Retrieve FC fabrics

REST API reference

NetApp
February 06, 2026

This PDF was generated from https://docs.netapp.com/us-en/ontap-restapi/network_fc_fabrics_endpoint_overview.html on February 06, 2026. Always check docs.netapp.com for the latest.

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Retrieve FC fabrics

Retrieve FC fabrics

Overview

The Fibre Channel (FC) fabric REST APIs provide read-only access to FC network information. This includes:

- the connections between the ONTAP cluster and the FC fabric,
- the switches that comprise the fabric, and
- the zones of the active zoneset of the fabric.

Caching

Obtaining this information from the FC fabric can be time consuming. To allow the REST API to be more responsive, the APIs always return data from a cache that is updated asynchronously, but only on demand. Cache updates are triggered when the age of cached data exceeds the caller-specified maximum age as specified by the query parameter `cache.maximum_age`.

When a GET request initiates a cache refresh, the API attempts to wait for the update to complete before returning. If the cache cannot be updated before the return timeout (see query parameter `return_timeout`), the GET returns the currently cached data, but the cache update continues asynchronously. The caller may examine the returned property `cache.update_time` or `cache.age` to determine if the returned information is sufficiently fresh. If not, the caller should wait several seconds, then make a GET request again until the returned information is updated.

Examples

Fibre Channel fabric data is typically large. The numbers of rows returned in the following examples has been edited to simplify reading.

Retrieving the Fibre Channel fabrics to which the cluster is connected

This example retrieves the names of the cluster's connected Fibre Channel fabrics. It also retrieves the cache timestamp properties so that the caller can verify the currency of the data.

```
# The API:
GET /api/network/fc/fabrics

# The call:
curl -X GET 'https://<mgmt-ip>/api/network/fc/fabrics?fields=cache' -H
'Accept: application/hal+json'

# The response:
{
"records": [
  {
    "name": "10:00:aa:bb:cc:dd:ee:ff",
```

```
    "cache": {
      "update_time": "2022-02-07T21:21:29Z",
      "age": "PT1M16S",
      "is_current": "true"
    },
    "_links": {
      "self": {
        "href":
"/api/network/fc/fabrics/10%3A00%3Aaa%3Abb%3Acc%3Add%3Aee%3Aff"
      }
    }
  },
  {
    "name": "10:00:ff:ee:dd:cc:bb:aa",
    "cache": {
      "update_time": "2022-02-07T21:21:29Z",
      "age": "PT1M16S",
      "is_current": "true"
    },
    "_links": {
      "self": {
        "href":
"/api/network/fc/fabrics/10%3A00%3Aff%3Aee%3Add%3Acc%3Abb%3Aaa"
      }
    }
  }
],
"num_records": 2,
"_links": {
  "self": {
    "href": "/api/network/fc/fabrics?fields=cache"
  }
}
}
```


Retrieving all switches of a Fibre Channel fabric

This example retrieves the switches of Fibre Channel fabric `10:00:aa:bb:cc:dd:ee:ff`.

```
# The API:
GET /api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/switches

# The call:
curl -X GET 'https://<mgmt-
```

```
ip>/api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/switches?fields=cache'
-H 'Accept: application/hal+json'

# The response:
{
"records": [
  {
    "wwn": "10:00:1a:1b:1c:1d:1e:1f",
    "cache": {
      "update_time": "2022-02-07T21:22:00Z",
      "age": "PT45S",
      "is_current": "true"
    },
    "_links": {
      "self": {
        "href":
"/api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/switches/10:00:1a:1b:1c:1
d:1e:1f"
      }
    }
  },
  {
    "wwn": "10:00:2a:2b:2c:2d:2e:1f",
    "cache": {
      "update_time": "2022-02-07T21:22:00Z",
      "age": "PT45S",
      "is_current": "true"
    },
    "_links": {
      "self": {
        "href":
"/api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/switches/10:00:2a:2b:2c:2
d:2e:1f"
      }
    }
  },
  {
    "wwn": "10:00:3a:3b:3c:3d:3e:3f",
    "cache": {
      "update_time": "2022-02-07T21:22:00Z",
      "age": "PT45S",
      "is_current": "true"
    },
    "_links": {
      "self": {
        "href":
```

```
"/api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/switches/10:00:3a:3b:3c:3
d:3e:3f"
      }
    }
  },
  {
    "wwn": "10:00:4a:4b:4c:4d:4e:4f",
    "cache": {
      "update_time": "2022-02-07T21:22:00Z",
      "age": "PT45S",
      "is_current": "true"
    },
    "_links": {
      "self": {
        "href":
"/api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/switches/10:00:4a:4b:4c:4
d:4e:4f"
      }
    }
  },
  {
    "wwn": "10:00:5a:5b:1a:5c:5d:5e",
    "cache": {
      "update_time": "2022-02-07T21:22:00Z",
      "age": "PT45S",
      "is_current": "true"
    },
    "_links": {
      "self": {
        "href":
"/api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/switches/10:00:5a:5b:1a:5
c:5d:5e"
      }
    }
  }
],
"num_records": 5,
"_links": {
  "self": {
    "href":
"/api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/switches?fields=cache"
  }
}
}
```

