



Manage disks

ONTAP 9.7 REST API reference

NetApp
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Manage disks

Storage disks endpoint overview

Retrieving storage disk information

The storage disk GET API retrieves all of the disks in the cluster.

Examples

1) Retrieve a list of disks from the cluster

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

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

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

# The response:
{
  "records": [
    {
      "name": "1.24.4",
      "_links": {
        "self": {
          "href": "/api/storage/disks/1.24.4"
        }
      }
    },
    {
      "name": "1.24.3",
      "_links": {
        "self": {
          "href": "/api/storage/disks/1.24.3"
        }
      }
    },
    {
      "name": "1.24.5",
      "_links": {
```

```
    "self": {
      "href": "/api/storage/disks/1.24.5"
    }
  },
  {
    "name": "1.24.0",
    "_links": {
      "self": {
        "href": "/api/storage/disks/1.24.0"
      }
    }
  },
  {
    "name": "1.24.2",
    "_links": {
      "self": {
        "href": "/api/storage/disks/1.24.2"
      }
    }
  },
  {
    "name": "1.24.1",
    "_links": {
      "self": {
        "href": "/api/storage/disks/1.24.1"
      }
    }
  }
],
"num_records": 6,
"_links": {
  "self": {
    "href": "/api/storage/disks"
  }
}
}
```

2) Retrieve a specific disk from the cluster

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

```
# The API:
/api/storage/disks/{name}

# The call:
curl -X GET "https://<mgmt-ip>/api/storage/disks/1.24.3" -H "accept:
application/hal+json"

# The response:
{
  "name": "1.24.3",
  "uid":
  "50000394:0808AA88:00000000:00000000:00000000:00000000:00000000:00000000:00000000:00000000",
  "serial_number": "EC47PC5021SW",
  "model": "X421_FAL12450A10",
  "vendor": "NETAPP",
  "firmware_version": "NA02",
  "usable_size": 438304768000,
  "rpm": 10000,
  "type": "sas",
  "class": "performance",
  "container_type": "aggregate",
  "pool": "pool0",
  "state": "present",
  "node": {
    "uuid": "3a89ed49-8c6d-11e8-93bc-00a0985a64b6",
    "name": "node-2",
    "_links": {
      "self": {
        "href": "/api/cluster/nodes/3a89ed49-8c6d-11e8-93bc-00a0985a64b6"
      }
    }
  },
  "home_node": {
    "uuid": "3a89ed49-8c6d-11e8-93bc-00a0985a64b6",
    "name": "node-2",
    "_links": {
      "self": {
        "href": "/api/cluster/nodes/3a89ed49-8c6d-11e8-93bc-00a0985a64b6"
      }
    }
  },
  "aggregates": [
    {
      "uuid": "3fd9c345-ba91-4949-a7b1-6e2b898d74e3",
      "name": "node_2_SAS_1",
```

```

    "_links": {
      "self": {
        "href": "/api/storage/aggregates/3fd9c345-ba91-4949-a7b1-6e2b898d74e3"
      }
    }
  ],
  "shelf": {
    "uid": "10318311901725526608",
    "_links": {
      "self": {
        "href": "/api/storage/shelves/10318311901725526608"
      }
    }
  },
  "bay": 3,
  "_links": {
    "self": {
      "href": "/api/storage/disks/1.24.3"
    }
  }
}

```

3) Rekey the data authentication key (AK) of all encrypting drives to an AK

created and maintained by the system.

```

# The API:
/api/storage/disks

# The call:
curl -X PATCH "https://<mgmt-ip>/api/storage/disks?name=*" -d
'{"encrypt_operation" : "rekey_data_auto_id"}' -H "accept:
application/hal+json" -H "Content-Type: application/hal+json"

