_only &dash; Allows tiering of only the volume Snapshot copies not associated with the active file system.</p> <p>The default tiering policy is "snapshot-only" for a FlexVol volume and "none" for a FlexGroup volume. The default minimum cooling period for the "snapshot-only" tiering policy is 2 days and for the "auto" tiering policy it is 31 days.</p>

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
count	integer	Number of elements to perform the operation on.
storage_service	storage_service	Determines the placement of any storage object created during this operation.

qos

The QoS policy for this volume.

Name	Type	Description
policy	policy	The QoS policy

space

Name	Type	Description
available	integer	The available space, in bytes.
size	integer	Total provisioned size, in bytes.
used	integer	The virtual space used (includes volume reserves) before storage efficiency, in bytes.

tiering

The tiering placement and policy definitions for this volume.

Name	Type	Description
control	string	Storage tiering placement rules for the object.

Name	Type	Description
policy	string	<p>Policy that determines whether the user data blocks of a volume in a FabricPool will be tiered to the cloud store when they become cold.</p> <p>FabricPool combines flash (performance tier) with a cloud store into a single aggregate. Temperature of a volume block increases if it is accessed frequently and decreases when it is not. Valid in POST or PATCH.</p> <p>all &dash; Allows tiering of both Snapshot copies and active file system user data to the cloud store as soon as possible by ignoring the temperature on the volume blocks.</p> <p>auto &dash; Allows tiering of both snapshot and active file system user data to the cloud store</p> <p>none &dash; Volume blocks are not be tiered to the cloud store.</p> <p>snapshot_only &dash; Allows tiering of only the volume Snapshot copies not associated with the active file system.</p> <p>The default tiering policy is "snapshot-only" for a FlexVol volume and "none" for a FlexGroup volume. The default minimum cooling period for the "snapshot-only" tiering policy is 2 days and for the "auto" tiering policy it is 31 days.</p>

volumes

Name	Type	Description
comment	string	A comment for the volume. Valid in POST or PATCH.

Name	Type	Description
language	string	Language encoding setting for volume. If no language is specified, the volume inherits its SVM language encoding setting.
name	string	Volume name. The name of volume must start with an alphabetic character (a to z or A to Z) or an underscore (_). The name must be 197 or fewer characters in length for FlexGroups, and 203 or fewer characters in length for all other types of volumes. Volume names must be unique within an SVM. Required on POST.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	The QoS policy for this volume.
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	
tiering	tiering	The tiering placement and policy definitions for this 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 • readOnly: 1 • Introduced in: 9.8

consistency_groups

Name	Type	Description
_links	self_link	

Name	Type	Description
luns	array[luns]	The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.
name	string	<p>Name of the consistency group. The consistency group name must be unique within an SVM.</p> <p>If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.</p>

Name	Type	Description
namespaces	array[namespaces]	<p>An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol. In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.</p> <p>An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.</p> <p>An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.</p> <ul style="list-style-type: none"> • maxItems: 16 • minItems: 0 • uniqueItems: 1 • Introduced in: 9.10 • x-ntap-modifyOnly: true
parent_consistency_group	parent_consistency_group	The parent consistency group.
provisioning_options	provisioning_options	Options that are applied to the operation.

Name	Type	Description
qos	qos	
restore_to	restore_to	Use to restore a consistency group to a previous Snapshot copy
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	Space information for the consistency group.
svm	svm	The Storage Virtual Machine (SVM) in which the consistency group is located.
tiering	tiering	The tiering placement and policy definitions for volumes in this consistency group.
uuid	string	<p>The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created.</p> <ul style="list-style-type: none"> • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • Introduced in: 9.10 • readOnly: 1

Name	Type	Description
volumes	array[volumes]	<p>A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group.</p> <p>The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group.</p> <p>The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit.</p>

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.

Update a consistency group

PATCH /application/consistency-groups/{uuid}

Introduced In: 9.10

Updates a consistency group.



that this operation will never delete storage elements. You can specify only elements that should be added to the consistency group regardless of existing storage objects.

Related ONTAP commands

N/A. There are no ONTAP commands for managing consistency groups.

Examples:

Adding namespaces to an existing volume in an existing consistency group

To add two NVMe Namespaces to an existing volume in an existing consistency group, create a new subsystem and bind the new namespaces to it.

```
curl -X PATCH 'https://<mgmt-ip>/api/application/consistency-
groups/6f51748a-0a7f-11ec-a449-005056bbcf9f' -d '{ "namespaces": [ {
"name": "/vol/vol1/new_namespace", "space": { "size": "10M" }, "os_type":
"windows", "provisioning_options": { "count": 2 }, "subsystem_map": {
"subsystem": { "name": "mySubsystem", "hosts": [ { "nqn": "nqn.1992-
08.com.netapp:sn.d04594ef915b4c73b642169e72e4c0b1:subsystem.host1" }, {
"nqn": "nqn.1992-
08.com.netapp:sn.d04594ef915b4c73b642169e72e4c0b1:subsystem.host2" } ] } }
} ] }'
```

Response:

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

== Parameters

[cols=5*,options=header]

|===

|Name

|Type

|In

|Required

|Description

|uuid

|string

|path

|True

a|The unique identifier of the consistency group to modify.

```
|return_timeout
|integer
|query
|False
```

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

```
* Default value: 1
* Max value: 120
* Min value: 0
```

```
|===
```

```
== Request Body
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|_links
```

```
|link:#self_link[self_link]
```

```
a|
```

```
|consistency_groups
```

```
|array[link:#consistency_groups[consistency_groups]]
```

a|A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A consistency group can only be associated with one direct parent consistency group.

```
|luns
```

```
|array[link:#luns[luns]]
```

a|The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.

|name
|string
a|Name of the consistency group. The consistency group name must be unique within an SVM.

If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.

|namespaces
|array[link:#namespaces[namespaces]]
a|An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol.
In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.

An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.

- * maxItems: 16
- * minItems: 0
- * uniqueItems: 1
- * Introduced in: 9.10
- * x-ntap-modifyOnly: true

|parent_consistency_group
|link:#parent_consistency_group[parent_consistency_group]
a|The parent consistency group.

|provisioning_options
|link:#provisioning_options[provisioning_options]

a|Options that are applied to the operation.

|qos

|link:#qos[qos]

a|

|replicated

|boolean

a|Indicates whether or not replication has been enabled on this consistency group.

|replication_source

|boolean

a|Indicates whether or not this consistency group is the source for replication.

|restore_to

|link:#restore_to[restore_to]

a|Use to restore a consistency group to a previous Snapshot copy

|snapshot_policy

|link:#snapshot_policy_reference[snapshot_policy_reference]

a|This is a reference to the Snapshot copy policy.

|space

|link:#space[space]

a|Space information for the consistency group.

|svm

|link:#svm[svm]

a|The Storage Virtual Machine (SVM) in which the consistency group is located.

|tiering

|link:#tiering[tiering]

a|The tiering placement and policy definitions for volumes in this consistency group.

|uuid

```
|string
```

a|The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created.

```
* example: 1cd8a442-86d1-11e0-ae1c-123478563412
```

```
* Introduced in: 9.10
```

```
* readOnly: 1
```

```
|volumes
```

```
|array[link:#volumes[volumes]]
```

a|A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group.

The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group.

The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit.

```
|===
```

```
.Example request
```

```
[%collapsible%closed]
```

```
====
```

```
[source,json,subs+=macros]
```

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "consistency_groups": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "luns": {
      "clone": {
        "source": {
          "name": "/vol/volume1/lun1",
```

```

    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  }
},
"comment": "string",
"create_time": "2018-06-04T19:00:00Z",
"lun_maps": {
  "igroup": {
    "comment": "string",
    "igroups": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "igroup1",
      "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    },
    "initiators": {
      "comment": "my comment",
      "name": "iqn.1998-01.com.corp.iscsi:name1"
    },
    "name": "igroup1",
    "os_type": "aix",
    "protocol": "fcp",
    "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
  }
},
"name": "/vol/volume1/lun1",
"os_type": "aix",
"provisioning_options": {
  "action": "create"
},
"qos": {
  "policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "max_throughput_iops": 10000,
    "max_throughput_mbps": 500,
    "min_throughput_iops": 2000,
    "min_throughput_mbps": 500,
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  }
}

```



```

    },
    "serial_number": "string",
    "space": {
      "size": 1073741824
    },
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "namespaces": {
    "comment": "string",
    "create_time": "2018-06-04T19:00:00Z",
    "name": "/vol/volume1/qtrees1/namespacel",
    "os_type": "aix",
    "provisioning_options": {
      "action": "create"
    },
    },
    "subsystem_map": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      },
      "anagrpid": "00103050h",
      "nsid": "00000001h",
      "subsystem": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        }
      },
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "parent_consistency_group": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    },
    "name": "my_consistency_group",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "provisioning_options": {
    "action": "create",
    "storage_service": {

```

```

    "name": "extreme"
  }
},
"qos": {
  "policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "max_throughput_iops": 10000,
    "max_throughput_mbps": 500,
    "min_throughput_iops": 2000,
    "min_throughput_mbps": 500,
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  }
},
"snapshot_policy": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "default",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"space": {
  "available": 5737418,
  "size": 1073741824,
  "used": 5737418
},
"svm": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "svm1",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"tiering": {
  "control": "allowed",
  "policy": "all"
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",

```

```

"volumes": {
  "comment": "string",
  "language": "ar",
  "name": "vol_cs_dept",
  "provisioning_options": {
    "action": "create",
    "storage_service": {
      "name": "extreme"
    }
  },
  "qos": {
    "policy": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "max_throughput_iops": 10000,
      "max_throughput_mbps": 500,
      "min_throughput_iops": 2000,
      "min_throughput_mbps": 500,
      "name": "performance",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  },
  "snapshot_policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "default",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "tiering": {
    "control": "allowed",
    "policy": "all"
  },
  "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
},
"luns": {
  "clone": {
    "source": {
      "name": "/vol/volume1/lun1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  }
}

```

```

    }
  },
  "comment": "string",
  "create_time": "2018-06-04T19:00:00Z",
  "lun_maps": {
    "igroup": {
      "comment": "string",
      "igroups": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "igroup1",
        "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
      },
      "initiators": {
        "comment": "my comment",
        "name": "iqn.1998-01.com.corp.iscsi:name1"
      },
      "name": "igroup1",
      "os_type": "aix",
      "protocol": "fc",
      "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    }
  },
  "name": "/vol/volume1/lun1",
  "os_type": "aix",
  "provisioning_options": {
    "action": "create"
  },
  "qos": {
    "policy": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "max_throughput_iops": 10000,
      "max_throughput_mbps": 500,
      "min_throughput_iops": 2000,
      "min_throughput_mbps": 500,
      "name": "performance",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  },
},

```

```

    "serial_number": "string",
    "space": {
      "size": 1073741824
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "namespaces": {
    "comment": "string",
    "create_time": "2018-06-04T19:00:00Z",
    "name": "/vol/volume1/qtreen1/namespacel",
    "os_type": "aix",
    "provisioning_options": {
      "action": "create"
    },
    "subsystem_map": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "anagrpid": "00103050h",
      "nsid": "00000001h",
      "subsystem": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      }
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "parent_consistency_group": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "my_consistency_group",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "provisioning_options": {
    "action": "create",
    "storage_service": {
      "name": "extreme"
    }
  }
}

```

```

    }
  },
  "qos": {
    "policy": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "max_throughput_iops": 10000,
      "max_throughput_mbps": 500,
      "min_throughput_iops": 2000,
      "min_throughput_mbps": 500,
      "name": "performance",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  },
  "snapshot_policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "default",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "space": {
    "available": 5737418,
    "size": 1073741824,
    "used": 5737418
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "tiering": {
    "control": "allowed",
    "policy": "all"
  },
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
  "volumes": {

```

```

"comment": "string",
"language": "ar",
"name": "vol_cs_dept",
"provisioning_options": {
  "action": "create",
  "storage_service": {
    "name": "extreme"
  }
},
"qos": {
  "policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "max_throughput_iops": 10000,
    "max_throughput_mbps": 500,
    "min_throughput_iops": 2000,
    "min_throughput_mbps": 500,
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  }
},
"snapshot_policy": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "default",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"tiering": {
  "control": "allowed",
  "policy": "all"
},
"uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
}
}
====

== Response

```

Status: 200, Ok

== Response

Status: 202, Accepted

== Error

Status: Default

ONTAP Error Response Codes

===	Error Code	Description
	53411842	Consistency group does not exist.
	53411843	A consistency group with specified UUID was not found.
	53411844	Specified consistency group was not found in the specified SVM.
	53411845	The specified UUID and name refer to different consistency groups.
	53411846	Either name or UUID must be provided.
	53411852	A consistency group with the same identifier in the same scope exists.
	53411853	Fields provided in the request conflict with each other.
	53411856	Field provided is only supported when provisioning new objects.
	53411857	LUNs that are not members of the application are not supported by this API. LUNs can be added to an application by adding the volume containing the LUNs to the application.
	53411860	An object with the same identifier in the same scope exists.


```
| 53411861
| Volume specified does not exist in provided volume array.

| 53411862
| Modifying existing igroups is not supported using this API.

| 53411864
| Request content insufficient to add an existing volume to an
application.

| 53411865
| Volumes contained in one consistency group cannot be added to a
different consistency group.

| 53411866
| LUNs are not supported on FlexGroup volumes.

| 53411867
| LUN name is too long after appending a unique suffix.

| 53411869
| Volume name is too long after appending a unique suffix.

| 53411870
| When using the "round_robin" layout, the volume count must not be
greater than the LUN count.
|===
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|error
```

```
|link:#error[error]
```

```
a|
```

```
|===
```

```
.Example error
```

```
[%collapsible%closed]
```

```
=====
```

```

[source,json,subs=+macros]
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===

[#self_link]
[.api-collapsible-fifth-title]
self_link

[cols=3*,options=header]
|===
|Name
|Type

```

|Description

|self

|link:#href[href]

a|

|===

[#source]

[.api-collapsible-fifth-title]

source

The source LUN for a LUN clone operation. This can be specified using property `clone.source.uuid` or `clone.source.name`. If both properties are supplied, they must refer to the same LUN.

Valid in POST to create a new LUN as a clone of the source.

Valid in PATCH to overwrite an existing LUN's data as a clone of another.

[cols=3*,options=header]

|===

|Name

|Type

|Description

|name

|string

a|The fully qualified path name of the clone source LUN composed of a "/vol" prefix, the volume name, the (optional) qtree name, and base name of the LUN. Valid in POST and PATCH.

|uuid

|string

a|The unique identifier of the clone source LUN. Valid in POST and PATCH.

|===

[#clone]

[.api-collapsible-fifth-title]

clone

This sub-object is used in POST to create a new LUN as a clone of an existing LUN, or PATCH to overwrite an existing LUN as a clone of another. Setting a property in this sub-object indicates that a LUN clone is desired. Consider the following other properties when cloning a LUN: ``auto_delete``, ``qos_policy``, ``space.guarantee.requested`` and ``space.scsi_thin_provisioning_support_enabled``.

When used in a PATCH, the patched LUN's data is over-written as a clone of the source and the following properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: ``class``, ``auto_delete``, ``lun_maps``, ``serial_number``, ``status.state``, and ``uuid``.

Persistent reservations for the patched LUN are also preserved.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|source
```

```
|link:#source[source]
```

a|The source LUN for a LUN clone operation. This can be specified using property ``clone.source.uuid`` or ``clone.source.name``. If both properties are supplied, they must refer to the same LUN.

Valid in POST to create a new LUN as a clone of the source.

Valid in PATCH to overwrite an existing LUN's data as a clone of another.

```
|===
```

```
[#igroups]
```

```
[.api-collapsible-fifth-title]
```

```
igroups
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|_links
```

```
|link:#self_link[self_link]
```

a|

|name

|string

a|The name of the initiator group.

|uuid

|string

a|The unique identifier of the initiator group.

|===

[#initiators]

[.api-collapsible-fifth-title]

initiators

The initiators that are members of the initiator group.

[cols=3*,options=header]

|===

|Name

|Type

|Description

|comment

|string

a|A comment available for use by the administrator.

|name

|string

a|Name of initiator that is a member of the initiator group.

|===

[#igroup]

[.api-collapsible-fifth-title]

igroup

The initiator group that directly owns the initiator, which is where modification of the initiator is supported. This property will only be

populated when the initiator is a member of a nested initiator group.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|comment
```

```
|string
```

```
a|A comment available for use by the administrator. Valid in POST and PATCH.
```

```
|igroups
```

```
|array[link:#igroups[igroups]]
```

```
a|Separate igroup definitions to include in this igroup.
```

```
|initiators
```

```
|array[link:#initiators[initiators]]
```

```
a|The initiators that are members of the group.
```

```
|name
```

```
|string
```

```
a|The name of the initiator group. Required in POST; optional in PATCH.
```

```
|os_type
```

```
|string
```

```
a|The host operating system of the initiator group. All initiators in the group should be hosts of the same operating system. Required in POST; optional in PATCH.
```

```
|protocol
```

```
|string
```

```
a|The protocols supported by the initiator group. This restricts the type of initiators that can be added to the initiator group. Optional in POST; if not supplied, this defaults to _mixed_.
```

The protocol of an initiator group cannot be changed after creation of the group.

