



## **Manage bridges**

### **ONTAP 9.13.1 REST API reference**

NetApp  
May 08, 2024

This PDF was generated from [https://docs.netapp.com/us-en/ontap-restapi-9131/ontap/storage\\_bridges\\_endpoint\\_overview.html](https://docs.netapp.com/us-en/ontap-restapi-9131/ontap/storage_bridges_endpoint_overview.html) on May 08, 2024. Always check docs.netapp.com for the latest.

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# Manage bridges

## Storage bridges endpoint overview

### Retrieving storage bridge information

The storage bridge GET API retrieves all of the bridges in the cluster.

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### Examples

#### 1) Retrieves a list of bridges from the cluster

The following example shows the response with a list of bridges from the cluster:

---

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

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

# The response:
{
  "records": [
    {
      "wwn": "2000001086a18100",
      "name": "ATTO_2000001086a18100",
      "_links": {
        "self": {
          "href": "/api/storage/bridges/2000001086a18100"
        }
      }
    },
    {
      "wwn": "2000001086a18380",
      "name": "ATTO_2000001086a18380",
      "_links": {
        "self": {
          "href": "/api/storage/bridges/2000001086a18380"
        }
      }
    }
  ],
  "num_records": 2,
  "_links": {
    "self": {
      "href": "/api/storage/bridges/"
    }
  }
}
```

---

## 2) Retrieves a specific bridge from the cluster

The following example shows the response of the requested bridge. If there is no bridge with the requested wwn, an error is returned.

---

```

# The API:
/api/storage/bridges/{wwn}

# The call:
curl -X GET "https://<mgmt-ip>/api/storage/bridges/2000001086a18100" -H
"accept: application/hal+json"

# The response:
{
  "wwn": "2000001086a18100",
  "chassis_throughput_state": "ok",
  "dram_single_bit_error_count": 0,
  "firmware_version": "3.10 007A",
  "ip_address": "10.226.57.178",
  "security_enabled": false,
  "monitoring_enabled": true,
  "model": "FibreBridge 7500N",
  "state": "ok",
  "managed_by": "in_band",
  "serial_number": "FB7500N102450",
  "symbolic_name": "RTP-FCSAS02-41KK10",
  "vendor": "atto",
  "name": "ATTO_2000001086a18100",
  "last_reboot": {
    "reason": {
      "message": "Reason: \"FirmwareRestart Command\".",
      "code": "39321683"
    }
  },
  "time": "2020-12-09T00:47:58-05:00"
},
"paths": [
{
  "name": "0e",
  "node": {
    "name": "sti8080mcc-http-005",
    "uuid": "ecc3d992-3a86-11eb-9fab-00a0985a6024",
    "_links": {
      "self": {
        "href": "/api/cluster/nodes/ecc3d992-3a86-11eb-9fab-00a0985a6024"
      }
    }
  }
},
  "_links": {
    "self": {
      "href": "/api/storage/ports/ecc3d992-3a86-11eb-9fab-00a0985a6024/0e"
    }
  }
}
]

```

```

    }
  },
  "target_port": {
    "wwn": "2100001086a18380"
  }
}
],
"temperature_sensor": {
  "name": "Chassis Temperature Sensor",
  "minimum": 0,
  "maximum": 90,
  "reading": 54,
  "state": "ok"
},
"fc_ports": [
{
  "id": 1,
  "state": "online",
  "enabled": true,
  "negotiated_data_rate": 8,
  "configured_data_rate": 8,
  "conn_mode": "ptp",
  "data_rate_capability": 16,
  "wwn": "2100001086a18100",
  "peer_wwn": "0000000000000000",
  "sfp": {
    "vendor": "FINISAR CORP.",
    "serial_number": "UW106SA",
    "part_number": "FTLF8529P3BCV",
    "data_rate_capability": 16
  }
},
{
  "id": 2,
  "state": "online",
  "enabled": true,
  "negotiated_data_rate": 16,
  "configured_data_rate": 16,
  "conn_mode": "ptp",
  "data_rate_capability": 16,
  "wwn": "2200001086a18100",
  "peer_wwn": "0000000000000000",
  "sfp": {
    "vendor": "FINISAR CORP.",
    "serial_number": "UW1072B",
    "part_number": "FTLF8529P3BCV",

```

