



# **Retrieve metrics of a consistency group**

ONTAP 9.13.1 REST API reference

NetApp  
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# Retrieve metrics of a consistency group

## Application consistency-groups consistency\_group.uuid metrics endpoint overview

### Overview

Retrieves historical performance and capacity metrics for a consistency group.

### Examples

#### Retrieving historical performance and space metrics for a consistency group for the past day

```
# The API:
/api/application/consistency-groups/{uuid}/metrics

# The call:
curl -X GET "https://<mgmt-ip>/api/application/consistency-
groups/{uuid}/metrics?interval=1d&fields=*" -H "accept:
application/hal+json"

# The response:
Snipped most of the records
{
  "records": [
    {
      "uuid": "5069acd5-b325-11ed-a958-005056ac6b54",
      "timestamp": "2023-02-23T03:17:45Z",
      "status": "ok",
      "duration": "PT15S",
      "latency": {
        "read": 0,
        "write": 0,
        "other": 0,
        "total": 0
      },
      "iops": {
        "read": 0,
        "write": 0,
        "other": 0,
        "total": 0
      },
      "throughput": {
        "read": 0,
        "write": 0,
```

```

        "other": 0,
        "total": 0
    },
    "available_space": 862216192,
    "used_space": 1810432,
    "size": 864026624,
    "_links": {
        "self": {
            "href": "/api/application/consistency-groups/5069acd5-b325-11ed-
a958-005056ac6b54/metrics/2023-02-23T03%3A17%3A45Z?fields=*"
        }
    }
},
{
    "uuid": "5069acd5-b325-11ed-a958-005056ac6b54",
    "timestamp": "2023-02-23T02:18:00Z",
    "svm": {
        "name": "vs0",
        "uuid": "55b1a7b9-b2fb-11ed-a958-005056ac6b54"
    },
    "status": "partial_no_data",
    "duration": "PT15S",
    "latency": {
        "read": 0,
        "write": 0,
        "other": 0,
        "total": 0
    },
    "iops": {
        "read": 0,
        "write": 0,
        "other": 0,
        "total": 0
    },
    "throughput": {
        "read": 0,
        "write": 0,
        "other": 0,
        "total": 0
    },
    "available_space": 0,
    "used_space": 0,
    "size": 0,
    "_links": {
        "self": {
            "href": "/api/application/consistency-groups/5069acd5-b325-11ed-

```

```

a958-005056ac6b54/metrics/2023-02-23T02%3A18%3A00Z?fields=**"
    }
  }
},
"num_records": 240,
"_links": {
  "self": {
    "href": "/api/application/consistency-groups/5069acd5-b325-11ed-a958-005056ac6b54/metrics?fields=**"
  }
}
}
}

```

### Retrieving historical metrics within a time range defined by timestamp

```

curl -X GET "https://<mgmt-ip>/api/application/consistency-groups/{uuid}/metrics?fields=**&timestamp=2023-02-23T03:36:45Z..2023-02-23T03:36:30Z" -H "accept: application/hal+json"

```

#### Response:

```

{
  "records": [
    {
      "uuid": "5069acd5-b325-11ed-a958-005056ac6b54",
      "timestamp": "2023-02-23T03:36:45Z",
      "svm": {
        "name": "vs0",
        "uuid": "55b1a7b9-b2fb-11ed-a958-005056ac6b54"
      },
      "status": "ok",
      "duration": "PT15S",
      "latency": {
        "read": 0,
        "write": 0,
        "other": 0,
        "total": 0
      },
      "iops": {
        "read": 0,
        "write": 0,
        "other": 0,
        "total": 0
      },
      "throughput": {

```

```

    "read": 0,
    "write": 0,
    "other": 0,
    "total": 0
  },
  "available_space": 862183424,
  "used_space": 1843200,
  "size": 864026624,
  "_links": {
    "self": {
      "href": "/api/application/consistency-groups/5069acd5-b325-11ed-a958-005056ac6b54/metrics/2023-02-23T03%3A36%3A45Z?fields=*"
    }
  }
},
{
  "uuid": "5069acd5-b325-11ed-a958-005056ac6b54",
  "timestamp": "2023-02-23T03:36:30Z",
  "svm": {
    "name": "vs0",
    "uuid": "55b1a7b9-b2fb-11ed-a958-005056ac6b54"
  },
  "status": "ok",
  "duration": "PT15S",
  "latency": {
    "read": 0,
    "write": 0,
    "other": 0,
    "total": 0
  },
  "iops": {
    "read": 0,
    "write": 0,
    "other": 0,
    "total": 0
  },
  "throughput": {
    "read": 0,
    "write": 0,
    "other": 0,
    "total": 0
  },
  "available_space": 862183424,
  "used_space": 1843200,
  "size": 864026624,
  "_links": {