```
|uuid
|string
a|The unique identifier of the initiator group.
```

```
|===
```

```
[#lun_maps]
[.api-collapsible-fifth-title]
lun_maps
```

A LUN map is an association between a LUN and an initiator group.

When a LUN is mapped to an initiator group, the initiator group's initiators are granted access to the LUN. The relationship between a LUN and an initiator group is many LUNs to many initiator groups.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|igroup
```

```
|link:#igroup[igroup]
```

```
a|The initiator group that directly owns the initiator, which is where modification of the initiator is supported. This property will only be populated when the initiator is a member of a nested initiator group.
```

```
|logical_unit_number
```

```
|integer
```

```
a|The logical unit number assigned to the LUN when mapped to the specified initiator group. The number is used to identify the LUN to initiators in the initiator group when communicating through the Fibre Channel Protocol or iSCSI. Optional in POST; if no value is provided, ONTAP assigns the lowest available value.
```

```
* Introduced in: 9.6
```

```
* readCreate: 1
```

```
|===
```

```
[#provisioning_options]
[.api-collapsible-fifth-title]
provisioning_options
```

Options that are applied to the operation.

```
[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|action
|string
a|Operation to perform
```

```
|count
|integer
a|Number of elements to perform the operation on.
```

```
|===
```

```
[#policy]
[.api-collapsible-fifth-title]
policy
```

The QoS policy

```
[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|_links
|link:#self_link[self_link]
a|
```

```
|max_throughput_iops
|integer
a|Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
```



```
|max_throughput_mbps
|integer
a|Specifies the maximum throughput in Megabytes per sec, 0 means none.
This is mutually exclusive with name and UUID during POST and PATCH.
```

```
|min_throughput_iops
|integer
a|Specifies the minimum throughput in IOPS, 0 means none. Setting
"min_throughput" is supported on AFF platforms only, unless FabricPool
tiering policies are set. This is mutually exclusive with name and UUID
during POST and PATCH.
```

```
|min_throughput_mbps
|integer
a|Specifies the minimum throughput in Megabytes per sec, 0 means none.
This is mutually exclusive with name and UUID during POST and PATCH.
```

```
|name
|string
a|The QoS policy group name. This is mutually exclusive with UUID and
other QoS attributes during POST and PATCH.
```

```
|uuid
|string
a|The QoS policy group UUID. This is mutually exclusive with name and
other QoS attributes during POST and PATCH.
```

```
|===
```

```
[#qos]
[.api-collapsible-fifth-title]
qos
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|policy
|link:#policy[policy]
a|The QoS policy
```

```
|===
```

```
[#guarantee]
[.api-collapsible-fifth-title]
guarantee
```

Properties that request and report the space guarantee for the LUN.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|requested
|boolean
```

a|The requested space reservation policy for the LUN. If `_true_`, a space reservation is requested for the LUN; if `_false_`, the LUN is thin provisioned. Guaranteeing a space reservation request for a LUN requires that the volume in which the LUN resides is also space reserved and that the fractional reserve for the volume is 100%. Valid in POST and PATCH.

```
|reserved
|boolean
```

a|Reports if the LUN is space guaranteed.

If `_true_`, a space guarantee is requested and the containing volume and aggregate support the request. If `_false_`, a space guarantee is not requested or a space guarantee is requested and either the containing volume or aggregate do not support the request.

```
|===
```

```
[#space]
[.api-collapsible-fifth-title]
space
```

The storage space related properties of the LUN.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|guarantee
```

```
|link:#guarantee[guarantee]
```

a|Properties that request and report the space guarantee for the LUN.

```
|size
```

```
|integer
```

a|The total provisioned size of the LUN. The LUN size can be increased but not reduced using the REST interface.

The maximum and minimum sizes listed here are the absolute maximum and absolute minimum sizes, in bytes. The actual minimum and maximum sizes vary depending on the ONTAP version, ONTAP platform, and the available space in the containing volume and aggregate.

For more information, see `_Size properties_` in the `_docs_` section of the ONTAP REST API documentation.

```
* example: 1073741824
```

```
* format: int64
```

```
* Max value: 140737488355328
```

```
* Min value: 4096
```

```
* Introduced in: 9.6
```

```
|used
```

```
|integer
```

a|The amount of space consumed by the main data stream of the LUN.

This value is the total space consumed in the volume by the LUN, including filesystem overhead, but excluding prefix and suffix streams. Due to internal filesystem overhead and the many ways SAN filesystems and applications utilize blocks within a LUN, this value does not necessarily reflect actual consumption/availability from the perspective of the filesystem or application. Without specific knowledge of how the LUN blocks are utilized outside of ONTAP, this property should not be used as an indicator for an out-of-space condition.

For more information, see `_Size properties_` in the `_docs_` section of the ONTAP REST API documentation.

```
* format: int64
* Introduced in: 9.6
* readOnly: 1
```

```
|===
```

```
[#luns]
[.api-collapsible-fifth-title]
luns
```

A LUN is the logical representation of storage in a storage area network (SAN).

In ONTAP, a LUN is located within a volume. Optionally, it can be located within a qtree in a volume.

A LUN can be created to a specified size using thin or thick provisioning. A LUN can then be renamed, resized, cloned, and moved to a different volume. LUNs support the assignment of a quality of service (QoS) policy for performance management or a QoS policy can be assigned to the volume containing the LUN. See the LUN object model to learn more about each of the properties supported by the LUN REST API.

A LUN must be mapped to an initiator group to grant access to the initiator group's initiators (client hosts). Initiators can then access the LUN and perform I/O over a Fibre Channel (FC) fabric using the Fibre Channel Protocol or a TCP/IP network using iSCSI.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|clone
```

```
|link:#clone[clone]
```

a|This sub-object is used in POST to create a new LUN as a clone of an existing LUN, or PATCH to overwrite an existing LUN as a clone of another. Setting a property in this sub-object indicates that a LUN clone is desired. Consider the following other properties when cloning a LUN: `auto_delete`, `qos_policy`, `space.guarantee.requested` and `space.scsi_thin_provisioning_support_enabled`.

When used in a PATCH, the patched LUN's data is over-written as a clone of the source and the following properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: `class`, `auto_delete`, `lun_maps`, `serial_number`, `status.state`, and `uuid`.

Persistent reservations for the patched LUN are also preserved.

|comment

|string

a|A configurable comment available for use by the administrator. Valid in POST and PATCH.

|create_time

|string

a|The time the LUN was created.

|enabled

|boolean

a|The enabled state of the LUN. LUNs can be disabled to prevent access to the LUN. Certain error conditions also cause the LUN to become disabled. If the LUN is disabled, you can consult the `state` property to determine if the LUN is administratively disabled (`_offline_`) or has become disabled as a result of an error. A LUN in an error condition can be brought online by setting the `enabled` property to `_true_` or brought administratively offline by setting the `enabled` property to `_false_`. Upon creation, a LUN is enabled by default. Valid in PATCH.

|lun_maps

|array[link:#lun_maps[lun_maps]]

a|An array of LUN maps.

A LUN map is an association between a LUN and an initiator group. When a LUN is mapped to an initiator group, the initiator group's initiators are granted access to the LUN. The relationship between a LUN and an initiator group is many LUNs to many initiator groups.

|name

|string

a|The fully qualified path name of the LUN composed of the `"/vol"` prefix, the volume name, the qtree name (optional), and the base name of the LUN. Valid in POST and PATCH.

```
|os_type
|string
a|The operating system type of the LUN.
```

Required in POST when creating a LUN that is not a clone of another.
Disallowed in POST when creating a LUN clone.

```
|provisioning_options
|link:#provisioning_options[provisioning_options]
a|Options that are applied to the operation.
```

```
|qos
|link:#qos[qos]
a|
```

```
|serial_number
|string
a|The LUN serial number. The serial number is generated by ONTAP when the
LUN is created.
```

```
* maxLength: 12
* minLength: 12
* readOnly: 1
* Introduced in: 9.10
```

```
|space
|link:#space[space]
a|The storage space related properties of the LUN.
```

```
|uuid
|string
a|The unique identifier of the LUN. The UUID is generated by ONTAP when
the LUN is created.
```

```
* example: 1cd8a442-86d1-11e0-ae1c-123478563412
* readOnly: 1
* Introduced in: 9.10
```

```
|===
```

```
[#_links]
[.api-collapsible-fifth-title]
_links
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|self
|link:#href[href]
a|
```

```
|===
```

```
[#nvme_subsystem_reference]
[.api-collapsible-fifth-title]
nvme_subsystem_reference
```

An NVMe subsystem maintains configuration state and NVMe namespace access control for a set of NVMe-connected hosts.

```
[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
 |_links
|link:#_links[_links]
a|
```

```
|name
|string
a|The name of the NVMe subsystem.
```

```
|uuid
|string
a|The unique identifier of the NVMe subsystem.
```

```
|===
```

```
[#subsystem_map]
[.api-collapsible-fifth-title]
subsystem_map
```

The NVMe subsystem with which the NVMe namespace is associated. A namespace can be mapped to zero (0) or one (1) subsystems.

There is an added cost to retrieving property values for `subsystem_map`. They are not populated for either a collection GET or an instance GET unless explicitly requested using the `fields` query parameter.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
 |_links
```

```
|link:#self_link[self_link]
```

```
a|
```

```
|anagrpid
```

```
|string
```

```
a|The Asymmetric Namespace Access Group ID (ANAGRPID) of the NVMe namespace.
```

The format for an ANAGRPID is 8 hexadecimal digits (zero-filled) followed by a lower case "h".

```
|nsid
```

```
|string
```

```
a|The NVMe namespace identifier. This is an identifier used by an NVMe controller to provide access to the NVMe namespace.
```

The format for an NVMe namespace identifier is 8 hexadecimal digits (zero-filled) followed by a lower case "h".

```
|subsystem
```

```
|link:#nvme_subsystem_reference[nvme_subsystem_reference]
```

```
a|An NVMe subsystem maintains configuration state and NVMe namespace access control for a set of NVMe-connected hosts.
```



```
|===
```

```
[#namespaces]  
[.api-collapsible-fifth-title]  
namespaces
```

An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the storage virtual machine using the NVMe over Fabrics protocol.

In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.

An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|auto_delete
```

```
|boolean
```

```
a|This property marks the NVMe namespace for auto deletion when the volume containing the namespace runs out of space. This is most commonly set on namespace clones.
```

When set to `_true_`, the NVMe namespace becomes eligible for automatic deletion when the volume runs out of space. Auto deletion only occurs when the volume containing the namespace is also configured for auto deletion and free space in the volume decreases below a particular threshold.

This property is optional in POST and PATCH. The default value for a new NVMe namespace is `_false_`.

There is an added cost to retrieving this property's value. It is not populated for either a collection GET or an instance GET unless it is explicitly requested using the `fields` query parameter. See [xref:{relative_path}getting_started_with_the_ontap_rest_api.html#Requesting_specific_fields\[Requesting specific fields\]](#) to learn more.

|comment

|string

a|A configurable comment available for use by the administrator. Valid in POST and PATCH.

|create_time

|string

a|The time the NVMe namespace was created.

|enabled

|boolean

a|The enabled state of the NVMe namespace. Certain error conditions cause the namespace to become disabled. If the namespace is disabled, you can check the `state` property to determine what error disabled the namespace. An NVMe namespace is enabled automatically when it is created.

|name

|string

a|The fully qualified path name of the NVMe namespace composed of a "/vol" prefix, the volume name, the (optional) qtree name and base name of the namespace. Valid in POST.

NVMe namespaces do not support rename, or movement between volumes.

|os_type

|string

a|The operating system type of the NVMe namespace.

Required in POST when creating an NVMe namespace that is not a clone of another. Disallowed in POST when creating a namespace clone.

|provisioning_options

|link:#provisioning_options[provisioning_options]

a|Options that are applied to the operation.

```
|subsystem_map
|array[link:#subsystem_map[subsystem_map]]
a|The NVMe subsystem with which the NVMe namespace is associated. A
namespace can be mapped to zero (0) or one (1) subsystems.
```

There is an added cost to retrieving property values for `subsystem_map`. They are not populated for either a collection GET or an instance GET unless explicitly requested using the `fields` query parameter.

```
|uuid
|string
a|The unique identifier of the NVMe namespace.
```

```
|===
```

```
[#parent_consistency_group]
[.api-collapsible-fifth-title]
parent_consistency_group
```

The parent consistency group.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|_links
|link:#self_link[self_link]
a|
```

```
|name
|string
a|The name of the consistency group.
```

```
|uuid
|string
a|The unique identifier of the consistency group.
```

```
|===
```

```
[#storage_service]  
[.api-collapsible-fifth-title]  
storage_service
```

Determines the placement of any storage object created during this operation.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name  
|Type  
|Description
```

```
|name
```

```
|string
```

a|Storage service name. If not specified, the default value is the most performant for the platform.

```
|===
```

```
[#provisioning_options]  
[.api-collapsible-fifth-title]  
provisioning_options
```

Options that are applied to the operation.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name  
|Type  
|Description
```

```
|action
```

```
|string
```

a|Operation to perform

```
|storage_service
```

```
|link:#storage_service[storage_service]
```

a|Determines the placement of any storage object created during this

operation.

|===

```
[#snapshot]
[.api-collapsible-fifth-title]
snapshot
```

A consistency group's Snapshot copy

```
[cols=3*,options=header]
```

|===

```
|Name
|Type
|Description
```

```
|name
```

```
|string
```

a|The name of the consistency group's Snapshot copy to restore to.

```
|uuid
```

```
|string
```

a|The UUID of the consistency group's Snapshot copy to restore to.

|===

```
[#restore_to]
[.api-collapsible-fifth-title]
restore_to
```

Use to restore a consistency group to a previous Snapshot copy

```
[cols=3*,options=header]
```

|===

```
|Name
|Type
|Description
```

```
|snapshot
```

```
|link:#snapshot[snapshot]
```

a|A consistency group's Snapshot copy

|===

```
[#snapshot_policy_reference]
[.api-collapsible-fifth-title]
snapshot_policy_reference
```

This is a reference to the Snapshot copy policy.

```
[cols=3*,options=header]
```

|===

```
|Name
|Type
|Description
```

```
|_links
|link:#_links[_links]
```

a|

```
|name
|string
a|
```

```
|uuid
|string
a|
```

|===

```
[#space]
[.api-collapsible-fifth-title]
space
```

Space information for the consistency group.

```
[cols=3*,options=header]
```

|===

```
|Name
|Type
|Description
```

```
|available
|integer
a|The amount of space available in the consistency group, in bytes.
```

```
|size
|integer
a|The total provisioned size of the consistency group, in bytes.
```

```
|used
|integer
a|The amount of space consumed in the consistency group, in bytes.
```

```
|===
```

```
[#svm]
[.api-collapsible-fifth-title]
svm
```

The Storage Virtual Machine (SVM) in which the consistency group is located.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
 |_links
|link:#_links[_links]
a|
```

```
|name
|string
a|The name of the SVM.
```

```
|uuid
|string
a|The unique identifier of the SVM.
```

```
|===
```

```
[#tiering]
[.api-collapsible-fifth-title]
tiering
```

The tiering placement and policy definitions for volumes in this consistency group.

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|control
|string
a|Storage tiering placement rules for the object.
```

```
|policy
|string
a|Policy that determines whether the user data blocks of a volume in a FabricPool will be tiered to the cloud store when they become cold.
```

FabricPool combines flash (performance tier) with a cloud store into a single aggregate. Temperature of a volume block increases if it is accessed frequently and decreases when it is not. Valid in POST or PATCH.

all ‐ Allows tiering of both Snapshot copies and active file system user data to the cloud store as soon as possible by ignoring the temperature on the volume blocks.

auto ‐ Allows tiering of both snapshot and active file system user data to the cloud store

none ‐ Volume blocks are not be tiered to the cloud store.

snapshot_only ‐ Allows tiering of only the volume Snapshot copies not associated with the active file system.

The default tiering policy is "snapshot-only" for a FlexVol volume and "none" for a FlexGroup volume. The default minimum cooling period for the "snapshot-only" tiering policy is 2 days and for the "auto" tiering policy it is 31 days.


```
|===
```

```
[#provisioning_options]  
[.api-collapsible-fifth-title]  
provisioning_options
```

Options that are applied to the operation.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name  
|Type  
|Description
```

```
|action  
|string  
a|Operation to perform
```

```
|count  
|integer  
a|Number of elements to perform the operation on.
```

```
|storage_service  
|link:#storage_service[storage_service]  
a|Determines the placement of any storage object created during this  
operation.
```

```
|===
```

```
[#qos]  
[.api-collapsible-fifth-title]  
qos
```

The QoS policy for this volume.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name  
|Type
```

|Description

|policy

|link:#policy[policy]

a|The QoS policy

|===

[#space]

[.api-collapsible-fifth-title]

space

[cols=3*,options=header]

|===

|Name

|Type

|Description

|available

|integer

a|The available space, in bytes.

|size

|integer

a|Total provisioned size, in bytes.

|used

|integer

a|The virtual space used (includes volume reserves) before storage efficiency, in bytes.

|===

[#tiering]

[.api-collapsible-fifth-title]

tiering

The tiering placement and policy definitions for this volume.

[cols=3*,options=header]

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|control
```

```
|string
```

```
a|Storage tiering placement rules for the object.
```

```
|policy
```

```
|string
```

```
a|Policy that determines whether the user data blocks of a volume in a FabricPool will be tiered to the cloud store when they become cold.
```

FabricPool combines flash (performance tier) with a cloud store into a single aggregate. Temperature of a volume block increases if it is accessed frequently and decreases when it is not. Valid in POST or PATCH.

all ‐ Allows tiering of both Snapshot copies and active file system user data to the cloud store as soon as possible by ignoring the temperature on the volume blocks.

auto ‐ Allows tiering of both snapshot and active file system user data to the cloud store

none ‐ Volume blocks are not be tiered to the cloud store.

snapshot_only ‐ Allows tiering of only the volume Snapshot copies not associated with the active file system.

The default tiering policy is "snapshot-only" for a FlexVol volume and "none" for a FlexGroup volume. The default minimum cooling period for the "snapshot-only" tiering policy is 2 days and for the "auto" tiering policy it is 31 days.

