



Manage cluster-wide storage

ONTAP 9.15.1 REST API reference

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Manage cluster-wide storage

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
block_storage.used	integer	query	False	Filter by block_storage.used <ul style="list-style-type: none">• Introduced in: 9.14
block_storage.physical_used	integer	query	False	Filter by block_storage.physical_used <ul style="list-style-type: none">• Introduced in: 9.14
block_storage.size	integer	query	False	Filter by block_storage.size <ul style="list-style-type: none">• Introduced in: 9.14
block_storage.available	integer	query	False	Filter by block_storage.available <ul style="list-style-type: none">• Introduced in: 9.14

Name	Type	In	Required	Description
block_storage.media s.type	string	query	False	Filter by block_storage.media s.type • Introduced in: 9.14
block_storage.media s.efficiency.ratio	number	query	False	Filter by block_storage.media s.efficiency.ratio • Introduced in: 9.14
block_storage.media s.efficiency.logical_u sed	integer	query	False	Filter by block_storage.media s.efficiency.logical_u sed • Introduced in: 9.14
block_storage.media s.efficiency.savings	integer	query	False	Filter by block_storage.media s.efficiency.savings • Introduced in: 9.14
block_storage.media s.available	integer	query	False	Filter by block_storage.media s.available • Introduced in: 9.14
block_storage.media s.size	integer	query	False	Filter by block_storage.media s.size • Introduced in: 9.14

Name	Type	In	Required	Description
block_storage.media s.encyency_without_ snapshots.ratio	number	query	False	Filter by block_storage.media s.encyency_without_ snapshots.ratio • Introduced in: 9.14
block_storage.media s.encyency_without_ snapshots.logical_us ed	integer	query	False	Filter by block_storage.media s.encyency_without_ snapshots.logical_u sed • Introduced in: 9.14
block_storage.media s.encyency_without_ snapshots.savings	integer	query	False	Filter by block_storage.media s.encyency_without_ snapshots.savings • Introduced in: 9.14
block_storage.media s.encyency_without_ snapshots_flexclone s.ratio	number	query	False	Filter by block_storage.media s.encyency_without_ snapshots_flexclone s.ratio • Introduced in: 9.14
block_storage.media s.encyency_without_ snapshots_flexclone s.logical_used	integer	query	False	Filter by block_storage.media s.encyency_without_ snapshots_flexclone s.logical_used • Introduced in: 9.14

Name	Type	In	Required	Description
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.physical_used	integer	query	False	Filter by block_storage.media s.physical_used • Introduced in: 9.14
block_storage.media s.used	integer	query	False	Filter by block_storage.media s.used • Introduced in: 9.14
block_storage.inactiv e_data	integer	query	False	Filter by block_storage.inacti ve_data • Introduced in: 9.14
efficiency.ratio	number	query	False	Filter by efficiency.ratio • Introduced in: 9.14
efficiency.logical_us ed	integer	query	False	Filter by efficiency.logical_us ed • Introduced in: 9.14
efficiency.savings	integer	query	False	Filter by efficiency.savings • Introduced in: 9.14

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

Name	Type	In	Required	Description
efficiency_without_snapshots.savings	integer	query	False	Filter by efficiency_without_snapshots.savings <ul style="list-style-type: none"> 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 the storage across the cluster. When a cloud store is also used by the storage, 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. <p>Platform Specifics</p> <ul style="list-style-type: none"> Unified ONTAP: Available for GET requests. ASA.Next: This property is not applicable, it is not available in the REST API and is not reported for GET requests. Introduced in: 9.6
efficiency_without_snapshots	efficiency_without_snapshots	Storage efficiency that does not include the savings provided by Snapshot copies.

Name	Type	Description
efficiency_without_snapshots_flexclones	efficiency_without_snapshots_flexclones	<p>Storage efficiency that does not include the savings provided by Snapshot copies and FlexClone volumes.</p> <p>Platform Specifics</p> <ul style="list-style-type: none"> • Unified ONTAP: Available for GET requests. • ASA.Next: This property is not applicable, it is not available in the REST API and is not reported for GET requests. • Introduced in: 9.9

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"
      }
    ],
    "total_metadata_used": 0
  },
  "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

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

Definitions

See Definitions

efficiency

Storage efficiency.