```

    "data_rate_capability": 16
  }
}
],
"power_supply_units": [
{
  "name": "A",
  "state": "ok"
},
{
  "name": "B",
  "state": "ok"
}
],
"sas_ports": [
{
  "id": 1,
  "state": "online",
  "enabled": true,
  "data_rate_capability": 12,
  "negotiated_data_rate": 6,
  "wwn": "5001086000a18100",
  "phy_1": {
    "state": "online"
  },
  "phy_2": {
    "state": "online"
  },
  "phy_3": {
    "state": "online"
  },
  "phy_4": {
    "state": "online"
  },
  "cable": {
    "vendor": "Molex Inc.",
    "serial_number": "618130935",
    "technology": "Passive Copper 5m ID:00",
    "part_number": "112-00431"
  }
},
{
  "state": "offline",
  "enabled": false,
  "data_rate_capability": 12,
  "negotiated_data_rate": 0,

```

```

"wwn": "5001086000a18104",
"phy_1": {
  "state": "offline"
},
"phy_2": {
  "state": "offline"
},
"phy_3": {
  "state": "offline"
},
"phy_4": {
  "state": "offline"
},
},
{
  "state": "offline",
  "enabled": false,
  "data_rate_capability": 12,
  "negotiated_data_rate": 0,
  "wwn": "5001086000a18108",
  "phy_1": {
    "state": "offline"
  },
  "phy_2": {
    "state": "offline"
  },
  "phy_3": {
    "state": "offline"
  },
  "phy_4": {
    "state": "offline"
  },
},
{
  "state": "offline",
  "enabled": false,
  "data_rate_capability": 12,
  "negotiated_data_rate": 0,
  "wwn": "5001086000a1810c",
  "phy_1": {
    "state": "offline"
  },
  "phy_2": {
    "state": "offline"
  },
  "phy_3": {

```



