



Application

ONTAP 9.7 REST API reference

NetApp
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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

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 example outlines the APIs necessary to create a smart container. 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:
{
  "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"
      }
    ]
  }
}

# The call:
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"} ] } }'

# 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

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"
  }
}
```

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`

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 [DOC 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

Name	Type	In	Required	Description
rpo.local.name	string	query	False	Filter by rpo.local.name
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
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
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.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned.
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.

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	
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.

maxdata_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
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
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]	

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
origin	origin	

object_stores

Name	Type	Description
name	string	The name of the object-store to use. Usage: <(size 1..512)>

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
flexcache	flexcache	
name	string	The name of the application component.
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.

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.

app_nfs_access

The list of NFS access controls.

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 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.
nfs_access	array[app_nfs_access]	The list of NFS access controls.
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
performance	performance	
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 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.
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
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.
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.
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
initiators	array[string]	

Name	Type	Description
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	Type	Description
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	Type	Description
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	

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.
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
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]	
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
initiators	array[string]	

Name	Type	Description
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.

Name	Type	Description
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	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
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.

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 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.

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

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	
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	Type	Description
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.
version	integer	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. <ul style="list-style-type: none"> • readOnly: 1

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.
protection_type	protection_type	

vdi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
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.
protection_type	protection_type	

vsi_on_san_new_igroups

The list of initiator groups to create.

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

Name	Type	Description
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.
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.

Name	Type	Description
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.
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	
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_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

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.
 - `name` - The generic templates require names for the components of the application. Other templates name the components automatically.
 - `size` - This generally refers to the size of an application component, which may be spread across multiple underlying storage objects (volumes, LUNs, etc...).
 - Either `nfs_access`, `cifs_access`, or `igroup_name` must be specified
 - `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.
 - `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.

- `storage_service.name` - *value*
- `protection_type.local_rpo` - *hourly* (Hourly Snapshot copies)
- `protection_type.remote_rpo` - *none* (Not MetroCluster)
- `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](#)
- [DOC Asynchronous operations](#)

Parameters

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

Request Body

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

Name	Type	Description
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.
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	
san	san	A generic SAN application.

Name	Type	Description
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.
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.

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	
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.

maxdata_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
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
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]	

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
origin	origin	

object_stores

Name	Type	Description
name	string	The name of the object-store to use. Usage: <(size 1..512)>

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
flexcache	flexcache	
name	string	The name of the application component.
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.

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.

app_nfs_access

The list of NFS access controls.

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 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.
nfs_access	array[app_nfs_access]	The list of NFS access controls.
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
performance	performance	
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 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.
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
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.
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.
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
initiators	array[string]	

Name	Type	Description
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	Type	Description
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	Type	Description
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	

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.
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
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]	
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
initiators	array[string]	

Name	Type	Description
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.

Name	Type	Description
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	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
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.

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 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.

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

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	
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	Type	Description
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.
version	integer	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. <ul style="list-style-type: none"> • readOnly: 1

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.
protection_type	protection_type	

vdi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
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.
protection_type	protection_type	

vsi_on_san_new_igroups

The list of initiator groups to create.

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

Name	Type	Description
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.
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.

Name	Type	Description
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.
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	
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.

_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

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.
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.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned.
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": "lif1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
      "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.
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]	
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]	
storage_service	storage_service	
svm	svm	

Name	Type	Description
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

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

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.
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.

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.
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

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

Request Body

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

Name	Type	Description
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}`

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

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}

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
component	component	

Name	Type	Description
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`

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

Parameters

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

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}

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": {
        "fc": {
            "interface": {
                "_links": {
                    "self": {
                        "href": "/api/resourcelink"
                    }
                }
            },
            "name": "lif1",

```

```

        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
        "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.
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]	
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
```

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

Name	Type	In	Required	Description
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	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.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned.
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

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

Request Body

Name	Type	Description
_links	_links	
application	application	
comment	string	Comment. Valid in POST.
components	array[components]	

Name	Type	Description
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}

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
```

Learn more

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

Parameters

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

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}

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

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

Parameters

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

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}

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

Parameters

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

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}

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 [DOC 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.
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.

Name	Type	Description
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	
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.

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.

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	
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.

maxdata_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
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
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]	

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
origin	origin	

object_stores

Name	Type	Description
name	string	The name of the object-store to use. Usage: <(size 1..512)>

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
flexcache	flexcache	
name	string	The name of the application component.
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.

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.

app_nfs_access

The list of NFS access controls.

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 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.
nfs_access	array[app_nfs_access]	The list of NFS access controls.
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
performance	performance	
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 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.
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
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.
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.
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
initiators	array[string]	

Name	Type	Description
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	Type	Description
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	Type	Description
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	

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.
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
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]	
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
initiators	array[string]	

Name	Type	Description
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.

Name	Type	Description
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	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
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.

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 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.

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

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	
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	Type	Description
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.
version	integer	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. <ul style="list-style-type: none"> • readOnly: 1

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.
protection_type	protection_type	

vdi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
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.
protection_type	protection_type	

vsi_on_san_new_igroups

The list of initiator groups to create.

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

Name	Type	Description
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
code	string	Error code
message	string	Error message

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

Update application properties

PATCH /application/applications/{uuid}

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](#)

- [DOC Asynchronous operations](#)

Parameters

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

Request Body

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

Name	Type	Description
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.
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	
san	san	A generic SAN application.

Name	Type	Description
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.
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.

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	
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.

maxdata_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
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
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]	

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
origin	origin	

object_stores

Name	Type	Description
name	string	The name of the object-store to use. Usage: <(size 1..512)>

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
flexcache	flexcache	
name	string	The name of the application component.
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.

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.

app_nfs_access

The list of NFS access controls.

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 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.
nfs_access	array[app_nfs_access]	The list of NFS access controls.
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
performance	performance	
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 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.
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
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.
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.
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
initiators	array[string]	

Name	Type	Description
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	Type	Description
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	Type	Description
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	

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.
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
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]	
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
initiators	array[string]	

Name	Type	Description
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.

Name	Type	Description
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	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
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.

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 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.

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

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	
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	Type	Description
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.
version	integer	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. <ul style="list-style-type: none"> • readOnly: 1

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.
protection_type	protection_type	

vdi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
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.
protection_type	protection_type	

vsi_on_san_new_igroups

The list of initiator groups to create.

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

Name	Type	Description
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.
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.

Name	Type	Description
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.
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	
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.

_links

Name	Type	Description
self	href	

job_link

Name	Type	Description
<u>_links</u>	_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 templates

GET /application/templates

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

- [DOC /application](#)

Parameters

Name	Type	In	Required	Description
name	string	query	False	Filter by name
protocol	string	query	False	Filter by protocol
description	string	query	False	Filter by description

Name	Type	In	Required	Description
missing_prerequisites	string	query	False	Filter by missing_prerequisites
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.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned.
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_template]	

Example response

