



## **Manage storage ports**

### **ONTAP 9.15.1 REST API reference**

NetApp

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# Manage storage ports

## Storage ports endpoint overview

### Retrieving storage port information

The storage port GET API retrieves all of the storage ports in the cluster.

### Examples

#### 1) Retrieve a list of storage ports from the cluster

The following example shows the response with a list of storage ports in the cluster:

```
# The API:
/api/storage/ports

# The call:
curl -X GET "https://<mgmt-ip>/api/storage/ports" -H "accept:
application/hal+json"

# The response:
{
  "records": [
    {
      "node": {
        "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
        "name": "node-1",
        "_links": {
          "self": {
            "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-
00a0985a72ee"
          }
        }
      },
      "name": "0a",
      "_links": {
        "self": {
          "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-
00a0985a72ee/0a"
        }
      }
    }
  ],
}
```

```

{
  "node": {
    "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
    "name": "node-1",
    "_links": {
      "self": {
        "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-00a0985a72ee"
      }
    }
  },
  "name": "0b",
  "_links": {
    "self": {
      "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-00a0985a72ee/0b"
    }
  }
},
{
  "node": {
    "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
    "name": "node-1",
    "_links": {
      "self": {
        "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-00a0985a72ee"
      }
    }
  },
  "name": "0c",
  "_links": {
    "self": {
      "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-00a0985a72ee/0c"
    }
  }
},
{
  "node": {
    "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
    "name": "node-1",
    "_links": {
      "self": {
        "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-00a0985a72ee"
      }
    }
  }
}

```

```

    }
  },
  "name": "0d",
  "_links": {
    "self": {
      "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-00a0985a72ee/0d"
    }
  }
},
{
  "node": {
    "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
    "name": "node-1",
    "_links": {
      "self": {
        "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-00a0985a72ee"
      }
    }
  },
  "name": "0e",
  "_links": {
    "self": {
      "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-00a0985a72ee/0e"
    }
  }
},
{
  "node": {
    "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
    "name": "node-1",
    "_links": {
      "self": {
        "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-00a0985a72ee"
      }
    }
  },
  "name": "0f",
  "_links": {
    "self": {
      "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-00a0985a72ee/0f"
    }
  }
}

```

```

    }
  },
  {
    "node": {
      "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
      "name": "node-1",
      "_links": {
        "self": {
          "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-00a0985a72ee"
        }
      }
    },
    "name": "0g",
    "_links": {
      "self": {
        "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-00a0985a72ee/0g"
      }
    }
  },
],
"num_records": 7,
"_links": {
  "self": {
    "href": "/api/storage/ports"
  }
}
}

```

## 2) Retrieve a specific storage port from the cluster

The following example shows the response of the requested storage port. If there is no storage port with the requested node uuid and name, an error is returned.

```
# The API:
/api/storage/ports/{node.uuid}/{name}

# The call:
curl -X GET "https://<mgmt-ip>/api/storage/ports/0530d6c1-8c6d-11e8-907f-00a0985a72ee/0a" -H "accept: application/hal+json"

# The response:
{
  "node": {
    "uuid": "0530d6c1-8c6d-11e8-907f-00a0985a72ee",
    "name": "node-1",
    "_links": {
      "self": {
        "href": "/api/cluster/nodes/0530d6c1-8c6d-11e8-907f-00a0985a72ee"
      }
    }
  },
  "name": "0a",
  "description": "SAS Host Adapter 0a (PMC-Sierra PM8001 rev. C)",
  "wwn": "500a098003633df0",
  "speed": 6,
  "cable": {
    "part_number": "112-00429+A0",
    "serial_number": "629230774",
    "identifier": "500a0980066e2c01-500a098003633df0",
    "length": "0.5m",
    "vendor": "Molex Inc.",
    "transceiver": "mini_sas_hd"
  },
  "state": "online",
  "enabled": true,
  "firmware_version": "01.12.09.00",
  "type": "sas",
  "redundant": true,
  "in_use": true,
  "_links": {
    "self": {
      "href": "/api/storage/ports/0530d6c1-8c6d-11e8-907f-00a0985a72ee/0a"
    }
  }
}
```

## Updating a storage port

The storage port PATCH API modifies the port mode for storage/network use and allows the port to be enabled/disabled.