```
    "state": "offline"
  },
  "phy_4": {
    "state": "offline"
  },
}
],
"_links": {
  "self": {
    "href": "/api/storage/bridges/2000001086a18100"
  }
}
}
```

## Retrieve a collection of bridges

GET /storage/bridges

**Introduced In:** 9.9

Retrieves a collection of bridges.

### Related ONTAP commands

- `storage bridge show`

### Learn more

- [DOC /storage/bridges](#)

### Parameters

Name	Type	In	Required	Description
wwn	string	query	False	Filter by wwn
managed_by	string	query	False	Filter by managed_by
paths.node.uuid	string	query	False	Filter by paths.node.uuid
paths.node.name	string	query	False	Filter by paths.node.name

Name	Type	In	Required	Description
paths.source_port.id	string	query	False	Filter by paths.source_port.id
paths.source_port.name	string	query	False	Filter by paths.source_port.name
paths.target_port.id	string	query	False	Filter by paths.target_port.id
paths.target_port.name	string	query	False	Filter by paths.target_port.name
paths.target_port.wwn	string	query	False	Filter by paths.target_port.wwn
paths.name	string	query	False	Filter by paths.name
state	string	query	False	Filter by state
last_reboot.time	string	query	False	Filter by last_reboot.time
last_reboot.reason.arguments.message	string	query	False	Filter by last_reboot.reason.arguments.message  • Introduced in: 9.10
last_reboot.reason.arguments.code	string	query	False	Filter by last_reboot.reason.arguments.code  • Introduced in: 9.10
last_reboot.reason.message	string	query	False	Filter by last_reboot.reason.message
last_reboot.reason.code	string	query	False	Filter by last_reboot.reason.code

Name	Type	In	Required	Description
last_reboot.reason.target	string	query	False	Filter by last_reboot.reason.target  • Introduced in: 9.10
name	string	query	False	Filter by name
firmware_version	string	query	False	Filter by firmware_version
dram_single_bit_error_count	integer	query	False	Filter by dram_single_bit_error_count
chassis_throughput_state	string	query	False	Filter by chassis_throughput_state
symbolic_name	string	query	False	Filter by symbolic_name
temperature_sensor.minimum	integer	query	False	Filter by temperature_sensor.minimum
temperature_sensor.maximum	integer	query	False	Filter by temperature_sensor.maximum
temperature_sensor.name	string	query	False	Filter by temperature_sensor.name
temperature_sensor.reading	integer	query	False	Filter by temperature_sensor.reading
temperature_sensor.state	string	query	False	Filter by temperature_sensor.state
sas_ports.id	integer	query	False	Filter by sas_ports.id

Name	Type	In	Required	Description
sas_ports.phy_1.state	string	query	False	Filter by sas_ports.phy_1.state
sas_ports.data_rate_capability	number	query	False	Filter by sas_ports.data_rate_capability
sas_ports.negotiated_data_rate	number	query	False	Filter by sas_ports.negotiated_data_rate
sas_ports.phy_3.state	string	query	False	Filter by sas_ports.phy_3.state
sas_ports.phy_2.state	string	query	False	Filter by sas_ports.phy_2.state
sas_ports.phy_4.state	string	query	False	Filter by sas_ports.phy_4.state
sas_ports.enabled	boolean	query	False	Filter by sas_ports.enabled
sas_ports.wwn	string	query	False	Filter by sas_ports.wwn
sas_ports.state	string	query	False	Filter by sas_ports.state
sas_ports.cable.vendor	string	query	False	Filter by sas_ports.cable.vendor
sas_ports.cable.serial_number	string	query	False	Filter by sas_ports.cable.serial_number
sas_ports.cable.part_number	string	query	False	Filter by sas_ports.cable.part_number

Name	Type	In	Required	Description
sas_ports.cable.technology	string	query	False	Filter by sas_ports.cable.technology
power_supply_units.name	string	query	False	Filter by power_supply_units.name
power_supply_units.state	string	query	False	Filter by power_supply_units.state
errors.component.id	integer	query	False	Filter by errors.component.id
errors.component.unique_id	string	query	False	Filter by errors.component.unique_id
errors.component.name	string	query	False	Filter by errors.component.name
errors.reason.arguments.message	string	query	False	Filter by errors.reason.arguments.message  • Introduced in: 9.10
errors.reason.arguments.code	string	query	False	Filter by errors.reason.arguments.code  • Introduced in: 9.10
errors.reason.message	string	query	False	Filter by errors.reason.message
errors.reason.code	string	query	False	Filter by errors.reason.code

Name	Type	In	Required	Description
errors.reason.target	string	query	False	Filter by errors.reason.target  • Introduced in: 9.10
errors.severity	string	query	False	Filter by errors.severity
errors.type	string	query	False	Filter by errors.type
security_enabled	boolean	query	False	Filter by security_enabled
ip_address	string	query	False	Filter by ip_address
serial_number	string	query	False	Filter by serial_number
model	string	query	False	Filter by model
fc_ports.enabled	boolean	query	False	Filter by fc_ports.enabled
fc_ports.negotiated_data_rate	number	query	False	Filter by fc_ports.negotiated_data_rate
fc_ports.data_rate_capability	number	query	False	Filter by fc_ports.data_rate_capability
fc_ports.state	string	query	False	Filter by fc_ports.state
fc_ports.wwn	string	query	False	Filter by fc_ports.wwn
fc_ports.peer_wwn	string	query	False	Filter by fc_ports.peer_wwn
fc_ports.configured_data_rate	number	query	False	Filter by fc_ports.configured_data_rate
fc_ports.id	integer	query	False	Filter by fc_ports.id

Name	Type	In	Required	Description
fc_ports.connection_mode	string	query	False	Filter by fc_ports.connection_mode
fc_ports.sfp.vendor	string	query	False	Filter by fc_ports.sfp.vendor
fc_ports.sfp.data_rate_capability	number	query	False	Filter by fc_ports.sfp.data_rate_capability
fc_ports.sfp.part_number	string	query	False	Filter by fc_ports.sfp.part_number
fc_ports.sfp.serial_number	string	query	False	Filter by fc_ports.sfp.serial_number
monitoring_enabled	boolean	query	False	Filter by monitoring_enabled
vendor	string	query	False	Filter by vendor
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	<p>The default is true for GET calls. When set to false, only the number of records is returned.</p> <ul style="list-style-type: none"> <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_bridge</a> ]	



## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": {
    "chassis_throughput_state": "ok",
    "errors": {
      "reason": {
        "arguments": {
          "code": "string",
          "message": "string"
        },
        "code": "4",
        "message": "entry doesn't exist",
        "target": "uuid"
      },
      "severity": "unknown",
      "type": "unknown"
    },
    "fc_ports": {
      "configured_data_rate": 0,
      "connection_mode": "loop",
      "data_rate_capability": 2,
      "negotiated_data_rate": 0,
      "peer_wwn": "200650eb1a238892",
      "sfp": {
        "data_rate_capability": 2
      },
      "state": "error",
      "wwn": "2100001086a54100"
    },
    "firmware_version": "4.10 007A",
    "ip_address": "string",
    "last_reboot": {
      "reason": {
        "arguments": {
          "code": "string",
          "message": "string"
        }
      }
    }
  }
}
```

```

    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  },
  "time": "2020-12-09 00:47:58 -0500"
},
"managed_by": "snmp",
"model": "FibreBridge6500N",
"name": "ATTO_FibreBridge6500N_1",
"paths": {
  "name": "2c",
  "node": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "source_port": {
    "id": "100050eb1a238892",
    "name": "rtp-fc03-41kk11:1"
  },
  "target_port": {
    "id": "100050eb1a238892",
    "name": "rtp-fc03-41kk11:6",
    "wwn": "2100001086a54100"
  }
},
"power_supply_units": {
  "state": "ok"
},
"sas_ports": {
  "data_rate_capability": 0,
  "negotiated_data_rate": 0,
  "state": "error",
  "wwn": "2100001086a54100"
},
"serial_number": "FB7600N100004",
"state": "unknown",
"symbolic_name": "rtp-fcsas03-41kk11",
"temperature_sensor": {
  "name": "Chassis temperature sensor",
  "state": "ok"
}

