



# Manage network Ethernet ports

## ONTAP 9.8 REST API reference

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# Manage network Ethernet ports

## Network Ethernet ports endpoint overview

### Overview

A port is a physical or virtual Ethernet network device. Physical ports may be combined into Link Aggregation Groups (LAGs or ifgrps), or divided into Virtual LANs (VLANs).

GET (collection), GET (instance), and PATCH APIs are available for all port types. POST and DELETE APIs are available for "lag" (ifgrp) and "vlan" port types.

### Retrieving network port information

The network ports GET API retrieves and displays relevant information pertaining to the ports configured in the cluster. The API retrieves the list of all ports configured in the cluster, or specifically requested ports. The fields returned in the response vary for different ports and configurations.

### Examples

#### Retrieving all ports in the cluster

The following output displays the UUID, name, and port type for all ports configured in a 2-node cluster. The port types are physical, vlan, and lag (ifgrp).

```
# The API:
/api/network/ethernet/ports

# The call:
curl -X GET "https://<mgmt-
ip>/api/network/ethernet/ports?fields=uuid,name,type" -H "accept:
application/hal+json"

# The response:
{
  "records": [
    {
      "uuid": "2d2c90c0-f70d-11e8-b145-005056bb5b8e",
      "name": "e0a",
      "type": "physical",
      "_links": {
        "self": {
          "href": "/api/network/ethernet/ports/2d2c90c0-f70d-11e8-b145-
005056bb5b8e"
        }
      }
    }
  ]
}
```

```
},
{
  "uuid": "2d3004da-f70d-11e8-b145-005056bb5b8e",
  "name": "e0b",
  "type": "physical",
  "_links": {
    "self": {
      "href": "/api/network/ethernet/ports/2d3004da-f70d-11e8-b145-005056bb5b8e"
    }
  }
},
{
  "uuid": "2d34a2cb-f70d-11e8-b145-005056bb5b8e",
  "name": "e0c",
  "type": "physical",
  "_links": {
    "self": {
      "href": "/api/network/ethernet/ports/2d34a2cb-f70d-11e8-b145-005056bb5b8e"
    }
  }
},
{
  "uuid": "2d37189f-f70d-11e8-b145-005056bb5b8e",
  "name": "e0d",
  "type": "physical",
  "_links": {
    "self": {
      "href": "/api/network/ethernet/ports/2d37189f-f70d-11e8-b145-005056bb5b8e"
    }
  }
},
{
  "uuid": "35de5d8b-f70d-11e8-abdf-005056bb7fc8",
  "name": "e0a",
  "type": "physical",
  "_links": {
    "self": {
      "href": "/api/network/ethernet/ports/35de5d8b-f70d-11e8-abdf-005056bb7fc8"
    }
  }
},
{
```

```
"uuid": "35de78cc-f70d-11e8-abdf-005056bb7fc8",
"name": "e0b",
"type": "physical",
"_links": {
  "self": {
    "href": "/api/network/ethernet/ports/35de78cc-f70d-11e8-abdf-005056bb7fc8"
  }
}
},
{
  "uuid": "35dead3c-f70d-11e8-abdf-005056bb7fc8",
  "name": "e0c",
  "type": "physical",
  "_links": {
    "self": {
      "href": "/api/network/ethernet/ports/35dead3c-f70d-11e8-abdf-005056bb7fc8"
    }
  }
},
{
  "uuid": "35deda90-f70d-11e8-abdf-005056bb7fc8",
  "name": "e0d",
  "type": "physical",
  "_links": {
    "self": {
      "href": "/api/network/ethernet/ports/35deda90-f70d-11e8-abdf-005056bb7fc8"
    }
  }
},
{
  "uuid": "42e25145-f97d-11e8-ade9-005056bb7fc8",
  "name": "e0c-100",
  "type": "vlan",
  "_links": {
    "self": {
      "href": "/api/network/ethernet/ports/42e25145-f97d-11e8-ade9-005056bb7fc8"
    }
  }
},
{
  "uuid": "569e0abd-f97d-11e8-ade9-005056bb7fc8",
  "name": "a0a",
```

```

    "type": "lag",
    "_links": {
      "self": {
        "href": "/api/network/ethernet/ports/569e0abd-f97d-11e8-ade9-005056bb7fc8"
      }
    }
  },
  "num_records": 10,
  "_links": {
    "self": {
      "href": "/api/network/ethernet/ports?fields=uuid,name,type"
    }
  }
}

```

### Retrieving a specific physical port

The following output displays the response when a specific physical port is requested. The system returns an error when there is no port with the requested UUID. Also, the speed field is set only if the state of the port is up.

```

# The API:
/api/network/ethernet/ports/{uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/network/ethernet/ports/2d37189f-f70d-11e8-b145-005056bb5b8e?fields=*" -H "accept: application/hal+json"

# The response:
{
  "uuid": "2d37189f-f70d-11e8-b145-005056bb5b8e",
  "name": "e0d",
  "mac_address": "00:50:56:bb:62:2d",
  "type": "physical",
  "node": {
    "uuid": "faa56898-f70c-11e8-b145-005056bb5b8e",
    "name": "user-cluster-01",
    "_links": {
      "self": {
        "href": "/api/cluster/nodes/faa56898-f70c-11e8-b145-005056bb5b8e"
      }
    }
  }
}

```

```

    }
  },
  "broadcast_domain": {
    "uuid": "36434bec-f70d-11e8-b145-005056bb5b8e",
    "name": "Default",
    "ipspace": {
      "name": "Default"
    },
    "_links": {
      "self": {
        "href": "/api/network/ethernet/broadcast-domains/36434bec-f70d-11e8-b145-005056bb5b8e"
      }
    }
  },
  "enabled": true,
  "state": "up",
  "mtu": 1500,
  "speed": "1000",
  "reachability": "not_repairable",
  "reachable_broadcast_domains": [
    {
      "uuid": "36434bec-f70d-11e8-b145-005056bb5b8e",
      "name": "Default",
      "ipspace": {
        "name": "Default"
      },
      "_links": {
        "self": {
          "href": "/api/network/ethernet/broadcast-domains/36434bec-f70d-11e8-b145-005056bb5b8e"
        }
      }
    },
    {
      "uuid": "df640ccf-72c4-11ea-b31d-005056bbfb29",
      "name": "Default-1",
      "ipspace": {
        "name": "Default"
      },
      "_links": {
        "self": {
          "href": "/api/network/ethernet/broadcast-domains/df640ccf-72c4-11ea-b31d-005056bbfb29"
        }
      }
    }
  ]
}

```

```

    }
  ],
  "_links": {
    "self": {
      "href": "/api/network/ethernet/ports/2d37189f-f70d-11e8-b145-005056bb5b8e"
    }
  }
}
}

```

## Retrieving a specific VLAN port

The following output displays the response when a specific VLAN port is requested. The system returns an error when there is no port with the requested UUID. Also, the speed field is set only if the state of the port is up.

```

# The API:
/api/network/ethernet/ports/{uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/network/ethernet/ports/42e25145-f97d-11e8-ade9-005056bb7fc8?fields=*" -H "accept: application/hal+json"

# The response:
{
  "uuid": "42e25145-f97d-11e8-ade9-005056bb7fc8",
  "name": "e0e-100",
  "mac_address": "00:50:56:bb:52:2f",
  "type": "vlan",
  "node": {
    "uuid": "6042cf47-f70c-11e8-abdf-005056bb7fc8",
    "name": "user-cluster-02",
    "_links": {
      "self": {
        "href": "/api/cluster/nodes/6042cf47-f70c-11e8-abdf-005056bb7fc8"
      }
    }
  }
},
  "broadcast_domain": {
    "uuid": "36434bec-f70d-11e8-b145-005056bb5b8e",
    "name": "Default",
    "ipspace": {
      "name": "Default"
    }
  }
}

```



```

    },
    "_links": {
      "self": {
        "href": "/api/network/ethernet/broadcast-domains/36434bec-f70d-11e8-
b145-005056bb5b8e"
      }
    }
  },
  "enabled": true,
  "state": "up",
  "mtu": 1500,
  "speed": "1000",
  "reachability": "ok",
  "reachable_broadcast_domains": [
    {
      "uuid": "36434bec-f70d-11e8-b145-005056bb5b8e",
      "name": "Default",
      "ipspace": {
        "name": "Default"
      },
      "_links": {
        "self": {
          "href": "/api/network/ethernet/broadcast-domains/36434bec-f70d-
11e8-b145-005056bb5b8e"
        }
      }
    }
  ],
  "vlan": {
    "tag": 100,
    "base_port": {
      "uuid": "35deff03-f70d-11e8-abdf-005056bb7fc8",
      "name": "e0e",
      "node": {
        "name": "user-cluster-02"
      },
      "_links": {
        "self": {
          "href": "/api/network/ethernet/ports/35deff03-f70d-11e8-abdf-
005056bb7fc8"
        }
      }
    }
  },
  "_links": {
    "self": {

```

```
    "href": "/api/network/ethernet/ports/42e25145-f97d-11e8-ade9-005056bb7fc8"
  }
}
```

## Retrieving a specific LAG port

The following output displays the response when a specific LAG port is requested. The system returns an error when there is no port with the requested UUID. Also, the speed and lag.active\_ports fields are set only if the state of the port is up.

```
# The API:
/api/network/ethernet/ports/{uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/network/ethernet/ports/569e0abd-f97d-11e8-ade9-005056bb7fc8?fields=*" -H "accept: application/hal+json"

# The response:
{
  "uuid": "569e0abd-f97d-11e8-ade9-005056bb7fc8",
  "name": "a0a",
  "mac_address": "02:50:56:bb:7f:c8",
  "type": "lag",
  "node": {
    "uuid": "6042cf47-f70c-11e8-abdf-005056bb7fc8",
    "name": "user-cluster-02",
    "_links": {
      "self": {
        "href": "/api/cluster/nodes/6042cf47-f70c-11e8-abdf-005056bb7fc8"
      }
    }
  },
  "broadcast_domain": {
    "uuid": "36434bec-f70d-11e8-b145-005056bb5b8e",
    "name": "Default",
    "ipspace": {
      "name": "Default"
    },
    "_links": {
      "self": {
        "href": "/api/network/ethernet/broadcast-domains/36434bec-f70d-11e8-
```

```

b145-005056bb5b8e"
  }
}
},
"enabled": true,
"state": "up",
"mtu": 1500,
"speed": "1000",
"reachability": "repairable",
"reachable_broadcast_domains": [
  {
    "uuid": "c7934b4f-691f-11ea-87fd-005056bb1ad3",
    "name": "Default",
    "ipspace": {
      "name": "Default"
    },
    "_links": {
      "self": {
        "href": "/api/network/ethernet/broadcast-domains/c7934b4f-691f-11ea-87fd-005056bb1ad3"
      }
    }
  }
],
"lag": {
  "mode": "singlemode",
  "distribution_policy": "mac",
  "member_ports": [
    {
      "uuid": "35df318d-f70d-11e8-abdf-005056bb7fc8",
      "name": "e0f",
      "node": {
        "name": "user-cluster-02"
      },
      "_links": {
        "self": {
          "href": "/api/network/ethernet/ports/35df318d-f70d-11e8-abdf-005056bb7fc8"
        }
      }
    },
    {
      "uuid": "35df5bad-f70d-11e8-abdf-005056bb7fc8",
      "name": "e0g",
      "node": {
        "name": "user-cluster-02"
      }
    }
  ]
}

