Retrieve network Ethernet switch ports

REST API reference

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Retrieve network Ethernet switch ports

Network Ethernet switch ports endpoint overview

Overview

This API can be used to get the port information for an ethernet switch used in a cluster or storage networks. This API supports GET only. The GET operation returns a list of ports with status and configuration information.

Examples

Retrieving the ports for ethernet switches

The following example retrieves the ethernet switch ports for all the ethernet switches used for cluster and/or storage networks. Note that if the *fields=** parameter is not specified, the fields in-octets, in-errors, in-discards, out-octets, out-errors, out-discards, interface-number, unique-name, mac-address are not returned. Filters can be added on the fields to limit the results.

```
# The API:
GET /network/ethernet/switch/ports

# The call:
curl -X GET "https://<mgmt-
ip>/api/network/ethernet/switch/ports?return_records=true" -H  "accept:
application/json" -H  "Content-Type: application/hal+json"

# The response: (abbreviated output due to length, shows a port connected
to a node, a port with no remote connection and a port connected to shelf)
{
"records": [
  {
    "switch": {
      "name": "RTP-CS01-510R11(FOC22092K12)",
      "_links": {
        "self": {
          "href": "/api/network/ethernet/switches/RTP-CS01-
510R11(FOC22092K12)"
        }
      }
    },
    "identity": {
      "name": "Ethernet1/1",
      "index": 436207616,
      "number": 1,
      "type": "ethernetcsmacd"
    },
    "mtu": 9216,
```

```
    "duplex_type": "full_duplex",
    "speed": 100000,
    "configured": "up",
    "state": "up",
    "isl": false,
    "statistics": {
      "receive_raw": {
        "packets": 1616467751,
        "errors": 0,
        "discards": 0
      },
      "transmit_raw": {
        "packets": 206717534,
        "errors": 0,
        "discards": 0
      }
    },
    "remote_port": {
      "mtu": 9000,
      "name": "e3a",
      "device": {
        "node": {
          "name": "stiA400-311",
          "uuid": "54c0f036-8a3a-11ea-893d-00a098fd726d",
          "_links": {
            "self": {
              "href": "/api/cluster/nodes/54c0f036-8a3a-11ea-893d-
00a098fd726d"
            }
          }
        }
      }
    },
    "mac_address": "00be75ae2ad4",
    "vlan_id": [
      1,
      17,
      18,
      92
    ],
    "_links": {
      "self": {
        "href": "/api/network/ethernet/switch/ports/RTP-CS01-
510R11%28FOC22092K12%29/Ethernet1%2F1/436207616"
      }
    }
```

```
  },
  {
    "switch": {
      "name": "RTP-CS01-510R11(FOC22092K12)",
      "_links": {
        "self": {
          "href": "/api/network/ethernet/switches/RTP-CS01-
510R11(FOC22092K12)"
        }
      }
    },
    "identity": {
      "name": "Ethernet1/11",
      "index": 436212736,
      "number": 11,
      "type": "ethernetcsmacd"
    },
    "mtu": 9216,
    "duplex_type": "unknown",
    "speed": 100000,
    "configured": "up",
    "state": "down",
    "isl": false,
    "statistics": {
      "receive_raw": {
        "packets": 0,
        "errors": 0,
        "discards": 0
        },
      "transmit_raw": {
        "packets": 0,
        "errors": 0,
        "discards": 0
      }
    },
    "mac_address": "00be75ae2afc",
    "vlan_id": [
      1,
      17,
      18,
      92
    ],
    "_links": {
      "self": {
        "href": "/api/network/ethernet/switch/ports/RTP-CS01-
510R11%28FOC22092K12%29/Ethernet1%2F11/436212736"
```

```
      }
    }
  },
  {
    "switch": {
      "name": "RTP-SS01-510R10(FOC22170DFR)",
      "_links": {
        "self": {
          "href": "/api/network/ethernet/switches/RTP-SS01-
510R10(FOC22170DFR)"
        }
      }
    },
    "identity": {
      "name": "Ethernet1/10",
      "index": 436212224,
      "number": 10,
      "type": "ethernetcsmacd"
    },
    "mtu": 9216,
    "duplex_type": "full_duplex",
    "speed": 100000,
    "configured": "up",
    "state": "up",
    "isl": false,
    "statistics": {
      "receive_raw": {
        "packets": 332013844,
        "errors": 0,
        "discards": 0
      },
      "transmit_raw": {
        "packets": 2429595607,
        "errors": 0,
        "discards": 0
      }
    },
    "remote_port": {
      "mtu": 9000,
      "name": "e0a",
      "device": {
        "shelf": {
          "name": "SHFFG1828000004:B",
          "uid": "12439000444923584512",
          "_links": {
            "self": {
```

```
              "href": "/api/storage/shelves/12439000444923584512"
            }
          }
        }
      }
    },
    "mac_address": "00fcbaead548",
    "vlan_id": [
      1,
      30
    ],
    "_links": {
      "self": {
        "href": "/api/network/ethernet/switch/ports/RTP-SS01-
510R10%28FOC22170DFR%29/Ethernet1%2F10/436212224"
      }
    }
  }
],
"num_records": 138,
"_links": {
  "self": {
    "href":
"/api/network/ethernet/switch/ports?fields=*&return_records=true"
  }
}
}
```