```

```
    },
    "vendor": "atto",
    "wwn": 2000001086600476
  }
}
```

## 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>	

component

Name	Type	Description
id	integer	Bridge error component ID
name	string	Bridge error component name
unique_id	string	Bridge error component unique ID

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.

errors

Name	Type	Description
component	<a href="#">component</a>	
reason	<a href="#">error</a>	
severity	string	Bridge error severity
type	string	Bridge error type

sfp

Name	Type	Description
data_rate_capability	number	Bridge FC port SFP data rate capability, in Gbps
part_number	string	
serial_number	string	Bridge FC port SFP serial number
vendor	string	Bridge FC port SFP vendor

fc\_ports

Name	Type	Description
configured_data_rate	number	Bridge FC port configured data rate, in Gbps
connection_mode	string	Bridge FC port configured connection mode
data_rate_capability	number	Bridge FC port data rate capability, in Gbps
enabled	boolean	Indicates whether the bridge FC port is enabled.
id	integer	Bridge FC port index
negotiated_data_rate	number	Bridge FC port negotiated data rate, in Gbps
peer_wwn	string	Bridge FC port peer port world wide name
sfp	<a href="#">sfp</a>	

Name	Type	Description
state	string	Bridge FC port state
wwn	string	Bridge FC port world wide name

error

The error message and code explaining why the bridge rebooted.

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.

last\_reboot

Name	Type	Description
reason	<a href="#">error</a>	The error message and code explaining why the bridge rebooted.
time	string	

\_links

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

node

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

source\_port

Name	Type	Description
id	string	Initiator side switch port id
name	string	Initiator side switch port name

target\_port

Name	Type	Description
id	string	Target side switch port id
name	string	Target side switch port name
wwn	string	Target side switch port world wide name

paths

Name	Type	Description
name	string	
node	<a href="#">node</a>	
source_port	<a href="#">source_port</a>	
target_port	<a href="#">target_port</a>	

power\_supply\_units

Name	Type	Description
name	string	Power supply unit name
state	string	Power supply unit state

cable

Name	Type	Description
part_number	string	Bridge cable part number
serial_number	string	Bridge cable serial number
technology	string	Bridge cable type
vendor	string	Bridge cable vendor