Retrieving all zones of the active zoneset of a Fibre Channel fabric

This example retrieves the zone of the active set of Fibre Channel fabric `10:00:aa:bb:cc:dd:ee:ff`.

```
# The API:
GET /api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/zones

# The call:
curl -X GET 'https://<mgmt-
ip>/api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/zones?fields=cache' -H
'Accept: application/hal+json'

# The response:
{
"records": [
  {
    "name": "zone1",
    "cache": {
      "update_time": "2022-02-07T20:17:06Z",
      "age": "PT1H17M54S",
      "is_current": "true"
    },
    "_links": {
      "self": {
        "href":
"/api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/zones/zone1"
      }
    }
  },
  {
    "name": "zone2",
    "cache": {
      "update_time": "2022-02-07T20:17:06Z",
      "age": "PT1H17M54S",
      "is_current": "true"
    },
    "_links": {
      "self": {
        "href":
"/api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/zones/zone2"
      }
    }
  },
  {
    "name": "zone3",
    "cache": {
```

```
      "update_time": "2022-02-07T20:17:06Z",
      "age": "PT1H17M54S",
      "is_current": "true"
    },
    "_links": {
      "self": {
        "href":
"/api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/zones/zone3"
      }
    }
  },
  {
    "name": "zone4",
    "cache": {
      "update_time": "2022-02-07T20:17:06Z",
      "age": "PT1H17M54S",
      "is_current": "true"
    },
    "_links": {
      "self": {
        "href":
"/api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/zones/zone4"
      }
    }
  }
],
"num_records": 4,
"_links": {
  "self": {
    "href":
"/api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/zones?fields=cache"
  }
}
}
```

Searching all Fibre Channel fabrics for a specific attached device identified by its WWPN

This example finds the Fibre Channel fabric, switch, and switch port to which the device with WWPN `50:0a:2a:2b:2c:2d:2e:2f` is attached. Note the use of the wildcard character in place of a fabric WWN in order to search all Fibre Channel fabrics.

```
# The API:
GET /api/network/fc/fabrics/*/switches
```

```
# The call:
curl -X GET 'https://<mgmt-
ip>/api/network/fc/fabrics/*/switches?fields=ports,cache&ports.attached_de
vice.wwpn=50:0a:2a:2b:2c:2d:2e:2f' -H 'Accept: application/hal+json'

# The response:
{
"records": [
  {
    "fabric": {
      "name": "10:00:aa:bb:cc:dd:ee:ff",
      "_links": {
        "self": {
          "href":
"/api/network/fc/fabrics/10%3A00%3Aaa%3Abb%3Acc%3Add%3Aee%3Aff"
        }
      }
    },
    "wwn": "10:00:6a:6b:6c:6d:6e:6f",
    "ports": [
      {
        "slot": "0",
        "state": "online",
        "type": "f_port",
        "wwpn": "20:00:1a:1b:1c:1d:1e:1f",
        "attached_device": {
          "port_id": "0x999000",
          "wwpn": "50:0a:1a:1b:1c:1d:1e:1f"
        }
      },
      {
        "slot": "1",
        "state": "online",
        "type": "f_port",
        "wwpn": "20:01:2a:2b:1c:2d:2e:2f",
        "attached_device": {
          "port_id": "0x999100",
          "wwpn": "50:0a:2a:2b:2c:2d:2e:2f"
        }
      },
      {
        "slot": "2",
        "state": "offline",
        "type": "none",
        "wwpn": "20:02:3a:3b:3c:3d:3e:3f"
      },
```

```
      {
        "slot": "3",
        "state": "offline",
        "type": "f_port",
        "wwpn": "20:03:4a:4b:4c:4d:4e:4f",
        "attached_device": {
          "port_id": "0x999300",
          "wwpn": "50:0a:4a:4b:4c:4d:4e:4f"
        }
      },
      {
        "slot": "4",
        "state": "online",
        "type": "f_port",
        "wwpn": "20:04:5a:5b:5c:5d:5e:5f",
        "attached_device": {
          "port_id": "0x999400",
          "wwpn": "50:0a:5a:5b:5c:5d:5e:5f"
        }
      }
    ],
    "cache": {
      "update_time": "2022-02-07T21:57:29Z",
      "age": "PT4M49S",
      "is_current": "true"
    },
    "_links": {
      "self": {
        "href":
"/api/network/fc/fabrics/10:00:aa:bb:cc:dd:ee:ff/switches/10:00:6a:6b:6c:6
d:6e:6f"
      }
    }
  }
],
"num_records": 1,
"_links": {
  "self": {
    "href":
"/api/network/fc/fabrics/*/switches?fields=ports,cache&ports.attached_devi
ce.wwpn=50:0a:2a:2b:2c:2d:2e:2f"
  }
}
}
```

