



Retrieve FC fabrics

ONTAP 9.12.1 REST API reference

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Retrieve FC fabrics

Network FC fabrics endpoint overview

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:6d:6e:6f"
    }
  }
},
"num_records": 1,
"_links": {
  "self": {
    "href":
"/api/network/fc/fabrics/*/switches?fields=ports,cache&ports.attached_device.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 |
|------------------------------------|--------|-------|----------|--|
| name | string | query | False | Filter by name |
| zoneset.name | string | query | False | Filter by zoneset.name |
| connections.cluster_port.name | string | query | False | Filter by connections.cluster_port.name |
| connections.cluster_port.uuid | string | query | False | Filter by connections.cluster_port.uuid |
| connections.cluster_port.node.name | string | query | False | Filter by connections.cluster_port.node.name |

| Name | Type | In | Required | Description |
|-------------------------------|---------------|-------|----------|---|
| connections.cluster_port.wwpn | string | query | False | Filter by connections.cluster_port.wwpn |
| connections.switch.port.wwpn | string | query | False | Filter by connections.switch.port.wwpn |
| connections.switch.wwn | string | query | False | Filter by connections.switch.wwn |
| 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 | <p>The maximum age of data in the Fibre Channel fabric cache before it should be refreshed from the fabric. The default is 15 minutes.</p> <ul style="list-style-type: none"> • Introduced in: 9.13 • 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 | <p>The default is true for GET calls. When set to false, only the number of records is returned.</p> <ul style="list-style-type: none"> • Default value: 1 |

| Name | Type | In | Required | Description |
|----------------|---------------|-------|----------|--|
| return_timeout | integer | query | False | <p>The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0 |
| order_by | array[string] | query | False | Order results by specified fields and optional [asc |

Response

Status: 200, Ok

| Name | Type | Description |
|-------------|---------------------------------|--|
| _links | _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 | 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 <code>cache.maximum_age</code> value of the request. A value of <code>true</code> indicates that the data is no older than the requested maximum age. A value of <code>false</code> 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 Channel 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 |

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 |
|-------------------------------|---------|-------|----------|---|
| cache.update_time | string | query | False | Filter by cache.update_time |
| cache.age | string | query | False | Filter by cache.age |
| cache.is_current | boolean | query | False | Filter by cache.is_current |
| wwn | string | query | False | Filter by wwn |
| ports.wwpn | string | query | False | Filter by ports.wwpn |
| ports.state | string | query | False | Filter by ports.state |
| ports.attached_device.port_id | string | query | False | Filter by ports.attached_device.port_id |
| ports.attached_device.wwpn | string | query | False | Filter by ports.attached_device.wwpn |
| ports.slot | string | query | False | Filter by ports.slot |
| ports.type | string | query | False | Filter by ports.type |

| Name | Type | In | Required | Description |
|-------------------|---------------|-------|----------|--|
| domain_id | integer | query | False | Filter by domain_id <ul style="list-style-type: none"> • Max value: 239 • Min value: 1 |
| vendor | string | query | False | Filter by vendor |
| release | string | query | False | Filter by release |
| name | string | query | False | Filter by name |
| 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. <ul style="list-style-type: none"> • Introduced in: 9.13 • 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. <ul style="list-style-type: none"> • Default value: 1 |

| Name | Type | In | Required | Description |
|----------------|---------------|-------|----------|--|
| return_timeout | integer | query | False | <p>The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached.</p> <ul style="list-style-type: none"> • Max value: 120 • Min value: 0 • Default value: 1 |
| order_by | array[string] | query | False | Order results by specified fields and optional [asc |

Response

Status: 200, Ok

| Name | Type | Description |
|-------------|------------------------------------|--|
| _links | _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": "0x011300",
        "wwpn": "50:0a:21:22:23:24:25:26"
      },
      "slot": "1",
      "state": "online",
      "type": "b_port",
      "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 |
|------------|---|
| 5375053 | The Fibre Channel fabric specified by name in the request URI was not found in the FC fabric cache. |

| 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 | |

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 <code>cache.maximum_age</code> value of the request. A value of <code>true</code> indicates that the data is no older than the requested maximum age. A value of <code>false</code> 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 Channel 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 |

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 |
|-------------------|---------------|-------|----------|---|
| cache.maximum_age | string | query | False | <p>The maximum age of data in the Fibre Channel fabric cache before it should be refreshed from the fabric. The default is 15 minutes.</p> <ul style="list-style-type: none"> • Default value: 1 • format: iso8601 • Introduced in: 9.13 |
| fields | array[string] | query | False | Specify the fields to return. |

Response

Status: 200, Ok

| Name | Type | Description |
|-----------|--------------------------------|---|
| _links | _links | |
| cache | cache | Properties of Fibre Channel 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. |

| Name | Type | Description |
|--------|--------|---|
| 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": "0x011300",
    "wwpn": "50:0a:21:22:23:24:25:26"
  },
  "slot": "1",
  "state": "online",
  "type": "b_port",
  "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 |
|------------|---|
| 5375053 | The Fibre Channel fabric specified by name in the request URI was not found in the FC fabric cache. |

| 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 | |

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 <code>cache.maximum_age</code> value of the request. A value of <code>true</code> indicates that the data is no older than the requested maximum age. A value of <code>false</code> 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 |