```

```

    },
    "_links": {
      "self": {
        "href": "/api/network/ethernet/ports/35df5bad-f70d-11e8-abdf-005056bb7fc8"
      }
    }
  },
  {
    "uuid": "35df9926-f70d-11e8-abdf-005056bb7fc8",
    "name": "e0h",
    "node": {
      "name": "user-cluster-02"
    },
    "_links": {
      "self": {
        "href": "/api/network/ethernet/ports/35df9926-f70d-11e8-abdf-005056bb7fc8"
      }
    }
  }
],
"active_ports": [
  {
    "uuid": "35df318d-f70d-11e8-abdf-005056bb7fc8",
    "name": "e0f",
    "_links": {
      "self": {
        "href": "/api/network/ethernet/ports/35df318d-f70d-11e8-abdf-005056bb7fc8"
      }
    }
  }
]
},
"_links": {
  "self": {
    "href": "/api/network/ethernet/ports/569e0abd-f97d-11e8-ade9-005056bb7fc8"
  }
}
}
}

```

## Retrieving all LAG (ifgrp) ports in the cluster

This command retrieves all LAG ports in the cluster (that is, all ports with type=LAG). The example shows how to filter a GET collection based on type.

```
# The API:
/api/network/ethernet/ports

# The call:
curl -X GET "https://<mgmt-
ip>/api/network/ethernet/ports?type=lag&node.name=user-cluster-
01&fields=name,enabled,speed,mtu" -H "accept: application/hal+json"

# The response:
{
  "records": [
    {
      "uuid": "0c226db0-4b63-11e9-8113-005056bbe040",
      "name": "a0b",
      "type": "lag",
      "node": {
        "name": "user-cluster-01"
      },
      "enabled": true,
      "mtu": 1500,
      "speed": "1000",
      "_links": {
        "self": {
          "href": "/api/network/ethernet/ports/0c226db0-4b63-11e9-8113-
005056bbe040"
        }
      }
    },
    {
      "uuid": "d3a84153-4b3f-11e9-a00d-005056bbe040",
      "name": "a0a",
      "type": "lag",
      "node": {
        "name": "user-cluster-01"
      },
      "enabled": true,
      "mtu": 1500,
      "speed": "1000",
      "_links": {
        "self": {
```

```

        "href": "/api/network/ethernet/ports/d3a84153-4b3f-11e9-a00d-
005056bbe040"
      }
    }
  ],
  "num_records": 2,
  "_links": {
    "self": {
      "href":
"/api/network/ethernet/ports?fields=name,enabled,speed,mtu&type=lag&node.n
ame=user-cluster-01"
    }
  }
}

```

## Creating VLAN and LAG ports

You can use the network ports POST API to create VLAN and LAG ports. If you supply the optional broadcast domain property, the specified broadcast domain will be assigned to the new port immediately. Otherwise, within a few minutes automatic probing will determine the correct broadcast domain and will assign it to the port. During that period of time, the port will not be capable of hosting interfaces.

## Examples

### Creating a VLAN port

The following output displays the record returned after the creation of a VLAN port on "e0e" and VLAN tag "100".

```

# The API:
/api/network/ethernet/ports

# The call:
curl -X POST "https://<mgmt-
ip>/api/network/ethernet/ports?return_records=true" -H "accept:
application/hal+json" -H "Content-Type: application/json" -d "{ \"type\":
\"vlan\", \"node\": { \"name\": \"user-cluster-01\" }, \"enabled\": true,
\"vlan\": { \"tag\": 100, \"base_port\": { \"name\": \"e0e\", \"node\": {
\"name\": \"user-cluster-01\" } } } }"

# The response:

```

```

{
  "num_records": 1,
  "records": [
    {
      "uuid": "88b2f682-fa42-11e8-a6d7-005056bb5b8e",
      "type": "vlan",
      "node": {
        "uuid": "faa56898-f70c-11e8-b145-005056bb5b8e",
        "name": "user-cluster-01",
        "_links": {
          "self": {
            "href": "/api/cluster/nodes/faa56898-f70c-11e8-b145-
005056bb5b8e"
          }
        }
      },
      "enabled": true,
      "vlan": {
        "tag": 100,
        "base_port": {
          "uuid": "2d39df72-f70d-11e8-b145-005056bb5b8e",
          "name": "e0e",
          "node": {
            "name": "user-cluster-01"
          },
          "_links": {
            "self": {
              "href": "/api/network/ethernet/ports/2d39df72-f70d-11e8-b145-
005056bb5b8e"
            }
          }
        }
      },
      "_links": {
        "self": {
          "href": "/api/network/ethernet/ports/88b2f682-fa42-11e8-a6d7-
005056bb5b8e"
        }
      }
    }
  ]
}

```

## Creating a VLAN port in a specific broadcast domain

The following output displays the record returned after the creation of a VLAN port on "e0e" and VLAN tag "100". Also, the VLAN port is added to the "Default" broadcast domain in the "Default" IPspace.

```
# The API:
/api/network/ethernet/ports

# The call:
curl -X POST "https://<mgmt-
ip>/api/network/ethernet/ports?return_records=true" -H "accept:
application/hal+json" -H "Content-Type: application/json" -d "{
\"type\": \"vlan\", \"node\": { \"name\": \"user-cluster-01\" },
\"broadcast_domain\": { \"name\": \"Default\", \"ipspace\": { \"name\":
\"Default \" } }, \"enabled\": true, \"vlan\": { \"tag\": 100,
\"base_port\": { \"name\": \"e0e\", \"node\": { \"name\": \"user-cluster-
01\" } } } }"

# The response:
{
  "num_records": 1,
  "records": [
    {
      "uuid": "88b2f682-fa42-11e8-a6d7-005056bb5b8e",
      "type": "vlan",
      "node": {
        "uuid": "faa56898-f70c-11e8-b145-005056bb5b8e",
        "name": "user-cluster-01",
        "_links": {
          "self": {
            "href": "/api/cluster/nodes/faa56898-f70c-11e8-b145-
005056bb5b8e"
          }
        }
      },
      "broadcast_domain": {
        "uuid": "36434bec-f70d-11e8-b145-005056bb5b8e",
        "name": "Default",
        "ipspace": {
          "name": "Default"
        },
        "_links": {
          "self": {
            "href": "/api/network/ethernet/broadcast-domains/36434bec-f70d-
11e8-b145-005056bb5b8e"
          }
        }
      }
    }
  ]
}
```



```

    }
  },
  "enabled": true,
  "vlan": {
    "tag": 100,
    "base_port": {
      "uuid": "2d39df72-f70d-11e8-b145-005056bb5b8e",
      "name": "e0e",
      "node": {
        "name": "user-cluster-01"
      },
      "_links": {
        "self": {
          "href": "/api/network/ethernet/ports/2d39df72-f70d-11e8-b145-005056bb5b8e"
        }
      }
    }
  },
  "_links": {
    "self": {
      "href": "/api/network/ethernet/ports/88b2f682-fa42-11e8-a6d7-005056bb5b8e"
    }
  }
}
]
}

```

## Creating a LAG (ifgrp) port

The following output displays the record returned after the creation of a LAG port with "e0f", "e0g" and "e0h" as member ports.

```

# The API:
/api/network/ethernet/ports

# The call:
curl -X POST "https://<mgmt-
ip>/api/network/ethernet/ports?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"type\":
\"lag\", \"node\": { \"name\": \"user-cluster-01\" }, \"enabled\": true,

```

```
\\"lag\\": { \\"mode\\": \\"singlemode\\", \\"distribution_policy\\": \\"mac\\",
\\"member_ports\\": [ { \\"name\\": \\"e0f\\", \\"node\\": { \\"name\\": \\"user-
cluster-01\\\" } }, { \\"name\\": \\"e0g\\", \\"node\\": { \\"name\\": \\"user-
cluster-01\\\" } }, { \\"name\\": \\"e0h\\", \\"node\\": { \\"name\\": \\"user-
cluster-01\\\" } } ] } }
```

# The response:

```
{
  \"num_records\": 1,
  \"records\": [
    {
      \"uuid\": \"1807772a-fa4d-11e8-a6d7-005056bb5b8e\",
      \"type\": \"lag\",
      \"node\": {
        \"uuid\": \"faa56898-f70c-11e8-b145-005056bb5b8e\",
        \"name\": \"user-cluster-01\"
      },
      \"enabled\": true,
      \"lag\": {
        \"mode\": \"singlemode\",
        \"distribution_policy\": \"mac\",
        \"member_ports\": [
          {
            \"uuid\": \"2d3c9adc-f70d-11e8-b145-005056bb5b8e\",
            \"name\": \"e0f\",
            \"node\": {
              \"name\": \"user-cluster-01\"
            }
          },
          {
            \"uuid\": \"2d40b097-f70d-11e8-b145-005056bb5b8e\",
            \"name\": \"e0g\",
            \"node\": {
              \"name\": \"user-cluster-01\"
            }
          },
          {
            \"uuid\": \"2d46d01e-f70d-11e8-b145-005056bb5b8e\",
            \"name\": \"e0h\",
            \"node\": {
              \"name\": \"user-cluster-01\"
            }
          }
        ]
      }
    }
  ]
}
```

```
]
}
```