```
|===
```

```
[#volumes]
```

```
[.api-collapsible-fifth-title]
```

```
volumes
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```

|Type
|Description

|comment
|string
a|A comment for the volume. Valid in POST or PATCH.

|language
|string
a|Language encoding setting for volume. If no language is specified, the
volume inherits its SVM language encoding setting.

|name
|string
a|Volume name. The name of volume must start with an alphabetic character
(a to z or A to Z) or an underscore (_). The name must be 197 or fewer
characters in length for FlexGroups, and 203 or fewer characters in length
for all other types of volumes. Volume names must be unique within an SVM.
Required on POST.

|provisioning_options
|link:#provisioning_options[provisioning_options]
a|Options that are applied to the operation.

|qos
|link:#qos[qos]
a|The QoS policy for this volume.

|snapshot_policy
|link:#snapshot_policy_reference[snapshot_policy_reference]
a|This is a reference to the Snapshot copy policy.

|space
|link:#space[space]
a|

|tiering
|link:#tiering[tiering]
a|The tiering placement and policy definitions for this volume.

```

```
|uuid
|string
a|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
```

```
* readOnly: 1
```

```
* Introduced in: 9.8
```

```
|===
```

```
[#consistency_groups]
[.api-collapsible-fifth-title]
consistency_groups
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|_links
```

```
|link:#self_link[self_link]
```

```
a|
```

```
|luns
```

```
|array[link:#luns[luns]]
```

```
a|The LUNs array can be used to create or modify LUNs in a consistency
group on a new or existing volume that is a member of the consistency
group. LUNs are considered members of a consistency group if they are
located on a volume that is a member of the consistency group.
```

```
|name
```

```
|string
```

```
a|Name of the consistency group. The consistency group name must be unique
within an SVM.
```

```
If not provided and the consistency group contains only one volume, the
name will be generated based on the volume name. If the consistency group
contains more than one volume, the name is required.
```

```
|namespaces
```

|array[link:#namespaces[namespaces]]

a|An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol.

In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.

An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.

- * maxItems: 16
- * minItems: 0
- * uniqueItems: 1
- * Introduced in: 9.10
- * x-ntap-modifyOnly: true

|parent_consistency_group

|link:#parent_consistency_group[parent_consistency_group]

a|The parent consistency group.

|provisioning_options

|link:#provisioning_options[provisioning_options]

a|Options that are applied to the operation.

|qos

|link:#qos[qos]

a|

|restore_to

|link:#restore_to[restore_to]

a|Use to restore a consistency group to a previous Snapshot copy

|snapshot_policy

|link:#snapshot_policy_reference[snapshot_policy_reference]

a|This is a reference to the Snapshot copy policy.

|space

|link:#space[space]

a|Space information for the consistency group.

|svm

|link:#svm[svm]

a|The Storage Virtual Machine (SVM) in which the consistency group is located.

|tiering

|link:#tiering[tiering]

a|The tiering placement and policy definitions for volumes in this consistency group.

|uuid

|string

a|The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created.

* example: 1cd8a442-86d1-11e0-ae1c-123478563412

* Introduced in: 9.10

* readOnly: 1

|volumes

|array[link:#volumes[volumes]]

a|A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group.

The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group.

The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit.

|===

```
[#consistency_group]
[.api-collapsible-fifth-title]
consistency_group
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|_links
```

```
|link:#self_link[self_link]
```

```
a|
```

```
|consistency_groups
```

```
|array[link:#consistency_groups[consistency_groups]]
```

```
a|A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A consistency group can only be associated with one direct parent consistency group.
```

```
|luns
```

```
|array[link:#luns[luns]]
```

```
a|The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.
```

```
|name
```

```
|string
```

```
a|Name of the consistency group. The consistency group name must be unique within an SVM.
```

If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.

```
|namespaces
```

```
|array[link:#namespaces[namespaces]]
```

```
a|An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol.
```

```
In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.
```


An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.

```
* maxItems: 16
* minItems: 0
* uniqueItems: 1
* Introduced in: 9.10
* x-ntap-modifyOnly: true
```

```
|parent_consistency_group
|link:#parent_consistency_group[parent_consistency_group]
a|The parent consistency group.
```

```
|provisioning_options
|link:#provisioning_options[provisioning_options]
a|Options that are applied to the operation.
```

```
|qos
|link:#qos[qos]
a|
```

```
|replicated
|boolean
a|Indicates whether or not replication has been enabled on this consistency group.
```

```
|replication_source
|boolean
a|Indicates whether or not this consistency group is the source for replication.
```

|restore_to

|link:#restore_to[restore_to]

a|Use to restore a consistency group to a previous Snapshot copy

|snapshot_policy

|link:#snapshot_policy_reference[snapshot_policy_reference]

a|This is a reference to the Snapshot copy policy.

|space

|link:#space[space]

a|Space information for the consistency group.

|svm

|link:#svm[svm]

a|The Storage Virtual Machine (SVM) in which the consistency group is located.

|tiering

|link:#tiering[tiering]

a|The tiering placement and policy definitions for volumes in this consistency group.

|uuid

|string

a|The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created.

* example: 1cd8a442-86d1-11e0-ae1c-123478563412

* Introduced in: 9.10

* readOnly: 1

|volumes

|array[link:#volumes[volumes]]

a|A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group.

The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group.

The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit.

|===

```
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments
```

```
[cols=3*,options=header]
```

|===

```
|Name
|Type
|Description
```

```
|code
|string
a|Argument code
```

```
|message
|string
a|Message argument
```

|===

```
[#error]
[.api-collapsible-fifth-title]
error
```

```
[cols=3*,options=header]
```

|===

```
|Name
|Type
|Description
```

```
|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments
```

```
|code
|string
```

```

a|Error code

|message
|string
a|Error message

|target
|string
a|The target parameter that caused the error.

|===

//end collapsible .Definitions block
====

:leveloffset: -1

= Manage application consistency group Snapshot copies

:leveloffset: +1

[[IDafd775b4f3fa013b94be672a068cf99a]]
= Application consistency-groups consistency_group.uuid snapshots endpoint
overview

== Overview

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

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

```

ensure correct interaction between host applications and ONTAP.

=== On-Demand Snapshot Copies

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

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

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

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

=== Restoring to a Previous Snapshot Copy

A Snapshot copy restores to a parent consistency group from an existing parent consistency group's Snapshot copy. A Snapshot copy restores to any of the children's consistency groups within it from an existing children's consistency group. Granular Snapshot copies are supported. This is performed by a PATCH operation on the specific consistency group for the restore. An example is shown in `xref:{relative_path}patch-application-consistency-groups-.html[PATCH /application/consistency-groups/{uid}]` .

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

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

== Consistency group Snapshot APIs

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

– GET `/api/application/consistency-groups/snapshots`

```
&ndash; POST      /api/application/consistency-groups/snapshots

&ndash; GET      /api/application/consistency-groups/snapshots/{uuid}

&ndash; DELETE    /api/application/consistency-groups/snapshots/{uuid}
```

== Examples

=== Required properties

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

=== Retrieving the list of existing Snapshot copies for a consistency group

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

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

Response:

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

```
],
"num_records": 2,
"_links": {
  "self": {
    "href": "/api/application/consistency-groups/a8d0626a-17a0-11eb-b141-005056acd498/snapshots"
  }
}
}
}
-----
```

=== Retrieves details of a specific Snapshot copy for a consistency group

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

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

Response:

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

```
"_links": {
  "self": {
    "href": "/api/application/consistency-groups/ddabc6a5-4196-11ec-8674-005056accf3f/snapshots/a175c021-4199-11ec-8674-005056accf3f"
  }
}
}
```

=== Creating a crash-consistent Snapshot copy of a consistency group

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

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

Response:

```
{
}
```

=== Creating a app-consistent Snapshot copy of a consistency group

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

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

Response:

```
{
}
```

=== Deleting a Snapshot copy from a consistency group

Deletes an existing Snapshot copy from a consistency group.


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

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

```
{
}
```

```
-----
```

```
[[ID56913292e8077fde42597b2c2300bd0c]]
= Retrieve consistency group Snapshot copies
```

```
[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/application/consistency-
groups/{consistency_group.uuid}/snapshots`#
```

```
*Introduced In:* 9.10
```

Retrieves Snapshot copies for a consistency group.

== Expensive properties

There is an added 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 [xref:{relative_path}getting_started_with_the_ontap_rest_api.html#Requesting_specific_fields](#)[DOC Requesting specific fields] to learn more.

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

== Parameters

```
[cols=5*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|In
```

```
|Required
```

|Description

|consistency_group.uuid

|string

|path

|True

a|The unique identifier of the consistency group to retrieve.

|comment

|string

|query

|False

a|Filter by comment

|missing_volumes.name

|string

|query

|False

a|Filter by missing_volumes.name

|missing_volumes.uuid

|string

|query

|False

a|Filter by missing_volumes.uuid

|snapmirror_label

|string

|query

|False

a|Filter by snapmirror_label

|name

|string

|query

|False

a|Filter by name

|uuid

|string

|query

```
|False  
a|Filter by uuid
```

```
|create_time  
|string  
|query  
|False  
a|Filter by create_time
```

```
|consistency_group.name  
|string  
|query  
|False  
a|Filter by consistency_group.name
```

```
|svm.uuid  
|string  
|query  
|False  
a|Filter by svm.uuid
```

```
|svm.name  
|string  
|query  
|False  
a|Filter by svm.name
```

```
|consistency_type  
|string  
|query  
|False  
a|Filter by consistency_type
```

```
|is_partial  
|boolean  
|query  
|False  
a|Filter by is_partial
```

```
|fields
```

```
|array[string]
|query
|False
a|Specify the fields to return.

|max_records
|integer
|query
|False
a|Limit the number of records returned.

|return_records
|boolean
|query
|False
a|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
a|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
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#collection_links[collection_links]
a|

|num_records
|integer
a|Number of records.

|records
|array[link:#records[records]]
a|

|===

.Example response
[%collapsible%closed]
=====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    },
  "comment": "My Snapshot copy comment",
  "consistency_group": {
    "_links": {
```

```

    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "my_consistency_group",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"consistency_type": "crash",
"create_time": "2020-10-25T11:20:00Z",
"is_partial": "",
"missing_volumes": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "volume1",
  "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
},
"snapmirror_label": "sm_label",
"svm": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "svm1",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
}
}
====

== Error

```

Status: Default, Error

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|error

```

```

|link:#error[error]
a|

|===

.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===

```

```
[#collection_links]
[.api-collapsible-fifth-title]
collection_links
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|next
|link:#href[href]
a|
```

```
|self
|link:#href[href]
a|
```

```
|===
```

```
[#self_link]
[.api-collapsible-fifth-title]
self_link
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|self
|link:#href[href]
a|
```

```
|===
```

```
[#consistency_group]
[.api-collapsible-fifth-title]
consistency_group
```

The consistency group of the Snapshot copy.

```
[cols=3*,options=header]
|===
```



```

|Name
|Type
|Description

|_links
|link:#self_link[self_link]
a|

|name
|string
a|The name of the consistency group.

|uuid
|string
a|The unique identifier of the consistency group.

|===

[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===

[#volume_reference]
[.api-collapsible-fifth-title]
volume_reference

[cols=3*,options=header]
|===
|Name
|Type
|Description

```

```
|_links
|link:#_links[_links]
a|
```

```
|name
|string
a|The name of the volume.
```

```
|uuid
|string
a|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
```

```
|===
```

```
[#svm_reference]
[.api-collapsible-fifth-title]
svm_reference
```

SVM, applies only to SVM-scoped objects.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|_links
|link:#_links[_links]
a|
```

```
|name
|string
a|The name of the SVM.
```

```
|uuid
|string
```

a|The unique identifier of the SVM.

|===

[#records]

[.api-collapsible-fifth-title]

records

[cols=3*,options=header]

|===

|Name

|Type

|Description

|_links

|link:#self_link[self_link]

a|

|comment

|string

a|Comment for the Snapshot copy.

|consistency_group

|link:#consistency_group[consistency_group]

a|The consistency group of the Snapshot copy.

|consistency_type

|string

a|Consistency type. This is for categorization purposes only. A Snapshot copy should not be set to 'application consistent' unless the host application is quiesced for the Snapshot copy. Valid in POST.

|create_time

|string

a|Time the snapshot copy was created

|is_partial

|boolean

a|Indicates whether the Snapshot copy taken is partial or not.

```

|missing_volumes
|array[link:#volume_reference[volume_reference]]
a|List of volumes which are not in the Snapshot copy.

|name
|string
a|Name of the Snapshot copy.

|snapmirror_label
|string
a|Snapmirror Label for the Snapshot copy.

|svm
|link:#svm_reference[svm_reference]
a|SVM, applies only to SVM-scoped objects.

|uuid
|string
a|The unique identifier of the Snapshot copy. The UUID is generated
by ONTAP when the Snapshot copy is created.

* example: 1cd8a442-86d1-11e0-ae1c-123478563412
* Introduced in: 9.6
* readOnly: 1

|===

[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code

```

```

|message
|string
a|Message argument

|===

[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments

|code
|string
a|Error code

|message
|string
a|Error message

|target
|string
a|The target parameter that caused the error.

|===

//end collapsible .Definitions block
=====

```

```
[[ID82efbba63a6fbb97003ab370d7c76a35]]
```

```
= Create a consistency group Snapshot copy
```

```
[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-  
block]#`/application/consistency-  
groups/{consistency_group.uuid}/snapshots`#
```

```
*Introduced In:* 9.10
```

```
Creates a Snapshot copy of an existing consistency group.
```

```
== Required properties
```

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

```
== Parameters
```

```
[cols=5*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|In
```

```
|Required
```

```
|Description
```

```
|consistency_group.uuid
```

```
|string
```

```
|path
```

```
|True
```

```
a|The unique identifier of the consistency group to retrieve.
```

```
|action
```

```
|string
```

```
|query
```

```
|False
```

```
a|Initiates the Snapshot copy create operation. The start of the Snapshot  
copy operation can optionally use a timeout value specified by  
"action_timeout". The Snapshot copy is committed by calling PATCH on the  
Snapshot copy href link with action specified as "commit".
```

```
* Introduced in: 9.11
```

```
* enum: ["start"]
```

```
|action_timeout
|integer
|query
|False
```

a|Duration to complete the 2-phase Snapshot copy operation. This also specifies the maximum duration that the write-fence remains in effect on the volumes associated with this consistency group. Default is 7 seconds with a valid range of 1 to 90 seconds.

* Introduced in: 9.11

```
|return_timeout
|integer
|query
|False
```

a|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

```
|return_records
|boolean
|query
|False
```

a|The default is false. If set to true, the records are returned.

* Default value:

```
|===
```

== Request Body

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```

|Type
|Description

|_links
|link:#self_link[self_link]
a|

|comment
|string
a|Comment for the Snapshot copy.

|consistency_group
|link:#consistency_group[consistency_group]
a|The consistency group of the Snapshot copy.

|consistency_type
|string
a|Consistency type. This is for categorization purposes only. A Snapshot
copy should not be set to 'application consistent' unless the host
application is quiesced for the Snapshot copy. Valid in POST.

|create_time
|string
a|Time the snapshot copy was created

|is_partial
|boolean
a|Indicates whether the Snapshot copy taken is partial or not.

|missing_volumes
|array[link:#volume_reference[volume_reference]]
a|List of volumes which are not in the Snapshot copy.

|name
|string
a|Name of the Snapshot copy.

|snapmirror_label
|string
a|Snapmirror Label for the Snapshot copy.

