NetApp

Manage cluster-wide storage

ONTAP 9.14.1 REST API reference

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Storage cluster endpoint overview

Retrieves cluster-wide storage details across the different tiers. Storage details include storage efficiency, block storage and cloud storage information.

Example

Retrieving cluster-wide storage details

The following example shows the details returned for a GET request on cluster-wide storage:

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

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

# The response:
{
"efficiency": {
  "savings": 143360,
  "ratio": 1.134099616858238,
  "logical_used": 1212416
},
"efficiency_without_snapshots": {
  "savings": 0,
  "ratio": 1,
  "logical_used": 167936
},
"efficiency_without_snapshots_flexclones": {
  "savings": 0,
  "ratio": 1,
  "logical_used": 167936
},
"block_storage": {
  "used": 6269812736,
  "size": 56125612032,
  "available": 49855799296,
  "physical_used": 1838284800,
  "inactive_data": 0,
```

```
    "medias": [
      {
        "type": "ssd",
        "size": 9891430400,
        "available": 3728039936,
        "used": 6163390464,
        "physical_used": 1832886272,
        "efficiency": {
          "savings": 0,
          "ratio": 1,
          "logical_used": 0
        },
        "efficiency_without_snapshots": {
          "savings": 0,
          "ratio": 1,
          "logical_used": 0
        },
        "efficiency_without_snapshots_flexclones": {
          "savings": 0,
          "ratio": 1,
          "logical_used": 0
        }
      },
      {
        "type": "vmdisk",
        "size": 46234181632,
        "available": 46127759360,
        "used": 106422272,
        "physical_used": 5398528,
        "efficiency": {
          "savings": 282624,
          "ratio": 1.303964757709251,
          "logical_used": 1212416
        },
        "efficiency_without_snapshots": {
          "savings": 0,
          "ratio": 1,
          "logical_used": 167936
        },
        "efficiency_without_snapshots_flexclones": {
          "savings": 0,
          "ratio": 1,
          "logical_used": 167936
        }
      }
    ]
```

