



Manage cluster mediators

ONTAP 9.13.1 REST API reference

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Manage cluster mediators

Cluster mediators endpoint overview

Overview

You can use this API to add or remove a mediator to MetroCluster over IP configuration, or get the status and details of the existing mediator in MetroCluster over IP configuration. The GET operation returns the status of the mediator along with the mediator details. The DELETE operation removes the mediator. The POST operation adds the mediator.

Adding a mediator

A mediator can be added to MetroCluster over IP configuration by issuing a POST on `/cluster/mediators`. Parameters are provided in the body of the POST request. There are no optional parameters for adding a mediator.

Required configuration fields

These fields are always required for any POST `/cluster/mediators` request.

- `ip_address` - Specifies the IP address of the mediator.
- `user` - Specifies a user name credential.
- `password` - Specifies a password credential.

Polling the setup job

After a successful POST `/cluster/mediators` is issued, an HTTP status code of 202 (Accepted) is returned along with a job UUID and a link in the body of the response. The setup job continues asynchronously and can be monitored by using the job UUID and the `/cluster/jobs` API. The "message" field in the response of the GET `/cluster/jobs/{uuid}` request shows the current step in the job, and the "state" field shows the overall state of the job.

Deleting a Mediator

A mediator can be deleted from MetroCluster over IP configuration by issuing a DELETE to `/cluster/mediators/{uuid}`. Parameters are provided in the body of the DELETE request. There are no optional parameters for adding a mediator.

Required configuration fields

These fields are always required for any DELETE `/cluster/mediators/{uuid}` request.

- `user` - Specifies a user name credential.
- `password` - Specifies a password credential.

Polling the delete job

After a successful DELETE `/cluster/mediators/{uuid}` is issued, an HTTP status code of 202 (Accepted) is returned along with a job UUID and a link in the body of the response. The delete job continues

asynchronously and can be monitored by using the job UUID and the /cluster/jobs API. The "message" field in the response of the GET /cluster/jobs/{uuid} request shows the current step in the job, and the "state" field shows the overall state of the job.

Examples

Setting up a mediator for a 4-Node MetroCluster over IP Configuration

This example shows the POST body when setting up a mediator for a 4-Node MetroCluster over IP configuration. The only prerequisite is that MetroCluster over IP is configured.

```
# API
/api/cluster/mediators
```

POST body included from file

```
mediator_post_body.txt:
{
  "ip_address": "1.1.1.1",
  "user": "username",
  "password": "password"
}
curl -X POST https://<mgmt-ip>/api/cluster/mediators -d
"@mediator_post_body.txt"
```

Inline POST body

```
curl -X POST https://<mgmt-ip>/api/cluster/mediators -H "Content-Type:
application/hal+json" -d '{"ip_address": "1.1.1.1", "user": "username",
"password": "password"}'
```

POST Response

```
HTTP/1.1 202 Accepted
Date: Tue, 22 Sep 2020 07:40:59 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/cluster/metrocluster
Content-Length: 189
Content-Type: application/hal+json
{
  "job": {
    "uuid": "f567b48b-fca6-11ea-acaf-005056bb47c1",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/f567b48b-fca6-11ea-acaf-005056bb47c1"
      }
    }
  }
}
```

Monitoring the job progress

Use the link provided in the response to the POST request to fetch information for the mediator setup job.

Request

```
curl -X GET https://<mgmt-ip>/api/cluster/jobs/f567b48b-fca6-11ea-acaf-005056bb47c1
```

Job status response

```
HTTP/1.1 202 Accepted
Date: Tue, 22 Sep 2020 07:41:29 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/cluster/metrocluster
Content-Length: 189
Content-Type: application/hal+json
{
  "uuid": "f567b48b-fca6-11ea-acaf-005056bb47c1",
  "description": "POST /api/cluster/mediators/",
  "state": "running",
  "start_time": "2020-09-22T03:41:00-04:00",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/f567b48b-fca6-11ea-acaf-005056bb47c1"
    }
  }
}
```