---

### Examples

#### 1) Using an Ethernet port for storage

The following example sets an Ethernet port mode for storage use:

---

```
# The API:
/api/storage/ports/{node.uuid}/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/storage/ports/0530d6c1-8c6d-11e8-907f-00a0985a72ee/e3a" -H "accept: application/hal+json" -H "Content-Type: application/hal_json" -d '{"mode": "storage"}'

# The response:
{
}
```

#### 2) Disabling a storage port

The following example disables an unused storage port:

---

```
# The API:
/api/storage/ports/{node.uuid}/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/storage/ports/0530d6c1-8c6d-11e8-907f-00a0985a72ee/e3a" -H "accept: application/hal+json" -H "Content-Type: application/hal_json" -d '{"enabled": "false"}'

# The response:
{
}
```



# Retrieve storage ports

GET /storage/ports

Introduced In: 9.6

Retrieves a collection of storage ports.

## Related ONTAP commands

- `storage port show`

## Learn more

- [DOC /storage/ports](#)

## Parameters

Name	Type	In	Required	Description
serial_number	string	query	False	Filter by serial_number
part_number	string	query	False	Filter by part_number
wwpn	string	query	False	Filter by wwpn <ul style="list-style-type: none"><li>• Introduced in: 9.9</li></ul>
mac_address	string	query	False	Filter by mac_address
wwn	string	query	False	Filter by wwn
speed	number	query	False	Filter by speed
enabled	boolean	query	False	Filter by enabled <ul style="list-style-type: none"><li>• Introduced in: 9.9</li></ul>
cable.identifier	string	query	False	Filter by cable.identifier

Name	Type	In	Required	Description
cable.vendor	string	query	False	Filter by cable.vendor  • Introduced in: 9.15
cable.length	string	query	False	Filter by cable.length
cable.transceiver	string	query	False	Filter by cable.transceiver  • Introduced in: 9.15
cable.serial_number	string	query	False	Filter by cable.serial_number
cable.part_number	string	query	False	Filter by cable.part_number
mode	string	query	False	Filter by mode  • Introduced in: 9.8
firmware_version	string	query	False	Filter by firmware_version  • Introduced in: 9.9
error.corrective_action	string	query	False	Filter by error.corrective_action
error.message	string	query	False	Filter by error.message
node.uuid	string	query	False	Filter by node.uuid
node.name	string	query	False	Filter by node.name
description	string	query	False	Filter by description
board_name	string	query	False	Filter by board_name

Name	Type	In	Required	Description
redundant	boolean	query	False	Filter by redundant <ul style="list-style-type: none"> <li>• Introduced in: 9.9</li> </ul>
name	string	query	False	Filter by name
state	string	query	False	Filter by state
in_use	boolean	query	False	Filter by in_use <ul style="list-style-type: none"> <li>• Introduced in: 9.9</li> </ul>
type	string	query	False	Filter by type <ul style="list-style-type: none"> <li>• Introduced in: 9.9</li> </ul>
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. <ul style="list-style-type: none"> <li>• Default value: 1</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>
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	Number of records
records	array[ <a href="#">storage_port</a> ]	

## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "board_name": "string",
      "cable": {
        "identifier": "500a0980000b6c3f-50000d1703544b80",
        "length": "2m",
        "part_number": "112-00431+A0",
        "serial_number": 616930439,
        "transceiver": "mini_sas_hd",
        "vendor": "Molex Inc."
      },
      "description": "SAS Host Adapter 2a (PMC-Sierra PM8072 rev. C)",
      "error": {
        "corrective_action": "string",
        "message": "string"
      },
      "firmware_version": "03.08.09.00",
      "mac_address": "string",
      "mode": "storage",
      "name": "2a",
      "node": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "node1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "part_number": "111-03801",
      "serial_number": "7A2463CC45B",
      "speed": 6,
      "state": "online",
      "type": "sas",
    }
  ]
}
```

