



Manage storage bridges

ONTAP 9.9.1 REST API reference

NetApp
August 29, 2024

Table of Contents

- Manage storage bridges 1
 - Storage bridges endpoint overview 1
 - Retrieve a collection of bridges 7
 - Retrieve a specific bridge 24
 - Report cluster-wide storage details across different tiers 35

Manage storage bridges

Storage bridges endpoint overview

Retrieving storage bridge information

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

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
vendor	string	query	False	Filter by vendor
errors.reason.code	string	query	False	Filter by errors.reason.code
errors.reason.message	string	query	False	Filter by errors.reason.message
errors.type	string	query	False	Filter by errors.type

Name	Type	In	Required	Description
errors.severity	string	query	False	Filter by errors.severity
errors.component.id	integer	query	False	Filter by errors.component.id
errors.component.name	string	query	False	Filter by errors.component.name
errors.component.unique_id	string	query	False	Filter by errors.component.unique_id
model	string	query	False	Filter by model
security_enabled	boolean	query	False	Filter by security_enabled
firmware_version	string	query	False	Filter by firmware_version
name	string	query	False	Filter by name
dram_single_bit_error_count	integer	query	False	Filter by dram_single_bit_error_count
fc_ports.negotiated_data_rate	number	query	False	Filter by fc_ports.negotiated_data_rate
fc_ports.wwn	string	query	False	Filter by fc_ports.wwn
fc_ports.state	string	query	False	Filter by fc_ports.state
fc_ports.id	integer	query	False	Filter by fc_ports.id
fc_ports.sfp.vendor	string	query	False	Filter by fc_ports.sfp.vendor
fc_ports.sfp.part_number	string	query	False	Filter by fc_ports.sfp.part_number

Name	Type	In	Required	Description
fc_ports.sfp.data_rate_capability	number	query	False	Filter by fc_ports.sfp.data_rate_capability
fc_ports.sfp.serial_number	string	query	False	Filter by fc_ports.sfp.serial_number
fc_ports.configured_data_rate	number	query	False	Filter by fc_ports.configured_data_rate
fc_ports.enabled	boolean	query	False	Filter by fc_ports.enabled
fc_ports.connection_mode	string	query	False	Filter by fc_ports.connection_mode
fc_ports.peer_wwn	string	query	False	Filter by fc_ports.peer_wwn
fc_ports.data_rate_capability	number	query	False	Filter by fc_ports.data_rate_capability
chassis_throughput_state	string	query	False	Filter by chassis_throughput_state
paths.node.name	string	query	False	Filter by paths.node.name
paths.node.uuid	string	query	False	Filter by paths.node.uuid
paths.name	string	query	False	Filter by paths.name
paths.source_port.name	string	query	False	Filter by paths.source_port.name
paths.source_port.id	string	query	False	Filter by paths.source_port.id

Name	Type	In	Required	Description
paths.target_port.id	string	query	False	Filter by paths.target_port.id
paths.target_port.wwn	string	query	False	Filter by paths.target_port.wwn
paths.target_port.name	string	query	False	Filter by paths.target_port.name
last_reboot.time	string	query	False	Filter by last_reboot.time
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
sas_ports.enabled	boolean	query	False	Filter by sas_ports.enabled
sas_ports.phy_2.state	string	query	False	Filter by sas_ports.phy_2.state
sas_ports.phy_3.state	string	query	False	Filter by sas_ports.phy_3.state
sas_ports.data_rate_capability	number	query	False	Filter by sas_ports.data_rate_capability
sas_ports.phy_1.state	string	query	False	Filter by sas_ports.phy_1.state
sas_ports.cable.serial_number	string	query	False	Filter by sas_ports.cable.serial_number

