

# **Display MetroCluster diagnostics**

ONTAP 9.14.1 REST API reference

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# **Display MetroCluster diagnostics**

# Cluster MetroCluster diagnostics endpoint overview

#### **Overview**

You can use this API to initiate a MetroCluster diagnostics operation and fetch the results of a completed diagnostics operation on a MetroCluster over IP configuration. The GET operation retrieves the results of a completed diagnostics operation for the MetroCluster over IP configuration. These can include the overall high level and details for the checks done for different components. By default, the response does not include the details. If the fields query is used in the request, the response will include the details. The POST request can be used to start a MetroCluster diagnostics operation or set up a schedule for the diagnostics to be run periodically.

#### **Details**

Details provide a way to view all the checks done on a component and the result of each check. The details of the checks are not included in the response by default. In order to fetch the details, use the fields query parameter.

- node.details
- aggregate.details
- cluster.details
- volume.details
- connection.details

# Starting a MetroCluster diagnostics operation

A new MetroCluster diagnostics operation can be started by issuing a POST to /cluster/metrocluster/diagnostics. There are no extra parameters required to initiate a diagnostics operation.

#### Polling the POST job for status of diagnostics operation

After a successful POST /cluster/diagnostics operation 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 POST 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**

#### Running the diagnostics operation

This example shows the POST request for starting a diagnostic operation for a MetroCluster over IP configuration and the responses returned:

```
#API
```

/api/cluster/metrocluster/diagnostics

#### **POST Request**

```
curl -X POST https://<mgmt-ip>/api/cluster/metrocluster/diagnostics
```

#### **POST Response**

#### Monitoring the job progress

Use the link provided in the response to the POST request to fetch information for the diagnostics operation job.

#### Request

```
curl -X GET https://<mgmt-ip>/api/cluster/jobs/f7d3804c-fcf7-11ea-acaf-
005056bb47c1
```

#### Job status response

```
HTTP/1.1 202 Accepted
Date: Tue, 22 Sep 2020 17:21:12 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache, no-store, must-revalidate
Content-Length: 345
Content-Type: application/hal+json
"uuid": "f7d3804c-fcf7-11ea-acaf-005056bb47c1",
"description": "POST /api/cluster/metrocluster/diagnostics",
"state": "running",
"message": "Checking nodes...",
"code": 2432853,
"start time": "2020-09-22T13:20:53-04:00",
" links": {
 "self": {
    "href": "/api/cluster/jobs/f7d3804c-fcf7-11ea-acaf-005056bb47c1"
  }
}
}
```

#### Final status of the diagnostics job

```
HTTP/1.1 202 Accepted
Date: Tue, 22 Sep 2020 17:29:04 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache, no-store, must-revalidate
Content-Length: 372
Content-Type: application/hal+json
"uuid": "f7d3804c-fcf7-11ea-acaf-005056bb47c1",
"description": "POST /api/cluster/metrocluster/diagnostics",
"state": "success",
"message": "success",
"code": 0,
"start time": "2020-09-22T13:20:53-04:00",
"end time": "2020-09-22T13:22:04-04:00",
" links": {
  "self": {
    "href": "/api/cluster/jobs/f7d3804c-fcf7-11ea-acaf-005056bb47c1"
  }
}
}
```

#### Retrieving the diagnostics operation

#### Request

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

#### Response

```
HTTP/1.1 202 Accepted
Date: Tue, 22 Sep 2020 18:04:28 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache, no-store, must-revalidate
Content-Length: 1005
Content-Type: application/hal+json
{
"node": {
  "timestamp": "2020-09-22T13:47:01-04:00",
  "state": "ok",
  "summary": {
    "message": ""
  }
},
"interface": {
  "timestamp": "2020-09-22T13:47:01-04:00",
  "state": "ok",
  "summary": {
    "message": ""
  }
},
"aggregate": {
  "timestamp": "2020-09-22T13:47:01-04:00",
  "state": "ok",
  "summary": {
    "message": ""
  }
} ,
"cluster": {
  "timestamp": "2020-09-22T13:47:01-04:00",
  "state": "ok",
  "summary": {
    "message": ""
  }
} ,
"connection": {
```

```
"timestamp": "2020-09-22T13:47:01-04:00",
  "state": "ok",
  "summary": {
    "message": ""
 }
},
"volume": {
  "timestamp": "2020-09-22T13:47:01-04:00",
  "state": "ok",
 "summary": {
    "message": ""
 }
},
"config replication": {
  "timestamp": "2020-09-22T13:47:01-04:00",
  "state": "ok",
 "summary": {
    "message": ""
 }
},
" links": {
 "self": {
    "href": "/api/cluster/metrocluster/diagnostics"
 }
}
}
```