```



```
|svm
|link:#svm_reference[svm_reference]
a|SVM, applies only to SVM-scoped objects.
```

```
|uuid
|string
a|The unique identifier of the Snapshot copy. The UUID is generated
by ONTAP when the Snapshot copy is created.
```

```
* example: 1cd8a442-86d1-11e0-ae1c-123478563412
* Introduced in: 9.10
* readOnly: 1
```

```
|===
```

```
.Example request
```

```
[%collapsible%closed]
```

```
=====
```

```
[source,json,subs=+macros]
```

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "comment": "My Snapshot copy comment",
  "consistency_group": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "my_consistency_group",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "consistency_type": "crash",
  "create_time": "2020-10-25T11:20:00Z",
  "is_partial": "",
  "missing_volumes": {
    "_links": {
      "self": {
```

```
    "href": "/api/resourcelink"
  }
},
"name": "volumel",
"uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
},
"snapmirror_label": "sm_label",
"svm": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "svm1",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
}
====
```

== Response

Status: 202, Accepted

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|job
|link:#job_link[job_link]
a|

|===

.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "job": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uuid": "string"
  }
}
====

== Response

```

Status: 201, Created

```
== Error
```

Status: Default, Error

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|error

```

```

|link:#error[error]
a|

|===

.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===

```

```

[#self_link]
[.api-collapsible-fifth-title]
self_link

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===

[#consistency_group]
[.api-collapsible-fifth-title]
consistency_group

The consistency group of the Snapshot copy.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#self_link[self_link]
a|

|name
|string
a|The name of the consistency group.

|uuid
|string
a|The unique identifier of the consistency group.

|===

```

```

[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===

[#volume_reference]
[.api-collapsible-fifth-title]
volume_reference

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the volume.

|uuid
|string
a|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

|===

```

```
[#svm_reference]
[.api-collapsible-fifth-title]
svm_reference
```

SVM, applies only to SVM-scoped objects.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|_links
```

```
|link:#_links[_links]
```

```
a|
```

```
|name
```

```
|string
```

```
a|The name of the SVM.
```

```
|uuid
```

```
|string
```

```
a|The unique identifier of the SVM.
```

```
|===
```

```
[#consistency_group_snapshot]
```

```
[.api-collapsible-fifth-title]
```

```
consistency_group_snapshot
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|_links
```

```
|link:#self_link[self_link]
```

```
a|
```

```
|comment
```

```
|string
a|Comment for the Snapshot copy.

|consistency_group
|link:#consistency_group[consistency_group]
a|The consistency group of the Snapshot copy.

|consistency_type
|string
a|Consistency type. This is for categorization purposes only. A Snapshot
copy should not be set to 'application consistent' unless the host
application is quiesced for the Snapshot copy. Valid in POST.

|create_time
|string
a|Time the snapshot copy was created

|is_partial
|boolean
a|Indicates whether the Snapshot copy taken is partial or not.

|missing_volumes
|array[link:#volume_reference[volume_reference]]
a|List of volumes which are not in the Snapshot copy.

|name
|string
a|Name of the Snapshot copy.

|snapmirror_label
|string
a|Snapmirror Label for the Snapshot copy.

|svm
|link:#svm_reference[svm_reference]
a|SVM, applies only to SVM-scoped objects.

|uuid
```



```

|string
a|The unique identifier of the Snapshot copy. The UUID is generated
by ONTAP when the Snapshot copy is created.

* example: 1cd8a442-86d1-11e0-ae1c-123478563412
* Introduced in: 9.10
* readOnly: 1

|===

[#job_link]
[.api-collapsible-fifth-title]
job_link

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

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

|===

[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string

```

```

a|Argument code

|message
|string
a|Message argument

|===

[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments

|code
|string
a|Error code

|message
|string
a|Error message

|target
|string
a|The target parameter that caused the error.

|===

//end collapsible .Definitions block
=====

```

```
[[ID8b0b849e4a8fc5aaa722b66908a15691]]
```

```
= Delete a consistency group Snapshot copy
```

```
[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-  
block]#`/application/consistency-  
groups/{consistency_group.uuid}/snapshots/{uuid}`#
```

```
*Introduced In:* 9.10
```

```
Deletes a Snapshot copy of a consistency group.
```

```
== Examples
```

```
== Parameters
```

```
[cols=5*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|In
```

```
|Required
```

```
|Description
```

```
|consistency_group.uuid
```

```
|string
```

```
|path
```

```
|True
```

```
a|The unique identifier of the Snapshot copy of the consistency group to  
delete.
```

```
|uuid
```

```
|string
```

```
|path
```

```
|True
```

```
a|Snapshot copy UUID
```

```
|return_timeout
```

```
|integer
```

```
|query
```

```
|False
```

```
a|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

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===

.Example error
[%collapsible%closed]
=====
[source,json,subs=+macros]
{
  "error": {
```

```

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

```

== Definitions

```

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====

```

```

[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

```

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

```

```

|code
|string
a|Argument code

```

```

|message
|string
a|Message argument

```

```

|===

```

```

[#error]
[.api-collapsible-fifth-title]
error

```

```

[cols=3*,options=header]
|===

```

```

|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments

|code
|string
a|Error code

|message
|string
a|Error message

|target
|string
a|The target parameter that caused the error.

|===

//end collapsible .Definitions block
=====

```

```

[[ID4c7dd7a48119dc388127bc748f8d09c2]]
= Retrieve a consistency group Snapshot copy

```

```

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/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 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 [xref:{relative_path}getting_started_with_the_ontap_rest_api.html#Requesting_specific_fields\[DOC Requesting specific fields\]](#) to learn more.

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

== Parameters

[cols=5*,options=header]
|===

Name	Type	In	Required	Description
------	------	----	----------	-------------

consistency_group.uuid	string	path	True	a The unique identifier of the consistency group to retrieve.
------------------------	--------	------	------	---

uuid	string	path	True	a The unique identifier of the Snapshot copy of the consistency group to retrieve.
------	--------	------	------	--

comment	string	query	False	a Filter by comment
---------	--------	-------	-------	---------------------

missing_volumes.name	string	query	False	a Filter by missing_volumes.name
----------------------	--------	-------	-------	----------------------------------

```
|missing_volumes.uuid  
|string  
|query  
|False  
a|Filter by missing_volumes.uuid
```

```
|snapmirror_label  
|string  
|query  
|False  
a|Filter by snapmirror_label
```

```
|name  
|string  
|query  
|False  
a|Filter by name
```

```
|create_time  
|string  
|query  
|False  
a|Filter by create_time
```

```
|consistency_group.name  
|string  
|query  
|False  
a|Filter by consistency_group.name
```

```
|svm.uuid  
|string  
|query  
|False  
a|Filter by svm.uuid
```

```
|svm.name  
|string  
|query
```



```
|False
a|Filter by svm.name

|consistency_type
|string
|query
|False
a|Filter by consistency_type

|is_partial
|boolean
|query
|False
a|Filter by is_partial

|fields
|array[string]
|query
|False
a|Specify the fields to return.

|max_records
|integer
|query
|False
a|Limit the number of records returned.

|return_records
|boolean
|query
|False
a|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
a|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
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.
```

```
|===
```

```
== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|_links
|link:#self_link[self_link]
a|
```

```
|comment
|string
a|Comment for the Snapshot copy.
```

```
|consistency_group
|link:#consistency_group[consistency_group]
a|The consistency group of the Snapshot copy.
```

```
|consistency_type
|string
a|Consistency type. This is for categorization purposes only. A Snapshot
copy should not be set to 'application consistent' unless the host
```

application is quiesced for the Snapshot copy. Valid in POST.

|create_time

|string

a|Time the snapshot copy was created

|is_partial

|boolean

a|Indicates whether the Snapshot copy taken is partial or not.

|missing_volumes

|array[link:#volume_reference[volume_reference]]

a|List of volumes which are not in the Snapshot copy.

|name

|string

a|Name of the Snapshot copy.

|snapmirror_label

|string

a|Snapmirror Label for the Snapshot copy.

|svm

|link:#svm_reference[svm_reference]

a|SVM, applies only to SVM-scoped objects.

|uuid

|string

a|The unique identifier of the Snapshot copy. The UUID is generated by ONTAP when the Snapshot copy is created.

* example: 1cd8a442-86d1-11e0-ae1c-123478563412

* Introduced in: 9.10

* readOnly: 1

|===

.Example response

```

[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "comment": "My Snapshot copy comment",
  "consistency_group": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "my_consistency_group",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "consistency_type": "crash",
  "create_time": "2020-10-25T11:20:00Z",
  "is_partial": "",
  "missing_volumes": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  },
  "snapmirror_label": "sm_label",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
}
====

== Error

```

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===

.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name

```

```

|Type
|Description

|href
|string
a|

|===

[#self_link]
[.api-collapsible-fifth-title]
self_link

```

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

```

```

|===

```

```

[#consistency_group]
[.api-collapsible-fifth-title]
consistency_group

```

The consistency group of the Snapshot copy.

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#self_link[self_link]
a|

|name
|string
a|The name of the consistency group.

```

```
|uuid
|string
a|The unique identifier of the consistency group.
```

```
|===
```

```
[#_links]
[.api-collapsible-fifth-title]
_links
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|self
|link:#href[href]
a|
```

```
|===
```

```
[#volume_reference]
[.api-collapsible-fifth-title]
volume_reference
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|_links
|link:#_links[_links]
a|
```

```
|name
|string
a|The name of the volume.
```

```
|uuid
```

```
|string
a|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
```

```
|===
```

```
[#svm_reference]
[.api-collapsible-fifth-title]
svm_reference
```

SVM, applies only to SVM-scoped objects.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|_links
|link:#_links[_links]
a|
```

```
|name
|string
a|The name of the SVM.
```

```
|uuid
|string
a|The unique identifier of the SVM.
```

```
|===
```

```
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments
```

```
[cols=3*,options=header]
```



```
|===  
|Name  
|Type  
|Description  
  
|code  
|string  
a|Argument code
```

```
|message  
|string  
a|Message argument
```

```
|===
```

```
[#error]  
[.api-collapsible-fifth-title]  
error
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name  
|Type  
|Description
```

```
|arguments  
|array[link:#error_arguments[error_arguments]]  
a|Message arguments
```

```
|code  
|string  
a|Error code
```

```
|message  
|string  
a|Error message
```

```
|target  
|string  
a|The target parameter that caused the error.
```

```

|===

//end collapsible .Definitions block
=====

:leveloffset: -1

[[ID05123c2bfcbaae7743f783eed8e3b73d]]
= Retrieve application templates

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/application/templates`#

*Introduced In:* 9.6

Retrieves application templates.

== Query examples

The most useful queries on this API allows searches by name or protocol
access. The following query returns all templates that are used to
provision an Oracle application.

----
GET /application/templates?name=ora*
----

Similarly, the following query returns all templates that support SAN
access.

----
GET /application/templates?protocol=san
----

== Learn more

* xref:{relative_path}application_overview.html[DOC /application]

== Parameters

[cols=5*,options=header]

```

```
|===  
  
|Name  
|Type  
|In  
|Required  
|Description  
  
|name  
|string  
|query  
|False  
a|Filter by name  
  
|protocol  
|string  
|query  
|False  
a|Filter by protocol  
  
|description  
|string  
|query  
|False  
a|Filter by description  
  
|missing_prerequisites  
|string  
|query  
|False  
a|Filter by missing_prerequisites  
  
|fields  
|array[string]  
|query  
|False  
a|Specify the fields to return.  
  
|max_records  
|integer  
|query  
|False
```

a|Limit the number of records returned.

|return_timeout

|integer

|query

|False

a|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

|return_records

|boolean

|query

|False

a|The default is true for GET calls. When set to false, only the number of records is returned.

* Default value: 1

|order_by

|array[string]

|query

|False

a|Order results by specified fields and optional [asc|desc] direction. Default direction is 'asc' for ascending.

|===

== Response

Status: 200, Ok

[cols=3*,options=header]

|===

|Name

|Type

|Description

```

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of records

|records
|array[link:#application_template[application_template]]
a|

|===

```

.Example response

[%collapsible%closed]

====

[source,json,subs=+macros]

```

{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "description": "string",
    "maxdata_on_san": {
      "app_type": "mongodb",
      "application_components": {
      },
      "metadata": {
      },
      "new_igroups": {
      },
      "ocsm_url": "string",
      "os_type": "aix"
    }
  }
}

```

```

},
"missing_prerequisites": "string",
"name": "string",
"nas": {
  "application_components": {
  },
  "cifs_access": {
    "access": "change"
  },
  "exclude_aggregates": {
  },
  "nfs_access": {
    "access": "none"
  },
  "protection_type": {
    "local_rpo": "hourly",
    "remote_rpo": "none"
  }
},
"nvme": {
  "components": {
  },
  "os_type": "aix",
  "rpo": {
    "local": {
      "name": "hourly"
    }
  }
},
"protocol": "nas",
"s3_bucket": {
  "application_components": {
  }
},
"san": {
  "application_components": {
  },
  "exclude_aggregates": {
  },
  "new_igroups": {
  },
  "os_type": "aix",
  "protection_type": {
    "local_rpo": "hourly",
    "remote_rpo": "none"
  }
}

```

```

    }
  }
}
====

== Error

```

Status: Default, Error

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===

.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====

```

```

[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===

[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===

[#self_link]
[.api-collapsible-fifth-title]
self_link

[cols=3*,options=header]
|===
|Name
|Type
|Description

```



```

|self
|link:#href[href]
a|

|===

[#metadata]
[.api-collapsible-fifth-title]
metadata

[cols=3*,options=header]
|===
|Name
|Type
|Description

|key
|string
a|Key to look up metadata associated with an application component.

|value
|string
a|Value associated with the key.

|===

[#protection_type]
[.api-collapsible-fifth-title]
protection_type

[cols=3*,options=header]
|===
|Name
|Type
|Description

|local_rpo
|string
a|The local rpo of the application component.

|remote_rpo

```

```

|string
a|The remote rpo of the application component.

|===

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The storage service of the application component.

|===

[#object_stores]
[.api-collapsible-fifth-title]
object_stores

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the object-store to use.

|===

[#maxdata_on_san_application_components_tiering]
[.api-collapsible-fifth-title]
maxdata_on_san_application_components_tiering

```

tiering

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|control
```

```
|string
```

```
a|Storage tiering placement rules for the container(s)
```

```
|object_stores
```

```
|array[link:#object_stores[object_stores]]
```

```
a|
```

```
|policy
```

```
|string
```

```
a|The storage tiering type of the application component.
```

```
|===
```

```
[#maxdata_on_san_application_components]
```

```
[.api-collapsible-fifth-title]
```

```
maxdata_on_san_application_components
```

The list of application components to be created.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|file_system
```

```
|string
```

```
a|Defines the type of file system that will be installed on this application component.
```

```
|host_management_url
```

```
|string
```

a|The host management URL for this application component.

|host_name

|string

a|FQDN of the L2 host that contains the hot tier of this application component.

|igroup_name

|string

a|The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.

|lun_count

|integer

a|The number of LUNs in the application component.

|metadata

|array[link:#metadata[metadata]]

a|

|name

|string

a|The name of the application component.

|protection_type

|link:#protection_type[protection_type]

a|

|storage_service

|link:#storage_service[storage_service]

a|

|tiering

|link:#maxdata_on_san_application_components_tiering[maxdata_on_san_application_components_tiering]

a|tiering

|total_size

|integer

a|The total size of the application component, split across the member LUNs. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|===

[#metadata]
[.api-collapsible-fifth-title]
metadata

[cols=3*,options=header]

|===

|Name
|Type
|Description

|key

|string

a|Key to look up metadata associated with an application.

|value

|string

a|Value associated with the key.

|===

[#igroups]
[.api-collapsible-fifth-title]
igroups

[cols=3*,options=header]

|===

|Name
|Type
|Description

|name

|string

a|The name of an igroup to nest within a parent igroup. Mutually exclusive with initiators and initiator_objects.

|uuid

```
|string
a|The UUID of an igroup to nest within a parent igroup Usage: <UUID>
```

```
|===
```

```
[#initiator_objects]
[.api-collapsible-fifth-title]
initiator_objects
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|comment
```

```
|string
```

```
a|A comment available for use by the administrator.
```

```
|name
```

```
|string
```

```
a|The WWPN, IQN, or Alias of the initiator. Mutually exclusive with nested
igroups and the initiators array.
```

```
|===
```

```
[#maxdata_on_san_new_igroups]
[.api-collapsible-fifth-title]
maxdata_on_san_new_igroups
```

```
The list of initiator groups to create.
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|comment
```

```
|string
```

```
a|A comment available for use by the administrator.
```

```

|igroups
|array[link:#igroups[igroups]]
a|

|initiator_objects
|array[link:#initiator_objects[initiator_objects]]
a|

|initiators
|array[string]
a|

|name
|string
a|The name of the new initiator group.

|os_type
|string
a|The name of the host OS accessing the application. The default value is
the host OS that is running the application.

|protocol
|string
a|The protocol of the new initiator group.

|===

[#maxdata_on_san]
[.api-collapsible-fifth-title]
maxdata_on_san

MAX Data application using SAN.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|app_type

```

```

|string
a|Type of the application that is being deployed on the L2.

|application_components
|array[link:#maxdata_on_san_application_components[maxdata_on_san_applicat
ion_components]]
a|The list of application components to be created.

|metadata
|array[link:#metadata[metadata]]
a|

|new_igroups
|array[link:#maxdata_on_san_new_igroups[maxdata_on_san_new_igroups]]
a|The list of initiator groups to create.

|ocsm_url
|string
a|The OnCommand System Manager URL for this application.

|os_type
|string
a|The name of the host OS running the application.

|===

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The storage service of the database.

```



```

|===

[#dataset]
[.api-collapsible-fifth-title]
dataset

[cols=3*,options=header]
|===
|Name
|Type
|Description

|element_count
|integer
a|The number of storage elements (LUNs for SAN) of the database to
maintain. Must be an even number between 2 and 16. Odd numbers will be
rounded up to the next even number within range.

|replication_factor
|integer
a|The number of data bearing members of the replicaset, including 1
primary and at least 1 secondary.

|size
|integer
a|The size of the database. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#mongo_db_on_san_new_igroups]
[.api-collapsible-fifth-title]
mongo_db_on_san_new_igroups

The list of initiator groups to create.

[cols=3*,options=header]
|===

```

```

|Name
|Type
|Description

|comment
|string
a|A comment available for use by the administrator.

|igroups
|array[link:#igroups[igroups]]
a|

|initiator_objects
|array[link:#initiator_objects[initiator_objects]]
a|

|initiators
|array[string]
a|

|name
|string
a|The name of the new initiator group.

|os_type
|string
a|The name of the host OS accessing the application. The default value is
the host OS that is running the application.

|protocol
|string
a|The protocol of the new initiator group.

|===

[#protection_type]
[.api-collapsible-fifth-title]
protection_type

[cols=3*,options=header]
|===
|Name

```

```

|Type
|Description

|local_rpo
|string
a|The local RPO of the application.

|remote_rpo
|string
a|The remote RPO of the application.

```

```

|===

```

```

[#secondary_igroups]
[.api-collapsible-fifth-title]
secondary_igroups

```

```

[cols=3*,options=header]

```

```

|===

```

```

|Name
|Type
|Description

```

```

|name
|string
a|The name of the initiator group for each secondary.

```

```

|===

```

```

[#mongo_db_on_san]
[.api-collapsible-fifth-title]
mongo_db_on_san

```

MongoDB using SAN.