Name	Type	In	Required	Description
sas_ports.cable.part_number	string	query	False	Filter by sas_ports.cable.part_number
sas_ports.cable.technology	string	query	False	Filter by sas_ports.cable.technology
sas_ports.cable.vendor	string	query	False	Filter by sas_ports.cable.vendor
sas_ports.phy_4.state	string	query	False	Filter by sas_ports.phy_4.state
sas_ports.wwn	string	query	False	Filter by sas_ports.wwn
sas_ports.negotiated_data_rate	number	query	False	Filter by sas_ports.negotiated_data_rate
sas_ports.state	string	query	False	Filter by sas_ports.state
sas_ports.id	integer	query	False	Filter by sas_ports.id
symbolic_name	string	query	False	Filter by symbolic_name
monitoring_enabled	boolean	query	False	Filter by monitoring_enabled
state	string	query	False	Filter by state
serial_number	string	query	False	Filter by serial_number
wwn	string	query	False	Filter by wwn
ip_address	string	query	False	Filter by ip_address
temperature_sensor.state	string	query	False	Filter by temperature_sensor.state

Name	Type	In	Required	Description
temperature_sensor.maximum	integer	query	False	Filter by temperature_sensor.maximum
temperature_sensor.reading	integer	query	False	Filter by temperature_sensor.reading
temperature_sensor.name	string	query	False	Filter by temperature_sensor.name
temperature_sensor.minimum	integer	query	False	Filter by temperature_sensor.minimum
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
managed_by	string	query	False	Filter by managed_by
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"> • Default value: 1

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"> • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

Status: 200, Ok

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[storage_bridge]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "chassis_throughput_state": "ok",
      "errors": [
        {
          "component": {
            "name": "string",
            "unique_id": "string"
          },
          "reason": {
            "code": "string",
            "message": "string"
          },
          "severity": "string",
          "type": "string"
        }
      ],
      "fc_ports": [
        {
          "configured_data_rate": "0",
          "connection_mode": "string",
          "data_rate_capability": "2",
          "negotiated_data_rate": "0",
          "peer_wwn": "200650eb1a238892",
          "sfp": {
            "data_rate_capability": "2",
            "part_number": "string",
            "serial_number": "string",
            "vendor": "string"
          },
          "state": "string",
          "wwn": "2100001086a54100"
        }
      ],
      "firmware_version": "4.10 007A",

```



```

"ip_address": "string",
"last_reboot": {
  "reason": {
    "code": "39321683",
    "message": "FirmwareRestart Command"
  },
  "time": "2020-12-09T00:47:58-05:00"
},
"managed_by": "string",
"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": [
  {
    "name": "string",
    "state": "string"
  }
],
"sas_ports": [
  {
    "cable": {
      "part_number": "string",
      "serial_number": "string",
      "technology": "string",

```

```

        "vendor": "string"
    },
    "data_rate_capability": "0",
    "negotiated_data_rate": "0",
    "phy_1": {
        "state": "string"
    },
    "phy_2": {
        "state": "string"
    },
    "phy_3": {
        "state": "string"
    },
    "phy_4": {
        "state": "string"
    },
    "state": "string",
    "wwn": "2100001086a54100"
}
],
"serial_number": "FB7600N100004",
"state": "string",
"symbolic_name": "rtp-fcsas03-4lkk11",
"temperature_sensor": {
    "name": "Chassis temperature sensor",
    "state": "string"
},
"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	href	
self	href	

component

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

reason

Name	Type	Description
code	string	
message	string	

errors

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

reason

Name	Type	Description
code	string	This field provides the error code explaining why did the bridge reboot.