=== Platform Specifics

- **Unified ONTAP:** Available for GET requests.
- **ASA.Next:** This property is not applicable, it is not available in the REST API and is not reported for GET requests.

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 FlexClone volumes.

=== Platform Specifics

- **Unified ONTAP:** Available for GET requests.
- **ASA.Next:** This property is not applicable, it is not available in the REST API and is not reported for GET requests.

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)

medias

Name	Type	Description
available	integer	Available space across the cluster based on media type.
efficiency	efficiency	Storage efficiency. Platform Specifics <ul style="list-style-type: none"> • Unified ONTAP: Available for GET requests. • ASA.Next: This property is not applicable, it is not available in the REST API and is not reported for GET requests. • Introduced in: 9.7
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 FlexClone volumes. Platform Specifics <ul style="list-style-type: none"> • Unified ONTAP: Available for GET requests. • ASA.Next: This property is not applicable, it is not available in the REST API and is not reported for GET requests. • Introduced in: 9.9

Name	Type	Description
physical_used	integer	Total physical used space across the cluster based on media type.
size	integer	Total space across the cluster based on media type.
type	string	The type of media being used.
used	integer	Used space across the cluster based on media type. Platform Specifics <ul style="list-style-type: none"> • Unified ONTAP: Available for GET requests. • ASA.Next: This property is not applicable, it is not available in the REST API and is not reported for GET requests. • format: int64 • Introduced in: 9.6 • x-nullable: true

block_storage

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

Name	Type	Description
available	integer	Available space across the cluster.

Name	Type	Description
full_threshold_percent	integer	<p>The cluster space full threshold percentage that triggers an EMS error.</p> <p>Platform Specifics</p> <ul style="list-style-type: none"> • Unified ONTAP: This property is not available as part of <code>cluster_space.block_storage</code> object in the REST API and is not reported for GET requests. • ASA.Next: Available for GET, POST, and PATCH requests. • format: int64 • Introduced in: 9.6 • x-nullable: true
inactive_data	integer	<p>Inactive data across the cluster.</p> <p>Platform Specifics</p> <ul style="list-style-type: none"> • Unified ONTAP: Available for GET requests. • ASA.Next: This property is not applicable, it is not available in the REST API and is not reported for GET requests. • format: int64 • Introduced in: 9.7 • x-nullable: true
medias	array[medias]	<p>Configuration information based on type of media. For example, SSD media type information includes the sum of all the SSD storage across the cluster.</p>

Name	Type	Description
nearly_full_threshold_percent	integer	<p>The cluster space nearly full threshold percentage that triggers an EMS warning.</p> <p>Platform Specifics</p> <ul style="list-style-type: none"> • Unified ONTAP: This property is not available as part of <code>cluster_space.block_storage</code> object in the REST API and is not reported for GET requests. • ASA.Next: Available for GET, POST, and PATCH requests. • format: int64 • x-nullable: true
physical_used	integer	Total physical used space across the cluster.
physical_used_percent	integer	<p>The Physical space used percentage across the cluster.</p> <p>Platform Specifics</p> <ul style="list-style-type: none"> • Unified ONTAP: This property is not available as part of the <code>cluster_space.block_storage</code> object in the REST API and is not reported for GET requests. • ASA.Next: Available for GET requests. • format: int64 • Introduced in: 9.10 • x-nullable: true
size	integer	Total space across the cluster.

Name	Type	Description
total_metadata_used	integer	<p>Total metadata used in the cluster.</p> <p>Platform Specifics</p> <ul style="list-style-type: none"> • Unified ONTAP: This property is not available as part of <code>cluster_space.block_storage</code> object in the REST API and is not reported for GET requests. • ASA.Next: Available for GET requests. • format: int64 • readOnly: 1 • x-nullable: true
used	integer	<p>Used space (includes volume reserves) across the cluster.</p> <p>Platform Specifics</p> <ul style="list-style-type: none"> • Unified ONTAP: Available for GET requests. • ASA.Next: This property is not applicable, it is not available in the REST API and is not reported for GET requests. • format: int64 • Introduced in: 9.6 • x-nullable: true

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.

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