Retrieve FC fabrics

GET `/network/fc/fabrics`

Introduced In: 9.11

Retrieves Fibre Channel fabrics.

Expensive properties

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

- `connections`
- `zoneset`

Related ONTAP commands

- `network fcp topology show`
- `network fcp zone show`

Learn more

- DOC /network/fc/fabrics

Parameters

Name	Type	In	Required	Description
zoneset.name	string	query	False	Filter by zoneset.name
connections.switch.wwn	string	query	False	Filter by connections.switch.wwn
connections.switch.port.wwpn	string	query	False	Filter by connections.switch.port.wwpn
connections.cluster_port.name	string	query	False	Filter by connections.cluster_port.name
connections.cluster_port.node.name	string	query	False	Filter by connections.cluster_port.node.name

Name	Type	In	Required	Description
connections.cluster_port.uuid	string	query	False	Filter by connections.cluster_port.uuid
connections.cluster_port.wwpn	string	query	False	Filter by connections.cluster_port.wwpn
name	string	query	False	Filter by name
cache.is_current	boolean	query	False	Filter by cache.is_current
cache.update_time	string	query	False	Filter by cache.update_time
cache.age	string	query	False	Filter by cache.age
cache.maximum_age	string	query	False	The maximum age of data in the Fibre Channel fabric cache before it should be refreshed from the fabric. The default is 15 minutes. • Default value: 1 • format: iso8601
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1

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

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	The number of records in the response.
records	array[fabric]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "cache": {
        "age": "PT3M30S",
        "update_time": "string"
      },
      "connections": [
        {
          "cluster_port": {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
            },
            "name": "0a",
            "node": {
              "name": "node1"
            },
            "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
            "wwpn": "50:0a:11:22:33:44:55:66"
          },
          "switch": {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
            },
            "port": {
              "wwpn": "50:0a:a1:a2:a3:a4:a5:a6"
```

```
            },
            "wwn": "10:00:b1:b2:b3:b4:b4:b6"
          }
        }
      ],
      "name": "10:00:c1:c2:c3:c4:c5:c6",
      "zoneset": {
        "name": "zoneset1"
      }
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	returned_error	

Example error


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


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

cache

Properties of Fibre Chanel fabric cache.

Name	Type	Description
age	string	The age of the Fibre Channel fabric data cache retrieved. If the FC fabric data cache has not been fully updated for a newly discovered fabric, or a fabric that has been re-discovered after being purged, a value for this property will not be retrieved. The value is in ISO 8601 duration format.
is_current	boolean	A boolean that indicates if the retrieved data is current relative to the `cache.maximum_age` value of the request. A value of `true` indicates that the data is no older than the requested maximum age. A value of `false` indicates that the data is older than the requested maximum age; if more current data is required, the caller should wait for some time for the cache update to complete and query the data again.

Name	Type	Description
update_time	string	The date and time at which the Fibre Channel fabric data cache retrieved was last updated. If the FC fabric data cache has not been fully updated for a newly discovered fabric, or a fabric that has been re-discovered after being purged, a value for this property will not be retrieved.

node

The node on which the cluster Fibre Channel port is located.

Name	Type	Description
name	string	The name of the node on which the cluster Fibre Channel port is located.

cluster_port

The cluster Fibre Channel (FC) port that connects the FC fabric.

Name	Type	Description
_links	_links	
name	string	The name of the cluster Fibre Channel port.
node	node	The node on which the cluster Fibre Channel port is located.
uuid	string	The unique identifier of the cluster Fibre Channel port.
wwpn	string	The world wide port name (WWPN) of the cluster Fibre Channel port.

port

The port of the Fibre Channel switch to which the cluster node port is connected.

Name	Type	Description
wwpn	string	The world wide port name (WWPN) of the Fibre Channel switch port.

switch

The Fibre Channel switch to which the cluster node port is connected.