# The response contain the number of disks attempted.
{
  "num_records": 32
}

```

Retrieve a collection of disks

GET /storage/disks

Retrieves a collection of disks.

Related ONTAP commands

- `storage disk show`

Learn more

- [DOC /storage/disks](#)

Parameters

| Name | Type | In | Required | Description |
|-------------------------|---------|-------|----------|-----------------------------------|
| bay | integer | query | False | Filter by bay |
| model | string | query | False | Filter by model |
| self_encrypting | boolean | query | False | Filter by self_encrypting |
| home_node.uuid | string | query | False | Filter by home_node.uuid |
| home_node.name | string | query | False | Filter by home_node.name |
| key_id.fips | string | query | False | Filter by key_id.fips |
| key_id.data | string | query | False | Filter by key_id.data |
| rated_life_used_percent | integer | query | False | Filter by rated_life_used_percent |
| shelf.uid | string | query | False | Filter by shelf.uid |
| rpm | integer | query | False | Filter by rpm |
| state | string | query | False | Filter by state |
| firmware_version | string | query | False | Filter by firmware_version |

| Name | Type | In | Required | Description |
|-----------------|---------|-------|----------|---------------------------|
| vendor | string | query | False | Filter by vendor |
| name | string | query | False | Filter by name |
| class | string | query | False | Filter by class |
| protection_mode | string | query | False | Filter by protection_mode |
| node.uuid | string | query | False | Filter by node.uuid |
| node.name | string | query | False | Filter by node.name |
| uid | string | query | False | Filter by uid |
| type | string | query | False | Filter by type |
| serial_number | string | query | False | Filter by serial_number |
| container_type | string | query | False | Filter by container_type |
| usable_size | integer | query | False | Filter by usable_size |
| fips_certified | boolean | query | False | Filter by fips_certified |
| aggregates.name | string | query | False | Filter by aggregates.name |
| aggregates.uuid | string | query | False | Filter by aggregates.uuid |
| pool | string | query | False | Filter by pool |
| drawer.id | integer | query | False | Filter by drawer.id |
| drawer.slot | integer | query | False | Filter by drawer.slot |
| dr_node.uuid | string | query | False | Filter by dr_node.uuid |

| Name | Type | In | Required | Description |
|----------------|---------------|-------|----------|--|
| dr_node.name | string | query | False | Filter by dr_node.name |
| 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. |
| 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. |
| 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[disk] | |

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "aggregates": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "aggr1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "bay": 1,
    "class": "solid_state",
    "container_type": "spare",
    "dr_node": {
      "name": "node1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "firmware_version": "NA51",
    "home_node": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "node1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "model": "X421_HCOBE450A10",
    "name": "1.0.1",
    "node": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      }
    }
  },
}
```

```

    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "pool": "pool0",
  "protection_mode": "open",
  "rated_life_used_percent": 10,
  "rpm": 15000,
  "serial_number": "KHG2VX8R",
  "shelf": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uid": 7777841915827391056
  },
  "state": "present",
  "type": "ssd",
  "uid":
"002538E5:71B00B2F:00000000:00000000:00000000:00000000:00000000:00000000:00000000:00000000",
  "usable_size": 959934889984,
  "vendor": "NETAPP"
}
}

```

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 | |

_links

| Name | Type | Description |
|------|----------------------|-------------|
| self | href | |

aggregates

Aggregate

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

dr_node

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

drawer

| Name | Type | Description |
|------|---------|-------------|
| id | integer | |
| slot | integer | |

home_node

| Name | Type | Description |
|--------|------------------------|-------------|
| _links | _links | |

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

key_id

| Name | Type | Description |
|------|--------|---------------------------------------|
| data | string | Key ID of the data authentication key |
| fips | string | Key ID of the FIPS authentication key |

node

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

shelf_reference

Shelf

| Name | Type | Description |
|------------------------|------------------------|-------------|
| _links | _links | |
| uid | string | |

disk

| Name | Type | Description |
|-------------------------|-------------------------------------|--------------------------------------|
| aggregates | array[aggregates] | List of aggregates sharing this disk |
| bay | integer | Disk shelf bay |
| class | string | Disk class |
| container_type | string | Type of overlying disk container |
| dr_node | dr_node | |
| drawer | drawer | |

| Name | Type | Description |
|-------------------------|---------------------------------|---|
| encryption_operation | string | Encryption operation to apply to the drives. Possible values are: <ul style="list-style-type: none"> • rekey_data_default • rekey_data_auto_id |
| fips_certified | boolean | |
| firmware_version | string | |
| home_node | home_node | |
| key_id | key_id | |
| model | string | |
| name | string | Cluster-wide disk name |
| node | node | |
| pool | string | Pool to which disk is assigned |
| protection_mode | string | Mode of drive data protection and FIPS compliance. Possible values are: <ul style="list-style-type: none"> • <i>open</i> - Disk is unprotected • <i>data</i> - Data protection only without FIPS compliance • <i>part</i> - Partial protection with FIPS compliance only • <i>full</i> - Full data and FIPS compliance protection |
| rated_life_used_percent | integer | Percentage of rated life used |
| rpm | integer | Revolutions per minute |
| self_encrypting | boolean | |
| serial_number | string | |
| shelf | shelf_reference | Shelf |
| state | string | State |
| type | string | Disk interface type |
| uid | string | The unique identifier for a disk |

| Name | Type | Description |
|-------------|---------|-------------|
| usable_size | integer | |
| vendor | 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. |

Update disk ownership, change authentication keys, or sanitize disks

PATCH /storage/disks

Updates the encryption controls of self-encrypting disks.