## Creating a LAG (ifgrp) port in a specific broadcast domain

The following output displays the record returned after the creation of a LAG port with "e0f", "e0g" and "e0h" as member ports. Also, the LAG port is added to the "Default" broadcast domain in the "Default" IPspace.

```
# The API:
/api/network/ethernet/ports

# The call:
curl -X POST "https://<mgmt-
ip>/api/network/ethernet/ports?return_records=true" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"type\":
\"lag\", \"node\": { \"name\": \"user-cluster-01\" },
\"broadcast_domain\": { \"name\": \"Default\", \"ipspace\": { \"name\":
\"Default\" } }, \"enabled\": true, \"lag\": { \"mode\": \"singlemode\",
\"distribution_policy\": \"mac\", \"member_ports\": [ { \"name\": \"e0f\",
\"node\": { \"name\": \"user-cluster-01\" } }, { \"name\": \"e0g\",
\"node\": { \"name\": \"user-cluster-01\" } }, { \"name\": \"e0h\",
\"node\": { \"name\": \"user-cluster-01\" } } ] } }" -u admin:netapp1! -k

# The response:
{
  "num_records": 1,
  "records": [
    {
      "uuid": "1807772a-fa4d-11e8-a6d7-005056bb5b8e",
      "type": "lag",
      "node": {
        "uuid": "faa56898-f70c-11e8-b145-005056bb5b8e",
        "name": "user-cluster-01"
      },
      "broadcast_domain": {
        "uuid": "36434bec-f70d-11e8-b145-005056bb5b8e",
        "name": "Default",
        "ipspace": {
          "name": "Default"
        }
      },
      "enabled": true,
      "lag": {
```

```

"mode": "singlemode",
"distribution_policy": "mac",
"member_ports": [
  {
    "uuid": "2d3c9adc-f70d-11e8-b145-005056bb5b8e",
    "name": "e0f",
    "node": {
      "name": "user-cluster-01"
    }
  },
  {
    "uuid": "2d40b097-f70d-11e8-b145-005056bb5b8e",
    "name": "e0g",
    "node": {
      "name": "user-cluster-01"
    }
  },
  {
    "uuid": "2d46d01e-f70d-11e8-b145-005056bb5b8e",
    "name": "e0h",
    "node": {
      "name": "user-cluster-01"
    }
  }
]
}
]
}

```

## Updating ports

You can use the network ports PATCH API to update the attributes of ports.

## Examples

### Updating the broadcast domain of a port

The following PATCH request removes the port from the current broadcast domain and adds it to the specified broadcast domain.

```
# The API:
/api/network/ethernet/ports/{uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/network/ethernet/ports/6867efaf-d702-11e8-994f-005056bbc994" -H "accept: application/hal+json" -H "Content-Type: application/json" -d "{ \"broadcast_domain\": { \"name\": \"Default\", \"ipSpace\": { \"name\": \"Default\" } } }"
```

---

## Updating the admin status of a port

The following PATCH request brings the specified port down.

```
# The API:
/api/network/ethernet/ports/{uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/network/ethernet/ports/51d3ab39-d86d-11e8-aca6-005056bbc994" -H "accept: application/hal+json" -H "Content-Type: application/json" -d "{ \"enabled\": \"false\" }"
```

---

## Repairing a port

The following PATCH request repairs a port. Only ports that have reachability as "repairable" can be repaired. The "reachability" parameter cannot be patched in the same request as other parameters that might affect the target port's reachability status.

```
# The API:
/api/network/ethernet/ports/{uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/network/ethernet/ports/51d3ab39-d86d-11e8-aca6-005056bbc994" -H "accept: application/hal+json" -H "Content-Type: application/json" -d "{ \"reachability\": \"ok\" }"
```

## Deleting ports

You can use the network ports DELETE API to delete VLAN and LAG ports in the cluster. Note that physical ports cannot be deleted. Deleting a port also removes the port from the broadcast domain.

---

## Example

### Deleting a VLAN port

The network ports DELETE API is used to delete a VLAN port.

---

```
# The API:
/api/network/ethernet/ports/{uuid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/network/ethernet/ports/6867efaf-
d702-11e8-994f-005056bbc994" -H "accept: application/hal+json" -H
"Content-Type: application/json"
```

## Retrieve ports

GET /network/ethernet/ports

**Introduced In:** 9.6

Retrieves a collection of ports (physical, VLAN and LAG) for an entire cluster.

### Related ONTAP commands

- network port show
- network port ifgrp show
- network port vlan show

### Parameters

| Name                                     | Type    | In    | Required | Description  |
|--|---------|-------|----------|--|
| reachable_broadcast_domains.uuid         | string  | query | False    | Filter by reachable_broadcast_domains.uuid<br><br>• Introduced in: 9.8         |
| reachable_broadcast_domains.name         | string  | query | False    | Filter by reachable_broadcast_domains.name<br><br>• Introduced in: 9.8         |
| reachable_broadcast_domains.ipspace.name | string  | query | False    | Filter by reachable_broadcast_domains.ipspace.name<br><br>• Introduced in: 9.8 |
| state                                    | string  | query | False    | Filter by state  |
| statistics.timestamp                     | string  | query | False    | Filter by statistics.timestamp<br><br>• Introduced in: 9.8                     |
| statistics.throughput_raw.write          | integer | query | False    | Filter by statistics.throughput_raw.write<br><br>• Introduced in: 9.8          |
| statistics.throughput_raw.read           | integer | query | False    | Filter by statistics.throughput_raw.read<br><br>• Introduced in: 9.8           |

| Name                                    | Type    | In    | Required | Description   |
|---|---------|-------|----------|---|
| statistics.throughput_raw.total         | integer | query | False    | Filter by statistics.throughput_raw.total<br><br>• Introduced in: 9.8         |
| statistics.device.receive_raw.packets   | integer | query | False    | Filter by statistics.device.receive_raw.packets<br><br>• Introduced in: 9.8   |
| statistics.device.receive_raw.discards  | integer | query | False    | Filter by statistics.device.receive_raw.discards<br><br>• Introduced in: 9.8  |
| statistics.device.receive_raw.errors    | integer | query | False    | Filter by statistics.device.receive_raw.errors<br><br>• Introduced in: 9.8    |
| statistics.device.timestamp             | string  | query | False    | Filter by statistics.device.timestamp<br><br>• Introduced in: 9.8             |
| statistics.device.transmit_raw.packets  | integer | query | False    | Filter by statistics.device.transmit_raw.packets<br><br>• Introduced in: 9.8  |
| statistics.device.transmit_raw.discards | integer | query | False    | Filter by statistics.device.transmit_raw.discards<br><br>• Introduced in: 9.8 |



| Name                                  | Type    | In    | Required | Description   |
|---------------------------------------|---------|-------|----------|---|
| statistics.device.transmit_raw.errors | integer | query | False    | Filter by statistics.device.transmit_raw.errors<br><br>• Introduced in: 9.8 |
| statistics.device.link_down_count_raw | integer | query | False    | Filter by statistics.device.link_down_count_raw<br><br>• Introduced in: 9.8 |
| statistics.status                     | string  | query | False    | Filter by statistics.status<br><br>• Introduced in: 9.8                     |
| speed                                 | integer | query | False    | Filter by speed   |
| reachability                          | string  | query | False    | Filter by reachability<br><br>• Introduced in: 9.8                          |
| mac_address                           | string  | query | False    | Filter by mac_address   |
| enabled                               | boolean | query | False    | Filter by enabled   |
| node.name                             | string  | query | False    | Filter by node.name   |
| node.uuid                             | string  | query | False    | Filter by node.uuid   |
| mtu                                   | integer | query | False    | Filter by mtu   |
| vlan.tag                              | integer | query | False    | Filter by vlan.tag  |
| vlan.base_port.name                   | string  | query | False    | Filter by vlan.base_port.name   |
| vlan.base_port.node.name              | string  | query | False    | Filter by vlan.base_port.node.name  |

| Name                           | Type   | In    | Required | Description                              |
|--------------------------------|--------|-------|----------|--|
| vlan.base_port.uuid            | string | query | False    | Filter by vlan.base_port.uuid            |
| broadcast_domain.uuid          | string | query | False    | Filter by broadcast_domain.uuid          |
| broadcast_domain.name          | string | query | False    | Filter by broadcast_domain.name          |
| broadcast_domain.ip_space.name | string | query | False    | Filter by broadcast_domain.ip_space.name |
| lag.active_ports.name          | string | query | False    | Filter by lag.active_ports.name          |
| lag.active_ports.node.name     | string | query | False    | Filter by lag.active_ports.node.name     |
| lag.active_ports.uuid          | string | query | False    | Filter by lag.active_ports.uuid          |
| lag.mode                       | string | query | False    | Filter by lag.mode                       |
| lag.member_ports.name          | string | query | False    | Filter by lag.member_ports.name          |
| lag.member_ports.node.name     | string | query | False    | Filter by lag.member_ports.node.name     |
| lag.member_ports.uuid          | string | query | False    | Filter by lag.member_ports.uuid          |
| lag.distribution_policy        | string | query | False    | Filter by lag.distribution_policy        |
| name                           | string | query | False    | Filter by name                           |

| Name                    | Type          | In    | Required | Description   |
|-------------------------|---------------|-------|----------|---|
| uuid                    | string        | query | False    | Filter by uuid  |
| metric.timestamp        | string        | query | False    | Filter by metric.timestamp<br><br>• Introduced in: 9.8        |
| metric.duration         | string        | query | False    | Filter by metric.duration<br><br>• Introduced in: 9.8         |
| metric.throughput.write | integer       | query | False    | Filter by metric.throughput.write<br><br>• Introduced in: 9.8 |
| metric.throughput.read  | integer       | query | False    | Filter by metric.throughput.read<br><br>• Introduced in: 9.8  |
| metric.throughput.total | integer       | query | False    | Filter by metric.throughput.total<br><br>• Introduced in: 9.8 |
| metric.status           | string        | query | False    | Filter by metric.status<br><br>• Introduced in: 9.8           |
| type                    | string        | query | False    | Filter by type  |
| fields                  | array[string] | query | False    | Specify the fields to return.                                 |
| max_records             | integer       | query | False    | Limit the number of records returned.                         |

| Name           | Type          | In    | Required | Description   |
|----------------|---------------|-------|----------|---|
| return_records | boolean       | query | False    | The default is true for GET calls. When set to false, only the number of records is returned. <ul style="list-style-type: none"> <li>• Default value: 1</li> </ul>  |
| 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. <ul style="list-style-type: none"> <li>• Default value: 1</li> <li>• Max value: 120</li> <li>• Min value: 0</li> </ul> |
| order_by       | array[string] | query | False    | Order results by specified fields and optional [asc   |