```
    "wwn": "50000d1703544b80",
    "wwpn": "string"
  }
]
}
```

## Error

Status: Default, Error

Name	Type	Description
error	<a href="#">returned_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>	

cable

Name	Type	Description
identifier	string	
length	string	
part_number	string	
serial_number	string	
transceiver	string	
vendor	string	

error

Name	Type	Description
corrective_action	string	Error corrective action
message	string	Error message

\_links

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

node

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

## storage\_port

Name	Type	Description
board_name	string	
cable	<a href="#">cable</a>	
description	string	
enabled	boolean	
error	<a href="#">error</a>	
firmware_version	string	
force	boolean	
in_use	boolean	Specifies whether any devices are connected through this port
mac_address	string	
mode	string	Operational mode of a non-dedicated Ethernet port
name	string	
node	<a href="#">node</a>	
part_number	string	
redundant	boolean	Specifies whether all devices connected through this port have a redundant path from another port
serial_number	string	
speed	number	Operational port speed in Gbps
state	string	
type	string	
wwn	string	World Wide Name
wwpn	string	World Wide Port Name

## error\_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument



returned\_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 storage port

GET /storage/ports/{node.uuid}/{name}

Introduced In: 9.6

Retrieves a specific storage port.

### Related ONTAP commands

- `storage port show`

### Learn more

- [DOC /storage/ports](#)

### Parameters

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

### Response

Status: 200, Ok

Name	Type	Description
board_name	string	
cable	<a href="#">cable</a>	
description	string	
enabled	boolean	
error	<a href="#">error</a>	
firmware_version	string	
force	boolean	
in_use	boolean	Specifies whether any devices are connected through this port
mac_address	string	
mode	string	Operational mode of a non-dedicated Ethernet port
name	string	
node	<a href="#">node</a>	
part_number	string	
redundant	boolean	Specifies whether all devices connected through this port have a redundant path from another port
serial_number	string	
speed	number	Operational port speed in Gbps
state	string	
type	string	
wwn	string	World Wide Name
wwpn	string	World Wide Port Name

## Example response

```
{
  "board_name": "string",
  "cable": {
    "identifier": "500a0980000b6c3f-50000d1703544b80",
    "length": "2m",
    "part_number": "112-00431+A0",
    "serial_number": 616930439,
    "transceiver": "mini_sas_hd",
    "vendor": "Molex Inc."
  },
  "description": "SAS Host Adapter 2a (PMC-Sierra PM8072 rev. C)",
  "error": {
    "corrective_action": "string",
    "message": "string"
  },
  "firmware_version": "03.08.09.00",
  "mac_address": "string",
  "mode": "storage",
  "name": "2a",
  "node": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "part_number": "111-03801",
  "serial_number": "7A2463CC45B",
  "speed": 6,
  "state": "online",
  "type": "sas",
  "wwn": "50000d1703544b80",
  "wwpn": "string"
}
```

## Error

Status: Default, Error

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

### Example error

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

### Definitions

## See Definitions

cable

Name	Type	Description
identifier	string	
length	string	
part_number	string	
serial_number	string	
transceiver	string	
vendor	string	

error

Name	Type	Description
corrective_action	string	Error corrective action
message	string	Error message

href

Name	Type	Description
href	string	

\_links

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

node

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

error\_arguments

Name	Type	Description
code	string	Argument code

Name	Type	Description
message	string	Message argument

returned\_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.

## Update a storage port

PATCH /storage/ports/{node.uuid}/{name}

**Introduced In:** 9.11

Updates a storage port.

### Related ONTAP commands

- `storage port modify`
- `storage port enable`
- `storage port disable`

### Learn more

- [DOC /storage/ports](#)

### Parameters

Name	Type	In	Required	Description
node.uuid	string	path	True	Node UUID
name	string	path	True	Port name

### Request Body

Name	Type	Description
board_name	string	
cable	<a href="#">cable</a>	
description	string	
enabled	boolean	
error	<a href="#">error</a>	
firmware_version	string	
force	boolean	
in_use	boolean	Specifies whether any devices are connected through this port
mac_address	string	
mode	string	Operational mode of a non-dedicated Ethernet port
name	string	
node	<a href="#">node</a>	
part_number	string	
redundant	boolean	Specifies whether all devices connected through this port have a redundant path from another port
serial_number	string	
speed	number	Operational port speed in Gbps
state	string	
type	string	
wwn	string	World Wide Name
wwpn	string	World Wide Port Name

## Example request