Final status of a successful Mediator add

```
HTTP/1.1 202 Accepted
Date: Tue, 22 Sep 2020 07:43:38 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/cluster/metrocluster
Content-Length: 358
Content-Type: application/hal+json
{
  "uuid": "f567b48b-fca6-11ea-acaf-005056bb47c1",
  "description": "POST /api/cluster/mediators/",
  "state": "success",
  "message": "success",
  "code": 0,
  "start_time": "2020-09-22T03:41:00-04:00",
  "end_time": "2020-09-22T03:42:10-04:00",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/f567b48b-fca6-11ea-acaf-005056bb47c1"
    }
  }
}
```

Retrieving the existing mediator configurations

Request

```
curl -X GET https://<mgmt-ip>/api/cluster/mediators
```

Response

```
HTTP/1.1 202 Accepted
Date: Tue, 22 Sep 2020 08:53:18 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/cluster/metrocluster
Content-Length: 320
Content-Type: application/hal+json
{
  "records": [
    {
      "uuid": "f89e8906-fca6-11ea-acaf-005056bb47c1",
      "_links": {
        "self": {
          "href": "/api/cluster/mediators/f89e8906-fca6-11ea-acaf-005056bb47c1"
        }
      }
    }
  ],
  "num_records": 1,
  "_links": {
    "self": {
      "href": "/api/cluster/mediators"
    }
  }
}
```

Retrieving a specific mediator using the uuid

Request

```
curl -X GET https://<mgmt-ip>/api/cluster/mediators/f89e8906-fca6-11ea-acaf-005056bb47c1
```

Response

```
HTTP/1.1 202 Accepted
Date: Tue, 22 Sep 2020 08:59:40 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/cluster/metrocluster
Content-Length: 347
Content-Type: application/hal+json
{
  "uuid": "f89e8906-fca6-11ea-acaf-005056bb47c1",
  "ip_address": "10.234.173.40",
  "port": 31784,
  "reachable": true,
  "peer_cluster": {
    "name": "mcc_siteB",
    "uuid": "38779fd1-fc6b-11ea-9421-005056bb21d8"
  },
  "peer_mediator_connectivity": "connected",
  "_links": {
    "self": {
      "href": "/api/cluster/mediators/f89e8906-fca6-11ea-acaf-005056bb47c1"
    }
  }
}
```

Deleting a configured Mediator using the uuid

Request

```
curl -X DELETE https://<mgmt-ip>/api/cluster/mediators/{uuid} -H "Content-Type: application+hal/json" -d '{"user": "username", "password": "password"}'
```

Response


```
HTTP/1.1 202 Accepted
Date: Tue, 22 Sep 2020 09:13:52 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/cluster/metrocluster
Content-Length: 189
Content-Type: application/hal+json
{
  "job": {
    "uuid": "eeb71ccd-fcb3-11ea-acaf-005056bb47c1",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/eeb71ccd-fcb3-11ea-acaf-005056bb47c1"
      }
    }
  }
}
```

Monitoring the job progress

Use the link provided in the response to the DELETE request to fetch information for the delete job.

Request

```
curl -X GET https://<mgmt-ip>/api/cluster/jobs/eeb71ccd-fcb3-11ea-acaf-005056bb47c1
```

Job status response

```
HTTP/1.1 202 Accepted
Date: Tue, 22 Sep 2020 09:14:20 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/cluster/metrocluster
Content-Length: 316
Content-Type: application/hal+json
{
  "uuid": "eeb71ccd-fcb3-11ea-acaf-005056bb47c1",
  "description": "DELETE /api/cluster/mediators/f89e8906-fca6-11ea-acaf-005056bb47c1",
  "state": "running",
  "start_time": "2020-09-22T05:13:52-04:00",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/eeb71ccd-fcb3-11ea-acaf-005056bb47c1"
    }
  }
}
```