```

[cols=3*,options=header]

```

```

|===

```

```

|Name
|Type
|Description

```

```

|dataset
|link:#dataset[dataset]
a|

|new_igroups
|array[link:#mongo_db_on_san_new_igroups[mongo_db_on_san_new_igroups]]
a|The list of initiator groups to create.

|os_type
|string
a|The name of the host OS running the application.

|primary_igroup_name
|string
a|The initiator group for the primary.

|protection_type
|link:#protection_type[protection_type]
a|

|secondary_igroups
|array[link:#secondary_igroups[secondary_igroups]]
a|

|===

[#export_policy]
[.api-collapsible-fifth-title]
export_policy

[cols=3*,options=header]
|===
|Name
|Type
|Description

|id
|integer
a|The ID of an existing NFS export policy.

|name
|string

```

a|The name of an existing NFS export policy.

|===

[#component]

[.api-collapsible-fifth-title]

component

[cols=3*,options=header]

|===

|Name

|Type

|Description

|name

|string

a|Name of the source component.

|===

[#svm]

[.api-collapsible-fifth-title]

svm

[cols=3*,options=header]

|===

|Name

|Type

|Description

|name

|string

a|Name of the source SVM.

|===

[#origin]

[.api-collapsible-fifth-title]

origin

[cols=3*,options=header]

```

|===
|Name
|Type
|Description

|component
|link:#component[component]
a|

|svm
|link:#svm[svm]
a|

|===

[#flexcache]
[.api-collapsible-fifth-title]
flexcache

[cols=3*,options=header]
|===
|Name
|Type
|Description

|dr_cache
|boolean
a|Dr-cache is a FlexCache volume create time option that has the same
flexgroup-msid as that of the origin of a FlexCache volume. By default,
dr-cache is disabled. The flexgroup-msid of the FlexCache volume does not
need to be same as that of the origin of a FlexCache volume.

|origin
|link:#origin[origin]
a|

|===

[#policy]
[.api-collapsible-fifth-title]
policy

[cols=3*,options=header]
|===

```

```

|Name
|Type
|Description

|name
|string
a|The name of an existing QoS policy.

|uuid
|string
a|The UUID of an existing QoS policy. Usage: <UUID>

```

```
|===
```

```

[#qos]
[.api-collapsible-fifth-title]
qos

```

```
[cols=3*,options=header]
```

```
|===
```

```

|Name
|Type
|Description

```

```

|policy
|link:#policy[policy]
a|

```

```
|===
```

```

[#nas_application_components_tiering]
[.api-collapsible-fifth-title]
nas_application_components_tiering

```

```
application-components.tiering
```

```
[cols=3*,options=header]
```

```
|===
```

```

|Name
|Type
|Description

```

```

|control
|string
a|Storage tiering placement rules for the container(s)

|object_stores
|array[link:#object_stores[object_stores]]
a|

|policy
|string
a|The storage tiering type of the application component.

|===

[#application_components]
[.api-collapsible-fifth-title]
application_components

[cols=3*,options=header]
|===
|Name
|Type
|Description

|export_policy
|link:#export_policy[export_policy]
a|

|flexcache
|link:#flexcache[flexcache]
a|

|name
|string
a|The name of the application component.

|qos
|link:#qos[qos]
a|

|scale_out
|boolean
a|Denotes a Flexgroup.

```



```
|share_count
|integer
a|The number of shares in the application component.
```

```
|storage_service
|link:#storage_service[storage_service]
a|
```

```
|tiering
|link:#nas_application_components_tiering[nas_application_components_tiering]
a|application-components.tiering
```

```
|total_size
|integer
a|The total size of the application component, split across the member shares. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}
```

```
|===
```

```
[#app_cifs_access]
[.api-collapsible-fifth-title]
app_cifs_access
```

The list of CIFS access controls. You must provide either 'user_or_group' or 'access' to enable CIFS access.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|access
|string
a|The CIFS access granted to the user or group.
```

```
|user_or_group
|string
```

a|The name of the CIFS user or group that will be granted access.

|===

```
[#exclude_aggregates]
[.api-collapsible-fifth-title]
exclude_aggregates
```

```
[cols=3*,options=header]
```

|===

```
|Name
|Type
|Description
```

```
|name
|string
```

a|The name of the aggregate to exclude. Usage: <aggregate name>

```
|uuid
|string
```

a|The ID of the aggregate to exclude. Usage: <UUID>

|===

```
[#app_nfs_access]
[.api-collapsible-fifth-title]
app_nfs_access
```

The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.

```
[cols=3*,options=header]
```

|===

```
|Name
|Type
|Description
```

```
|access
|string
```

a|The NFS access granted.

```
|host
|string
a|The name of the NFS entity granted access.
```

```
|===
```

```
[#protection_type]
[.api-collapsible-fifth-title]
protection_type
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|local_policy
|string
a|The Snapshot copy policy to apply to each volume in the smart container.
This property is only supported for smart containers. Usage: <snapshot
policy>
```

```
|local_rpo
|string
a|The local RPO of the application.
```

```
|remote_rpo
|string
a|The remote RPO of the application.
```

```
|===
```

```
[#nas]
[.api-collapsible-fifth-title]
nas
```

A generic NAS application.

```
[cols=3*,options=header]
```

```

|===
|Name
|Type
|Description

|application_components
|array[link:#application_components[application_components]]
a|

|cifs_access
|array[link:#app_cifs_access[app_cifs_access]]
a|The list of CIFS access controls. You must provide either
'user_or_group' or 'access' to enable CIFS access.

|cifs_share_name
|string
a|The name of the CIFS share. Usage: <Share>

|exclude_aggregates
|array[link:#exclude_aggregates[exclude_aggregates]]
a|

|nfs_access
|array[link:#app_nfs_access[app_nfs_access]]
a|The list of NFS access controls. You must provide either 'host' or
'access' to enable NFS access.

|protection_type
|link:#protection_type[protection_type]
a|

|===

[#performance]
[.api-collapsible-fifth-title]
performance

[cols=3*,options=header]
|===
|Name
|Type
|Description

```

```

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#hosts]
[.api-collapsible-fifth-title]
hosts

[cols=3*,options=header]
|===
|Name
|Type
|Description

|nqn
|string
a|The host NQN.

|===

[#zapp_nvme_components_subsystem]
[.api-collapsible-fifth-title]
zapp_nvme_components_subsystem

components.subsystem

[cols=3*,options=header]
|===
|Name
|Type
|Description

|hosts
|array[link:#hosts[hosts]]
a|

|name
|string
a|The name of the subsystem accessing the component. If neither the name
nor the UUID is provided, the name defaults to <application-
name>_<component-name>, whether that subsystem already exists or not.

```

```

|os_type
|string
a|The name of the host OS accessing the component. The default value is
the host OS that is running the application.

|uuid
|string
a|The UUID of an existing subsystem to be granted access to the component.
Usage: <UUID>

|===

[#zapp_nvme_components_tiering]
[.api-collapsible-fifth-title]
zapp_nvme_components_tiering

application-components.tiering

[cols=3*,options=header]
|===
|Name
|Type
|Description

|control
|string
a|Storage tiering placement rules for the container(s)

|object_stores
|array[link:#object_stores[object_stores]]
a|

|policy
|string
a|The storage tiering type of the application component.

|===

```

```

[#components]
[.api-collapsible-fifth-title]
components

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the application component.

|namespace_count
|integer
a|The number of namespaces in the component.

|os_type
|string
a|The name of the host OS running the application.

|performance
|link:#performance[performance]
a|

|qos
|link:#qos[qos]
a|

|subsystem
|link:#zapp_nvme_components_subsystem[zapp_nvme_components_subsystem]
a|components.subsystem

|tiering
|link:#zapp_nvme_components_tiering[zapp_nvme_components_tiering]
a|application-components.tiering

|total_size
|integer
a|The total size of the component, spread across member namespaces. Usage:
{<integer>[KB\|MB\|GB\|TB\|PB]}

```

```
|===
```

```
[#local]  
[.api-collapsible-fifth-title]  
local
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name  
|Type  
|Description
```

```
|name  
|string  
a|The local RPO of the application.
```

```
|policy  
|string  
a|The Snapshot copy policy to apply to each volume in the smart container.  
This property is only supported for smart containers. Usage: <snapshot  
policy>
```

```
|===
```

```
[#rpo]  
[.api-collapsible-fifth-title]  
rpo
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name  
|Type  
|Description
```

```
|local  
|link:#local[local]  
a|
```

```
|===
```



```

[#zapp_nvme]
[.api-collapsible-fifth-title]
zapp_nvme

An NVME application.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|components
|array[link:#components[components]]
a|

|os_type
|string
a|The name of the host OS running the application.

|rpo
|link:#rpo[rpo]
a|

|===

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The storage service of the archive log.

|===

```

```

[#archive_log]
[.api-collapsible-fifth-title]
archive_log

[cols=3*,options=header]
|===
|Name
|Type
|Description

|size
|integer
a|The size of the archive log. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#db]
[.api-collapsible-fifth-title]
db

[cols=3*,options=header]
|===
|Name
|Type
|Description

|size
|integer
a|The size of the database. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The storage service of the ORACLE_HOME storage volume.
```

```
|===
```

```
[#ora_home]
[.api-collapsible-fifth-title]
ora_home
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|size
|integer
a|The size of the ORACLE_HOME storage volume. Usage:
{<integer>[KB\|MB\|GB\|TB\|PB]}
```

```
|storage_service
|link:#storage_service[storage_service]
a|
```

```
|===
```

```
[#storage_service]
[.api-collapsible-fifth-title]
storage_service
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|name
|string
a|The storage service of the redo log group.
```

```
|===
```

```
[#redo_log]
[.api-collapsible-fifth-title]
redo_log
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|mirrored
```

```
|boolean
```

```
a|Specifies whether the redo log group should be mirrored.
```

```
|size
```

```
|integer
```

```
a|The size of the redo log group. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}
```

```
|storage_service
```

```
|link:#storage_service[storage_service]
```

```
a|
```

```
|===
```

```
[#oracle_on_nfs]
[.api-collapsible-fifth-title]
oracle_on_nfs
```

```
Oracle using NFS.
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
```

```

|Description

|archive_log
|link:#archive_log[archive_log]
a|

|db
|link:#db[db]
a|

|nfs_access
|array[link:#app_nfs_access[app_nfs_access]]
a|The list of NFS access controls. You must provide either 'host' or
'access' to enable NFS access.

|ora_home
|link:#ora_home[ora_home]
a|

|protection_type
|link:#protection_type[protection_type]
a|

|redo_log
|link:#redo_log[redo_log]
a|

|===

[#oracle_on_san_new_igroups]
[.api-collapsible-fifth-title]
oracle_on_san_new_igroups

The list of initiator groups to create.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|comment
|string
a|A comment available for use by the administrator.

```

```
|igroups
|array[link:#igroups[igroups]]
a|
```

```
|initiator_objects
|array[link:#initiator_objects[initiator_objects]]
a|
```

```
|initiators
|array[string]
a|
```

```
|name
|string
a|The name of the new initiator group.
```

```
|os_type
|string
a|The name of the host OS accessing the application. The default value is
the host OS that is running the application.
```

```
|protocol
|string
a|The protocol of the new initiator group.
```

```
|===
```

```
[#oracle_on_san]
[.api-collapsible-fifth-title]
oracle_on_san
```

Oracle using SAN.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|archive_log
```

```

|link:#archive_log[archive_log]
a|

|db
|link:#db[db]
a|

|igroup_name
|string
a|The name of the initiator group through which the contents of this
application will be accessed. Modification of this parameter is a
disruptive operation. All LUNs in the application component will be
unmapped from the current igroup and re-mapped to the new igroup.

|new_igroups
|array[link:#oracle_on_san_new_igroups[oracle_on_san_new_igroups]]
a|The list of initiator groups to create.

|ora_home
|link:#ora_home[ora_home]
a|

|os_type
|string
a|The name of the host OS running the application.

|protection_type
|link:#protection_type[protection_type]
a|

|redo_log
|link:#redo_log[redo_log]
a|

|===

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

[cols=3*,options=header]
|===
|Name

```

```

|Type
|Description

|name
|string
a|The storage service of the Oracle grid binary storage volume.

```

```

|===

```

```

[#grid_binary]
[.api-collapsible-fifth-title]
grid_binary

```

```

[cols=3*,options=header]

```

```

|===

```

```

|Name
|Type
|Description

```

```

|size
|integer
a|The size of the Oracle grid binary storage volume. Usage:
{<integer>[KB\|MB\|GB\|TB\|PB]}

```

```

|storage_service
|link:#storage_service[storage_service]
a|

```

```

|===

```

```

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

```

```

[cols=3*,options=header]

```

```

|===

```

```

|Name
|Type
|Description

```

```

|name
|string
a|The storage service of the Oracle CRS volume.

```



```
|===
```

```
[#oracle_crs]  
[.api-collapsible-fifth-title]  
oracle_crs
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name  
|Type  
|Description
```

```
|copies
```

```
|integer
```

```
a|The number of CRS volumes.
```

```
|size
```

```
|integer
```

```
a|The size of the Oracle CRS/voting storage volume. Usage:
```

```
{<integer>[KB\|MB\|GB\|TB\|PB]}
```

```
|storage_service
```

```
|link:#storage_service[storage_service]
```

```
a|
```

```
|===
```

```
[#oracle_rac_on_nfs]  
[.api-collapsible-fifth-title]  
oracle_rac_on_nfs
```

```
Oracle RAC using NFS.
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name  
|Type  
|Description
```

```
|archive_log
```

```

|link:#archive_log[archive_log]
a|

|db
|link:#db[db]
a|

|grid_binary
|link:#grid_binary[grid_binary]
a|

|nfs_access
|array[link:#app_nfs_access[app_nfs_access]]
a|The list of NFS access controls. You must provide either 'host' or
'access' to enable NFS access.

|ora_home
|link:#ora_home[ora_home]
a|

|oracle_crs
|link:#oracle_crs[oracle_crs]
a|

|protection_type
|link:#protection_type[protection_type]
a|

|redo_log
|link:#redo_log[redo_log]
a|

|===

[#db_sids]
[.api-collapsible-fifth-title]
db_sids

[cols=3*,options=header]
|===
|Name
|Type
|Description

|igroup_name

```

```
|string
a|The name of the initiator group through which the contents of this
application will be accessed. Modification of this parameter is a
disruptive operation. All LUNs in the application component will be
unmapped from the current igroup and re-mapped to the new igroup.
```

```
|===
```

```
[#oracle_rac_on_san_new_igroups]
[.api-collapsible-fifth-title]
oracle_rac_on_san_new_igroups
```

The list of initiator groups to create.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|comment
```

```
|string
```

```
a|A comment available for use by the administrator.
```

```
|igroups
```

```
|array[link:#igroups[igroups]]
```

```
a|
```

```
|initiator_objects
```

```
|array[link:#initiator_objects[initiator_objects]]
```

```
a|
```

```
|initiators
```

```
|array[string]
```

```
a|
```

```
|name
```

```
|string
```

```
a|The name of the new initiator group.
```

```
|os_type
```

```
|string
```

a|The name of the host OS accessing the application. The default value is the host OS that is running the application.

|protocol

|string

a|The protocol of the new initiator group.

|===

[#oracle_rac_on_san]

[.api-collapsible-fifth-title]

oracle_rac_on_san

Oracle RAC using SAN.

[cols=3*,options=header]

|===

|Name

|Type

|Description

|archive_log

|link:#archive_log[archive_log]

a|

|db

|link:#db[db]

a|

|db_sids

|array[link:#db_sids[db_sids]]

a|

|grid_binary

|link:#grid_binary[grid_binary]

a|

|new_igroups

|array[link:#oracle_rac_on_san_new_igroups[oracle_rac_on_san_new_igroups]]

a|The list of initiator groups to create.

|ora_home

```

|link:#ora_home[ora_home]
a|

|oracle_crs
|link:#oracle_crs[oracle_crs]
a|

|os_type
|string
a|The name of the host OS running the application.

|protection_type
|link:#protection_type[protection_type]
a|

|redo_log
|link:#redo_log[redo_log]
a|

|===

[#zapp_s3_bucket_application_components_access_policies_conditions]
[.api-collapsible-fifth-title]
zapp_s3_bucket_application_components_access_policies_conditions

conditions

[cols=3*,options=header]
|===
|Name
|Type
|Description

|delimiters
|array[string]
a|

|max_keys
|array[integer]
a|

|operator
|string
a|Policy Condition Operator.