Name	Type	Description
_links	_links	
port	port	The port of the Fibre Channel switch to which the cluster node port is connected.
wwn	string	The world-wide name (WWN) of the Fibre Channel switch to which the cluster node port is attached.

connections

A connection between a cluster node Fibre Channel (FC) port and an FC switch port.

Name	Type	Description
cluster_port	cluster_port	The cluster Fibre Channel (FC) port that connects the FC fabric.
switch	switch	The Fibre Channel switch to which the cluster node port is connected.

zoneset

The active Fibre Channel zoneset in the fabric.

Name	Type	Description
name	string	The name of the Fibre Channel zoneset.

fabric

A Fibre Channel (FC) fabric REST object provides information about an FC network (fabric) connected to the cluster. Logically, the FC fabric also contains FC switches and the FC zones that comprise the active zoneset of the fabric. FC switch and zone information is not reported directly in the FC fabric REST object for reasons of scale and flexibility; they are found by querying the FC switches and FC zones REST endpoints.

Name	Type	Description
_links	_links	
cache	cache	Properties of Fibre Chanel fabric cache.
connections	array[connections]	An array of the connections between the cluster and the switches Fibre Channel fabric.
name	string	The world wide name (WWN) of the primary switch of the Fibre Channel (FC) fabric. This is used as a unique identifier for the FC fabric.
zoneset	zoneset	The active Fibre Channel zoneset in the fabric.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_error

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

Retrieve FC fabric switches

GET `/network/fc/fabrics/{fabric.name}/switches`

Introduced In: 9.11

Retrieves the Fibre Channel switches of a Fibre Channel fabric.

Expensive properties

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

- `ports`

Related ONTAP commands

- `network fcp topology show`

Learn more

- DOC /network/fc/fabrics

Parameters

Name	Type	In	Required	Description
fabric.name	string	path	True	The WWN of the primary switch of the Fibre Channel fabric.
name	string	query	False	Filter by name
release	string	query	False	Filter by release
vendor	string	query	False	Filter by vendor
wwn	string	query	False	Filter by wwn
cache.age	string	query	False	Filter by cache.age
cache.update_time	string	query	False	Filter by cache.update_time
cache.is_current	boolean	query	False	Filter by cache.is_current
domain_id	integer	query	False	Filter by domain_id • Max value: 239 • Min value: 1
ports.state	string	query	False	Filter by ports.state

Name	Type	In	Required	Description
ports.slot	string	query	False	Filter by ports.slot
ports.type	string	query	False	Filter by ports.type
ports.attached_device.wwpn	string	query	False	Filter by ports.attached_device.wwpn
ports.attached_device.port_id	string	query	False	Filter by ports.attached_device.port_id
ports.wwpn	string	query	False	Filter by ports.wwpn
cache.maximum_age	string	query	False	The maximum age of data in the Fibre Channel fabric cache before it should be refreshed from the fabric. The default is 15 minutes. • Default value: 1 • format: iso8601
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Max value: 120 • Min value: 0 • Default value: 15
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	The number of records in the response.
records	array[fc_switch]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "cache": {
        "age": "PT3M30S",
        "update_time": "string"
      },
      "domain_id": 1,
      "fabric": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "10:00:d1:d2:d3:d4:d5:d6"
      },
      "name": "switch1",
      "ports": [
        {
          "attached_device": {
            "port_id": 70400,
            "wwpn": "50:0a:21:22:23:24:25:26"
          },
          "slot": 1,
          "state": "online",
          "type": "string",
          "wwpn": "50:0a:31:32:33:34:35:36"
        }
      ],
      "release": "1.0.",
```

```
      "vendor": "vendor1",
      "wwn": "10:00:e1:e2:e3:e4:e5:e6"
    }
  ]
}
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
5373982	An invalid WWN was specified. The length is incorrect.
5373983	An invalid WWN was specified. The format is incorrect.
5375053	The Fibre Channel fabric specified by name in the request URI was not found in the FC fabric cache.

Also see the table of common errors in the Response body overview section of this documentation.

Name	Type	Description
error	returned_error	

Example error

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

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

cache

Properties of Fibre Chanel fabric cache.

Name	Type	Description
age	string	The age of the Fibre Channel fabric data cache retrieved. If the FC fabric data cache has not been fully updated for a newly discovered fabric, or a fabric that has been re-discovered after being purged, a value for this property will not be retrieved. The value is in ISO 8601 duration format.
is_current	boolean	A boolean that indicates if the retrieved data is current relative to the `cache.maximum_age` value of the request. A value of `true` indicates that the data is no older than the requested maximum age. A value of `false` indicates that the data is older than the requested maximum age; if more current data is required, the caller should wait for some time for the cache update to complete and query the data again.