Final status of the Mediator DELETE job

```

HTTP/1.1 202 Accepted
Date: Tue, 22 Sep 2020 09:21:46 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/cluster/metrocluster
Content-Length: 396
Content-Type: application/hal+json
{
  "uuid": "eeb71ccd-fcb3-11ea-acaf-005056bb47c1",
  "description": "DELETE /api/cluster/mediators/f89e8906-fca6-11ea-acaf-005056bb47c1",
  "state": "success",
  "message": "success",
  "code": 0,
  "start_time": "2020-09-22T05:13:52-04:00",
  "end_time": "2020-09-22T05:14:24-04:00",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/eeb71ccd-fcb3-11ea-acaf-005056bb47c1"
    }
  }
}

```

Retrieve ONTAP Mediators configured in the cluster

GET /cluster/mediators

Introduced In: 9.8

Retrieves mediators configured in the cluster.

Parameters

Name	Type	In	Required	Description
port	integer	query	False	Filter by port
peer_mediator_connectivity	string	query	False	Filter by peer_mediator_connectivity • Introduced in: 9.10
uuid	string	query	False	Filter by uuid

Name	Type	In	Required	Description
reachable	boolean	query	False	Filter by reachable
ip_address	string	query	False	Filter by ip_address
peer_cluster.name	string	query	False	Filter by peer_cluster.name
peer_cluster.uuid	string	query	False	Filter by peer_cluster.uuid
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. <ul style="list-style-type: none"> • Default value: 1
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. <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[records]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "ca_certificate": "string",
      "dr_group": {
        "id": 0
      },
      "ip_address": "10.10.10.7",
      "password": "mypassword",
      "peer_cluster": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "cluster2",
        "uuid": "ebe27c49-1adf-4496-8335-ab862aebebf2"
      },
      "peer_mediator_connectivity": "connected",
      "port": 31784,
      "reachable": 1,
      "user": "myusername",
      "uuid": "string"
    }
  ]
}
```

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	

dr_group

DR group reference.

Name	Type	Description
id	integer	DR Group ID

_links

Name	Type	Description
self	href	

peer_cluster

The peer cluster that the mediator service is used for.

Name	Type	Description
_links	_links	
name	string	
uuid	string	

records

Name	Type	Description
ca_certificate	string	CA certificate for ONTAP Mediator. This is optional if the certificate is already installed. <ul style="list-style-type: none">• x-ntap-createOnly: true• Introduced in: 9.8• x-nullable: true

Name	Type	Description
dr_group	dr_group	DR group reference.
ip_address	string	The IP address of the mediator.
password	string	The password used to connect to the REST server on the mediator.
peer_cluster	peer_cluster	The peer cluster that the mediator service is used for.
peer_mediator_connectivity	string	Indicates the mediator connectivity status of the peer cluster. Possible values are connected, unreachable, unknown.
port	integer	The REST server's port number on the mediator.
reachable	boolean	Indicates the connectivity status of the mediator.
user	string	The username used to connect to the REST server on the mediator.
uuid	string	The unique identifier for the mediator service.

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

Name	Type	Description
target	string	The target parameter that caused the error.

Create and connect an ONTAP Mediator

POST /cluster/mediators

Introduced In: 9.8

Creates and connect a mediator.

Parameters

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. <ul style="list-style-type: none"> • Default value:

Request Body

Name	Type	Description
ca_certificate	string	CA certificate for ONTAP Mediator. This is optional if the certificate is already installed. <ul style="list-style-type: none"> • x-ntap-createOnly: true • Introduced in: 9.8 • x-nullable: true
dr_group	dr_group	DR group reference.
ip_address	string	The IP address of the mediator.
password	string	The password used to connect to the REST server on the mediator.
peer_cluster	peer_cluster	The peer cluster that the mediator service is used for.
peer_mediator_connectivity	string	Indicates the mediator connectivity status of the peer cluster. Possible values are connected, unreachable, unknown.
port	integer	The REST server's port number on the mediator.
reachable	boolean	Indicates the connectivity status of the mediator.
user	string	The username used to connect to the REST server on the mediator.
uuid	string	The unique identifier for the mediator service.

Example request