phy\_1

Name	Type	Description
state	string	Bridge SAS port PHY1 state

phy\_2

Name	Type	Description
state	string	Bridge SAS port PHY2 state

phy\_3

Name	Type	Description
state	string	Bridge SAS port PHY3 state

phy\_4

Name	Type	Description
state	string	Bridge SAS port PHY4 state

sas\_ports

Name	Type	Description
cable	<a href="#">cable</a>	
data_rate_capability	number	Bridge SAS port data rate capability, in Gbps
enabled	boolean	Indicates whether a bridge SAS port is enabled.
id	integer	Bridge SAS port index
negotiated_data_rate	number	Bridge SAS port negotiated data rate, in Gbps
phy_1	<a href="#">phy_1</a>	
phy_2	<a href="#">phy_2</a>	
phy_3	<a href="#">phy_3</a>	
phy_4	<a href="#">phy_4</a>	
state	string	Bridge SAS port state



Name	Type	Description
wwn	string	Bridge SAS port world wide name

#### temperature\_sensor

Name	Type	Description
maximum	integer	Maximum safe operating temperature, in degrees Celsius.
minimum	integer	Minimum safe operating temperature, in degrees Celsius.
name	string	Temperature sensor name
reading	integer	Chassis temperature sensor reading, in degrees Celsius.
state	string	

#### storage\_bridge

Name	Type	Description
chassis_throughput_state	string	Chassis throughput status
dram_single_bit_error_count	integer	
errors	array[errors]	
fc_ports	array[fc_ports]	
firmware_version	string	Bridge firmware version
ip_address	string	IP Address
last_reboot	last_reboot	
managed_by	string	
model	string	Bridge model
monitoring_enabled	boolean	Indicates whether monitoring is enabled for the bridge.
name	string	Bridge name
paths	array[paths]	
power_supply_units	array[power_supply_units]	

Name	Type	Description
sas_ports	array[ <a href="#">sas_ports</a> ]	
security_enabled	boolean	Indicates whether security is enabled for the bridge.
serial_number	string	Bridge serial number
state	string	Bridge state
symbolic_name	string	Bridge symbolic name
temperature_sensor	<a href="#">temperature_sensor</a>	
vendor	string	Bridge vendor
wwn	string	Bridge world wide name

## Retrieve a specific bridge

GET /storage/bridges/{wwn}

**Introduced In:** 9.9

Retrieves a specific bridge

### Related ONTAP commands

- `storage bridge show`

### Learn more

- [DOC /storage/bridges](#)

### Parameters

Name	Type	In	Required	Description
wwn	string	path	True	
fields	array[string]	query	False	Specify the fields to return.

### Response

Status: 200, Ok

Name	Type	Description
chassis_throughput_state	string	Chassis throughput status
dram_single_bit_error_count	integer	
errors	array[ <a href="#">errors</a> ]	
fc_ports	array[ <a href="#">fc_ports</a> ]	
firmware_version	string	Bridge firmware version
ip_address	string	IP Address
last_reboot	<a href="#">last_reboot</a>	
managed_by	string	
model	string	Bridge model
monitoring_enabled	boolean	Indicates whether monitoring is enabled for the bridge.
name	string	Bridge name
paths	array[ <a href="#">paths</a> ]	
power_supply_units	array[ <a href="#">power_supply_units</a> ]	
sas_ports	array[ <a href="#">sas_ports</a> ]	
security_enabled	boolean	Indicates whether security is enabled for the bridge.
serial_number	string	Bridge serial number
state	string	Bridge state
symbolic_name	string	Bridge symbolic name
temperature_sensor	<a href="#">temperature_sensor</a>	
vendor	string	Bridge vendor
wwn	string	Bridge world wide name