Retrieving a ports on an ethernet switch


```
# The API:
GET /network/ethernet/switch/ports/{switch.name}/{identity.name}/
{identity.index}

# The call:
curl -X GET "https://<mgmt-ip>/api/network/ethernet/switch/ports/RTP-SS02-
510R10%28FOC22131U6T%29/Ethernet1%2F9/436211712?return_records=true" -H
"accept: application/json" -H  "Content-Type: application/hal+json"

# The response:
{
"switch": {
  "name": "RTP-SS02-510R10(FOC22131U6T)",
  "_links": {
```

```
    "self": {
      "href": "/api/network/ethernet/switches/RTP-SS02-
510R10(FOC22131U6T)"
    }
  }
},
"identity": {
  "name": "Ethernet1/9",
  "index": 436211712,
  "number": 9,
  "type": "ethernetcsmacd"
},
"mtu": 9216,
"duplex_type": "full_duplex",
"speed": 100000,
"configured": "up",
"state": "up",
"isl": false,
"statistics": {
  "receive_raw": {
    "packets": 4012559315,
    "errors": 0,
    "discards": 0
  },
  "transmit_raw": {
    "packets": 337898026,
    "errors": 0,
    "discards": 0
 }
},
"remote_port": {
  "mtu": 9000,
  "name": "e0b",
  "device": {
    "shelf": {
      "name": "SHFFG1828000004:A",
      "uid": "12439000444923584512",
      "_links": {
        "self": {
          "href": "/api/storage/shelves/12439000444923584512"
        }
      }
    }
  }
},
"mac_address": "00fcbaea7228",
```

```
"vlan_id": [
  1,
  30
],
"_links": {
  "self": {
    "href": "/api/network/ethernet/switch/ports/RTP-SS02-
510R10%28FOC22131U6T%29/Ethernet1%2F9/436211712"
  }
}
}
```


Retrieve Ethernet switch ports

GET `/network/ethernet/switch/ports`

Introduced In: 9.8

Retrieves the ethernet switch ports.

Related ONTAP commands

- `system switch ethernet interface show`

Learn more

- DOC /network/ethernet/switch/ports

Parameters

Name	Type	In	Required	Description
state	string	query	False	Filter by state
duplex_type	string	query	False	Filter by duplex_type
identity.name	string	query	False	Filter by identity.name
identity.index	integer	query	False	Filter by identity.index
identity.number	integer	query	False	Filter by identity.number

Name	Type	In	Required	Description
switch.name	string	query	False	Filter by switch.name
statistics.receive_raw.packets	integer	query	False	Filter by statistics.receive_raw.packets
statistics.receive_raw.discards	integer	query	False	Filter by statistics.receive_raw.discards
statistics.receive_raw.errors	integer	query	False	Filter by statistics.receive_raw.errors
statistics.transmit_raw.packets	integer	query	False	Filter by statistics.transmit_raw.packets
statistics.transmit_raw.discards	integer	query	False	Filter by statistics.transmit_raw.discards
statistics.transmit_raw.errors	integer	query	False	Filter by statistics.transmit_raw.errors
configured	string	query	False	Filter by configured
mtu	integer	query	False	Filter by mtu
isl	boolean	query	False	Filter by isl
vlan_id	integer	query	False	Filter by vlan_id
mac_address	string	query	False	Filter by mac_address
type	string	query	False	Filter by type
speed	integer	query	False	Filter by speed
remote_port.mtu	integer	query	False	Filter by remote_port.mtu

Name	Type	In	Required	Description
remote_port.name	string	query	False	Filter by remote_port.name
remote_port.device.shelf.uid	string	query	False	Filter by remote_port.device.shelf.uid
remote_port.device.node.name	string	query	False	Filter by remote_port.device.node.name
remote_port.device.node.uuid	string	query	False	Filter by remote_port.device.node.uuid
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
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: 1 • Max value: 120 • Min value: 0

Name	Type	In	Required	Description
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	collection_links	
num_records	integer	Number of Records
records	array[switch_port]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "configured": "string",
      "duplex_type": "string",
      "identity": {
        "index": 0,
        "name": "string",
        "number": 0
      },
      "mac_address": "string",
      "mtu": 0,
      "remote_port": {
        "device": {
          "node": {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
            },
            "name": "node1",
            "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
          },
          "shelf": {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
            },
            "uid": "77778419158273910 56"
          }
```

```
        },
        "mtu": 0,
        "name": "string"
      },
      "speed": 0,
      "state": "string",
      "statistics": {
        "receive_raw": {
          "discards": "100",
          "errors": "200",
          "packets": "500"
        },
        "transmit_raw": {
          "discards": "100",
          "errors": "200",
          "packets": "500"
        }
      },
      "switch": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "RTP-SS01-510R03(FOC223443KQ)"
      },
      "type": "string",
      "vlan_id": [
        "integer"
      ]
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


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


Definitions

See Definitions

href

Name	Type	Description
href	string	

collection_links

Name	Type	Description
next	href	
self	href	

self_link

Name	Type	Description
self	href	

identity

Name	Type	Description
index	integer	Interface Index.
name	string	Interface Name.
number	integer	Interface Number.