## Response

Status: 200, Ok

| Name        | Type                          | Description |
|-------------|-------------------------------|-------------|
| _links      | <a href="#">_links</a>        |             |
| num_records | integer                       |             |
| records     | array[ <a href="#">port</a> ] |             |

## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "broadcast_domain": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "ipspace": {
        "name": "ipspace1"
      },
      "name": "bd1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "lag": {
      "active_ports": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "elb",
        "node": {
          "name": "node1"
        },
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "distribution_policy": "port",
      "member_ports": {
        "_links": {
          "self": {
```

```

        "href": "/api/resourcelink"
    },
    },
    "name": "elb",
    "node": {
        "name": "node1"
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"mode": "multimode_lacp"
},
"mac_address": "01:02:03:04:05:06",
"metric": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "duration": "PT15S",
    "status": "ok",
    "throughput": {
        "read": "200",
        "total": "1000",
        "write": "100"
    },
    "timestamp": "2017-01-25T11:20:13Z"
},
"mtu": "1500",
"name": "elb",
"node": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"reachability": "ok",
"reachable_broadcast_domains": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "ipspace": {

```

```
    "name": "ipspace1"
  },
  "name": "bd1",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"speed": "1000",
"state": "up",
"statistics": {
  "device": {
    "link_down_count_raw": "3",
    "receive_raw": {
      "discards": "100",
      "errors": "200",
      "packets": "500"
    },
    "timestamp": "2017-01-25T11:20:13Z",
    "transmit_raw": {
      "discards": "100",
      "errors": "200",
      "packets": "500"
    }
  },
},
"status": "ok",
"throughput_raw": {
  "read": "200",
  "total": "1000",
  "write": "100"
},
"timestamp": "2017-01-25T11:20:13Z"
},
"type": "vlan",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
"vlan": {
  "base_port": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
  },
  "name": "elb",
  "node": {
    "name": "node1"
  },
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"tag": "100"
```

```
}  
}  
}
```

## 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 | <a href="#">href</a> |             |
| self | <a href="#">href</a> |             |

\_links

| Name | Type                 | Description |
|------|----------------------|-------------|
| self | <a href="#">href</a> |             |

ipospace

| Name | Type   | Description                            |
|------|--------|--|
| name | string | Name of the broadcast domain's IPspace |

broadcast\_domain

Broadcast domain UUID along with a readable name. Either the UUID or both names may be provided on input.

| Name     | Type                     | Description   |
|----------|--------------------------|---|
| _links   | <a href="#">_links</a>   |   |
| ipospace | <a href="#">ipospace</a> |   |
| name     | string                   | Name of the broadcast domain, scoped to its IPspace |
| uuid     | string                   | Broadcast domain UUID                               |

node

| Name | Type   | Description                                |
|------|--------|--|
| name | string | Name of node on which the port is located. |

## active\_ports

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

| Name   | Type                   | Description |
|--------|------------------------|-------------|
| _links | <a href="#">_links</a> |             |
| name   | string                 |             |
| node   | <a href="#">node</a>   |             |
| uuid   | string                 |             |

## member\_ports

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

| Name   | Type                   | Description |
|--------|------------------------|-------------|
| _links | <a href="#">_links</a> |             |
| name   | string                 |             |
| node   | <a href="#">node</a>   |             |
| uuid   | string                 |             |

## lag

| Name                | Type                                  | Description   |
|---------------------|---------------------------------------|---|
| active_ports        | array[ <a href="#">active_ports</a> ] | Active ports of a LAG (ifgrp). (Some member ports may be inactive.)           |
| distribution_policy | string                                | Policy for mapping flows to ports for outbound packets through a LAG (ifgrp). |
| member_ports        | array[ <a href="#">member_ports</a> ] |   |
| mode                | string                                | Determines how the ports interact with the switch.                            |

## throughput

The rate of throughput bytes per second observed at the port object.

| Name | Type    | Description                                 |
|------|---------|---|
| read | integer | Performance metric for read I/O operations. |

| Name  | Type    | Description   |
|-------|---------|---|
| total | integer | Performance metric aggregated over all types of I/O operations. |
| write | integer | Performance metric for write I/O operations.                    |

metric

The most recent sample of I/O metrics for the port.

| Name       | Type                       | Description   |
|------------|----------------------------|---|
| _links     | <a href="#">_links</a>     |   |
| duration   | string                     | The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:  |
| status     | string                     | Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data".<br>"inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated.<br>"Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data. |
| throughput | <a href="#">throughput</a> | The rate of throughput bytes per second observed at the port object.  |

| Name      | Type   | Description                            |
|-----------|--------|--|
| timestamp | string | The timestamp of the performance data. |

node

| Name   | Type                   | Description |
|--------|------------------------|-------------|
| _links | <a href="#">_links</a> |             |
| name   | string                 |             |
| uuid   | string                 |             |

reachable\_broadcast\_domains

Broadcast domain UUID along with a readable name. Either the UUID or both names may be provided on input.

| Name    | Type                    | Description   |
|---------|-------------------------|---|
| _links  | <a href="#">_links</a>  |   |
| ipspace | <a href="#">ipspace</a> |   |
| name    | string                  | Name of the broadcast domain, scoped to its IPspace |
| uuid    | string                  | Broadcast domain UUID                               |

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.                |

#### device

Device-related counters for the port object. These counters are applicable at the lowest layer of the networking stack. These values can be used to calculate both transmit and receive packet and error rates by comparing two samples taken at different times and calculating the increase in counter value divided by the elapsed time between the two samples.

| Name                | Type                         | Description  |
|---------------------|------------------------------|--|
| link_down_count_raw | integer                      | The number of link state changes from up to down seen on the device. |
| receive_raw         | <a href="#">receive_raw</a>  | Packet receive counters for the Ethernet port.                       |
| timestamp           | string                       | The timestamp when the device specific counters were collected.      |
| transmit_raw        | <a href="#">transmit_raw</a> | Packet transmit counters for the Ethernet port.                      |

#### throughput\_raw

Throughput bytes observed at the port object. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.

| Name  | Type    | Description   |
|-------|---------|---|
| read  | integer | Performance metric for read I/O operations.                     |
| total | integer | Performance metric aggregated over all types of I/O operations. |
| write | integer | Performance metric for write I/O operations.                    |

#### statistics

The real time I/O statistics for the port.

| Name           | Type           | Description   |
|----------------|----------------|---|
| device         | device         | Device-related counters for the port object. These counters are applicable at the lowest layer of the networking stack. These values can be used to calculate both transmit and receive packet and error rates by comparing two samples taken at different times and calculating the increase in counter value divided by the elapsed time between the two samples.   |
| status         | string         | Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data".<br>"inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated.<br>"Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data. |
| throughput_raw | throughput_raw | Throughput bytes observed at the port object. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.  |
| timestamp      | string         | The timestamp of the throughput_raw performance data.   |

## base\_port

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

| Name   | Type                   | Description |
|--------|------------------------|-------------|
| _links | <a href="#">_links</a> |             |
| name   | string                 |             |
| node   | <a href="#">node</a>   |             |
| uuid   | string                 |             |

## vlan

| Name      | Type                      | Description  |
|-----------|---------------------------|--|
| base_port | <a href="#">base_port</a> | Port UUID along with readable names. Either the UUID or both names may be supplied on input. |
| tag       | integer                   | VLAN ID  |

## port

| Name             | Type                             | Description   |
|------------------|----------------------------------|---|
| _links           | <a href="#">_links</a>           |   |
| broadcast_domain | <a href="#">broadcast_domain</a> | Broadcast domain UUID along with a readable name. Either the UUID or both names may be provided on input. |
| enabled          | boolean                          |   |
| lag              | <a href="#">lag</a>              |   |
| mac_address      | string                           |   |
| metric           | <a href="#">metric</a>           | The most recent sample of I/O metrics for the port.   |
| mtu              | integer                          | MTU of the port in bytes. Set by broadcast domain.  |
| name             | string                           | Portname, such as e0a, e1b-100 (VLAN on ethernet), a0c (LAG/ifgrp), a0d-200 (vlan on LAG/ifgrp)           |
| node             | <a href="#">node</a>             |   |

| Name                        | Type   | Description   |
|-----------------------------|--|---|
| reachability                | string   | Reachability status of the port. Enum value "ok" is the only acceptable value for a PATCH request to repair a port. |
| reachable_broadcast_domains | array[ <a href="#">reachable_broadcast_domains</a> ] | Reachable broadcast domains.  |
| speed                       | integer  | Link speed in Mbps  |
| state                       | string   | Operational state of the port.  |
| statistics                  | <a href="#">statistics</a>                           | The real time I/O statistics for the port.  |
| type                        | string   | Type of physical or virtual port  |
| uuid                        | string   | Port UUID   |
| vlan                        | <a href="#">vlan</a>                                 |   |

#### error\_arguments

| Name    | Type   | Description      |
|---------|--------|------------------|
| code    | string | Argument code    |
| message | string | Message argument |

#### error

| Name      | Type                                     | Description                                 |
|-----------|--|---|
| arguments | array[ <a href="#">error_arguments</a> ] | Message arguments                           |
| code      | string                                   | Error code                                  |
| message   | string                                   | Error message                               |
| target    | string                                   | The target parameter that caused the error. |

## Create a new VLAN or LAG

POST /network/ethernet/ports



## Introduced In: 9.6

Creates a new VLAN (such as node1:e0a-100) or LAG (ifgrp, such as node2:a0a).

## Required properties

- `node` - Node the port will be created on.
- `type` - Defines if a VLAN or LAG will be created:
  - VLAN
    - `vlan.base_port` - Physical port or LAG the VLAN will be created on.
    - `vlan.tag` - Tag used to identify VLAN on the base port.
  - LAG
    - `lag.mode` - Policy for the LAG that will be created.
    - `lag.distribution_policy` - Indicates how the packets are distributed between ports.
    - `lag.member_ports` - Set of ports the LAG consists of.

## Optional properties

- `broadcast_domain` - The layer-2 broadcast domain the port is associated with. The port will be placed in a broadcast domain if it is not specified. It may take several minutes for the broadcast domain to be assigned. During that period the port cannot host interfaces.

## Related ONTAP commands

- `network port ifgrp create`
- `network port vlan create`

## Parameters

| Name                        | Type    | In    | Required | Description  |
|-----------------------------|---------|-------|----------|--|
| <code>return_records</code> | boolean | query | False    | The default is false. If set to true, the records are returned. <ul style="list-style-type: none"><li>• Default value:</li></ul> |

## Request Body

| Name                | Type                   | Description |
|---------------------|------------------------|-------------|
| <code>_links</code> | <a href="#">_links</a> |             |

| Name                        | Type   | Description   |
|-----------------------------|--|---|
| broadcast_domain            | <a href="#">broadcast_domain</a>                     | Broadcast domain UUID along with a readable name. Either the UUID or both names may be provided on input.           |
| enabled                     | boolean  |   |
| lag                         | <a href="#">lag</a>                                  |   |
| mac_address                 | string   |   |
| metric                      | <a href="#">metric</a>                               | The most recent sample of I/O metrics for the port.   |
| mtu                         | integer  | MTU of the port in bytes. Set by broadcast domain.  |
| name                        | string   | Portname, such as e0a, e1b-100 (VLAN on ethernet), a0c (LAG/ifgrp), a0d-200 (vlan on LAG/ifgrp)                     |
| node                        | <a href="#">node</a>                                 |   |
| reachability                | string   | Reachability status of the port. Enum value "ok" is the only acceptable value for a PATCH request to repair a port. |
| reachable_broadcast_domains | array[ <a href="#">reachable_broadcast_domains</a> ] | Reachable broadcast domains.  |
| speed                       | integer  | Link speed in Mbps  |
| state                       | string   | Operational state of the port.  |
| statistics                  | <a href="#">statistics</a>                           | The real time I/O statistics for the port.  |
| type                        | string   | Type of physical or virtual port  |
| uuid                        | string   | Port UUID   |
| vlan                        | <a href="#">vlan</a>                                 |   |

## Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "broadcast_domain": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "ipspace": {
      "name": "ipspace1"
    },
    "name": "bd1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "lag": {
    "active_ports": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "e1b",
      "node": {
        "name": "node1"
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "distribution_policy": "port",
    "member_ports": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "e1b",
      "node": {
        "name": "node1"
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  },
}
```

```

    "mode": "multimode_lacp"
  },
  "mac_address": "01:02:03:04:05:06",
  "metric": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "duration": "PT15S",
  "status": "ok",
  "throughput": {
    "read": "200",
    "total": "1000",
    "write": "100"
  },
  "timestamp": "2017-01-25T11:20:13Z"
},
"mtu": "1500",
"name": "e1b",
"node": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  }
},
"name": "node1",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"reachability": "ok",
"reachable_broadcast_domains": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  }
},
"ipspace": {
  "name": "ipspace1"
},
"name": "bd1",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"speed": "1000",
"state": "up",
"statistics": {
  "device": {