```

```
|prefixes
|array[string]
a|
```

```
|source_ips
|array[string]
a|
```

```
|usernames
|array[string]
a|
```

```
|===
```

```
[#zapp_s3_bucket_application_components_access_policies]
[.api-collapsible-fifth-title]
zapp_s3_bucket_application_components_access_policies
```

The list of S3 objectstore policies to be created.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|actions
|array[string]
a|
```

```
|conditions
|array[link:#zapp_s3_bucket_application_components_access_policies_conditi
ons[zapp_s3_bucket_application_components_access_policies_conditions]]
a|conditions.
```

```
|effect
|string
a|Allow or Deny Access.
```

```
|principals
|array[string]
```

```

a|

|resources
|array[string]
a|

|sid
|string
a|Statement Identifier Usage: <(size 1..256)>

|===

[#zapp_s3_bucket_application_components]
[.api-collapsible-fifth-title]
zapp_s3_bucket_application_components

The list of application components to be created.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|access_policies
|array[link:#zapp_s3_bucket_application_components_access_policies[zapp_s3
_bucket_application_components_access_policies]]
a|The list of S3 objectstore policies to be created.

|capacity_tier
|boolean
a|Prefer lower latency storage under similar media costs.

|comment
|string
a|Object Store Server Bucket Description Usage: <(size 1..256)>

|exclude_aggregates
|array[link:#exclude_aggregates[exclude_aggregates]]
a|

```

```

|name
|string
a|The name of the application component.

|qos
|link:#qos[qos]
a|

|size
|integer
a|The total size of the S3 Bucket, split across the member components.
Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|uuid
|string
a|Object Store Server Bucket UUID Usage: <UUID>

|versioning_state
|string
a|Bucket Versioning State.

|===

[#zapp_s3_bucket]
[.api-collapsible-fifth-title]
zapp_s3_bucket

A generic S3 bucket application.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|application_components
|array[link:#zapp_s3_bucket_application_components[zapp_s3_bucket_applicat

```



```
ion_components]]  
a|The list of application components to be created.
```

```
|===
```

```
[#san_application_components_tiering]  
[.api-collapsible-fifth-title]  
san_application_components_tiering
```

```
application-components.tiering
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name  
|Type  
|Description
```

```
|control
```

```
|string
```

```
a|Storage tiering placement rules for the container(s)
```

```
|object_stores
```

```
|array[link:#object_stores[object_stores]]
```

```
a|
```

```
|policy
```

```
|string
```

```
a|The storage tiering type of the application component.
```

```
|===
```

```
[#application_components]  
[.api-collapsible-fifth-title]  
application_components
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name  
|Type  
|Description
```

```

|igroup_name
|string
a|The name of the initiator group through which the contents of this
application will be accessed. Modification of this parameter is a
disruptive operation. All LUNs in the application component will be
unmapped from the current igroup and re-mapped to the new igroup.

|lun_count
|integer
a|The number of LUNs in the application component.

|name
|string
a|The name of the application component.

|os_type
|string
a|The name of the host OS running the application.

|qos
|link:#qos[qos]
a|

|storage_service
|link:#storage_service[storage_service]
a|

|tiering
|link:#san_application_components_tiering[san_application_components_tieri
ng]
a|application-components.tiering

|total_size
|integer
a|The total size of the application component, split across the member
LUNs. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|===

[#san_new_igroups]

```

```
[.api-collapsible-fifth-title]
```

```
san_new_igroups
```

The list of initiator groups to create.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|comment
```

```
|string
```

```
a|A comment available for use by the administrator.
```

```
|igroups
```

```
|array[link:#igroups[igroups]]
```

```
a|
```

```
|initiator_objects
```

```
|array[link:#initiator_objects[initiator_objects]]
```

```
a|
```

```
|initiators
```

```
|array[string]
```

```
a|
```

```
|name
```

```
|string
```

```
a|The name of the new initiator group.
```

```
|os_type
```

```
|string
```

```
a|The name of the host OS accessing the application. The default value is the host OS that is running the application.
```

```
|protocol
```

```
|string
```

```
a|The protocol of the new initiator group.
```

```
|===
```

```
[#san]
[.api-collapsible-fifth-title]
san
```

A generic SAN application.

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|application_components
|array[link:#application_components[application_components]]
a|

|exclude_aggregates
|array[link:#exclude_aggregates[exclude_aggregates]]
a|

|new_igroups
|array[link:#san_new_igroups[san_new_igroups]]
a|The list of initiator groups to create.

|os_type
|string
a|The name of the host OS running the application.

|protection_type
|link:#protection_type[protection_type]
a|

|===
```

```
[#storage_service]
[.api-collapsible-fifth-title]
storage_service
```

```
[cols=3*,options=header]
|===
|Name
|Type
```

```

|Description

|name
|string
a|The storage service of the DB.

|===

[#db]
[.api-collapsible-fifth-title]
db

[cols=3*,options=header]
|===
|Name
|Type
|Description

|size
|integer
a|The size of the DB. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The storage service of the log DB.

```

```

|===

[#log]
[.api-collapsible-fifth-title]
log

[cols=3*,options=header]
|===
|Name
|Type
|Description

|size
|integer
a|The size of the log DB. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#sql_on_san_new_igroups]
[.api-collapsible-fifth-title]
sql_on_san_new_igroups

The list of initiator groups to create.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|comment
|string
a|A comment available for use by the administrator.

|igroups
|array[link:#igroups[igroups]]
a|

```

```

|initiator_objects
|array[link:#initiator_objects[initiator_objects]]
a|

|initiators
|array[string]
a|

|name
|string
a|The name of the new initiator group.

|os_type
|string
a|The name of the host OS accessing the application. The default value is
the host OS that is running the application.

|protocol
|string
a|The protocol of the new initiator group.

|===

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The storage service of the temp DB.

|===

[#temp_db]
[.api-collapsible-fifth-title]

```

```

temp_db

[cols=3*,options=header]
|===
|Name
|Type
|Description

|size
|integer
a|The size of the temp DB. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#sql_on_san]
[.api-collapsible-fifth-title]
sql_on_san

Microsoft SQL using SAN.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|db
|link:#db[db]
a|

|igroup_name
|string
a|The name of the initiator group through which the contents of this
application will be accessed. Modification of this parameter is a
disruptive operation. All LUNs in the application component will be
unmapped from the current igroup and re-mapped to the new igroup.

|log
|link:#log[log]

```



```

a|

|new_igroups
|array[link:#sql_on_san_new_igroups[sql_on_san_new_igroups]]
a|The list of initiator groups to create.

|os_type
|string
a|The name of the host OS running the application.

|protection_type
|link:#protection_type[protection_type]
a|

|server_cores_count
|integer
a|The number of server cores for the DB.

|temp_db
|link:#temp_db[temp_db]
a|

|===

[#access]
[.api-collapsible-fifth-title]
access

[cols=3*,options=header]
|===
|Name
|Type
|Description

|installer
|string
a|SQL installer admin user name.

|service_account
|string
a|SQL service account user name.

```

```
|===
```

```
[#sql_on_smb]  
[.api-collapsible-fifth-title]  
sql_on_smb
```

Microsoft SQL using SMB.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name  
|Type  
|Description
```

```
|access
```

```
|link:#access[access]
```

```
a|
```

```
|db
```

```
|link:#db[db]
```

```
a|
```

```
|log
```

```
|link:#log[log]
```

```
a|
```

```
|protection_type
```

```
|link:#protection_type[protection_type]
```

```
a|
```

```
|server_cores_count
```

```
|integer
```

```
a|The number of server cores for the DB.
```

```
|temp_db
```

```
|link:#temp_db[temp_db]
```

```
a|
```

```
|===
```

```
[#storage_service]
```

```
[.api-collapsible-fifth-title]
```

```

storage_service

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The storage service of the desktops.

|===

[#desktops]
[.api-collapsible-fifth-title]
desktops

[cols=3*,options=header]
|===
|Name
|Type
|Description

|count
|integer
a|The number of desktops to support.

|size
|integer
a|The size of the desktops. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#hyper_v_access]
[.api-collapsible-fifth-title]
hyper_v_access

```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|service_account
```

```
|string
```

```
a|Hyper-V service account.
```

```
|===
```

```
[#vdi_on_nas]
```

```
[.api-collapsible-fifth-title]
```

```
vdi_on_nas
```

```
A VDI application using NAS.
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|desktops
```

```
|link:#desktops[desktops]
```

```
a|
```

```
|hyper_v_access
```

```
|link:#hyper_v_access[hyper_v_access]
```

```
a|
```

```
|nfs_access
```

```
|array[link:#app_nfs_access[app_nfs_access]]
```

```
a|The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
```

```
|protection_type
```

```
|link:#protection_type[protection_type]
```

```
a|
```

```
|===
```

```
[#vdi_on_san_new_igroups]
[.api-collapsible-fifth-title]
vdi_on_san_new_igroups
```

The list of initiator groups to create.

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|comment
|string
a|A comment available for use by the administrator.

|igroups
|array[link:#igroups[igroups]]
a|

|initiator_objects
|array[link:#initiator_objects[initiator_objects]]
a|

|initiators
|array[string]
a|

|name
|string
a|The name of the new initiator group.

|protocol
|string
a|The protocol of the new initiator group.

|===

[#vdi_on_san]
[.api-collapsible-fifth-title]
vdi_on_san
```

A VDI application using SAN.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|desktops
```

```
|link:#desktops[desktops]
```

```
a|
```

```
|hypervisor
```

```
|string
```

```
a|The name of the hypervisor hosting the application.
```

```
|igroup_name
```

```
|string
```

```
a|The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
```

```
|new_igroups
```

```
|array[link:#vdi_on_san_new_igroups[vdi_on_san_new_igroups]]
```

```
a|The list of initiator groups to create.
```

```
|protection_type
```

```
|link:#protection_type[protection_type]
```

```
a|
```

```
|===
```

```
[#storage_service]
```

```
[.api-collapsible-fifth-title]
```

```
storage_service
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```

|Description

|name
|string
a|The storage service of the datastore.

|===

[#datastore]
[.api-collapsible-fifth-title]
datastore

[cols=3*,options=header]
|===
|Name
|Type
|Description

|count
|integer
a|The number of datastores to support.

|size
|integer
a|The size of the datastore. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#vsi_on_nas]
[.api-collapsible-fifth-title]
vsi_on_nas

A VSI application using NAS.

[cols=3*,options=header]
|===
|Name

```

```

|Type
|Description

|datastore
|link:#datastore[datastore]
a|

|hyper_v_access
|link:#hyper_v_access[hyper_v_access]
a|

|nfs_access
|array[link:#app_nfs_access[app_nfs_access]]
a|The list of NFS access controls. You must provide either 'host' or
'access' to enable NFS access.

|protection_type
|link:#protection_type[protection_type]
a|

|===

[#vsi_on_san_new_igroups]
[.api-collapsible-fifth-title]
vsi_on_san_new_igroups

The list of initiator groups to create.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|comment
|string
a|A comment available for use by the administrator.

|igroups
|array[link:#igroups[igroups]]
a|

|initiator_objects

```



```
|array[link:#initiator_objects[initiator_objects]]
```

```
a|
```

```
|initiators
```

```
|array[string]
```

```
a|
```

```
|name
```

```
|string
```

```
a|The name of the new initiator group.
```

```
|protocol
```

```
|string
```

```
a|The protocol of the new initiator group.
```

```
|===
```

```
[#vsi_on_san]
```

```
[.api-collapsible-fifth-title]
```

```
vsi_on_san
```

A VSI application using SAN.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|datastore
```

```
|link:#datastore[datastore]
```

```
a|
```

```
|hypervisor
```

```
|string
```

```
a|The name of the hypervisor hosting the application.
```

```
|igroup_name
```

```
|string
```

```
a|The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be
```

unmapped from the current igroup and re-mapped to the new igroup.

```
|new_igroups
|array[link:#vsi_on_san_new_igroups[vsi_on_san_new_igroups]]
a|The list of initiator groups to create.
```

```
|protection_type
|link:#protection_type[protection_type]
a|
```

```
|===
```

```
[#application_template]
[.api-collapsible-fifth-title]
application_template
```

Application templates

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|_links
|link:#self_link[self_link]
a|
```

```
|description
|string
a|Description.
```

```
|maxdata_on_san
|link:#maxdata_on_san[maxdata_on_san]
a|MAX Data application using SAN.
```

```
|missing_prerequisites
|string
a|Missing prerequisites.
```

```
|mongo_db_on_san
|link:#mongo_db_on_san[mongo_db_on_san]
a|MongoDB using SAN.
```

```
|name
|string
a|Template name.
```

```
|nas
|link:#nas[nas]
a|A generic NAS application.
```

```
|nvme
|link:#zapp_nvme[zapp_nvme]
a|An NVME application.
```

```
|oracle_on_nfs
|link:#oracle_on_nfs[oracle_on_nfs]
a|Oracle using NFS.
```

```
|oracle_on_san
|link:#oracle_on_san[oracle_on_san]
a|Oracle using SAN.
```

```
|oracle_rac_on_nfs
|link:#oracle_rac_on_nfs[oracle_rac_on_nfs]
a|Oracle RAC using NFS.
```

```
|oracle_rac_on_san
|link:#oracle_rac_on_san[oracle_rac_on_san]
a|Oracle RAC using SAN.
```

```
|protocol
|string
a|Access protocol.
```

```
|s3_bucket
|link:#zapp_s3_bucket[zapp_s3_bucket]
```

```
a|A generic S3 bucket application.
```

```
|san
```

```
|link:#san[san]
```

```
a|A generic SAN application.
```

```
|sql_on_san
```

```
|link:#sql_on_san[sql_on_san]
```

```
a|Microsoft SQL using SAN.
```

```
|sql_on_smb
```

```
|link:#sql_on_smb[sql_on_smb]
```

```
a|Microsoft SQL using SMB.
```

```
|vdi_on_nas
```

```
|link:#vdi_on_nas[vdi_on_nas]
```

```
a|A VDI application using NAS.
```

```
|vdi_on_san
```

```
|link:#vdi_on_san[vdi_on_san]
```

```
a|A VDI application using SAN.
```

```
|vsi_on_nas
```

```
|link:#vsi_on_nas[vsi_on_nas]
```

```
a|A VSI application using NAS.
```

```
|vsi_on_san
```

```
|link:#vsi_on_san[vsi_on_san]
```

```
a|A VSI application using SAN.
```

```
|===
```

```
[#error_arguments]
```

```
[.api-collapsible-fifth-title]
```

```
error_arguments
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description

|code
|string
a|Argument code
```

```
|message
|string
a|Message argument
```

```
|===
```

```
[#error]
[.api-collapsible-fifth-title]
error
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments
```

```
|code
|string
a|Error code
```

```
|message
|string
a|Error message
```

```
|target
|string
a|The target parameter that caused the error.
```

```
|===
```

```
//end collapsible .Definitions block
```

```
=====
```

```
[[IDea792a645f37ba5e59013a9c56fb1e20]]
```

```
= Retrieve an application template
```

```
[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-  
block]#`/application/templates/{name}`#
```

```
*Introduced In:* 9.6
```

```
Retrieves an application template.
```

```
== Template properties
```

Each application template has a set of properties. These properties are always nested under a property with the same name as the template. For example, when using the `mongo_db_on_san` template, the properties are found nested inside the `mongo_db_on_san` property. The properties nested under the template property are all specific to the template. The model for the application template object includes all the available templates, but only the object that corresponds to the template's name is returned, and only one is provided in any application API.

The model of each template includes a description of each property and its allowed values or usage. Default values are also indicated when available. The template properties returned by this API include an example value for each property.

```
== Template prerequisites
```

Each template has a set of prerequisites required for its use. If any of these prerequisites are not met, the `missing_prerequisites` property indicates which prerequisite is missing.

```
== Learn more
```

```
* xref:{relative_path}application_overview.html[DOC /application]
```

```
== Parameters
```

```

[cols=5*,options=header]
|===
|Name
|Type
|In
|Required
|Description

|name
|string
|path
|True
a|Template Name

|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===

== Response

```

Status: 200, Ok

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#self_link[self_link]
a|

|description
|string
a|Description.

|maxdata_on_san
|link:#maxdata_on_san[maxdata_on_san]
a|MAX Data application using SAN.

```

```
|missing_prerequisites
|string
a|Missing prerequisites.
```

```
|mongo_db_on_san
|link:#mongo_db_on_san[mongo_db_on_san]
a|MongoDB using SAN.
```

```
|name
|string
a|Template name.
```

```
|nas
|link:#nas[nas]
a|A generic NAS application.
```

```
|nvme
|link:#zapp_nvme[zapp_nvme]
a|An NVME application.
```

```
|oracle_on_nfs
|link:#oracle_on_nfs[oracle_on_nfs]
a|Oracle using NFS.
```

```
|oracle_on_san
|link:#oracle_on_san[oracle_on_san]
a|Oracle using SAN.
```

```
|oracle_rac_on_nfs
|link:#oracle_rac_on_nfs[oracle_rac_on_nfs]
a|Oracle RAC using NFS.
```

```
|oracle_rac_on_san
|link:#oracle_rac_on_san[oracle_rac_on_san]
a|Oracle RAC using SAN.
```



```
|protocol
|string
a|Access protocol.
```

```
|s3_bucket
|link:#zapp_s3_bucket[zapp_s3_bucket]
a|A generic S3 bucket application.
```

```
|san
|link:#san[san]
a|A generic SAN application.
```

```
|sql_on_san
|link:#sql_on_san[sql_on_san]
a|Microsoft SQL using SAN.
```

```
|sql_on_smb
|link:#sql_on_smb[sql_on_smb]
a|Microsoft SQL using SMB.
```

```
|vdi_on_nas
|link:#vdi_on_nas[vdi_on_nas]
a|A VDI application using NAS.
```

```
|vdi_on_san
|link:#vdi_on_san[vdi_on_san]
a|A VDI application using SAN.
```

```
|vsi_on_nas
|link:#vsi_on_nas[vsi_on_nas]
a|A VSI application using NAS.
```

```
|vsi_on_san
|link:#vsi_on_san[vsi_on_san]
a|A VSI application using SAN.
```

```
|===
```

```

.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "description": "string",
  "maxdata_on_san": {
    "app_type": "mongodb",
    "application_components": {
    },
    "metadata": {
    },
    "new_igroups": {
    },
    "ocsm_url": "string",
    "os_type": "aix"
  },
  "missing_prerequisites": "string",
  "name": "string",
  "nas": {
    "application_components": {
    },
    "cifs_access": {
      "access": "change"
    },
    "exclude_aggregates": {
    },
    "nfs_access": {
      "access": "none"
    },
    "protection_type": {
      "local_rpo": "hourly",
      "remote_rpo": "none"
    }
  },
  "nvme": {
    "components": {
    },
    "os_type": "aix",
    "rpo": {

```

```

    "local": {
      "name": "hourly"
    }
  },
  "protocol": "nas",
  "s3_bucket": {
    "application_components": {
    }
  },
  "san": {
    "application_components": {
    },
    "exclude_aggregates": {
    },
    "new_igroups": {
    },
    "os_type": "aix",
    "protection_type": {
      "local_rpo": "hourly",
      "remote_rpo": "none"
    }
  }
}
====

== Error