Name	Type	Description
message	string	This field provides the error message explaining why did the bridge reboot.

last_reboot

Name	Type	Description
reason	reason	
time	string	

_links

Name	Type	Description
self	href	

node

Name	Type	Description
_links	_links	
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	node	
source_port	source_port	
target_port	target_port	

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	cable	
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	phy_1	
phy_2	phy_2	
phy_3	phy_3	
phy_4	phy_4	
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	

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]	
sas_ports	array[sas_ports]	
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	temperature_sensor	
vendor	string	Bridge vendor
wwn	string	Bridge world wide name

error_arguments

Name	Type	Description
code	string	Argument code

Name	Type	Description
message	string	Message argument

error

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

Retrieve 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[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]	
sas_ports	array[sas_ports]	
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	temperature_sensor	
vendor	string	Bridge vendor
wwn	string	Bridge world wide name

Example response

```
{
  "chassis_throughput_state": "ok",
  "errors": [
    {
      "component": {
        "name": "string",
        "unique_id": "string"
      },
      "reason": {
        "code": "string",
        "message": "string"
      },
      "severity": "string",
      "type": "string"
    }
  ],
  "fc_ports": [
    {
      "configured_data_rate": "0",
      "connection_mode": "string",
      "data_rate_capability": "2",
      "negotiated_data_rate": "0",
      "peer_wwn": "200650eb1a238892",
      "sfp": {
        "data_rate_capability": "2",
        "part_number": "string",
        "serial_number": "string",
        "vendor": "string"
      },
      "state": "string",
      "wwn": "2100001086a54100"
    }
  ],
  "firmware_version": "4.10 007A",
  "ip_address": "string",
  "last_reboot": {
    "reason": {
      "code": "39321683",
      "message": "FirmwareRestart Command"
    },
    "time": "2020-12-09T00:47:58-05:00"
  },
  "managed_by": "string",
  "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": [
  {
    "name": "string",
    "state": "string"
  }
],
"sas_ports": [
  {
    "cable": {
      "part_number": "string",
      "serial_number": "string",
      "technology": "string",
      "vendor": "string"
    },
    "data_rate_capability": "0",
    "negotiated_data_rate": "0",
    "phy_1": {
      "state": "string"
    },
    "phy_2": {
      "state": "string"
    }
  }
],

```

```
"phy_3": {
  "state": "string"
},
"phy_4": {
  "state": "string"
},
"state": "string",
"wnn": "2100001086a54100"
}
],
"serial_number": "FB7600N100004",
"state": "string",
"symbolic_name": "rtp-fcsas03-41kk11",
"temperature_sensor": {
  "name": "Chassis temperature sensor",
  "state": "string"
},
"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

reason

Name	Type	Description
code	string	
message	string	

errors

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

reason

Name	Type	Description
code	string	This field provides the error code explaining why did the bridge reboot.
message	string	This field provides the error message explaining why did the bridge reboot.

last_reboot

Name	Type	Description
reason	reason	
time	string	

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

node

Name	Type	Description
_links	_links	
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	node	
source_port	source_port	
target_port	target_port	

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	cable	

Name	Type	Description
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	phy_1	
phy_2	phy_2	
phy_3	phy_3	
phy_4	phy_4	
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	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

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

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
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">• Default value: 1

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"> • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc
desc] direction. Default direction is 'asc' for ascending.	fields	array[string]	query	False

Response

Status: 200, Ok

Name	Type	Description
block_storage	block_storage	
cloud_storage	cloud_storage	
efficiency	space_efficiency	Storage efficiency
efficiency_without_snapshots	space_efficiency	Storage efficiency that does not include the savings provided by Snapshot copies.
efficiency_without_snapshots_flexclones	space_efficiency	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": "string"
      }
    ]
  },
  "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	space_efficiency	Storage Efficiency
efficiency_without_snapshots	space_efficiency	Storage efficiency that does not include the savings provided by Snapshot copies.
efficiency_without_snapshots_flex_clones	space_efficiency	Storage efficiency that does not include the savings provided by Snapshot copies and FlexClones.
size	integer	Total space
type	string	The type of media being used
used	integer	Used space

block_storage

Name	Type	Description
inactive_data	integer	Inactive data across all aggregates
medias	array[medias]	
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

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

Copyright information

Copyright © 2024 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.