## Example response

```
{
  "chassis_throughput_state": "ok",
  "errors": {
    "reason": {
      "arguments": {
        "code": "string",
        "message": "string"
      },
      "code": "4",
      "message": "entry doesn't exist",
      "target": "uuid"
    },
    "severity": "unknown",
    "type": "unknown"
  },
  "fc_ports": {
    "configured_data_rate": 0,
    "connection_mode": "loop",
    "data_rate_capability": 2,
    "negotiated_data_rate": 0,
    "peer_wwn": "200650eb1a238892",
    "sfp": {
      "data_rate_capability": 2
    },
    "state": "error",
    "wwn": "2100001086a54100"
  },
  "firmware_version": "4.10 007A",
  "ip_address": "string",
  "last_reboot": {
    "reason": {
      "arguments": {
        "code": "string",
        "message": "string"
      },
      "code": "4",
      "message": "entry doesn't exist",
      "target": "uuid"
    },
    "time": "2020-12-09 00:47:58 -0500"
  },
  "managed_by": "snmp",
  "model": "FibreBridge6500N",
  "name": "ATTO_FibreBridge6500N_1",
```

```

"paths": {
  "name": "2c",
  "node": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "source_port": {
    "id": "100050eb1a238892",
    "name": "rtp-fc03-41kk11:1"
  },
  "target_port": {
    "id": "100050eb1a238892",
    "name": "rtp-fc03-41kk11:6",
    "wnn": "2100001086a54100"
  }
},
"power_supply_units": {
  "state": "ok"
},
"sas_ports": {
  "data_rate_capability": 0,
  "negotiated_data_rate": 0,
  "state": "error",
  "wnn": "2100001086a54100"
},
"serial_number": "FB7600N100004",
"state": "unknown",
"symbolic_name": "rtp-fcsas03-41kk11",
"temperature_sensor": {
  "name": "Chassis temperature sensor",
  "state": "ok"
},
"vendor": "atto",
"wnn": 2000001086600476
}

```

## 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

### component

Name	Type	Description
id	integer	Bridge error component ID
name	string	Bridge error component name
unique_id	string	Bridge error component unique ID

### 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.

### errors

Name	Type	Description
component	<a href="#">component</a>	
reason	<a href="#">error</a>	
severity	string	Bridge error severity
type	string	Bridge error type

### sfp

Name	Type	Description
data_rate_capability	number	Bridge FC port SFP data rate capability, in Gbps
part_number	string	
serial_number	string	Bridge FC port SFP serial number
vendor	string	Bridge FC port SFP vendor

#### fc\_ports

Name	Type	Description
configured_data_rate	number	Bridge FC port configured data rate, in Gbps
connection_mode	string	Bridge FC port configured connection mode
data_rate_capability	number	Bridge FC port data rate capability, in Gbps
enabled	boolean	Indicates whether the bridge FC port is enabled.
id	integer	Bridge FC port index
negotiated_data_rate	number	Bridge FC port negotiated data rate, in Gbps
peer_wwn	string	Bridge FC port peer port world wide name
sfp	<a href="#">sfp</a>	
state	string	Bridge FC port state
wwn	string	Bridge FC port world wide name

#### error

The error message and code explaining why the bridge rebooted.

Name	Type	Description
arguments	array[ <a href="#">error_arguments</a> ]	Message arguments



Name	Type	Description
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

last\_reboot

Name	Type	Description
reason	<a href="#">error</a>	The error message and code explaining why the bridge rebooted.
time	string	

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	

source\_port

Name	Type	Description
id	string	Initiator side switch port id
name	string	Initiator side switch port name

target\_port

Name	Type	Description
id	string	Target side switch port id
name	string	Target side switch port name
wwn	string	Target side switch port world wide name

#### paths

Name	Type	Description
name	string	
node	<a href="#">node</a>	
source_port	<a href="#">source_port</a>	
target_port	<a href="#">target_port</a>	

#### power\_supply\_units

Name	Type	Description
name	string	Power supply unit name
state	string	Power supply unit state

#### cable

Name	Type	Description
part_number	string	Bridge cable part number
serial_number	string	Bridge cable serial number
technology	string	Bridge cable type
vendor	string	Bridge cable vendor

#### phy\_1

Name	Type	Description
state	string	Bridge SAS port PHY1 state

#### phy\_2

Name	Type	Description
state	string	Bridge SAS port PHY2 state

phy\_3

Name	Type	Description
state	string	Bridge SAS port PHY3 state

phy\_4

Name	Type	Description
state	string	Bridge SAS port PHY4 state

sas\_ports

Name	Type	Description
cable	<a href="#">cable</a>	
data_rate_capability	number	Bridge SAS port data rate capability, in Gbps
enabled	boolean	Indicates whether a bridge SAS port is enabled.
id	integer	Bridge SAS port index
negotiated_data_rate	number	Bridge SAS port negotiated data rate, in Gbps
phy_1	<a href="#">phy_1</a>	
phy_2	<a href="#">phy_2</a>	
phy_3	<a href="#">phy_3</a>	
phy_4	<a href="#">phy_4</a>	
state	string	Bridge SAS port state
wwn	string	Bridge SAS port world wide name

temperature\_sensor

Name	Type	Description
maximum	integer	Maximum safe operating temperature, in degrees Celsius.
minimum	integer	Minimum safe operating temperature, in degrees Celsius.
name	string	Temperature sensor name
reading	integer	Chassis temperature sensor reading, in degrees Celsius.
state	string	