_links

Name	Type	Description
self	href	

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

shelf

Shelf connected to this port.

Name	Type	Description
_links	_links	
uid	string	

device

Device connected to port.

Name	Type	Description
node	node	
shelf	shelf	Shelf connected to this port.

remote_port

Remote port

Name	Type	Description
device	device	Device connected to port.
mtu	integer	MTU in octets
name	string	Port Name.

receive_raw

Packet receive counters for the Ethernet port.

Name	Type	Description
discards	integer	Total number of discarded packets.
errors	integer	Number of packet errors.
packets	integer	Total packet count.

transmit_raw

Packet transmit counters for the Ethernet port.

Name	Type	Description
discards	integer	Total number of discarded packets.

Name	Type	Description
errors	integer	Number of packet errors.
packets	integer	Total packet count.

statistics

These are raw counters for the device associated with the Ethernet port.

Name	Type	Description
receive_raw	receive_raw	Packet receive counters for the Ethernet port.
transmit_raw	transmit_raw	Packet transmit counters for the Ethernet port.

switch

The name of the specified cluster or storage switch.

Name	Type	Description
_links	self_link	
name	string	

switch_port

Ethernet Switch Port REST API

Name	Type	Description
_links	self_link	
configured	string	Administrative Status.
duplex_type	string	Duplex Settings.
identity	identity	
isl	boolean	Is configured as an ISL link.
mac_address	string	MAC Address.
mtu	integer	MTU.
remote_port	remote_port	Remote port

Name	Type	Description
speed	integer	Interface Speed(Mbps)
state	string	Operational Status.
statistics	statistics	These are raw counters for the device associated with the Ethernet port.
switch	switch	The name of the specified cluster or storage switch.
type	string	Interface Type.
vlan_id	array[integer]	

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 Ethernet switch port

GET `/network/ethernet/switch/ports/{switch}/{identity.name}/{identity.index}`

Introduced In: 9.8

Retrieves an ethernet switch port.

Related ONTAP commands

- `system switch ethernet interface show`

Parameters

Name	Type	In	Required	Description
switch	string	path	True	Switch Name
identity.name	string	path	True	Interface Name
identity.index	integer	path	True	Interface Index
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	self_link	
configured	string	Administrative Status.
duplex_type	string	Duplex Settings.
identity	identity	
isl	boolean	Is configured as an ISL link.
mac_address	string	MAC Address.
mtu	integer	MTU.
remote_port	remote_port	Remote port
speed	integer	Interface Speed(Mbps)
state	string	Operational Status.
statistics	statistics	These are raw counters for the device associated with the Ethernet port.

Name	Type	Description
switch	switch	The name of the specified cluster or storage switch.
type	string	Interface Type.
vlan_id	array[integer]	

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "configured": "string",
  "duplex_type": "string",
  "identity": {
    "index": 0,
    "name": "string",
    "number": 0
  },
  "mac_address": "string",
  "mtu": 0,
  "remote_port": {
    "device": {
      "node": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "node1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "shelf": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "uid": "77778419158273910 56"
      }
    },
    "mtu": 0,
    "name": "string"
  },
  "speed": 0,
  "state": "string",
  "statistics": {
    "receive_raw": {
      "discards": "100",
      "errors": "200",
```

```
      "packets": "500"
    },
    "transmit_raw": {
      "discards": "100",
      "errors": "200",
      "packets": "500"
    }
  },
  "switch": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "RTP-SS01-510R03(FOC223443KQ)"
  },
  "type": "string",
  "vlan_id": [
    "integer"
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error


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


Definitions

See Definitions

href

Name	Type	Description
href	string	

self_link

Name	Type	Description
self	href	

identity

Name	Type	Description
index	integer	Interface Index.
name	string	Interface Name.
number	integer	Interface Number.

_links

Name	Type	Description
self	href	

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

shelf

Shelf connected to this port.

Name	Type	Description
_links	_links	
uid	string	

device

Device connected to port.

Name	Type	Description
node	node	
shelf	shelf	Shelf connected to this port.

remote_port

Remote port

Name	Type	Description
device	device	Device connected to port.
mtu	integer	MTU in octets
name	string	Port Name.

receive_raw

Packet receive counters for the Ethernet port.

Name	Type	Description
discards	integer	Total number of discarded packets.
errors	integer	Number of packet errors.
packets	integer	Total packet count.

transmit_raw

Packet transmit counters for the Ethernet port.

Name	Type	Description
discards	integer	Total number of discarded packets.
errors	integer	Number of packet errors.
packets	integer	Total packet count.

statistics

These are raw counters for the device associated with the Ethernet port.

Name	Type	Description
receive_raw	receive_raw	Packet receive counters for the Ethernet port.
transmit_raw	transmit_raw	Packet transmit counters for the Ethernet port.

switch

The name of the specified cluster or storage switch.

Name	Type	Description
_links	self_link	
name	string	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

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

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