```

Status: Default, Error

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===

.Example error
[%collapsible%closed]

```

```

====
[source,json,subs=+macros]
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}

```

====

== Definitions

```

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block

```

====

```

[#href]
[.api-collapsible-fifth-title]
href

```

```

[cols=3*,options=header]

```

|===

```

|Name
|Type
|Description

```

```

|href
|string
a|

```

|===

```

[#self_link]
[.api-collapsible-fifth-title]
self_link

```

```

[cols=3*,options=header]

```

|===

```

|Name

```

```

|Type
|Description

|self
|link:#href[href]
a|

|===

[#metadata]
[.api-collapsible-fifth-title]
metadata

[cols=3*,options=header]
|===
|Name
|Type
|Description

|key
|string
a|Key to look up metadata associated with an application component.

|value
|string
a|Value associated with the key.

|===

[#protection_type]
[.api-collapsible-fifth-title]
protection_type

[cols=3*,options=header]
|===
|Name
|Type
|Description

|local_rpo
|string
a|The local rpo of the application component.

```

```

|remote_rpo
|string
a|The remote rpo of the application component.

|===

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The storage service of the application component.

|===

[#object_stores]
[.api-collapsible-fifth-title]
object_stores

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the object-store to use.

|===

[#maxdata_on_san_application_components_tiering]
[.api-collapsible-fifth-title]

```

```
maxdata_on_san_application_components_tiering
```

```
tiering
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|control
```

```
|string
```

```
a|Storage tiering placement rules for the container(s)
```

```
|object_stores
```

```
|array[link:#object_stores[object_stores]]
```

```
a|
```

```
|policy
```

```
|string
```

```
a|The storage tiering type of the application component.
```

```
|===
```

```
[#maxdata_on_san_application_components]
```

```
[.api-collapsible-fifth-title]
```

```
maxdata_on_san_application_components
```

The list of application components to be created.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|file_system
```

```
|string
```

```
a|Defines the type of file system that will be installed on this application component.
```

```
|host_management_url
|string
a|The host management URL for this application component.

|host_name
|string
a|FQDN of the L2 host that contains the hot tier of this application
component.

|igroup_name
|string
a|The name of the initiator group through which the contents of this
application will be accessed. Modification of this parameter is a
disruptive operation. All LUNs in the application component will be
unmapped from the current igroup and re-mapped to the new igroup.

|lun_count
|integer
a|The number of LUNs in the application component.

|metadata
|array[link:#metadata[metadata]]
a|

|name
|string
a|The name of the application component.

|protection_type
|link:#protection_type[protection_type]
a|

|storage_service
|link:#storage_service[storage_service]
a|

|tiering
|link:#maxdata_on_san_application_components_tiering[maxdata_on_san_applic
ation_components_tiering]
a|tiering
```



```
|total_size
|integer
a|The total size of the application component, split across the member
LUNs. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}
```

```
|===
```

```
[#metadata]
[.api-collapsible-fifth-title]
metadata
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|key
|string
a|Key to look up metadata associated with an application.
```

```
|value
|string
a|Value associated with the key.
```

```
|===
```

```
[#igroups]
[.api-collapsible-fifth-title]
igroups
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|name
|string
a|The name of an igroup to nest within a parent igroup. Mutually exclusive
with initiators and initiator_objects.
```

```
|uuid
|string
a|The UUID of an igroup to nest within a parent igroup Usage: <UUID>
```

```
|===
```

```
[#initiator_objects]
[.api-collapsible-fifth-title]
initiator_objects
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|comment
```

```
|string
```

```
a|A comment available for use by the administrator.
```

```
|name
```

```
|string
```

```
a|The WWPN, IQN, or Alias of the initiator. Mutually exclusive with nested igroups and the initiators array.
```

```
|===
```

```
[#maxdata_on_san_new_igroups]
[.api-collapsible-fifth-title]
maxdata_on_san_new_igroups
```

The list of initiator groups to create.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|comment
```

```

|string
a|A comment available for use by the administrator.

|igroups
|array[link:#igroups[igroups]]
a|

|initiator_objects
|array[link:#initiator_objects[initiator_objects]]
a|

|initiators
|array[string]
a|

|name
|string
a|The name of the new initiator group.

|os_type
|string
a|The name of the host OS accessing the application. The default value is
the host OS that is running the application.

|protocol
|string
a|The protocol of the new initiator group.

|===

[#maxdata_on_san]
[.api-collapsible-fifth-title]
maxdata_on_san

MAX Data application using SAN.

[cols=3*,options=header]
|===
|Name
|Type
|Description

```

```
|app_type
|string
a|Type of the application that is being deployed on the L2.
```

```
|application_components
|array[link:#maxdata_on_san_application_components[maxdata_on_san_applicat
ion_components]]
a|The list of application components to be created.
```

```
|metadata
|array[link:#metadata[metadata]]
a|
```

```
|new_igroups
|array[link:#maxdata_on_san_new_igroups[maxdata_on_san_new_igroups]]
a|The list of initiator groups to create.
```

```
|ocsm_url
|string
a|The OnCommand System Manager URL for this application.
```

```
|os_type
|string
a|The name of the host OS running the application.
```

```
|===
```

```
[#storage_service]
[.api-collapsible-fifth-title]
storage_service
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|name
|string
a|The storage service of the database.
```

```
|===
```

```
[#dataset]  
[.api-collapsible-fifth-title]  
dataset
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name  
|Type  
|Description
```

```
|element_count
```

```
|integer
```

```
a|The number of storage elements (LUNs for SAN) of the database to  
maintain. Must be an even number between 2 and 16. Odd numbers will be  
rounded up to the next even number within range.
```

```
|replication_factor
```

```
|integer
```

```
a|The number of data bearing members of the replicaset, including 1  
primary and at least 1 secondary.
```

```
|size
```

```
|integer
```

```
a|The size of the database. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}
```

```
|storage_service
```

```
|link:#storage_service[storage_service]
```

```
a|
```

```
|===
```

```
[#mongo_db_on_san_new_igroups]  
[.api-collapsible-fifth-title]  
mongo_db_on_san_new_igroups
```

The list of initiator groups to create.

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|comment
|string
a|A comment available for use by the administrator.

|igroups
|array[link:#igroups[igroups]]
a|

|initiator_objects
|array[link:#initiator_objects[initiator_objects]]
a|

|initiators
|array[string]
a|

|name
|string
a|The name of the new initiator group.

|os_type
|string
a|The name of the host OS accessing the application. The default value is
the host OS that is running the application.

|protocol
|string
a|The protocol of the new initiator group.

|===

[#protection_type]
[.api-collapsible-fifth-title]
protection_type

[cols=3*,options=header]

```

```

|===
|Name
|Type
|Description

|local_rpo
|string
a|The local RPO of the application.

|remote_rpo
|string
a|The remote RPO of the application.

|===

[#secondary_igroups]
[.api-collapsible-fifth-title]
secondary_igroups

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the initiator group for each secondary.

|===

[#mongo_db_on_san]
[.api-collapsible-fifth-title]
mongo_db_on_san

MongoDB using SAN.

[cols=3*,options=header]
|===
|Name
|Type

```

```

|Description

|dataset
|link:#dataset[dataset]
a|

|new_igroups
|array[link:#mongo_db_on_san_new_igroups[mongo_db_on_san_new_igroups]]
a|The list of initiator groups to create.

|os_type
|string
a|The name of the host OS running the application.

|primary_igroup_name
|string
a|The initiator group for the primary.

|protection_type
|link:#protection_type[protection_type]
a|

|secondary_igroups
|array[link:#secondary_igroups[secondary_igroups]]
a|

|===

[#export_policy]
[.api-collapsible-fifth-title]
export_policy

[cols=3*,options=header]
|===
|Name
|Type
|Description

|id
|integer
a|The ID of an existing NFS export policy.

```



```
|name
|string
a|The name of an existing NFS export policy.
```

```
|===
```

```
[#component]
[.api-collapsible-fifth-title]
component
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|name
|string
a|Name of the source component.
```

```
|===
```

```
[#svm]
[.api-collapsible-fifth-title]
svm
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|name
|string
a|Name of the source SVM.
```

```
|===
```

```
[#origin]
[.api-collapsible-fifth-title]
origin
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|component
```

```
|link:#component[component]
```

```
a|
```

```
|svm
```

```
|link:#svm[svm]
```

```
a|
```

```
|===
```

```
[#flexcache]
```

```
[.api-collapsible-fifth-title]
```

```
flexcache
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|dr_cache
```

```
|boolean
```

```
a|Dr-cache is a FlexCache volume create time option that has the same flexgroup-msid as that of the origin of a FlexCache volume. By default, dr-cache is disabled. The flexgroup-msid of the FlexCache volume does not need to be same as that of the origin of a FlexCache volume.
```

```
|origin
```

```
|link:#origin[origin]
```

```
a|
```

```
|===
```

```
[#policy]
```

```
[.api-collapsible-fifth-title]
```

```
policy
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of an existing QoS policy.

|uuid
|string
a|The UUID of an existing QoS policy. Usage: <UUID>
```

```
|===
```

```
[#qos]
[.api-collapsible-fifth-title]
qos
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|policy
|link:#policy[policy]
a|
```

```
|===
```

```
[#nas_application_components_tiering]
[.api-collapsible-fifth-title]
nas_application_components_tiering
```

```
application-components.tiering
```

```
[cols=3*,options=header]
|===
|Name
|Type
```

```

|Description

|control
|string
a|Storage tiering placement rules for the container(s)

|object_stores
|array[link:#object_stores[object_stores]]
a|

|policy
|string
a|The storage tiering type of the application component.

|===

[#application_components]
[.api-collapsible-fifth-title]
application_components

[cols=3*,options=header]
|===
|Name
|Type
|Description

|export_policy
|link:#export_policy[export_policy]
a|

|flexcache
|link:#flexcache[flexcache]
a|

|name
|string
a|The name of the application component.

|qos
|link:#qos[qos]
a|

|scale_out

```

```
|boolean
a|Denotes a Flexgroup.
```

```
|share_count
|integer
a|The number of shares in the application component.
```

```
|storage_service
|link:#storage_service[storage_service]
a|
```

```
|tiering
|link:#nas_application_components_tiering[nas_application_components_tiering]
a|application-components.tiering
```

```
|total_size
|integer
a|The total size of the application component, split across the member shares. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}
```

```
|===
```

```
[#app_cifs_access]
[.api-collapsible-fifth-title]
app_cifs_access
```

The list of CIFS access controls. You must provide either 'user_or_group' or 'access' to enable CIFS access.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|access
|string
a|The CIFS access granted to the user or group.
```

```
|user_or_group
|string
a|The name of the CIFS user or group that will be granted access.
```

```
|===
```

```
[#exclude_aggregates]
[.api-collapsible-fifth-title]
exclude_aggregates
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|name
|string
a|The name of the aggregate to exclude. Usage: <aggregate name>
```

```
|uuid
|string
a|The ID of the aggregate to exclude. Usage: <UUID>
```

```
|===
```

```
[#app_nfs_access]
[.api-collapsible-fifth-title]
app_nfs_access
```

The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|access
|string
```

```
a|The NFS access granted.
```

```
|host
```

```
|string
```

```
a|The name of the NFS entity granted access.
```

```
|===
```

```
[#protection_type]
```

```
[.api-collapsible-fifth-title]
```

```
protection_type
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|local_policy
```

```
|string
```

```
a|The Snapshot copy policy to apply to each volume in the smart container.  
This property is only supported for smart containers. Usage: <snapshot  
policy>
```

```
|local_rpo
```

```
|string
```

```
a|The local RPO of the application.
```

```
|remote_rpo
```

```
|string
```

```
a|The remote RPO of the application.
```

```
|===
```

```
[#nas]
```

```
[.api-collapsible-fifth-title]
```

```
nas
```

```
A generic NAS application.
```

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|application_components
|array[link:#application_components[application_components]]
a|

|cifs_access
|array[link:#app_cifs_access[app_cifs_access]]
a|The list of CIFS access controls. You must provide either
'user_or_group' or 'access' to enable CIFS access.

|cifs_share_name
|string
a|The name of the CIFS share. Usage: <Share>

|exclude_aggregates
|array[link:#exclude_aggregates[exclude_aggregates]]
a|

|nfs_access
|array[link:#app_nfs_access[app_nfs_access]]
a|The list of NFS access controls. You must provide either 'host' or
'access' to enable NFS access.

|protection_type
|link:#protection_type[protection_type]
a|

|===

[#performance]
[.api-collapsible-fifth-title]
performance

[cols=3*,options=header]
|===
|Name
|Type

```



```

|Description

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#hosts]
[.api-collapsible-fifth-title]
hosts

[cols=3*,options=header]
|===
|Name
|Type
|Description

|nqn
|string
a|The host NQN.

|===

[#zapp_nvme_components_subsystem]
[.api-collapsible-fifth-title]
zapp_nvme_components_subsystem

components.subsystem

[cols=3*,options=header]
|===
|Name
|Type
|Description

|hosts
|array[link:#hosts[hosts]]
a|

|name
|string
a|The name of the subsystem accessing the component. If neither the name

```

nor the UUID is provided, the name defaults to <application-name>_<component-name>, whether that subsystem already exists or not.

|os_type

|string

a|The name of the host OS accessing the component. The default value is the host OS that is running the application.

|uuid

|string

a|The UUID of an existing subsystem to be granted access to the component.
Usage: <UUID>

|===

[#zapp_nvme_components_tiering]

[.api-collapsible-fifth-title]

zapp_nvme_components_tiering

application-components.tiering

[cols=3*,options=header]

|===

|Name

|Type

|Description

|control

|string

a|Storage tiering placement rules for the container(s)

|object_stores

|array[link:#object_stores[object_stores]]

a|

|policy

|string

a|The storage tiering type of the application component.

|===

```
[#components]
[.api-collapsible-fifth-title]
components

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the application component.

|namespace_count
|integer
a|The number of namespaces in the component.

|os_type
|string
a|The name of the host OS running the application.

|performance
|link:#performance[performance]
a|

|qos
|link:#qos[qos]
a|

|subsystem
|link:#zapp_nvme_components_subsystem[zapp_nvme_components_subsystem]
a|components.subsystem

|tiering
|link:#zapp_nvme_components_tiering[zapp_nvme_components_tiering]
a|application-components.tiering

|total_size
|integer
```

a|The total size of the component, spread across member namespaces. Usage:

{<integer>[KB\|MB\|GB\|TB\|PB]}

|===

[#local]

[.api-collapsible-fifth-title]

local

[cols=3*,options=header]

|===

|Name

|Type

|Description

|name

|string

a|The local RPO of the application.

|policy

|string

a|The Snapshot copy policy to apply to each volume in the smart container. This property is only supported for smart containers. Usage: <snapshot policy>

|===

[#rpo]

[.api-collapsible-fifth-title]

rpo

[cols=3*,options=header]

|===

|Name

|Type

|Description

|local

|link:#local[local]

a|

|===

```
[#zapp_nvme]
[.api-collapsible-fifth-title]
zapp_nvme
```

An NVME application.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|components
```

```
|array[link:#components[components]]
```

```
a|
```

```
|os_type
```

```
|string
```

```
a|The name of the host OS running the application.
```

```
|rpo
```

```
|link:#rpo[rpo]
```

```
a|
```

```
|===
```

```
[#storage_service]
```

```
[.api-collapsible-fifth-title]
```

```
storage_service
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|name
```

```
|string
```

```
a|The storage service of the archive log.
```

```
|===
```

```

[#archive_log]
[.api-collapsible-fifth-title]
archive_log

[cols=3*,options=header]
|===
|Name
|Type
|Description

|size
|integer
a|The size of the archive log. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#db]
[.api-collapsible-fifth-title]
db

[cols=3*,options=header]
|===
|Name
|Type
|Description

|size
|integer
a|The size of the database. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#storage_service]

```

```

[.api-collapsible-fifth-title]
storage_service

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The storage service of the ORACLE_HOME storage volume.

|===

[#ora_home]
[.api-collapsible-fifth-title]
ora_home

[cols=3*,options=header]
|===
|Name
|Type
|Description

|size
|integer
a|The size of the ORACLE_HOME storage volume. Usage:
{<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

[cols=3*,options=header]
|===
|Name

```

```

|Type
|Description

|name
|string
a|The storage service of the redo log group.

|===

[#redo_log]
[.api-collapsible-fifth-title]
redo_log

[cols=3*,options=header]
|===
|Name
|Type
|Description

|mirrored
|boolean
a|Specifies whether the redo log group should be mirrored.

|size
|integer
a|The size of the redo log group. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#oracle_on_nfs]
[.api-collapsible-fifth-title]
oracle_on_nfs

Oracle using NFS.

[cols=3*,options=header]
|===

```



```

|Name
|Type
|Description

|archive_log
|link:#archive_log[archive_log]
a|

|db
|link:#db[db]
a|

|nfs_access
|array[link:#app_nfs_access[app_nfs_access]]
a|The list of NFS access controls. You must provide either 'host' or
'access' to enable NFS access.

|ora_home
|link:#ora_home[ora_home]
a|

|protection_type
|link:#protection_type[protection_type]
a|

|redo_log
|link:#redo_log[redo_log]
a|

|===

[#oracle_on_san_new_igroups]
[.api-collapsible-fifth-title]
oracle_on_san_new_igroups

The list of initiator groups to create.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|comment

```

```

|string
a|A comment available for use by the administrator.

|igroups
|array[link:#igroups[igroups]]
a|

|initiator_objects
|array[link:#initiator_objects[initiator_objects]]
a|

|initiators
|array[string]
a|

|name
|string
a|The name of the new initiator group.

|os_type
|string
a|The name of the host OS accessing the application. The default value is
the host OS that is running the application.

|protocol
|string
a|The protocol of the new initiator group.

|===

[#oracle_on_san]
[.api-collapsible-fifth-title]
oracle_on_san

Oracle using SAN.

[cols=3*,options=header]
|===
|Name
|Type
|Description

```

```

|archive_log
|link:#archive_log[archive_log]
a|

|db
|link:#db[db]
a|

|igroup_name
|string
a|The name of the initiator group through which the contents of this
application will be accessed. Modification of this parameter is a
disruptive operation. All LUNs in the application component will be
unmapped from the current igroup and re-mapped to the new igroup.

|new_igroups
|array[link:#oracle_on_san_new_igroups[oracle_on_san_new_igroups]]
a|The list of initiator groups to create.

|ora_home
|link:#ora_home[ora_home]
a|

|os_type
|string
a|The name of the host OS running the application.

|protection_type
|link:#protection_type[protection_type]
a|

|redo_log
|link:#redo_log[redo_log]
a|

|===

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

[cols=3*,options=header]

```

```

|===
|Name
|Type
|Description

|name
|string
a|The storage service of the Oracle grid binary storage volume.