```

```
"link_down_count_raw": "3",
"receive_raw": {
  "discards": "100",
  "errors": "200",
  "packets": "500"
},
"timestamp": "2017-01-25T11:20:13Z",
"transmit_raw": {
  "discards": "100",
  "errors": "200",
  "packets": "500"
}
},
"status": "ok",
"throughput_raw": {
  "read": "200",
  "total": "1000",
  "write": "100"
},
"timestamp": "2017-01-25T11:20:13Z"
},
"type": "vlan",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
"vlan": {
  "base_port": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "e1b",
    "node": {
      "name": "node1"
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "tag": "100"
}
}
```

## Response

Status: 201, Created

| Name        | Type                          | Description |
|-------------|-------------------------------|-------------|
| _links      | <a href="#">_links</a>        |             |
| num_records | integer                       |             |
| records     | array[ <a href="#">port</a> ] |             |

## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "broadcast_domain": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "ipspace": {
        "name": "ipspace1"
      },
      "name": "bd1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "lag": {
      "active_ports": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "elb",
        "node": {
          "name": "node1"
        },
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "distribution_policy": "port",
      "member_ports": {
        "_links": {
          "self": {
```

```

        "href": "/api/resourcelink"
    },
    },
    "name": "elb",
    "node": {
        "name": "node1"
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"mode": "multimode_lacp"
},
"mac_address": "01:02:03:04:05:06",
"metric": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "duration": "PT15S",
    "status": "ok",
    "throughput": {
        "read": "200",
        "total": "1000",
        "write": "100"
    },
    "timestamp": "2017-01-25T11:20:13Z"
},
"mtu": "1500",
"name": "elb",
"node": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"reachability": "ok",
"reachable_broadcast_domains": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "ipspace": {

```



```

    "name": "ipspacel"
  },
  "name": "bd1",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"speed": "1000",
"state": "up",
"statistics": {
  "device": {
    "link_down_count_raw": "3",
    "receive_raw": {
      "discards": "100",
      "errors": "200",
      "packets": "500"
    },
    "timestamp": "2017-01-25T11:20:13Z",
    "transmit_raw": {
      "discards": "100",
      "errors": "200",
      "packets": "500"
    }
  },
  "status": "ok",
  "throughput_raw": {
    "read": "200",
    "total": "1000",
    "write": "100"
  },
  "timestamp": "2017-01-25T11:20:13Z"
},
"type": "vlan",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
"vlan": {
  "base_port": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "elb",
    "node": {
      "name": "node1"
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "tag": "100"
}

```