## Report cluster-wide storage details across different tiers

GET `/storage/cluster`

**Introduced In:** 9.6

Reports cluster wide storage details across different tiers. By default, this endpoint returns all fields. Supports the following roles: admin, and readonly.

### Parameters

Name	Type	In	Required	Description
fields	array[string]	query	False	Specify the fields to return.

### Response

Status: 200, Ok

Name	Type	Description
block_storage	<a href="#">block_storage</a>	
cloud_storage	<a href="#">cloud_storage</a>	
efficiency	<a href="#">space_efficiency</a>	Storage efficiency
efficiency_without_snapshots	<a href="#">space_efficiency</a>	Storage efficiency that does not include the savings provided by Snapshot copies.

Name	Type	Description
efficiency_without_snapshots_flexclones	<a href="#">space_efficiency</a>	Storage efficiency that does not include the savings provided by Snapshot copies and FlexClones.

## Example response

```
{
  "block_storage": {
    "medias": {
      "efficiency": {
        "logical_used": 0,
        "ratio": 0,
        "savings": 0
      },
      "efficiency_without_snapshots": {
        "logical_used": 0,
        "ratio": 0,
        "savings": 0
      },
      "efficiency_without_snapshots_flexclones": {
        "logical_used": 0,
        "ratio": 0,
        "savings": 0
      },
      "type": "hdd"
    }
  },
  "cloud_storage": {
    "used": 0
  },
  "efficiency": {
    "logical_used": 0,
    "ratio": 0,
    "savings": 0
  },
  "efficiency_without_snapshots": {
    "logical_used": 0,
    "ratio": 0,
    "savings": 0
  },
  "efficiency_without_snapshots_flexclones": {
    "logical_used": 0,
    "ratio": 0,
    "savings": 0
  }
}
```

## 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

space\_efficiency

Storage Efficiency

Name	Type	Description
logical_used	integer	Logical used
ratio	number	Data reduction ratio (logical_used / used)
savings	integer	Space saved by storage efficiencies (logical_used - used)

space\_efficiency

Storage efficiency that does not include the savings provided by Snapshot copies.

Name	Type	Description
logical_used	integer	Logical used
ratio	number	Data reduction ratio (logical_used / used)
savings	integer	Space saved by storage efficiencies (logical_used - used)

space\_efficiency

Storage efficiency that does not include the savings provided by Snapshot copies and FlexClones.

Name	Type	Description
logical_used	integer	Logical used
ratio	number	Data reduction ratio (logical_used / used)
savings	integer	Space saved by storage efficiencies (logical_used - used)

medias

Name	Type	Description
available	integer	Available space



Name	Type	Description
efficiency	<a href="#">space_efficiency</a>	Storage Efficiency
efficiency_without_snapshots	<a href="#">space_efficiency</a>	Storage efficiency that does not include the savings provided by Snapshot copies.
efficiency_without_snapshots_flex_clones	<a href="#">space_efficiency</a>	Storage efficiency that does not include the savings provided by Snapshot copies and FlexClones.
physical_used	integer	Total physical used space
size	integer	Total space
type	string	The type of media being used
used	integer	Used space

#### block\_storage

Name	Type	Description
available	integer	Available space across the cluster
inactive_data	integer	Inactive data across all aggregates
medias	array[ <a href="#">medias</a> ]	
physical_used	integer	Total physical used space across the cluster
size	integer	Total space across the cluster
used	integer	Space used (includes volume reserves)

#### cloud\_storage

Name	Type	Description
used	integer	Total space used in cloud.

#### space\_efficiency

## Storage efficiency

Name	Type	Description
logical_used	integer	Logical used
ratio	number	Data reduction ratio (logical_used / used)
savings	integer	Space saved by storage efficiencies (logical_used - used)

## 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.

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