```

```

    "self": {
      "href": "/api/application/consistency-groups/5069acd5-b325-11ed-a958-005056ac6b54/metrics/2023-02-23T03%3A36%3A30Z?fields=**"
    }
  },
  "num_records": 2,
  "_links": {
    "self": {
      "href": "/api/application/consistency-groups/5069acd5-b325-11ed-a958-005056ac6b54/metrics?fields=**&timestamp=2023-02-23T03:36:45Z..2023-02-23T03:36:30Z"
    }
  }
}

```

## Retrieve historical performance metrics of a consistency group

GET /application/consistency-groups/{consistency\_group.uuid}/metrics

**Introduced In:** 9.13

Retrieves historical performance and capacity metrics for a consistency group.

### Parameters

Name	Type	In	Required	Description
available_space	integer	query	False	Filter by available_space
throughput.read	integer	query	False	Filter by throughput.read
throughput.other	integer	query	False	Filter by throughput.other
throughput.write	integer	query	False	Filter by throughput.write
throughput.total	integer	query	False	Filter by throughput.total
duration	string	query	False	Filter by duration

Name	Type	In	Required	Description
latency.read	integer	query	False	Filter by latency.read
latency.other	integer	query	False	Filter by latency.other
latency.write	integer	query	False	Filter by latency.write
latency.total	integer	query	False	Filter by latency.total
used_space	integer	query	False	Filter by used_space
size	integer	query	False	Filter by size
timestamp	string	query	False	Filter by timestamp
status	string	query	False	Filter by status
iops.read	integer	query	False	Filter by iops.read
iops.other	integer	query	False	Filter by iops.other
iops.write	integer	query	False	Filter by iops.write
iops.total	integer	query	False	Filter by iops.total
consistency_group.uid	string	path	True	Unique identifier of the consistency group.

Name	Type	In	Required	Description
interval	string	query	False	<p>The time range for the data. Examples can be 1h, 1d, 1w, 1m, 1y. The period for each time range is as follows:</p> <ul style="list-style-type: none"> <li>• 1h: Metrics over the most recent hour sampled over 15 seconds.</li> <li>• 1d: Metrics over the most recent day sampled over 5 minutes.</li> <li>• 1w: Metrics over the most recent week sampled over 30 minutes.</li> <li>• 1m: Metrics over the most recent month sampled over 2 hours.</li> <li>• 1y: Metrics over the most recent year sampled over a day.</li> <li>• Default value: 1</li> <li>• enum: ["1h", "1d", "1w", "1m", "1y"]</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>
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
order_by	array[string]	query	False	Order results by specified fields and optional [asc/desc] direction. Default direction is 'asc' for ascending.
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>

## Response

Status: 200, Ok

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

Name	Type	Description
num_records	integer	Number of records
records	array[ <a href="#">records</a> ]	

## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "available_space": 4096,
    "duration": "PT15S",
    "iops": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "latency": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "size": 4096,
    "status": "ok",
    "throughput": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "timestamp": "2017-01-25 06:20:13 -0500",
    "used_space": 4096
  }
}
```

## 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>	

\_links

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

iops

The rate of I/O operations observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

latency

The round trip latency observed at the storage object, in microseconds.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

### throughput

The rate of throughput bytes per second observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

### records

Performance and capacity numbers, such as, IOPS, latency, throughput, used space, and available space.

Name	Type	Description
_links	<a href="#">_links</a>	
available_space	integer	The total space available in the consistency group, in bytes.

Name	Type	Description
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:
iops	<a href="#">iops</a>	The rate of I/O operations observed at the storage object.
latency	<a href="#">latency</a>	The round trip latency observed at the storage object, in microseconds.
size	integer	The total size of the consistency group, in bytes.
status	string	Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput	<a href="#">throughput</a>	The rate of throughput bytes per second observed at the storage object.
timestamp	string	The timestamp of the performance and capacity data.

Name	Type	Description
used_space	integer	The total space used in the consistency group, in bytes.

#### 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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