```
}  
}  
}
```

## Error

Status: Default

### ONTAP Error Response Codes

| Error Code | Description  |
|------------|--|
| 1376361    | Port is already a member of a LAG.   |
| 1966189    | Port is the home port or current port of an interface.                                       |
| 1967083    | The specified type is not valid.   |
| 1967084    | The specified node UUID is not valid.  |
| 1967085    | The specified node name is not valid.  |
| 1967086    | Node name and UUID must match if both are provided.  |
| 1967087    | The specified broadcast domain UUID is not valid.  |
| 1967088    | The specified broadcast domain name does not exist in the specified IPspace.                 |
| 1967089    | The specified broadcast domain UUID, name, and IPspace name do not match.                    |
| 1967090    | The specified VLAN base port UUID is not valid.  |
| 1967091    | The specified VLAN base port name and node name are not valid.                               |
| 1967092    | The specified node does not match the node specified for the VLAN base port.                 |
| 1967093    | The specified VLAN base port UUID, name, and VLAN base port node name do not match.          |
| 1967094    | The specified LAG member port UUID is not valid.   |
| 1967095    | The specified LAG member port name and node name combination is not valid.                   |
| 1967096    | The specified node does not match the specified LAG member port node.                        |
| 1967097    | The specified LAG member ports UUID, name, and node name do not match.                       |
| 1967098    | VLAN POST operation has failed because admin status could not be set for the specified port. |

| Error Code | Description  |
|------------|--|
| 1967099    | Partial success of the VLAN POST operation. Verify the state of the created VLAN for more information. |
| 1967100    | LAG POST operation failed because admin status could not be set.                                       |
| 1967101    | Partial success of the LAG POST operation. Verify the state of the created LAG for more information.   |
| 1967102    | POST operation might have left the configuration in an inconsistent state. Check the configuration.    |
| 1967148    | Failure to remove port from broadcast domain.  |
| 1967149    | Failure to add port to broadcast domain.   |
| 1967175    | VLANs cannot be created on ports in the Cluster IPspace.   |

| 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 | <a href="#">href</a> |             |

ipospace

| Name | Type   | Description                            |
|------|--------|--|
| name | string | Name of the broadcast domain's IPspace |

broadcast\_domain

Broadcast domain UUID along with a readable name. Either the UUID or both names may be provided on input.

| Name     | Type                     | Description   |
|----------|--------------------------|---|
| _links   | <a href="#">_links</a>   |   |
| ipospace | <a href="#">ipospace</a> |   |
| name     | string                   | Name of the broadcast domain, scoped to its IPspace |
| uuid     | string                   | Broadcast domain UUID                               |

node

| Name | Type   | Description                                |
|------|--------|--|
| name | string | Name of node on which the port is located. |

active\_ports

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

| Name   | Type                   | Description |
|--------|------------------------|-------------|
| _links | <a href="#">_links</a> |             |

| Name | Type                 | Description |
|------|----------------------|-------------|
| name | string               |             |
| node | <a href="#">node</a> |             |
| uuid | string               |             |

member\_ports

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

| Name   | Type                   | Description |
|--------|------------------------|-------------|
| _links | <a href="#">_links</a> |             |
| name   | string                 |             |
| node   | <a href="#">node</a>   |             |
| uuid   | string                 |             |

lag

| Name                | Type                                  | Description   |
|---------------------|---------------------------------------|---|
| active_ports        | array[ <a href="#">active_ports</a> ] | Active ports of a LAG (ifgrp). (Some member ports may be inactive.)           |
| distribution_policy | string                                | Policy for mapping flows to ports for outbound packets through a LAG (ifgrp). |
| member_ports        | array[ <a href="#">member_ports</a> ] |   |
| mode                | string                                | Determines how the ports interact with the switch.                            |

throughput

The rate of throughput bytes per second observed at the port object.

| Name  | Type    | Description   |
|-------|---------|---|
| read  | integer | Performance metric for read I/O operations.                     |
| total | integer | Performance metric aggregated over all types of I/O operations. |
| write | integer | Performance metric for write I/O operations.                    |

## metric

The most recent sample of I/O metrics for the port.

| Name                   | Type                       | Description   |
|------------------------|----------------------------|---|
| <a href="#">_links</a> | <a href="#">_links</a>     |   |
| duration               | string                     | The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:  |
| status                 | string                     | Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data".<br>"inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated.<br>"Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data. |
| throughput             | <a href="#">throughput</a> | The rate of throughput bytes per second observed at the port object.  |
| timestamp              | string                     | The timestamp of the performance data.  |

## node

| Name                   | Type                   | Description |
|------------------------|------------------------|-------------|
| <a href="#">_links</a> | <a href="#">_links</a> |             |

| Name | Type   | Description |
|------|--------|-------------|
| name | string |             |
| uuid | string |             |

reachable\_broadcast\_domains

Broadcast domain UUID along with a readable name. Either the UUID or both names may be provided on input.

| Name    | Type                    | Description   |
|---------|-------------------------|---|
| _links  | <a href="#">_links</a>  |   |
| ipspace | <a href="#">ipspace</a> |   |
| name    | string                  | Name of the broadcast domain, scoped to its IPspace |
| uuid    | string                  | Broadcast domain UUID                               |

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.                |

device

Device-related counters for the port object. These counters are applicable at the lowest layer of the

networking stack. These values can be used to calculate both transmit and receive packet and error rates by comparing two samples taken at different times and calculating the increase in counter value divided by the elapsed time between the two samples.

| Name                | Type                         | Description  |
|---------------------|------------------------------|--|
| link_down_count_raw | integer                      | The number of link state changes from up to down seen on the device. |
| receive_raw         | <a href="#">receive_raw</a>  | Packet receive counters for the Ethernet port.                       |
| timestamp           | string                       | The timestamp when the device specific counters were collected.      |
| transmit_raw        | <a href="#">transmit_raw</a> | Packet transmit counters for the Ethernet port.                      |

#### throughput\_raw

Throughput bytes observed at the port object. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.

| Name  | Type    | Description   |
|-------|---------|---|
| read  | integer | Performance metric for read I/O operations.                     |
| total | integer | Performance metric aggregated over all types of I/O operations. |
| write | integer | Performance metric for write I/O operations.                    |

#### statistics

The real time I/O statistics for the port.



| Name           | Type           | Description  |
|----------------|----------------|--|
| device         | device         | Device-related counters for the port object. These counters are applicable at the lowest layer of the networking stack. These values can be used to calculate both transmit and receive packet and error rates by comparing two samples taken at different times and calculating the increase in counter value divided by the elapsed time between the two samples.  |
| status         | string         | <p>Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data".</p> <p>"inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated.</p> <p>"Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data.</p> |
| throughput_raw | throughput_raw | Throughput bytes observed at the port object. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.   |
| timestamp      | string         | The timestamp of the throughput_raw performance data.  |

base\_port

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

| Name   | Type                   | Description |
|--------|------------------------|-------------|
| _links | <a href="#">_links</a> |             |
| name   | string                 |             |
| node   | <a href="#">node</a>   |             |
| uuid   | string                 |             |

vlan

| Name      | Type                      | Description  |
|-----------|---------------------------|--|
| base_port | <a href="#">base_port</a> | Port UUID along with readable names. Either the UUID or both names may be supplied on input. |
| tag       | integer                   | VLAN ID  |

port

| Name             | Type                             | Description   |
|------------------|----------------------------------|---|
| _links           | <a href="#">_links</a>           |   |
| broadcast_domain | <a href="#">broadcast_domain</a> | Broadcast domain UUID along with a readable name. Either the UUID or both names may be provided on input. |
| enabled          | boolean                          |   |
| lag              | <a href="#">lag</a>              |   |
| mac_address      | string                           |   |
| metric           | <a href="#">metric</a>           | The most recent sample of I/O metrics for the port.   |
| mtu              | integer                          | MTU of the port in bytes. Set by broadcast domain.  |
| name             | string                           | Portname, such as e0a, e1b-100 (VLAN on ethernet), a0c (LAG/ifgrp), a0d-200 (vlan on LAG/ifgrp)           |
| node             | <a href="#">node</a>             |   |

| Name                        | Type   | Description   |
|-----------------------------|--|---|
| reachability                | string   | Reachability status of the port. Enum value "ok" is the only acceptable value for a PATCH request to repair a port. |
| reachable_broadcast_domains | array[ <a href="#">reachable_broadcast_domains</a> ] | Reachable broadcast domains.  |
| speed                       | integer  | Link speed in Mbps  |
| state                       | string   | Operational state of the port.  |
| statistics                  | <a href="#">statistics</a>                           | The real time I/O statistics for the port.  |
| type                        | string   | Type of physical or virtual port  |
| uuid                        | string   | Port UUID   |
| vlan                        | <a href="#">vlan</a>                                 |   |

#### \_links

| Name | Type                 | Description |
|------|----------------------|-------------|
| next | <a href="#">href</a> |             |
| self | <a href="#">href</a> |             |

#### error\_arguments

| Name    | Type   | Description      |
|---------|--------|------------------|
| code    | string | Argument code    |
| message | string | Message argument |

#### error

| Name      | Type                                     | Description       |
|-----------|--|-------------------|
| arguments | array[ <a href="#">error_arguments</a> ] | Message arguments |
| code      | string                                   | Error code        |
| message   | string                                   | Error message     |

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

## Delete a VLAN or LAG

DELETE /network/ethernet/ports/{uuid}

**Introduced In:** 9.6

Deletes a VLAN or LAG.

### Related ONTAP commands

- `network port ifgrp delete`
- `network port vlan delete`

### Parameters

| Name | Type   | In   | Required | Description |
|------|--------|------|----------|-------------|
| uuid | string | path | True     | Port UUID   |

### Response

Status: 200, Ok

### Error

Status: Default

#### ONTAP Error Response Codes

| Error Code | Description  |
|------------|--|
| 1376858    | Port already has an interface bound.                   |
| 1966189    | Port is the home port or current port of an interface. |

| Name  | Type                  | Description |
|-------|-----------------------|-------------|
| error | <a href="#">error</a> |             |

## Example error

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

## Definitions

### See Definitions

#### error\_arguments

| Name    | Type   | Description      |
|---------|--------|------------------|
| code    | string | Argument code    |
| message | string | Message argument |

#### error

| Name      | Type                                     | Description                                 |
|-----------|--|---|
| arguments | array[ <a href="#">error_arguments</a> ] | Message arguments                           |
| code      | string                                   | Error code                                  |
| message   | string                                   | Error message                               |
| target    | string                                   | The target parameter that caused the error. |

## Retrieve a physical port, VLAN, or LAG details

GET /network/ethernet/ports/{uuid}

Introduced In: 9.6

Retrieves the details of a physical port, VLAN, or LAG.

## Related ONTAP commands

- `network port show`
- `network port ifgrp show`
- `network port vlan show`

## Parameters

| Name   | Type          | In    | Required | Description                   |
|--------|---------------|-------|----------|-------------------------------|
| uuid   | string        | path  | True     | Port UUID                     |
| fields | array[string] | query | False    | Specify the fields to return. |

## Response

Status: 200, Ok

| Name                             | Type                             | Description   |
|----------------------------------|----------------------------------|---|
| <a href="#">_links</a>           | <a href="#">_links</a>           |   |
| <a href="#">broadcast_domain</a> | <a href="#">broadcast_domain</a> | Broadcast domain UUID along with a readable name. Either the UUID or both names may be provided on input. |
| <a href="#">enabled</a>          | <a href="#">boolean</a>          |   |
| <a href="#">lag</a>              | <a href="#">lag</a>              |   |
| <a href="#">mac_address</a>      | <a href="#">string</a>           |   |
| <a href="#">metric</a>           | <a href="#">metric</a>           | The most recent sample of I/O metrics for the port.   |
| <a href="#">mtu</a>              | <a href="#">integer</a>          | MTU of the port in bytes. Set by broadcast domain.  |
| <a href="#">name</a>             | <a href="#">string</a>           | Portname, such as e0a, e1b-100 (VLAN on ethernet), a0c (LAG/ifgrp), a0d-200 (vlan on LAG/ifgrp)           |
| <a href="#">node</a>             | <a href="#">node</a>             |   |

| Name                        | Type   | Description   |
|-----------------------------|--|---|
| reachability                | string   | Reachability status of the port. Enum value "ok" is the only acceptable value for a PATCH request to repair a port. |
| reachable_broadcast_domains | array[ <a href="#">reachable_broadcast_domains</a> ] | Reachable broadcast domains.  |
| speed                       | integer  | Link speed in Mbps  |
| state                       | string   | Operational state of the port.  |
| statistics                  | <a href="#">statistics</a>                           | The real time I/O statistics for the port.  |
| type                        | string   | Type of physical or virtual port  |
| uuid                        | string   | Port UUID   |
| vlan                        | <a href="#">vlan</a>                                 |   |

## Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "broadcast_domain": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "ipspace": {
      "name": "ipspace1"
    },
    "name": "bd1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "lag": {
    "active_ports": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "e1b",
      "node": {
        "name": "node1"
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "distribution_policy": "port",
    "member_ports": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "e1b",
      "node": {
        "name": "node1"
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  },
}
```



```
    "mode": "multimode_lacp"
  },
  "mac_address": "01:02:03:04:05:06",
  "metric": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "duration": "PT15S",
  "status": "ok",
  "throughput": {
    "read": "200",
    "total": "1000",
    "write": "100"
  },
  "timestamp": "2017-01-25T11:20:13Z"
},
"mtu": "1500",
"name": "e1b",
"node": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  }
},
"name": "node1",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"reachability": "ok",
"reachable_broadcast_domains": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  }
},
"ipspace": {
  "name": "ipspace1"
},
"name": "bd1",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"speed": "1000",
"state": "up",
"statistics": {
  "device": {
```

```
"link_down_count_raw": "3",
"receive_raw": {
  "discards": "100",
  "errors": "200",
  "packets": "500"
},
"timestamp": "2017-01-25T11:20:13Z",
"transmit_raw": {
  "discards": "100",
  "errors": "200",
  "packets": "500"
}
},
"status": "ok",
"throughput_raw": {
  "read": "200",
  "total": "1000",
  "write": "100"
},
"timestamp": "2017-01-25T11:20:13Z"
},
"type": "vlan",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
"vlan": {
  "base_port": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "e1b",
    "node": {
      "name": "node1"
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "tag": "100"
}
}
```

## 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 | <a href="#">href</a> |             |

ipospace

| Name | Type   | Description                            |
|------|--------|--|
| name | string | Name of the broadcast domain's IPspace |

broadcast\_domain

Broadcast domain UUID along with a readable name. Either the UUID or both names may be provided on input.

| Name     | Type                     | Description   |
|----------|--------------------------|---|
| _links   | <a href="#">_links</a>   |   |
| ipospace | <a href="#">ipospace</a> |   |
| name     | string                   | Name of the broadcast domain, scoped to its IPspace |
| uuid     | string                   | Broadcast domain UUID                               |

node

| Name | Type   | Description                                |
|------|--------|--|
| name | string | Name of node on which the port is located. |

active\_ports

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

| Name   | Type                   | Description |
|--------|------------------------|-------------|
| _links | <a href="#">_links</a> |             |

| Name | Type                 | Description |
|------|----------------------|-------------|
| name | string               |             |
| node | <a href="#">node</a> |             |
| uuid | string               |             |

member\_ports

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

| Name   | Type                   | Description |
|--------|------------------------|-------------|
| _links | <a href="#">_links</a> |             |
| name   | string                 |             |
| node   | <a href="#">node</a>   |             |
| uuid   | string                 |             |

lag

| Name                | Type                                  | Description   |
|---------------------|---------------------------------------|---|
| active_ports        | array[ <a href="#">active_ports</a> ] | Active ports of a LAG (ifgrp). (Some member ports may be inactive.)           |
| distribution_policy | string                                | Policy for mapping flows to ports for outbound packets through a LAG (ifgrp). |
| member_ports        | array[ <a href="#">member_ports</a> ] |   |
| mode                | string                                | Determines how the ports interact with the switch.                            |

throughput

The rate of throughput bytes per second observed at the port object.