```

```

|===

```

```

[#grid_binary]
[.api-collapsible-fifth-title]
grid_binary

```

```

[cols=3*,options=header]

```

```

|===

```

```

|Name
|Type
|Description

```

```

|size

```

```

|integer

```

```

a|The size of the Oracle grid binary storage volume. Usage:
{<integer>[KB\|MB\|GB\|TB\|PB]}

```

```

|storage_service

```

```

|link:#storage_service[storage_service]

```

```

a|

```

```

|===

```

```

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

```

```

[cols=3*,options=header]

```

```

|===

```

```

|Name
|Type
|Description

```

```

|name

```

```

|string
a|The storage service of the Oracle CRS volume.

|===

[#oracle_crs]
[.api-collapsible-fifth-title]
oracle_crs

[cols=3*,options=header]
|===
|Name
|Type
|Description

|copies
|integer
a|The number of CRS volumes.

|size
|integer
a|The size of the Oracle CRS/voting storage volume. Usage:
{<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#oracle_rac_on_nfs]
[.api-collapsible-fifth-title]
oracle_rac_on_nfs

Oracle RAC using NFS.

[cols=3*,options=header]
|===
|Name
|Type
|Description

```

```

|archive_log
|link:#archive_log[archive_log]
a|

|db
|link:#db[db]
a|

|grid_binary
|link:#grid_binary[grid_binary]
a|

|nfs_access
|array[link:#app_nfs_access[app_nfs_access]]
a|The list of NFS access controls. You must provide either 'host' or
'access' to enable NFS access.

|ora_home
|link:#ora_home[ora_home]
a|

|oracle_crs
|link:#oracle_crs[oracle_crs]
a|

|protection_type
|link:#protection_type[protection_type]
a|

|redo_log
|link:#redo_log[redo_log]
a|

|===

[#db_sids]
[.api-collapsible-fifth-title]
db_sids

[cols=3*,options=header]
|===
|Name
|Type
|Description

```

```
|igroup_name
|string
a|The name of the initiator group through which the contents of this
application will be accessed. Modification of this parameter is a
disruptive operation. All LUNs in the application component will be
unmapped from the current igroup and re-mapped to the new igroup.
```

```
|===
```

```
[#oracle_rac_on_san_new_igroups]
[.api-collapsible-fifth-title]
oracle_rac_on_san_new_igroups
```

The list of initiator groups to create.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|comment
```

```
|string
```

```
a|A comment available for use by the administrator.
```

```
|igroups
```

```
|array[link:#igroups[igroups]]
```

```
a|
```

```
|initiator_objects
```

```
|array[link:#initiator_objects[initiator_objects]]
```

```
a|
```

```
|initiators
```

```
|array[string]
```

```
a|
```

```
|name
```

```
|string
```

```
a|The name of the new initiator group.
```

```

|os_type
|string
a|The name of the host OS accessing the application. The default value is
the host OS that is running the application.

|protocol
|string
a|The protocol of the new initiator group.

|===

[#oracle_rac_on_san]
[.api-collapsible-fifth-title]
oracle_rac_on_san

Oracle RAC using SAN.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|archive_log
|link:#archive_log[archive_log]
a|

|db
|link:#db[db]
a|

|db_sids
|array[link:#db_sids[db_sids]]
a|

|grid_binary
|link:#grid_binary[grid_binary]
a|

|new_igroups
|array[link:#oracle_rac_on_san_new_igroups[oracle_rac_on_san_new_igroups]]
a|The list of initiator groups to create.

```



```

|ora_home
|link:#ora_home[ora_home]
a|

|oracle_crs
|link:#oracle_crs[oracle_crs]
a|

|os_type
|string
a|The name of the host OS running the application.

|protection_type
|link:#protection_type[protection_type]
a|

|redo_log
|link:#redo_log[redo_log]
a|

|===

[#zapp_s3_bucket_application_components_access_policies_conditions]
[.api-collapsible-fifth-title]
zapp_s3_bucket_application_components_access_policies_conditions

conditions

[cols=3*,options=header]
|===
|Name
|Type
|Description

|delimiters
|array[string]
a|

|max_keys
|array[integer]
a|

|operator

```

```
|string
a|Policy Condition Operator.
```

```
|prefixes
|array[string]
a|
```

```
|source_ips
|array[string]
a|
```

```
|usernames
|array[string]
a|
```

```
|===
```

```
[#zapp_s3_bucket_application_components_access_policies]
[.api-collapsible-fifth-title]
zapp_s3_bucket_application_components_access_policies
```

The list of S3 objectstore policies to be created.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|actions
|array[string]
a|
```

```
|conditions
|array[link:#zapp_s3_bucket_application_components_access_policies_conditi
ons[zapp_s3_bucket_application_components_access_policies_conditions]]
a|conditions.
```

```
|effect
|string
a|Allow or Deny Access.
```

```
|principals
|array[string]
a|

|resources
|array[string]
a|

|sid
|string
a|Statement Identifier Usage: <(size 1..256)>
```

```
|===
```

```
[#zapp_s3_bucket_application_components]
[.api-collapsible-fifth-title]
zapp_s3_bucket_application_components
```

The list of application components to be created.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|access_policies
|array[link:#zapp_s3_bucket_application_components_access_policies[zapp_s3
_bucket_application_components_access_policies]]
a|The list of S3 objectstore policies to be created.
```

```
|capacity_tier
|boolean
a|Prefer lower latency storage under similar media costs.
```

```
|comment
|string
a|Object Store Server Bucket Description Usage: <(size 1..256)>
```

```
|exclude_aggregates
|array[link:#exclude_aggregates[exclude_aggregates]]
```

```

a|

|name
|string
a|The name of the application component.

|qos
|link:#qos[qos]
a|

|size
|integer
a|The total size of the S3 Bucket, split across the member components.
Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|uuid
|string
a|Object Store Server Bucket UUID Usage: <UUID>

|versioning_state
|string
a|Bucket Versioning State.

|===

[#zapp_s3_bucket]
[.api-collapsible-fifth-title]
zapp_s3_bucket

A generic S3 bucket application.

[cols=3*,options=header]
|===
|Name
|Type
|Description

```

```

|application_components
|array[link:#zapp_s3_bucket_application_components[zapp_s3_bucket_applicat
ion_components]]
a|The list of application components to be created.

|===

[#san_application_components_tiering]
[.api-collapsible-fifth-title]
san_application_components_tiering

application-components.tiering

[cols=3*,options=header]
|===
|Name
|Type
|Description

|control
|string
a|Storage tiering placement rules for the container(s)

|object_stores
|array[link:#object_stores[object_stores]]
a|

|policy
|string
a|The storage tiering type of the application component.

|===

[#application_components]
[.api-collapsible-fifth-title]
application_components

[cols=3*,options=header]
|===
|Name
|Type

```

|Description

|igroup_name

|string

a|The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.

|lun_count

|integer

a|The number of LUNs in the application component.

|name

|string

a|The name of the application component.

|os_type

|string

a|The name of the host OS running the application.

|qos

|link:#qos[qos]

a|

|storage_service

|link:#storage_service[storage_service]

a|

|tiering

|link:#san_application_components_tiering[san_application_components_tiering]

a|application-components.tiering

|total_size

|integer

a|The total size of the application component, split across the member LUNs. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|===

```
[#san_new_igroups]
[.api-collapsible-fifth-title]
san_new_igroups
```

The list of initiator groups to create.

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|comment
|string
a|A comment available for use by the administrator.
```

```
|igroups
|array[link:#igroups[igroups]]
a|
```

```
|initiator_objects
|array[link:#initiator_objects[initiator_objects]]
a|
```

```
|initiators
|array[string]
a|
```

```
|name
|string
a|The name of the new initiator group.
```

```
|os_type
|string
a|The name of the host OS accessing the application. The default value is
the host OS that is running the application.
```

```
|protocol
|string
a|The protocol of the new initiator group.
```

```

|===

[#san]
[.api-collapsible-fifth-title]
san

A generic SAN application.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|application_components
|array[link:#application_components[application_components]]
a|

|exclude_aggregates
|array[link:#exclude_aggregates[exclude_aggregates]]
a|

|new_igroups
|array[link:#san_new_igroups[san_new_igroups]]
a|The list of initiator groups to create.

|os_type
|string
a|The name of the host OS running the application.

|protection_type
|link:#protection_type[protection_type]
a|

|===

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

[cols=3*,options=header]
|===

```



```

|Name
|Type
|Description

|name
|string
a|The storage service of the DB.

|===

[#db]
[.api-collapsible-fifth-title]
db

[cols=3*,options=header]
|===
|Name
|Type
|Description

|size
|integer
a|The size of the DB. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The storage service of the log DB.

```

```

|===

[#log]
[.api-collapsible-fifth-title]
log

[cols=3*,options=header]
|===
|Name
|Type
|Description

|size
|integer
a|The size of the log DB. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#sql_on_san_new_igroups]
[.api-collapsible-fifth-title]
sql_on_san_new_igroups

The list of initiator groups to create.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|comment
|string
a|A comment available for use by the administrator.

|igroups
|array[link:#igroups[igroups]]

```

```

a|

|initiator_objects
|array[link:#initiator_objects[initiator_objects]]
a|

|initiators
|array[string]
a|

|name
|string
a|The name of the new initiator group.

|os_type
|string
a|The name of the host OS accessing the application. The default value is
the host OS that is running the application.

|protocol
|string
a|The protocol of the new initiator group.

|===

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The storage service of the temp DB.

|===

```

```

[#temp_db]
[.api-collapsible-fifth-title]
temp_db

[cols=3*,options=header]
|===
|Name
|Type
|Description

|size
|integer
a|The size of the temp DB. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#sql_on_san]
[.api-collapsible-fifth-title]
sql_on_san

Microsoft SQL using SAN.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|db
|link:#db[db]
a|

|igroup_name
|string
a|The name of the initiator group through which the contents of this
application will be accessed. Modification of this parameter is a
disruptive operation. All LUNs in the application component will be
unmapped from the current igroup and re-mapped to the new igroup.

```

```

|log
|link:#log[log]
a|

|new_igroups
|array[link:#sql_on_san_new_igroups[sql_on_san_new_igroups]]
a|The list of initiator groups to create.

|os_type
|string
a|The name of the host OS running the application.

|protection_type
|link:#protection_type[protection_type]
a|

|server_cores_count
|integer
a|The number of server cores for the DB.

|temp_db
|link:#temp_db[temp_db]
a|

|===

[#access]
[.api-collapsible-fifth-title]
access

[cols=3*,options=header]
|===
|Name
|Type
|Description

|installer
|string
a|SQL installer admin user name.

|service_account
|string

```

```
a|SQL service account user name.
```

```
|===
```

```
[#sql_on_smb]  
[.api-collapsible-fifth-title]  
sql_on_smb
```

```
Microsoft SQL using SMB.
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name  
|Type  
|Description
```

```
|access
```

```
|link:#access[access]
```

```
a|
```

```
|db
```

```
|link:#db[db]
```

```
a|
```

```
|log
```

```
|link:#log[log]
```

```
a|
```

```
|protection_type
```

```
|link:#protection_type[protection_type]
```

```
a|
```

```
|server_cores_count
```

```
|integer
```

```
a|The number of server cores for the DB.
```

```
|temp_db
```

```
|link:#temp_db[temp_db]
```

```
a|
```

```
|===
```

```

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The storage service of the desktops.

|===

[#desktops]
[.api-collapsible-fifth-title]
desktops

[cols=3*,options=header]
|===
|Name
|Type
|Description

|count
|integer
a|The number of desktops to support.

|size
|integer
a|The size of the desktops. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#hyper_v_access]
[.api-collapsible-fifth-title]

```

```
hyper_v_access
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|service_account
```

```
|string
```

```
a|Hyper-V service account.
```

```
|===
```

```
[#vdi_on_nas]
```

```
[.api-collapsible-fifth-title]
```

```
vdi_on_nas
```

```
A VDI application using NAS.
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|desktops
```

```
|link:#desktops[desktops]
```

```
a|
```

```
|hyper_v_access
```

```
|link:#hyper_v_access[hyper_v_access]
```

```
a|
```

```
|nfs_access
```

```
|array[link:#app_nfs_access[app_nfs_access]]
```

```
a|The list of NFS access controls. You must provide either 'host' or 'access' to enable NFS access.
```

```
|protection_type
```

```
|link:#protection_type[protection_type]
```

```
a|
```



```
|===
```

```
[#vdi_on_san_new_igroups]  
[.api-collapsible-fifth-title]  
vdi_on_san_new_igroups
```

The list of initiator groups to create.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name  
|Type  
|Description
```

```
|comment
```

```
|string
```

```
a|A comment available for use by the administrator.
```

```
|igroups
```

```
|array[link:#igroups[igroups]]
```

```
a|
```

```
|initiator_objects
```

```
|array[link:#initiator_objects[initiator_objects]]
```

```
a|
```

```
|initiators
```

```
|array[string]
```

```
a|
```

```
|name
```

```
|string
```

```
a|The name of the new initiator group.
```

```
|protocol
```

```
|string
```

```
a|The protocol of the new initiator group.
```

```
|===
```

```
[#vdi_on_san]
```

```
[.api-collapsible-fifth-title]
```

```
vdi_on_san
```

A VDI application using SAN.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|desktops
```

```
|link:#desktops[desktops]
```

```
a|
```

```
|hypervisor
```

```
|string
```

```
a|The name of the hypervisor hosting the application.
```

```
|igroup_name
```

```
|string
```

```
a|The name of the initiator group through which the contents of this application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.
```

```
|new_igroups
```

```
|array[link:#vdi_on_san_new_igroups[vdi_on_san_new_igroups]]
```

```
a|The list of initiator groups to create.
```

```
|protection_type
```

```
|link:#protection_type[protection_type]
```

```
a|
```

```
|===
```

```
[#storage_service]
```

```
[.api-collapsible-fifth-title]
```

```
storage_service
```

```
[cols=3*,options=header]
```

```
|===
```

```

|Name
|Type
|Description

|name
|string
a|The storage service of the datastore.

|===

[#datastore]
[.api-collapsible-fifth-title]
datastore

[cols=3*,options=header]
|===
|Name
|Type
|Description

|count
|integer
a|The number of datastores to support.

|size
|integer
a|The size of the datastore. Usage: {<integer>[KB\|MB\|GB\|TB\|PB]}

|storage_service
|link:#storage_service[storage_service]
a|

|===

[#vsi_on_nas]
[.api-collapsible-fifth-title]
vsi_on_nas

A VSI application using NAS.

[cols=3*,options=header]

```

```

|===
|Name
|Type
|Description

|datastore
|link:#datastore[datastore]
a|

|hyper_v_access
|link:#hyper_v_access[hyper_v_access]
a|

|nfs_access
|array[link:#app_nfs_access[app_nfs_access]]
a|The list of NFS access controls. You must provide either 'host' or
'access' to enable NFS access.

|protection_type
|link:#protection_type[protection_type]
a|

|===

[#vsi_on_san_new_igroups]
[.api-collapsible-fifth-title]
vsi_on_san_new_igroups

The list of initiator groups to create.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|comment
|string
a|A comment available for use by the administrator.

|igroups
|array[link:#igroups[igroups]]
a|

```

```
|initiator_objects
|array[link:#initiator_objects[initiator_objects]]
a|
```

```
|initiators
|array[string]
a|
```

```
|name
|string
a|The name of the new initiator group.
```

```
|protocol
|string
a|The protocol of the new initiator group.
```

```
|===
```

```
[#vsi_on_san]
[.api-collapsible-fifth-title]
vsi_on_san
```

A VSI application using SAN.

```
[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|datastore
|link:#datastore[datastore]
a|
```

```
|hypervisor
|string
a|The name of the hypervisor hosting the application.
```

```
|igroup_name
|string
a|The name of the initiator group through which the contents of this
```

application will be accessed. Modification of this parameter is a disruptive operation. All LUNs in the application component will be unmapped from the current igroup and re-mapped to the new igroup.

```
|new_igroups
|array[link:#vsi_on_san_new_igroups[vsi_on_san_new_igroups]]
a|The list of initiator groups to create.
```

```
|protection_type
|link:#protection_type[protection_type]
a|
```

```
|===
```

```
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|code
|string
a|Argument code
```

```
|message
|string
a|Message argument
```

```
|===
```

```
[#error]
[.api-collapsible-fifth-title]
error
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments

|code
|string
a|Error code

|message
|string
a|Error message

|target
|string
a|The target parameter that caused the error.
```

```
|===
```

```
//end collapsible .Definitions block
```

```
====
```

```
:leveloffset: -1
```

```
:leveloffset: -1
```

```
<<<
```

```
*Copyright information*
```

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