Name	Type	Description
update_time	string	The date and time at which the Fibre Channel fabric data cache retrieved was last updated. If the FC fabric data cache has not been fully updated for a newly discovered fabric, or a fabric that has been re-discovered after being purged, a value for this property will not be retrieved.

fabric

A reference to a Fibre Channel fabric.

Name	Type	Description
_links	_links	
name	string	The world wide name (WWN) of the primary switch of the Fibre Channel (FC) fabric. This is used as a unique identifier for the FC fabric.

attached_device

The Fibre Channel (FC) device attached to the FC switch port.

Name	Type	Description
port_id	string	The Fibre Channel port identifier of the attach device.
wwpn	string	The world-wide port name (WWPN) of the attached device.

ports

A Fibre Channel switch port.

Name	Type	Description
attached_device	attached_device	The Fibre Channel (FC) device attached to the FC switch port.
slot	string	The slot of the Fibre Channel switch port.

Name	Type	Description
state	string	The state of the Fibre Channel switch port.
type	string	The type of the Fibre Channel switch port.
wwpn	string	The world wide port name (WWPN) of the Fibre Channel switch port.

fc_switch

A Fibre Channel switch.

Name	Type	Description
_links	_links	
cache	cache	Properties of Fibre Chanel fabric cache.
domain_id	integer	The domain identifier (ID) of the Fibre Channel (FC) switch. The domain ID is a unique identifier for the FC switch in the FC fabric.
fabric	fabric	A reference to a Fibre Channel fabric.
name	string	The logical name of the Fibre Channel switch.
ports	array[ports]	An array of the Fibre Channel (FC) switch's ports and their attached FC devices.
release	string	The firmware release of the Fibre Channel switch.
vendor	string	The vendor of the Fibre Channel switch.
wwn	string	The world-wide name (WWN) for the Fibre Channel switch.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_error

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

Retrieve an FC switch

GET `/network/fc/fabrics/{fabric.name}/switches/{wwn}`

Introduced In: 9.11

Retrieves a Fibre Channel switch.

Expensive properties

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

- `ports`

Related ONTAP commands

- `network fcp topology show`

Learn more

- DOC /network/fc/fabrics

Parameters

Name	Type	In	Required	Description
fabric.name	string	path	True	The WWN of the primary switch of the Fibre Channel fabric.
wwn	string	path	True	The WWN of the Fibre Channel switch.
cache.maximum_age	string	query	False	The maximum age of data in the Fibre Channel fabric cache before it should be refreshed from the fabric. The default is 15 minutes. • Default value: 1 • format: iso8601
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
cache	cache	Properties of Fibre Chanel fabric cache.
domain_id	integer	The domain identifier (ID) of the Fibre Channel (FC) switch. The domain ID is a unique identifier for the FC switch in the FC fabric.
fabric	fabric	A reference to a Fibre Channel fabric.
name	string	The logical name of the Fibre Channel switch.

Name	Type	Description
ports	array[ports]	An array of the Fibre Channel (FC) switch's ports and their attached FC devices.
release	string	The firmware release of the Fibre Channel switch.
vendor	string	The vendor of the Fibre Channel switch.
wwn	string	The world-wide name (WWN) for the Fibre Channel switch.