| Name  | Type    | Description   |
|-------|---------|---|
| read  | integer | Performance metric for read I/O operations.                     |
| total | integer | Performance metric aggregated over all types of I/O operations. |
| write | integer | Performance metric for write I/O operations.                    |

## metric

The most recent sample of I/O metrics for the port.

| Name                   | Type                       | Description   |
|------------------------|----------------------------|---|
| <a href="#">_links</a> | <a href="#">_links</a>     |   |
| duration               | string                     | The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:  |
| status                 | string                     | Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data".<br>"inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated.<br>"Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data. |
| throughput             | <a href="#">throughput</a> | The rate of throughput bytes per second observed at the port object.  |
| timestamp              | string                     | The timestamp of the performance data.  |

## node

| Name                   | Type                   | Description |
|------------------------|------------------------|-------------|
| <a href="#">_links</a> | <a href="#">_links</a> |             |

| Name | Type   | Description |
|------|--------|-------------|
| name | string |             |
| uuid | string |             |

reachable\_broadcast\_domains

Broadcast domain UUID along with a readable name. Either the UUID or both names may be provided on input.

| Name    | Type                    | Description   |
|---------|-------------------------|---|
| _links  | <a href="#">_links</a>  |   |
| ipspace | <a href="#">ipspace</a> |   |
| name    | string                  | Name of the broadcast domain, scoped to its IPspace |
| uuid    | string                  | Broadcast domain UUID                               |

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.                |

device

Device-related counters for the port object. These counters are applicable at the lowest layer of the

networking stack. These values can be used to calculate both transmit and receive packet and error rates by comparing two samples taken at different times and calculating the increase in counter value divided by the elapsed time between the two samples.

| Name                | Type                         | Description  |
|---------------------|------------------------------|--|
| link_down_count_raw | integer                      | The number of link state changes from up to down seen on the device. |
| receive_raw         | <a href="#">receive_raw</a>  | Packet receive counters for the Ethernet port.                       |
| timestamp           | string                       | The timestamp when the device specific counters were collected.      |
| transmit_raw        | <a href="#">transmit_raw</a> | Packet transmit counters for the Ethernet port.                      |

#### throughput\_raw

Throughput bytes observed at the port object. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.

| Name  | Type    | Description   |
|-------|---------|---|
| read  | integer | Performance metric for read I/O operations.                     |
| total | integer | Performance metric aggregated over all types of I/O operations. |
| write | integer | Performance metric for write I/O operations.                    |

#### statistics

The real time I/O statistics for the port.



| Name           | Type           | Description  |
|----------------|----------------|--|
| device         | device         | Device-related counters for the port object. These counters are applicable at the lowest layer of the networking stack. These values can be used to calculate both transmit and receive packet and error rates by comparing two samples taken at different times and calculating the increase in counter value divided by the elapsed time between the two samples.  |
| status         | string         | <p>Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data".</p> <p>"inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated.</p> <p>"Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data.</p> |
| throughput_raw | throughput_raw | Throughput bytes observed at the port object. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.   |
| timestamp      | string         | The timestamp of the throughput_raw performance data.  |

base\_port

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

| Name                | Type                   | Description |
|---------------------|------------------------|-------------|
| <code>_links</code> | <a href="#">_links</a> |             |
| <code>name</code>   | string                 |             |
| <code>node</code>   | <a href="#">node</a>   |             |
| <code>uuid</code>   | string                 |             |

vlan

| Name                   | Type                      | Description  |
|------------------------|---------------------------|--|
| <code>base_port</code> | <a href="#">base_port</a> | Port UUID along with readable names. Either the UUID or both names may be supplied on input. |
| <code>tag</code>       | integer                   | VLAN ID  |

error\_arguments

| Name                 | Type   | Description      |
|----------------------|--------|------------------|
| <code>code</code>    | string | Argument code    |
| <code>message</code> | string | Message argument |

error

| Name                   | Type                                     | Description                                 |
|------------------------|--|---|
| <code>arguments</code> | array[ <a href="#">error_arguments</a> ] | Message arguments                           |
| <code>code</code>      | string                                   | Error code                                  |
| <code>message</code>   | string                                   | Error message                               |
| <code>target</code>    | string                                   | The target parameter that caused the error. |

## Update a port

PATCH `/network/ethernet/ports/{uuid}`

Introduced In: 9.6

Updates a port.

## Related ONTAP commands

- `network port broadcast-domain add-ports`
- `network port broadcast-domain remove-ports`
- `network port ifgrp modify`
- `network port modify`
- `network port vlan modify`

## Parameters

| Name | Type   | In   | Required | Description |
|------|--------|------|----------|-------------|
| uuid | string | path | True     | Port UUID   |

## Request Body

| Name                          | Type                          | Description   |
|-------------------------------|-------------------------------|---|
| <code>_links</code>           | <code>_links</code>           |   |
| <code>broadcast_domain</code> | <code>broadcast_domain</code> | Broadcast domain UUID along with a readable name. Either the UUID or both names may be provided on input.           |
| <code>enabled</code>          | boolean                       |   |
| <code>lag</code>              | <code>lag</code>              |   |
| <code>mac_address</code>      | string                        |   |
| <code>metric</code>           | <code>metric</code>           | The most recent sample of I/O metrics for the port.   |
| <code>mtu</code>              | integer                       | MTU of the port in bytes. Set by broadcast domain.  |
| <code>name</code>             | string                        | Portname, such as e0a, e1b-100 (VLAN on ethernet), a0c (LAG/ifgrp), a0d-200 (vlan on LAG/ifgrp)                     |
| <code>node</code>             | <code>node</code>             |   |
| <code>reachability</code>     | string                        | Reachability status of the port. Enum value "ok" is the only acceptable value for a PATCH request to repair a port. |

| Name                        | Type   | Description                                |
|-----------------------------|--|--|
| reachable_broadcast_domains | array[ <a href="#">reachable_broadcast_domains</a> ] | Reachable broadcast domains.               |
| speed                       | integer  | Link speed in Mbps                         |
| state                       | string   | Operational state of the port.             |
| statistics                  | <a href="#">statistics</a>                           | The real time I/O statistics for the port. |
| type                        | string   | Type of physical or virtual port           |
| uuid                        | string   | Port UUID                                  |
| vlan                        | <a href="#">vlan</a>                                 |  |

## Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "broadcast_domain": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "ipspace": {
      "name": "ipspace1"
    },
    "name": "bd1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "lag": {
    "active_ports": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "e1b",
      "node": {
        "name": "node1"
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "distribution_policy": "port",
    "member_ports": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "e1b",
      "node": {
        "name": "node1"
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  },
}
```

```
    "mode": "multimode_lacp"
  },
  "mac_address": "01:02:03:04:05:06",
  "metric": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "duration": "PT15S",
  "status": "ok",
  "throughput": {
    "read": "200",
    "total": "1000",
    "write": "100"
  },
  "timestamp": "2017-01-25T11:20:13Z"
},
"mtu": "1500",
"name": "e1b",
"node": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  }
},
"name": "node1",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"reachability": "ok",
"reachable_broadcast_domains": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  }
},
"ipspace": {
  "name": "ipspace1"
},
"name": "bd1",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"speed": "1000",
"state": "up",
"statistics": {
  "device": {
```