Related ONTAP commands

- `storage encryption disk modify -data-key-id`
- `security key-manager key query -key-type NSE-AK`

Learn more

- [DOC /storage/disks](#)

Parameters

| Name | Type | In | Required | Description |
|----------------------|---------|-------|----------|--|
| return_records | boolean | query | False | The default is false. If set to true, the records are returned. |
| name | string | query | True | Disk name |
| encryption_operation | string | query | True | Name of the operation to apply to encrypting disks. <ul style="list-style-type: none"> enum: ["rekey_data_default", "rekey_data_auto_id"] |

Response

Status: 200, Ok

Error

Status: Default

ONTAP Error Response Codes

| Error Code | Description |
|------------|--|
| 1441795 | Setting the data key ID to the manufacture secure ID is not allowed when in FIPS-compliance mode. |
| 14155777 | The operation failed on one or more disks. |
| 14155778 | No self-encrypting disks were specified. |
| 14155779 | Status from a node shows that a conflicting operation has occurred. Some disk controls might have changed. |
| 14155780 | Could not retrieve the required key ID from the key manager. |

Retrieve a specific disk

GET /storage/disks/{name}

Retrieves a specific disk.

Related ONTAP commands

- `storage disk show`

Learn more

- [DOC /storage/disks](#)

Parameters

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

Response

Status: 200, Ok

| Name | Type | Description |
|----------------------|-------------------------------------|---|
| aggregates | array[aggregates] | List of aggregates sharing this disk |
| bay | integer | Disk shelf bay |
| class | string | Disk class |
| container_type | string | Type of overlying disk container |
| dr_node | dr_node | |
| drawer | drawer | |
| encryption_operation | string | Encryption operation to apply to the drives. Possible values are: <ul style="list-style-type: none">• <code>rekey_data_default</code>• <code>rekey_data_auto_id</code> |
| fips_certified | boolean | |
| firmware_version | string | |
| home_node | home_node | |
| key_id | key_id | |

| Name | Type | Description |
|-------------------------|---------------------------------|---|
| model | string | |
| name | string | Cluster-wide disk name |
| node | node | |
| pool | string | Pool to which disk is assigned |
| protection_mode | string | Mode of drive data protection and FIPS compliance. Possible values are: <ul style="list-style-type: none"> • <i>open</i> - Disk is unprotected • <i>data</i> - Data protection only without FIPS compliance • <i>part</i> - Partial protection with FIPS compliance only • <i>full</i> - Full data and FIPS compliance protection |
| rated_life_used_percent | integer | Percentage of rated life used |
| rpm | integer | Revolutions per minute |
| self_encrypting | boolean | |
| serial_number | string | |
| shelf | shelf_reference | Shelf |
| state | string | State |
| type | string | Disk interface type |
| uid | string | The unique identifier for a disk |
| usable_size | integer | |
| vendor | string | |

Example response

```
{
  "aggregates": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "aggr1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "bay": 1,
  "class": "solid_state",
  "container_type": "spare",
  "dr_node": {
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "firmware_version": "NA51",
  "home_node": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "model": "X421_HCOBE450A10",
  "name": "1.0.1",
  "node": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "pool": "pool0",
  "protection_mode": "open",
  "rated_life_used_percent": 10,
  "rpm": 15000,
  "serial_number": "KHG2VX8R",
  "shelf": {
```

```

    "_links": {
      "self": {
        "href": "/api/resourceLink"
      }
    },
    "uid": 7777841915827391056
  },
  "state": "present",
  "type": "ssd",
  "uid":
"002538E5:71B00B2F:00000000:00000000:00000000:00000000:00000000:00000000:00000000:00000000",
  "usable_size": 959934889984,
  "vendor": "NETAPP"
}

```

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 | href | |

aggregates

Aggregate

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

dr_node

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

drawer

| Name | Type | Description |
|------|---------|-------------|
| id | integer | |
| slot | integer | |

home_node

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

key_id

| Name | Type | Description |
|------|--------|---------------------------------------|
| data | string | Key ID of the data authentication key |
| fips | string | Key ID of the FIPS authentication key |

node

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

shelf_reference

Shelf

| Name | Type | Description |
|--------|------------------------|-------------|
| _links | _links | |
| uid | 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. |

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