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "cache": {
    "age": "PT3M30S",
    "update_time": "string"
  },
  "domain_id": 1,
  "fabric": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "10:00:d1:d2:d3:d4:d5:d6"
  },
  "name": "switch1",
  "ports": [
    {
      "attached_device": {
        "port_id": 70400,
        "wwpn": "50:0a:21:22:23:24:25:26"
      },
      "slot": 1,
      "state": "online",
      "type": "string",
      "wwpn": "50:0a:31:32:33:34:35:36"
    }
  ],
  "release": "1.0.",
  "vendor": "vendor1",
  "wwn": "10:00:e1:e2:e3:e4:e5:e6"
}
```


Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
5373982	An invalid WWN was specified. The length is incorrect.
5373983	An invalid WWN was specified. The format is incorrect.
5375053	The Fibre Channel fabric specified by name in the request URI was not found in the FC fabric cache.

Also see the table of common errors in the Response body overview section of this documentation.

Name	Type	Description
error	returned_error	

Example error

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

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

cache

Properties of Fibre Chanel fabric cache.

Name	Type	Description
age	string	The age of the Fibre Channel fabric data cache retrieved. If the FC fabric data cache has not been fully updated for a newly discovered fabric, or a fabric that has been re-discovered after being purged, a value for this property will not be retrieved. The value is in ISO 8601 duration format.
is_current	boolean	A boolean that indicates if the retrieved data is current relative to the `cache.maximum_age` value of the request. A value of `true` indicates that the data is no older than the requested maximum age. A value of `false` indicates that the data is older than the requested maximum age; if more current data is required, the caller should wait for some time for the cache update to complete and query the data again.

Name	Type	Description
update_time	string	The date and time at which the Fibre Channel fabric data cache retrieved was last updated. If the FC fabric data cache has not been fully updated for a newly discovered fabric, or a fabric that has been re-discovered after being purged, a value for this property will not be retrieved.

fabric

A reference to a Fibre Channel fabric.

Name	Type	Description
_links	_links	
name	string	The world wide name (WWN) of the primary switch of the Fibre Channel (FC) fabric. This is used as a unique identifier for the FC fabric.

attached_device

The Fibre Channel (FC) device attached to the FC switch port.

Name	Type	Description
port_id	string	The Fibre Channel port identifier of the attach device.
wwpn	string	The world-wide port name (WWPN) of the attached device.

ports

A Fibre Channel switch port.

Name	Type	Description
attached_device	attached_device	The Fibre Channel (FC) device attached to the FC switch port.
slot	string	The slot of the Fibre Channel switch port.

Name	Type	Description
state	string	The state of the Fibre Channel switch port.
type	string	The type of the Fibre Channel switch port.
wwpn	string	The world wide port name (WWPN) of the Fibre Channel switch port.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_error

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

Retrieve FC fabric zones

GET `/network/fc/fabrics/{fabric.name}/zones`

Introduced In: 9.11

Retrieves the zones of the active zoneset of a Fibre Channel fabric.

Expensive properties

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

- `members`

Related ONTAP commands

- `network fcp zone show`

Learn more

- DOC /network/fc/fabrics

Parameters

Name	Type	In	Required	Description
fabric.name	string	path	True	The WWN of the primary switch of the Fibre Channel fabric.
name	string	query	False	Filter by name
cache.age	string	query	False	Filter by cache.age
cache.is_current	boolean	query	False	Filter by cache.is_current
cache.update_time	string	query	False	Filter by cache.update_time
members.name	string	query	False	Filter by members.name
members.type	string	query	False	Filter by members.type
cache.maximum_age	string	query	False	The maximum age of data in the Fibre Channel fabric cache before it should be refreshed from the fabric. The default is 15 minutes. • Default value: 1 • format: iso8601
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_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 15 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	The number of records in the response.
records	array[fc_zone]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "cache": {
        "age": "PT3M30S",
        "update_time": "string"
      },
      "fabric": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "10:00:d1:d2:d3:d4:d5:d6"
      },
      "members": [
        {
          "name": "10:00:12:34:56:78:9a:bc",
          "type": "port_name"
        }
      ],
      "name": "zone1"
    }
  ]
}
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
5373982	An invalid WWN was specified. The length is incorrect.
5373983	An invalid WWN was specified. The format is incorrect.
5375053	The Fibre Channel fabric specified by name in the request URI was not found in the FC fabric cache.

Also see the table of common errors in the Response body overview section of this documentation.

Name	Type	Description
error	returned_error	

Example error

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

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

cache

Properties of Fibre Chanel fabric cache.

Name	Type	Description
age	string	The age of the Fibre Channel fabric data cache retrieved. If the FC fabric data cache has not been fully updated for a newly discovered fabric, or a fabric that has been re-discovered after being purged, a value for this property will not be retrieved. The value is in ISO 8601 duration format.