```
"link_down_count_raw": "3",
"receive_raw": {
  "discards": "100",
  "errors": "200",
  "packets": "500"
},
"timestamp": "2017-01-25T11:20:13Z",
"transmit_raw": {
  "discards": "100",
  "errors": "200",
  "packets": "500"
}
},
"status": "ok",
"throughput_raw": {
  "read": "200",
  "total": "1000",
  "write": "100"
},
"timestamp": "2017-01-25T11:20:13Z"
},
"type": "vlan",
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
"vlan": {
  "base_port": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "e1b",
    "node": {
      "name": "node1"
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "tag": "100"
}
}
```

## Response

Status: 200, Ok

## Error

Status: Default

### ONTAP Error Response Codes

| Error Code | Description   |
|------------|---|
| 1376361    | Port is already a member of a LAG.  |
| 1377562    | Port cannot be used because it is currently the home port or current port of an interface.  |
| 1377563    | Port is already a member of a LAG.  |
| 1967087    | The specified broadcast domain UUID is not valid.   |
| 1967088    | The specified broadcast domain name does not exist in the specified IPspace.  |
| 1967089    | The specified broadcast domain UUID, name and IPspace name do not match.  |
| 1967094    | The specified LAG member port UUID is not valid.  |
| 1967095    | The specified LAG member port name and node name combination is not valid.  |
| 1967096    | The specified node does not match the specified LAG member port node.   |
| 1967097    | The specified LAG member ports UUID, name, and node name do not match.  |
| 1967148    | Failure to remove port from broadcast domain.   |
| 1967149    | Failure to add port to broadcast domain.  |
| 1967184    | The reachability parameter cannot be patched in the same request as other parameters that might affect the target port's reachability status. |
| 1967185    | The port cannot be repaired because the port is deemed as non-repairable.   |
| 1967186    | Invalid value for the reachability parameter.   |
| 1967580    | This command is not supported as the effective cluster version is earlier than 9.8.   |
| 1967582    | The reachability parameter is not supported on this cluster.  |

| Name  | Type                  | Description |
|-------|-----------------------|-------------|
| error | <a href="#">error</a> |             |



## 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 | <a href="#">href</a> |             |

ipospace

| Name | Type   | Description                            |
|------|--------|--|
| name | string | Name of the broadcast domain's IPspace |

broadcast\_domain

Broadcast domain UUID along with a readable name. Either the UUID or both names may be provided on input.

| Name     | Type                     | Description   |
|----------|--------------------------|---|
| _links   | <a href="#">_links</a>   |   |
| ipospace | <a href="#">ipospace</a> |   |
| name     | string                   | Name of the broadcast domain, scoped to its IPspace |
| uuid     | string                   | Broadcast domain UUID                               |

node

| Name | Type   | Description                                |
|------|--------|--|
| name | string | Name of node on which the port is located. |

active\_ports

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

| Name   | Type                   | Description |
|--------|------------------------|-------------|
| _links | <a href="#">_links</a> |             |

| Name | Type                 | Description |
|------|----------------------|-------------|
| name | string               |             |
| node | <a href="#">node</a> |             |
| uuid | string               |             |

member\_ports

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

| Name   | Type                   | Description |
|--------|------------------------|-------------|
| _links | <a href="#">_links</a> |             |
| name   | string                 |             |
| node   | <a href="#">node</a>   |             |
| uuid   | string                 |             |

lag

| Name                | Type                                  | Description   |
|---------------------|---------------------------------------|---|
| active_ports        | array[ <a href="#">active_ports</a> ] | Active ports of a LAG (ifgrp). (Some member ports may be inactive.)           |
| distribution_policy | string                                | Policy for mapping flows to ports for outbound packets through a LAG (ifgrp). |
| member_ports        | array[ <a href="#">member_ports</a> ] |   |
| mode                | string                                | Determines how the ports interact with the switch.                            |

throughput

The rate of throughput bytes per second observed at the port object.

| Name  | Type    | Description   |
|-------|---------|---|
| read  | integer | Performance metric for read I/O operations.                     |
| total | integer | Performance metric aggregated over all types of I/O operations. |
| write | integer | Performance metric for write I/O operations.                    |

## metric

The most recent sample of I/O metrics for the port.

| Name                   | Type                       | Description   |
|------------------------|----------------------------|---|
| <a href="#">_links</a> | <a href="#">_links</a>     |   |
| duration               | string                     | The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:  |
| status                 | string                     | Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data".<br>"inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated.<br>"Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data. |
| throughput             | <a href="#">throughput</a> | The rate of throughput bytes per second observed at the port object.  |
| timestamp              | string                     | The timestamp of the performance data.  |

## node

| Name                   | Type                   | Description |
|------------------------|------------------------|-------------|
| <a href="#">_links</a> | <a href="#">_links</a> |             |

| Name | Type   | Description |
|------|--------|-------------|
| name | string |             |
| uuid | string |             |

reachable\_broadcast\_domains

Broadcast domain UUID along with a readable name. Either the UUID or both names may be provided on input.

| Name    | Type                    | Description   |
|---------|-------------------------|---|
| _links  | <a href="#">_links</a>  |   |
| ipspace | <a href="#">ipspace</a> |   |
| name    | string                  | Name of the broadcast domain, scoped to its IPspace |
| uuid    | string                  | Broadcast domain UUID                               |

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.                |

device

Device-related counters for the port object. These counters are applicable at the lowest layer of the

networking stack. These values can be used to calculate both transmit and receive packet and error rates by comparing two samples taken at different times and calculating the increase in counter value divided by the elapsed time between the two samples.

| Name                | Type                         | Description  |
|---------------------|------------------------------|--|
| link_down_count_raw | integer                      | The number of link state changes from up to down seen on the device. |
| receive_raw         | <a href="#">receive_raw</a>  | Packet receive counters for the Ethernet port.                       |
| timestamp           | string                       | The timestamp when the device specific counters were collected.      |
| transmit_raw        | <a href="#">transmit_raw</a> | Packet transmit counters for the Ethernet port.                      |

#### throughput\_raw

Throughput bytes observed at the port object. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.

| Name  | Type    | Description   |
|-------|---------|---|
| read  | integer | Performance metric for read I/O operations.                     |
| total | integer | Performance metric aggregated over all types of I/O operations. |
| write | integer | Performance metric for write I/O operations.                    |

#### statistics

The real time I/O statistics for the port.

| Name           | Type           | Description  |
|----------------|----------------|--|
| device         | device         | Device-related counters for the port object. These counters are applicable at the lowest layer of the networking stack. These values can be used to calculate both transmit and receive packet and error rates by comparing two samples taken at different times and calculating the increase in counter value divided by the elapsed time between the two samples.  |
| status         | string         | <p>Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data".</p> <p>"inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated.</p> <p>"Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data.</p> |
| throughput_raw | throughput_raw | Throughput bytes observed at the port object. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.   |
| timestamp      | string         | The timestamp of the throughput_raw performance data.  |

base\_port

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

| Name   | Type                   | Description |
|--------|------------------------|-------------|
| _links | <a href="#">_links</a> |             |
| name   | string                 |             |
| node   | <a href="#">node</a>   |             |
| uuid   | string                 |             |

vlan

| Name      | Type                      | Description  |
|-----------|---------------------------|--|
| base_port | <a href="#">base_port</a> | Port UUID along with readable names. Either the UUID or both names may be supplied on input. |
| tag       | integer                   | VLAN ID  |

port

| Name             | Type                             | Description   |
|------------------|----------------------------------|---|
| _links           | <a href="#">_links</a>           |   |
| broadcast_domain | <a href="#">broadcast_domain</a> | Broadcast domain UUID along with a readable name. Either the UUID or both names may be provided on input. |
| enabled          | boolean                          |   |
| lag              | <a href="#">lag</a>              |   |
| mac_address      | string                           |   |
| metric           | <a href="#">metric</a>           | The most recent sample of I/O metrics for the port.   |
| mtu              | integer                          | MTU of the port in bytes. Set by broadcast domain.  |
| name             | string                           | Portname, such as e0a, e1b-100 (VLAN on ethernet), a0c (LAG/ifgrp), a0d-200 (vlan on LAG/ifgrp)           |
| node             | <a href="#">node</a>             |   |



| Name                        | Type   | Description   |
|-----------------------------|--|---|
| reachability                | string   | Reachability status of the port. Enum value "ok" is the only acceptable value for a PATCH request to repair a port. |
| reachable_broadcast_domains | array[ <a href="#">reachable_broadcast_domains</a> ] | Reachable broadcast domains.  |
| speed                       | integer  | Link speed in Mbps  |
| state                       | string   | Operational state of the port.  |
| statistics                  | <a href="#">statistics</a>                           | The real time I/O statistics for the port.  |
| type                        | string   | Type of physical or virtual port  |
| uuid                        | string   | Port UUID   |
| vlan                        | <a href="#">vlan</a>                                 |   |

#### error\_arguments

| Name    | Type   | Description      |
|---------|--------|------------------|
| code    | string | Argument code    |
| message | string | Message argument |

#### error

| Name      | Type                                     | Description                                 |
|-----------|--|---|
| arguments | array[ <a href="#">error_arguments</a> ] | Message arguments                           |
| code      | string                                   | Error code                                  |
| message   | string                                   | Error message                               |
| target    | string                                   | The target parameter that caused the error. |

## Retrieve historical port performance metrics

GET /network/ethernet/ports/{uuid}/metrics

**Introduced In:** 9.8

Retrieves historical performance metrics for a port.

**Parameters**

| <b>Name</b>      | <b>Type</b> | <b>In</b> | <b>Required</b> | <b>Description</b>             |
|------------------|-------------|-----------|-----------------|--------------------------------|
| timestamp        | string      | query     | False           | Filter by timestamp            |
| duration         | string      | query     | False           | Filter by duration             |
| throughput.write | integer     | query     | False           | Filter by throughput.write     |
| throughput.read  | integer     | query     | False           | Filter by throughput.read      |
| throughput.total | integer     | query     | False           | Filter by throughput.total     |
| status           | string      | query     | False           | Filter by status               |
| uuid             | string      | path      | True            | Unique identifier of the port. |

| Name     | Type   | In    | Required | Description   |
|----------|--------|-------|----------|---|
| interval | string | query | False    | <p>The time range for the data. Examples can be 1h, 1d, 1m, 1w, 1y. The period for each time range is as follows:</p> <ul style="list-style-type: none"> <li>• 1h: Metrics over the most recent hour sampled over 15 seconds.</li> <li>• 1d: Metrics over the most recent day sampled over 5 minutes.</li> <li>• 1w: Metrics over the most recent week sampled over 30 minutes.</li> <li>• 1m: Metrics over the most recent month sampled over 2 hours.</li> <li>• 1y: Metrics over the most recent year sampled over a day.</li> <li>• Default value: 1</li> <li>• enum: ["1h", "1d", "1w", "1m", "1y"]</li> </ul> |

| 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"> <li>• Default value: 1</li> <li>• Max value: 120</li> <li>• Min value: 0</li> </ul> |
| fields   | array[string]  | query   | False    | Specify the fields to return.  |
| max_records  | integer        | query   | False    | Limit the number of records returned.  |
| order_by   | array[string]  | query   | False    | Order results by specified fields and optional [asc  |
| desc] direction. Default direction is 'asc' for ascending. | return_records | boolean | query    | False  |

## Response

Status: 200, Ok

| Name        | Type                             | Description       |
|-------------|----------------------------------|-------------------|
| _links      | <a href="#">_links</a>           |                   |
| num_records | integer                          | Number of records |
| records     | array[ <a href="#">records</a> ] |                   |

## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "duration": "PT15S",
    "status": "ok",
    "throughput": {
      "read": "200",
      "total": "1000",
      "write": "100"
    },
    "timestamp": "2017-01-25T11:20:13Z"
  }
}
```

## Error

Status: Default, Error

| Name  | Type                  | Description |
|-------|-----------------------|-------------|
| error | <a href="#">error</a> |             |

## 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 | <a href="#">href</a> |             |
| self | <a href="#">href</a> |             |

\_links

| Name | Type                 | Description |
|------|----------------------|-------------|
| self | <a href="#">href</a> |             |

throughput

The rate of throughput bytes per second observed at the port object.

| Name  | Type    | Description   |
|-------|---------|---|
| read  | integer | Performance metric for read I/O operations.                     |
| total | integer | Performance metric aggregated over all types of I/O operations. |
| write | integer | Performance metric for write I/O operations.                    |

records

Throughput performance for the Ethernet port.

| Name     | Type                   | Description  |
|----------|------------------------|--|
| _links   | <a href="#">_links</a> |  |
| duration | string                 | The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations: |

| Name       | Type                       | Description  |
|------------|----------------------------|--|
| status     | string                     | <p>Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data".</p> <p>"inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated.</p> <p>"Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data.</p> |
| throughput | <a href="#">throughput</a> | The rate of throughput bytes per second observed at the port object.   |
| timestamp  | string                     | The timestamp of the performance data.   |

#### error\_arguments

| Name    | Type   | Description      |
|---------|--------|------------------|
| code    | string | Argument code    |
| message | string | Message argument |

#### error

| Name      | Type                                     | Description       |
|-----------|--|-------------------|
| arguments | array[ <a href="#">error_arguments</a> ] | Message arguments |
| code      | string                                   | Error code        |



| <b>Name</b> | <b>Type</b> | <b>Description</b>                          |
|-------------|-------------|---|
| message     | string      | Error message                               |
| target      | string      | The target parameter that caused the error. |

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