```
{
  "_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"
      },
      "nfs_access": {
        "access": "none"
      },
      "protection_type": {
        "local_rpo": "hourly",
        "remote_rpo": "none"
      }
    },
    "nvme": {
```

```

"components": {
},
"os_type": "linux",
"rpo": {
  "local": {
    "name": "hourly"
  }
},
"protocol": "nas",
"san": {
  "application_components": {
  },
  "new_igroups": {
  },
  "os_type": "aix",
  "protection_type": {
    "local_rpo": "hourly",
    "remote_rpo": "none"
  }
}
}
}

```

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	

self_link

Name	Type	Description
self	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.

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	
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.

maxdata_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
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
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]	

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
origin	origin	

object_stores

Name	Type	Description
name	string	The name of the object-store to use. Usage: <(size 1..512)>

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
flexcache	flexcache	
name	string	The name of the application component.
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.

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.

app_nfs_access

The list of NFS access controls.

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 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.
nfs_access	array[app_nfs_access]	The list of NFS access controls.
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
performance	performance	
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 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.
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
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.
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.
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
initiators	array[string]	

Name	Type	Description
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	

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.
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
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]	
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
initiators	array[string]	

Name	Type	Description
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.

Name	Type	Description
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	

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.

Name	Type	Description
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.
protection_type	protection_type	

vdi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
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.

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[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.
protection_type	protection_type	

vsi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
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_template

Application templates

Name	Type	Description
_links	self_link	
description	string	Description.
maxdata_on_san	maxdata_on_san	MAX Data application using SAN.
missing_prerequisites	string	Missing prerequisites.

Name	Type	Description
mongo_db_on_san	mongo_db_on_san	MongoDB using SAN.
name	string	Template name.
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.
protocol	string	Access protocol.
san	san	A generic SAN application.
sql_on_san	sql_on_san	Microsoft SQL using SAN.
sql_on_smb	sql_on_smb	Microsoft SQL using SMB.
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_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 template

GET /application/templates/{name}

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

- [DOC /application](#)

Parameters

Name	Type	In	Required	Description
name	string	path	True	Template Name
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
_links	self_link	
description	string	Description.
maxdata_on_san	maxdata_on_san	MAX Data application using SAN.
missing_prerequisites	string	Missing prerequisites.
mongo_db_on_san	mongo_db_on_san	MongoDB using SAN.
name	string	Template name.
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.
protocol	string	Access protocol.
san	san	A generic SAN application.
sql_on_san	sql_on_san	Microsoft SQL using SAN.
sql_on_smb	sql_on_smb	Microsoft SQL using SMB.
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.

Example response

```
{
  "_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"
    },
    "nfs_access": {
      "access": "none"
    },
    "protection_type": {
      "local_rpo": "hourly",
      "remote_rpo": "none"
    }
  },
  "nvme": {
    "components": {
    },
    "os_type": "linux",
    "rpo": {
      "local": {
        "name": "hourly"
      }
    }
  }
},
```

```
"protocol": "nas",
"san": {
  "application_components": {
  },
  "new_igroups": {
  },
  "os_type": "aix",
  "protection_type": {
    "local_rpo": "hourly",
    "remote_rpo": "none"
  }
}
}
```

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	

self_link

Name	Type	Description
self	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.

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.

Name	Type	Description
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	
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.

maxdata_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
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
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]	

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
origin	origin	

object_stores

Name	Type	Description
name	string	The name of the object-store to use. Usage: <(size 1..512)>

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
flexcache	flexcache	
name	string	The name of the application component.
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.

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.

app_nfs_access

The list of NFS access controls.

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 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.
nfs_access	array[app_nfs_access]	The list of NFS access controls.
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
performance	performance	
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 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.
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
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.
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.
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
initiators	array[string]	

Name	Type	Description
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	

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.
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
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]	
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
initiators	array[string]	

Name	Type	Description
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.

Name	Type	Description
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	

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.

Name	Type	Description
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.
protection_type	protection_type	

vdi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
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.

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[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.
protection_type	protection_type	

vsi_on_san_new_igroups

The list of initiator groups to create.

Name	Type	Description
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.

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