is_current	boolean	A boolean that indicates if the retrieved data is current relative to the `cache.maximum_age` value of the request. A value of `true` indicates that the data is no older than the requested maximum age. A value of `false` indicates that the data is older than the requested maximum age; if more current data is required, the caller should wait for some time for the cache update to complete and query the data again.

Name	Type	Description
update_time	string	The date and time at which the Fibre Channel fabric data cache retrieved was last updated. If the FC fabric data cache has not been fully updated for a newly discovered fabric, or a fabric that has been re-discovered after being purged, a value for this property will not be retrieved.

fabric

A reference to a Fibre Channel fabric.

Name	Type	Description
_links	_links	
name	string	The world wide name (WWN) of the primary switch of the Fibre Channel (FC) fabric. This is used as a unique identifier for the FC fabric.

members

A Fibre Channel zone member.

Name	Type	Description
name	string	The identifying property value of the zone member. The format of this value depends on the member type: • `port_id`: A zero-filled 6-digit hexadecimal value with a 0x prefer. Example: 0x0000A0. • `port_name`: A world-wide name. Example: 10:00:12:34:56:78:9a:bc. • `domain_id_port`: A domain ID and a port ID as decimal integers separated by a slash. Example: 1/2. • `node_name`: A world-wide name. Example: 10:00:11:22:33:44:55:66. • `fabric_port_name`: A world-wide name. Example: 10:00:ab:cd:ef:12:34:56. # The following types might not report a name: • `interface` • `domain_interface` • `ip_address` • `symbolic_node_name` • `device_alias`
type	string	The type of Fibre Channel zone member. This value should be used to interpret the contents of the `name` property.

fc_zone

A Fibre Channel zone.

Name	Type	Description
_links	_links	

Name	Type	Description
cache	cache	Properties of Fibre Chanel fabric cache.
fabric	fabric	A reference to a Fibre Channel fabric.
members	array[members]	An array of Fibre Channel zone members.
name	string	The name of the Fibre Channel zone.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_error

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

Retrieve an FC fabric zone

GET `/network/fc/fabrics/{fabric.name}/zones/{name}`

Introduced In: 9.11

Retrieves a zone of the active zoneset of a Fibre Channel fabric.

Expensive properties

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

fields to learn more.

- `members`

Related ONTAP commands

- `network fcp zone show`

Learn more

- DOC /network/fc/fabrics

Parameters

Name	Type	In	Required	Description
fabric.name	string	path	True	The WWN of the primary switch of the Fibre Channel fabric.
name	string	path	True	The name of a zone in the active zoneset the Fibre Channel fabric.
cache.maximum_age	string	query	False	The maximum age of data in the Fibre Channel fabric cache before it should be refreshed from the fabric. The default is 15 minutes. • Default value: 1 • format: iso8601
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	

Name	Type	Description
cache	cache	Properties of Fibre Chanel fabric cache.
fabric	fabric	A reference to a Fibre Channel fabric.
members	array[members]	An array of Fibre Channel zone members.
name	string	The name of the Fibre Channel zone.

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "cache": {
    "age": "PT3M30S",
    "update_time": "string"
  },
  "fabric": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "10:00:d1:d2:d3:d4:d5:d6"
  },
  "members": [
    {
      "name": "10:00:12:34:56:78:9a:bc",
      "type": "port_name"
    }
  ],
  "name": "zone1"
}
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
5373982	An invalid WWN was specified. The length is incorrect.
5373983	An invalid WWN was specified. The format is incorrect.
5375053	The Fibre Channel fabric specified by name in the request URI was not found in the FC fabric cache.

Also see the table of common errors in the Response body overview section of this documentation.

Name	Type	Description
error	returned_error	

Example error

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

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

cache

Properties of Fibre Chanel fabric cache.

Name	Type	Description
age	string	The age of the Fibre Channel fabric data cache retrieved. If the FC fabric data cache has not been fully updated for a newly discovered fabric, or a fabric that has been re-discovered after being purged, a value for this property will not be retrieved. The value is in ISO 8601 duration format.
is_current	boolean	A boolean that indicates if the retrieved data is current relative to the `cache.maximum_age` value of the request. A value of `true` indicates that the data is no older than the requested maximum age. A value of `false` indicates that the data is older than the requested maximum age; if more current data is required, the caller should wait for some time for the cache update to complete and query the data again.

Name	Type	Description
update_time	string	The date and time at which the Fibre Channel fabric data cache retrieved was last updated. If the FC fabric data cache has not been fully updated for a newly discovered fabric, or a fabric that has been re-discovered after being purged, a value for this property will not be retrieved.

fabric

A reference to a Fibre Channel fabric.

Name	Type	Description
_links	_links	
name	string	The world wide name (WWN) of the primary switch of the Fibre Channel (FC) fabric. This is used as a unique identifier for the FC fabric.

members

A Fibre Channel zone member.

Name	Type	Description