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 |
|--------------------------------|---------------|-------|----------|---|
| <code>name</code> | string | query | False | Filter by name |
| <code>members.type</code> | string | query | False | Filter by members.type |
| <code>members.name</code> | string | query | False | Filter by members.name |
| <code>cache.update_time</code> | string | query | False | Filter by cache.update_time |
| <code>cache.age</code> | string | query | False | Filter by cache.age |
| <code>cache.is_current</code> | boolean | query | False | Filter by cache.is_current |
| <code>cache.maximum_age</code> | string | query | False | <p>The maximum age of data in the Fibre Channel fabric cache before it should be refreshed from the fabric. The default is 15 minutes.</p> <ul style="list-style-type: none"> • Introduced in: 9.13 • Default value: 1 • format: iso8601 |
| <code>fields</code> | 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 | <p>The default is true for GET calls. When set to false, only the number of records is returned.</p> <ul style="list-style-type: none"> • Default value: 1 |
| return_timeout | integer | query | False | <p>The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0 |
| 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 |
|------------|---|
| 5375053 | The Fibre Channel fabric specified by name in the request URI was not found in the FC fabric cache. |

| 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 | |

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 <code>cache.maximum_age</code> value of the request. A value of <code>true</code> indicates that the data is no older than the requested maximum age. A value of <code>false</code> 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 | <p>The identifying property value of the zone member. The format of this value depends on the member type:</p> <ul style="list-style-type: none"> • <code>port_id</code>: A zero-filled 6-digit hexadecimal value with a 0x prefer. Example: 0x0000A0. • <code>port_name</code>: A world-wide name. Example: 10:00:12:34:56:78:9a:bc. • <code>domain_id_port</code>: A domain ID and a port ID as decimal integers separated by a slash. Example: 1/2. • <code>node_name</code>: A world-wide name. Example: 10:00:11:22:33:44:55:66. • <code>fabric_port_name</code>: A world-wide name. Example: 10:00:ab:cd:ef:12:34:56. <p>#</p> <p>The following types might not report a name:</p> <ul style="list-style-type: none"> • <code>interface</code> • <code>domain_interface</code> • <code>ip_address</code> • <code>symbolic_node_name</code> • <code>device_alias</code> |
| type | string | The type of Fibre Channel zone member. This value should be used to interpret the contents of the <code>name</code> property. |

fc_zone

A Fibre Channel zone.

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

| Name | Type | Description |
|---------|----------------------------------|---|
| cache | cache | Properties of Fibre Channel 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 |

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 |
|-------------------|---------------|-------|----------|--|
| 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. <ul style="list-style-type: none">• Default value: 1• format: iso8601• Introduced in: 9.13 |
| 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. |
| fabric | fabric | A reference to a Fibre Channel fabric. |

| Name | Type | Description |
|---------|----------------------------------|---|
| 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 |
|------------|---|
| 5375053 | The Fibre Channel fabric specified by name in the request URI was not found in the FC fabric cache. |

| 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 | |

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 <code>cache.maximum_age</code> value of the request. A value of <code>true</code> indicates that the data is no older than the requested maximum age. A value of <code>false</code> 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 | <p>The identifying property value of the zone member. The format of this value depends on the member type:</p> <ul style="list-style-type: none"> • <code>port_id</code>: A zero-filled 6-digit hexadecimal value with a 0x prefer. Example: 0x0000A0. • <code>port_name</code>: A world-wide name. Example: 10:00:12:34:56:78:9a:bc. • <code>domain_id_port</code>: A domain ID and a port ID as decimal integers separated by a slash. Example: 1/2. • <code>node_name</code>: A world-wide name. Example: 10:00:11:22:33:44:55:66. • <code>fabric_port_name</code>: A world-wide name. Example: 10:00:ab:cd:ef:12:34:56. <p>#</p> <p>The following types might not report a name:</p> <ul style="list-style-type: none"> • <code>interface</code> • <code>domain_interface</code> • <code>ip_address</code> • <code>symbolic_node_name</code> • <code>device_alias</code> |
| type | string | The type of Fibre Channel zone member. This value should be used to interpret the contents of the <code>name</code> property. |

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 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 |
|-------------------|---------------|-------|----------|---|
| cache.maximum_age | string | query | False | <p>The maximum age of data in the Fibre Channel fabric cache before it should be refreshed from the fabric. The default is 15 minutes.</p> <ul style="list-style-type: none"> • Default value: 1 • format: iso8601 • Introduced in: 9.13 |
| fields | array[string] | query | False | Specify the fields to return. |

Response

Status: 200, Ok

| Name | Type | Description |
|-------------|--------------------------------------|--|
| _links | _links | |
| cache | cache | Properties of Fibre Channel 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, 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 | |

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 <code>cache.maximum_age</code> value of the request. A value of <code>true</code> indicates that the data is no older than the requested maximum age. A value of <code>false</code> 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 |

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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