# 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 identity.number, statistics, and 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?fields=*"
-H  "accept: application/hal+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": "00:be:75:ae:2a:d4",
    "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": "1.1",
          "module": "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=*"
  }
}
}
```


#### 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" -H  "accept:
application/hal+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": "e0a",
  "device": {
    "shelf": {
      "name": "1.1",
      "module": "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 |
| speed | integer | query | False | Filter by speed |
| configured | string | query | False | Filter by configured |
| vlan_id | integer | query | False | Filter by vlan_id |
| duplex_type | string | query | False | Filter by duplex_type |

| Name | Type | In | Required | Description |
| --- | --- | --- | --- | --- |
| statistics.transmit_raw.errors | integer | query | False | Filter by statistics.transmit_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.receive_raw.errors | integer | query | False | Filter by statistics.receive_raw.errors |
| 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 |
| switch.name | string | query | False | Filter by switch.name |
| isl | boolean | query | False | Filter by isl |
| type | string | query | False | Filter by type |
| mtu | integer | query | False | Filter by mtu |
| mac_address | string | query | False | Filter by mac_address |
| remote_port.mtu | integer | query | False | Filter by remote_port.mtu |
| 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 |

| Name | Type | In | Required | Description |
| --- | --- | --- | --- | --- |
| remote_port.device.shelf.module | string | query | False | Filter by remote_port.device.shelf.module<br>• Introduced in: 9.12 |
| remote_port.device.shelf.name | string | query | False | Filter by remote_port.device.shelf.name<br>• Introduced in: 9.12 |
| remote_port.device.shelf.uid | string | query | False | Filter by remote_port.device.shelf.uid |
| remote_port.name | string | query | False | Filter by remote_port.name |
| identity.index | integer | query | False | Filter by identity.index |
| identity.name | string | query | False | Filter by identity.name |
| identity.number | integer | query | False | Filter by identity.number |
| 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.<br>• 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.<br>• Default value: 1<br>• Max value: 120<br>• 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 | collection_links | |
| num_records | integer | Number of Records |
| records | array[switch_port] | |

**Example response**


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "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"
              }
            },
            "module": "string",
```

```
            "name": "1.1",
            "uid": "12439000444923584512"
          }
        },
        "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 | 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 | |

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 | |
| module | string | Shelf module connected to this port. |
| name | string | |
| 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 | |

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. |

| Name | Type | Description |
|---|---|---|
| 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. |
| 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 |

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 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"
          }
        },
        "module": "string",
        "name": "1.1",
        "uid": "12439000444923584512"
      }
    },
    "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 | 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 | |

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 | |
| module | string | Shelf module connected to this port. |
| name | string | |
| 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 |

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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