```
{
  "ca_certificate": "string",
  "dr_group": {
    "id": 0
  },
  "ip_address": "10.10.10.7",
  "password": "mypassword",
  "peer_cluster": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "cluster2",
    "uuid": "ebe27c49-1adf-4496-8335-ab862aebef2"
  },
  "peer_mediator_connectivity": "connected",
  "port": 31784,
  "reachable": 1,
  "user": "myusername",
  "uuid": "string"
}
```

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

```
{
  "job": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uuid": "string"
  }
}
```

Headers

Name	Description	Type
Location	Useful for tracking the resource location	string

Error

Status: Default

ONTAP Error Response codes

Error code	Description
13369351	Update to mediator failed. Reason: does not authorized for that command. Check that the peer cluster and mediator are reachable.

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

dr_group

DR group reference.

Name	Type	Description
id	integer	DR Group ID

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

peer_cluster

The peer cluster that the mediator service is used for.

Name	Type	Description
_links	_links	
name	string	
uuid	string	

mediator

Mediator information

Name	Type	Description
ca_certificate	string	CA certificate for ONTAP Mediator. This is optional if the certificate is already installed. <ul style="list-style-type: none">• x-ntap-createOnly: true• Introduced in: 9.8• x-nullable: true
dr_group	dr_group	DR group reference.
ip_address	string	The IP address of the mediator.

Name	Type	Description
password	string	The password used to connect to the REST server on the mediator.
peer_cluster	peer_cluster	The peer cluster that the mediator service is used for.
peer_mediator_connectivity	string	Indicates the mediator connectivity status of the peer cluster. Possible values are connected, unreachable, unknown.
port	integer	The REST server's port number on the mediator.
reachable	boolean	Indicates the connectivity status of the mediator.
user	string	The username used to connect to the REST server on the mediator.
uuid	string	The unique identifier for the mediator service.

job_link

Name	Type	Description
_links	_links	
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

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.

Delete an ONTAP Mediator

DELETE /cluster/mediators/{uuid}

Introduced In: 9.8

Deletes the mediator.

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	<ul style="list-style-type: none"> format: uuid

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0

Request Body

Name	Type	Description
ca_certificate	string	<p>CA certificate for ONTAP Mediator. This is optional if the certificate is already installed.</p> <ul style="list-style-type: none"> • x-ntap-createOnly: true • Introduced in: 9.8 • x-nullable: true
dr_group	dr_group	DR group reference.
ip_address	string	The IP address of the mediator.

Name	Type	Description
password	string	The password used to connect to the REST server on the mediator.
peer_cluster	peer_cluster	The peer cluster that the mediator service is used for.
peer_mediator_connectivity	string	Indicates the mediator connectivity status of the peer cluster. Possible values are connected, unreachable, unknown.
port	integer	The REST server's port number on the mediator.
reachable	boolean	Indicates the connectivity status of the mediator.
user	string	The username used to connect to the REST server on the mediator.
uuid	string	The unique identifier for the mediator service.

Example request

```
{
  "ca_certificate": "string",
  "dr_group": {
    "id": 0
  },
  "ip_address": "10.10.10.7",
  "password": "mypassword",
  "peer_cluster": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "cluster2",
    "uuid": "ebe27c49-1adf-4496-8335-ab862aebef2"
  },
  "peer_mediator_connectivity": "connected",
  "port": 31784,
  "reachable": 1,
  "user": "myusername",
  "uuid": "string"
}
```

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