name	string	The identifying property value of the zone member. The format of this value depends on the member type: • `port_id`: A zero-filled 6-digit hexadecimal value with a 0x prefer. Example: 0x0000A0. • `port_name`: A world-wide name. Example: 10:00:12:34:56:78:9a:bc. • `domain_id_port`: A domain ID and a port ID as decimal integers separated by a slash. Example: 1/2. • `node_name`: A world-wide name. Example: 10:00:11:22:33:44:55:66. • `fabric_port_name`: A world-wide name. Example: 10:00:ab:cd:ef:12:34:56. # The following types might not report a name: • `interface` • `domain_interface` • `ip_address` • `symbolic_node_name` • `device_alias`
type	string	The type of Fibre Channel zone member. This value should be used to interpret the contents of the `name` property.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_error

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

Retrieve an FC fabric

GET `/network/fc/fabrics/{name}`

Introduced In: 9.11

Retrieves a Fibre Channel fabric.

Expensive properties

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

- `connections`
- `zoneset`

Related ONTAP commands

- `network fcp topology show`
- `network fcp zone show`

Learn more

- DOC /network/fc/fabrics

Parameters

Name	Type	In	Required	Description
name	string	path	True	The world wide name (WWN) of the primary switch of the Fibre Channel fabric.
cache.maximum_age	string	query	False	The maximum age of data in the Fibre Channel fabric cache before it should be refreshed from the fabric. The default is 15 minutes. • Default value: 1 • format: iso8601
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
cache	cache	Properties of Fibre Chanel fabric cache.
connections	array[connections]	An array of the connections between the cluster and the switches Fibre Channel fabric.
name	string	The world wide name (WWN) of the primary switch of the Fibre Channel (FC) fabric. This is used as a unique identifier for the FC fabric.
zoneset	zoneset	The active Fibre Channel zoneset in the fabric.

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "cache": {
    "age": "PT3M30S",
    "update_time": "string"
  },
  "connections": [
    {
      "cluster_port": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "0a",
        "node": {
          "name": "node1"
        },
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
        "wwpn": "50:0a:11:22:33:44:55:66"
      },
      "switch": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "port": {
          "wwpn": "50:0a:a1:a2:a3:a4:a5:a6"
        },
        "wwn": "10:00:b1:b2:b3:b4:b4:b6"
      }
    }
  ],
  "name": "10:00:c1:c2:c3:c4:c5:c6",
  "zoneset": {
    "name": "zoneset1"
  }
}
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
5373982	An invalid WWN was specified. The length is incorrect.
5373983	An invalid WWN was specified. The format is incorrect.

Also see the table of common errors in the Response body overview section of this documentation.

Name	Type	Description
error	returned_error	

Example error

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

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

cache

Properties of Fibre Chanel fabric cache.

Name	Type	Description
age	string	The age of the Fibre Channel fabric data cache retrieved. If the FC fabric data cache has not been fully updated for a newly discovered fabric, or a fabric that has been re-discovered after being purged, a value for this property will not be retrieved. The value is in ISO 8601 duration format.
is_current	boolean	A boolean that indicates if the retrieved data is current relative to the `cache.maximum_age` value of the request. A value of `true` indicates that the data is no older than the requested maximum age. A value of `false` indicates that the data is older than the requested maximum age; if more current data is required, the caller should wait for some time for the cache update to complete and query the data again.

Name	Type	Description
update_time	string	The date and time at which the Fibre Channel fabric data cache retrieved was last updated. If the FC fabric data cache has not been fully updated for a newly discovered fabric, or a fabric that has been re-discovered after being purged, a value for this property will not be retrieved.

node

The node on which the cluster Fibre Channel port is located.

Name	Type	Description
name	string	The name of the node on which the cluster Fibre Channel port is located.

cluster_port

The cluster Fibre Channel (FC) port that connects the FC fabric.

Name	Type	Description
_links	_links	
name	string	The name of the cluster Fibre Channel port.
node	node	The node on which the cluster Fibre Channel port is located.
uuid	string	The unique identifier of the cluster Fibre Channel port.
wwpn	string	The world wide port name (WWPN) of the cluster Fibre Channel port.

port

The port of the Fibre Channel switch to which the cluster node port is connected.

Name	Type	Description
wwpn	string	The world wide port name (WWPN) of the Fibre Channel switch port.

switch

The Fibre Channel switch to which the cluster node port is connected.

Name	Type	Description
_links	_links	
port	port	The port of the Fibre Channel switch to which the cluster node port is connected.
wwn	string	The world-wide name (WWN) of the Fibre Channel switch to which the cluster node port is attached.

connections

A connection between a cluster node Fibre Channel (FC) port and an FC switch port.

Name	Type	Description
cluster_port	cluster_port	The cluster Fibre Channel (FC) port that connects the FC fabric.
switch	switch	The Fibre Channel switch to which the cluster node port is connected.

zoneset

The active Fibre Channel zoneset in the fabric.

Name	Type	Description
name	string	The name of the Fibre Channel zoneset.

error_arguments

Name	Type	Description
code	string	Argument code

Name	Type	Description
message	string	Message argument

returned_error

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

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