```
        }
    }
```

Report cluster-wide storage details across different tiers

GET `/storage/cluster`

Introduced In: 9.6

Retrieves cluster-wide storage details across the different tiers. By default, this endpoint returns all fields. Storage details include storage efficiency, block storage and cloud storage information. Supports the following roles: admin, and readonly.

Parameters

Name	Type	In	Required	Description
cloud_storage.used	integer	query	False	Filter by cloud_storage.used • Introduced in: 9.14
efficiency.savings	integer	query	False	Filter by efficiency.savings • Introduced in: 9.14
efficiency.logical_used	integer	query	False	Filter by efficiency.logical_used • Introduced in: 9.14
efficiency.ratio	number	query	False	Filter by efficiency.ratio • Introduced in: 9.14
efficiency_without_snapshots.savings	integer	query	False	Filter by efficiency_without_snapshots.savings • Introduced in: 9.14

Name	Type	In	Required	Description
efficiency_without_snapshots.logical_used	integer	query	False	Filter by efficiency_without_snapshots.logical_used • Introduced in: 9.14
efficiency_without_snapshots.ratio	number	query	False	Filter by efficiency_without_snapshots.ratio • Introduced in: 9.14
efficiency_without_snapshots_flexclones.savings	integer	query	False	Filter by efficiency_without_snapshots_flexclones.savings • Introduced in: 9.14
efficiency_without_snapshots_flexclones.logical_used	integer	query	False	Filter by efficiency_without_snapshots_flexclones.logical_used • Introduced in: 9.14
efficiency_without_snapshots_flexclones.ratio	number	query	False	Filter by efficiency_without_snapshots_flexclones.ratio • Introduced in: 9.14
block_storage.medias.used	integer	query	False	Filter by block_storage.medias.used • Introduced in: 9.14

Name	Type	In	Required	Description
block_storage.medias.available	integer	query	False	Filter by block_storage.medias.available • Introduced in: 9.14
block_storage.medias.efficiency.savings	integer	query	False	Filter by block_storage.medias.efficiency.savings • Introduced in: 9.14
block_storage.medias.efficiency.logical_used	integer	query	False	Filter by block_storage.medias.efficiency.logical_used • Introduced in: 9.14
block_storage.medias.efficiency.ratio	number	query	False	Filter by block_storage.medias.efficiency.ratio • Introduced in: 9.14
block_storage.medias.efficiency_without_snapshots.savings	integer	query	False	Filter by block_storage.medias.efficiency_without_snapshots.savings • Introduced in: 9.14
block_storage.medias.efficiency_without_snapshots.logical_used	integer	query	False	Filter by block_storage.medias.efficiency_without_snapshots.logical_used • Introduced in: 9.14

Name	Type	In	Required	Description
block_storage.media s.efficiency_without_ snapshots.ratio	number	query	False	Filter by block_storage.media s.efficiency_without_ snapshots.ratio • Introduced in: 9.14
block_storage.media s.size	integer	query	False	Filter by block_storage.media s.size • Introduced in: 9.14
block_storage.media s.efficiency_without_ snapshots_flexclone s.savings	integer	query	False	Filter by block_storage.media s.efficiency_without_ snapshots_flexclone s.savings • Introduced in: 9.14
block_storage.media s.efficiency_without_ snapshots_flexclone s.logical_used	integer	query	False	Filter by block_storage.media s.efficiency_without_ snapshots_flexclone s.logical_used • Introduced in: 9.14
block_storage.media s.efficiency_without_ snapshots_flexclone s.ratio	number	query	False	Filter by block_storage.media s.efficiency_without_ snapshots_flexclone s.ratio • Introduced in: 9.14
block_storage.media s.type	string	query	False	Filter by block_storage.media s.type • Introduced in: 9.14

Name	Type	In	Required	Description
block_storage.medias.physical_used	integer	query	False	Filter by block_storage.medias.physical_used • Introduced in: 9.14
block_storage.inactive_data	integer	query	False	Filter by block_storage.inactive_data • Introduced in: 9.14
block_storage.physical_used	integer	query	False	Filter by block_storage.physical_used • Introduced in: 9.14
block_storage.size	integer	query	False	Filter by block_storage.size • Introduced in: 9.14
block_storage.used	integer	query	False	Filter by block_storage.used • Introduced in: 9.14
block_storage.available	integer	query	False	Filter by block_storage.available • Introduced in: 9.14
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
block_storage	block_storage	Configuration information for the locally attached portion of all the aggregates across the cluster. When a cloud store is also used by an aggregate, this is referred to as the performance tier.
cloud_storage	cloud_storage	Configuration information for the cloud storage portion of all the aggregates across the cluster. This is referred to as the capacity tier.
efficiency	efficiency	Storage efficiency.
efficiency_without_snapshots	efficiency_without_snapshots	Storage efficiency that does not include the savings provided by Snapshot copies.
efficiency_without_snapshots_flexcl ones	efficiency_without_snapshots_flexcl ones	Storage efficiency that does not include the savings provided by Snapshot copies and FlexClones.

Example response

```json
{
  "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	returned_error	

Example error

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

Definitions

See Definitions

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)

efficiency_without_snapshots

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)

efficiency_without_snapshots_flexclones

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 of all the aggregates based on media type.
efficiency	efficiency	Storage efficiency.
efficiency_without_snapshots	efficiency_without_snapshots	Storage efficiency that does not include the savings provided by Snapshot copies.
efficiency_without_snapshots_flex clones	efficiency_without_snapshots_flex clones	Storage efficiency that does not include the savings provided by Snapshot copies and FlexClones.
physical_used	integer	Total physical used space of all the aggregates based on media type.
size	integer	Total space of all the aggregates based on media type.
type	string	The type of media being used.
used	integer	Used space of all the aggregates based on media type.

block_storage

Configuration information for the locally attached portion of all the aggregates across the cluster. When a cloud store is also used by an aggregate, this is referred to as the performance tier.

Name	Type	Description
available	integer	Available space of all aggregates across the cluster.
inactive_data	integer	Inactive data of all aggregates across the cluster.
medias	array[medias]	Configuration information based on type of media. For example, SSD media type information includes the sum of all the SSD aggregates across the cluster.
physical_used	integer	Total physical used space of all aggregates across the cluster.

Name	Type	Description
size	integer	Total space of all aggregates across the cluster.
used	integer	Used space (includes volume reserves) of the all aggregates across the cluster.

cloud_storage

Configuration information for the cloud storage portion of all the aggregates across the cluster. This is referred to as the capacity tier.

Name	Type	Description
used	integer	Total space used in cloud.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_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.