```
{
  "job": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uuid": "string"
  }
}
```

Error

Status: Default

ONTAP Error Response codes

Error code	Description
13369377	Mediator field "mediator.id" does not exist.

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

dr_group

DR group reference.

Name	Type	Description
id	integer	DR Group ID

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

peer_cluster

The peer cluster that the mediator service is used for.

Name	Type	Description
_links	_links	
name	string	
uuid	string	

mediator

Mediator information

Name	Type	Description
ca_certificate	string	CA certificate for ONTAP Mediator. This is optional if the certificate is already installed. <ul style="list-style-type: none">• x-ntap-createOnly: true• Introduced in: 9.8• x-nullable: true
dr_group	dr_group	DR group reference.
ip_address	string	The IP address of the mediator.

Name	Type	Description
password	string	The password used to connect to the REST server on the mediator.
peer_cluster	peer_cluster	The peer cluster that the mediator service is used for.
peer_mediator_connectivity	string	Indicates the mediator connectivity status of the peer cluster. Possible values are connected, unreachable, unknown.
port	integer	The REST server's port number on the mediator.
reachable	boolean	Indicates the connectivity status of the mediator.
user	string	The username used to connect to the REST server on the mediator.
uuid	string	The unique identifier for the mediator service.

job_link

Name	Type	Description
_links	_links	
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

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.

Retrieve ONTAP Mediator state and configuration

GET /cluster/mediators/{uuid}

Introduced In: 9.8

Retrieves the mediator state and configuration.

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	<ul style="list-style-type: none"> format: uuid
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
ca_certificate	string	CA certificate for ONTAP Mediator. This is optional if the certificate is already installed. <ul style="list-style-type: none"> x-ntap-createOnly: true Introduced in: 9.8 x-nullable: true
dr_group	dr_group	DR group reference.

Name	Type	Description
ip_address	string	The IP address of the mediator.
password	string	The password used to connect to the REST server on the mediator.
peer_cluster	peer_cluster	The peer cluster that the mediator service is used for.
peer_mediator_connectivity	string	Indicates the mediator connectivity status of the peer cluster. Possible values are connected, unreachable, unknown.
port	integer	The REST server's port number on the mediator.
reachable	boolean	Indicates the connectivity status of the mediator.
user	string	The username used to connect to the REST server on the mediator.
uuid	string	The unique identifier for the mediator service.

Example response

```
{
  "ca_certificate": "string",
  "dr_group": {
    "id": 0
  },
  "ip_address": "10.10.10.7",
  "password": "mypassword",
  "peer_cluster": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "cluster2",
    "uuid": "ebe27c49-1adf-4496-8335-ab862aebef2"
  },
  "peer_mediator_connectivity": "connected",
  "port": 31784,
  "reachable": 1,
  "user": "myusername",
  "uuid": "string"
}
```

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

dr_group

DR group reference.

Name	Type	Description
id	integer	DR Group ID

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

peer_cluster

The peer cluster that the mediator service is used for.

Name	Type	Description
_links	_links	
name	string	
uuid	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

Name	Type	Description
target	string	The target parameter that caused the error.

Retrieve historical performance metrics for the cluster

GET `/cluster/metrics`

Introduced In: 9.6

Retrieves historical performance metrics for the cluster.

Parameters

Name	Type	In	Required	Description
timestamp	string	query	False	Filter by timestamp
status	string	query	False	Filter by status
duration	string	query	False	Filter by duration
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
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
latency.read	integer	query	False	Filter by latency.read

Name	Type	In	Required	Description
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
interval	string	query	False	<p>The time range for the data. Examples can be 1h, 1d, 1m, 1w, or 1y. The period for each time range is specified as follows:</p> <ul style="list-style-type: none"> • 1h: Metrics over the most recent hour sampled over 15 seconds. • 1d: Metrics over the most recent day sampled over 5 minutes. • 1w: Metrics over the most recent week sampled over 30 minutes. • 1m: Metrics over the most recent month sampled over 2 hours. • 1y: Metrics over the most recent year sampled over a day. • Default value: 1 • enum: ["1h", "1d", "1w", "1m", "1y"]

Name	Type	In	Required	Description
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. <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0
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

Response

Status: 200, Ok

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

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "duration": "PT15S",
      "iops": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "latency": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "status": "ok",
      "throughput": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "timestamp": "2017-01-25 06:20:13 -0500"
    }
  ]
}
```

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	

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 in microseconds 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.

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 numbers, such as IOPS latency and throughput.

Name	Type	Description
_links	_links	

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	iops	The rate of I/O operations observed at the storage object.
latency	latency	The round trip latency in microseconds observed at the storage object.
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	throughput	The rate of throughput bytes per second observed at the storage object.
timestamp	string	The timestamp of the performance data.

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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