```
{
  "board_name": "string",
  "cable": {
    "identifier": "500a0980000b6c3f-50000d1703544b80",
    "length": "2m",
    "part_number": "112-00431+A0",
    "serial_number": 616930439,
    "transceiver": "mini_sas_hd",
    "vendor": "Molex Inc."
  },
  "description": "SAS Host Adapter 2a (PMC-Sierra PM8072 rev. C)",
  "error": {
    "corrective_action": "string",
    "message": "string"
  },
  "firmware_version": "03.08.09.00",
  "mac_address": "string",
  "mode": "storage",
  "name": "2a",
  "node": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "name": "node1",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"part_number": "111-03801",
"serial_number": "7A2463CC45B",
"speed": 6,
"state": "online",
"type": "sas",
"wwn": "50000d1703544b80",
"wwpn": "string"
}
```

## Response

Status: 200, Ok



## Error

Status: Default

### ONTAP Error Response Codes

Error Code	Description
17891328	Port operation "<operation>\\" failed on port \"<name>\". This might indicate a hardware error, an illegal request, or an aborted command.</name></operation>
17891329	Port "<name>\\" is invalid.</name>
17891330	Port operation "<operation>\\" failed on port \"<port>\\" because it is not supported on this port type.</port></operation>
17891331	Cannot complete operation on port "<port>\". The status of the port is not available.</port>
17891332	Port operation "<operation>\\" failed on port \"<port>\". The port is not offline.</port></operation>
17891333	Port operation "<operation>\\" failed on port \"<port>\". The port is already offline.</port></operation>
17891334	Port operation "<operation>\\" failed on port \"<port>\". One or more devices on the port is currently being sanitized.</port></operation>
17891338	Device operation "<operation>\\" failed on port \"<name>\". Some devices can only be accessed through this port. Disabling this port might cause multiple device failures.</name></operation>
17891339	Device operation "<operation>\\" failed on port \"<name>\". Some devices can only be accessed through this port. Disabling this port might cause multiple device failures. Use the \"-force\" parameter to ignore checks and <operation>the port.</operation></name></operation>
17891344	Device operation "<operation>\\" failed on port \"<name>\\" because the port is in use.</name></operation>
17891345	Device operation "<operation>\\" failed on port \"<name>\\" because the port is in use. Use the \"-force\" parameter to ignore checks and <operation>the port.</operation></name></operation>
17891346	Port "<name>\\" is already enabled.</name>
17891347	Port "<name>\\" is already disabled.</name>

Error Code	Description
17891350	Port "<name>\" is not a valid storage Ethernet port.</name>
17891350	Port "<port>\" is not a valid storage Ethernet port.</port>
17891352	Port operation "<operation>\" failed on port \"<name>\". Reboot node \"<node>\" to recover.</node></name></operation>
17891353	Unable to enable port "<port>\" because it is in network mode.</port>
17891354	Unable to disable port "<port>\" because it is in network mode.</port>
17891355	Port operation "<operation>\" failed on port \"<name>\" because it is not supported on dedicated ports.</name></operation>
17891356	Unable to <operation>port \"<port>\" when setting mode to \"<mode>\".</mode></port></operation>

Also see the table of common errors in the [Response body](#) overview section of this documentation.

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

### Example error

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

### Definitions

## See Definitions

cable

Name	Type	Description
identifier	string	
length	string	
part_number	string	
serial_number	string	
transceiver	string	
vendor	string	

error

Name	Type	Description
corrective_action	string	Error corrective action
message	string	Error message

href

Name	Type	Description
href	string	

\_links

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

node

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

storage\_port

Name	Type	Description
board_name	string	
cable	<a href="#">cable</a>	

Name	Type	Description
description	string	
enabled	boolean	
error	<a href="#">error</a>	
firmware_version	string	
force	boolean	
in_use	boolean	Specifies whether any devices are connected through this port
mac_address	string	
mode	string	Operational mode of a non-dedicated Ethernet port
name	string	
node	<a href="#">node</a>	
part_number	string	
redundant	boolean	Specifies whether all devices connected through this port have a redundant path from another port
serial_number	string	
speed	number	Operational port speed in Gbps
state	string	
type	string	
wwn	string	World Wide Name
wwpn	string	World Wide Port Name

#### error\_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

#### returned\_error

<b>Name</b>	<b>Type</b>	<b>Description</b>
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.

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