#### Retrieving check details for the node component

#### Request

```
curl -X GET https://<mgmt-
ip>/api/cluster/metrocluster/diagnostics?fields=node.details
```

#### Response

```
HTTP/1.1 200 OK
Date: Thu, 10 Feb 2022 00:05:12 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache, no-store, must-revalidate
Content-Length: 4506
Content-Type: application/hal+json
{
"node": {
```

```
"details": [
      "node": {
        "uuid": "11111111-1111-1111-1111-1111111111",
        "name": "node1",
        " links": {
          "self": {
            "href": "/api/cluster/nodes/11111111-1111-1111-
111111111111"
        }
      },
      "cluster": {
        "uuid": "12121212-1212-1212-1212-121212121212",
        "name": "clusterA",
        " links": {
         "self": {
            "href": "/api/cluster/12121212-1212-1212-1212-121212121212"
         }
        }
      },
      "timestamp": "2022-02-09T18:47:00-05:00",
      "checks": [
        {
          "name": "node reachable",
         "result": "ok"
        },
          "name": "metrocluster ready",
          "result": "ok"
        },
          "name": "local ha partner",
          "result": "ok"
        },
          "name": "ha mirroring on",
          "result": "ok"
        },
          "name": "ha mirroring op state",
          "result": "ok"
        },
          "name": "symmetric ha relationship",
          "result": "ok"
```

```
},
     "name": "remote dr partner",
     "result": "ok"
    },
     "name": "dr mirroring on",
     "result": "ok"
    },
      "name": "dr mirroring op state",
     "result": "ok"
    },
      "name": "symmetric dr relationship",
      "result": "ok"
    },
      "name": "remote dr auxiliary partner",
     "result": "ok"
    },
      "name": "symmetric dr auxiliary relationship",
     "result": "ok"
    },
      "name": "storage failover enabled",
     "result": "ok"
    },
     "name": "has intercluster lif",
     "result": "ok"
    },
      "name": "node_object_limit",
     "result": "ok"
    },
      "name": "automatic uso",
     "result": "ok"
},
  "node": {
    "uuid": "22222222-2222-2222-2222-22222222222",
```

```
"name": "node2",
       " links": {
        "self": {
           22222222222"
       }
     },
     "cluster": {
       "uuid": "23232323-2323-2323-2323-232323232323",
       "name": "clusterB",
       " links": {
         "self": {
           "href": "/api/cluster/23232323-2323-2323-2323-23232323232323"
         }
     },
     "timestamp": "2022-02-09T18:47:00-05:00",
     "checks": [
         "name": "node reachable",
         "result": "ok"
       },
         "name": "metrocluster ready",
        "result": "ok"
       },
         "name": "local ha partner",
         "result": "ok"
       },
         "name": "ha mirroring on",
         "result": "ok"
       },
         "name": "ha mirroring op state",
         "result": "ok"
       },
         "name": "symmetric ha relationship",
         "result": "ok"
       },
         "name": "remote dr partner",
         "result": "ok"
```

```
},
         "name": "dr mirroring on",
         "result": "ok"
        },
          "name": "dr mirroring op state",
         "result": "ok"
        },
          "name": "symmetric dr relationship",
         "result": "ok"
        },
          "name": "remote dr auxiliary partner",
          "result": "ok"
        },
          "name": "symmetric dr auxiliary relationship",
          "result": "ok"
        },
          "name": "storage failover enabled",
          "result": "ok"
        },
          "name": "has_intercluster lif",
         "result": "ok"
        },
          "name": "node_object_limit",
          "result": "ok"
        },
          "name": "automatic uso",
         "result": "ok"
 ]
},
" links": {
 "self": {
   "href": "/api/cluster/metrocluster/diagnostics"
 }
}
```

.

# Retrieving check details for the volume component

## Request

```
curl -X GET https://<mgmt-
ip>/api/cluster/metrocluster/diagnostics?fields=volume.details
```

## Response

```
HTTP/1.1 200 OK
Cache-Control: no-cache, no-store, must-revalidate
Connection: close
Date: Fri, 08 Apr 2022 20:07:38 GMT
Server: libzapid-httpd
Vary: Accept-Encoding
Content-Length: 928
Content-Type: application/hal+json
"volume": {
  "details": [
      "checks": [
          "name": "unmirrored flexgroups",
         "result": "ok",
      ]
    },
      "checks": [
          "name": "mixed flexgroups",
          "result": "ok",
      ]
  ]
" links": {
  "self": {
    "href": "/api/cluster/metrocluster/diagnostics"
  }
}
}
```

## **Related ONTAP Commands**

```
• metrocluster check run
```

- metrocluster check show
- metrocluster check node show
- metrocluster check aggregate show
- metrocluster check cluster show

- metrocluster check connection show
- metrocluster check volume show

# Retrieve diagnostic operation results for a MetroCluster configuration

 ${\sf GET/cluster/metrocluster/diagnostics}$ 

Introduced In: 9.8

Retrieves the results of a completed diagnostic operation for the MetroCluster configuration.

## **Parameters**

Name	Туре	In	Required	Description
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.

# Response

Status: 200, Ok

Name	Туре	Description
aggregate	aggregate	
cluster	cluster	
config-replication	config-replication	
connection	connection	
interface	interface	
node	node	
volume	volume	

```
"aggregate": {
  "details": {
    "aggregate": {
      " links": {
       "self": {
         "href": "/api/resourcelink"
       }
      },
      "name": "aggr1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "checks": {
      "additional info": {
       "code": "string",
       "message": "string"
     },
      "name": "mirrror status",
      "result": "ok"
    },
    "cluster": {
      " links": {
        "self": {
         "href": "/api/resourcelink"
       }
      },
     "name": "cluster1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "node": {
      " links": {
        "self": {
         "href": "/api/resourcelink"
       }
      },
      "name": "node1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    "timestamp": "2016-03-10 17:35:16 -0500",
    "volume": {
      " links": {
        "self": {
         "href": "/api/resourcelink"
```

```
},
      "name": "volume1",
     "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
   }
  },
  "state": "ok",
  "summary": {
   "code": "string",
  "message": "string"
 },
  "timestamp": "2016-03-10 17:35:16 -0500"
},
"cluster": {
 "details": {
    "aggregate": {
      " links": {
       "self": {
         "href": "/api/resourcelink"
       }
      },
      "name": "aggr1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "checks": {
      "additional info": {
       "code": "string",
       "message": "string"
     },
      "name": "mirrror status",
      "result": "ok"
    },
    "cluster": {
     " links": {
        "self": {
         "href": "/api/resourcelink"
       }
      },
      "name": "cluster1",
     "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "node": {
      " links": {
       "self": {
         "href": "/api/resourcelink"
       }
      },
```

```
"name": "node1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "timestamp": "2016-03-10 17:35:16 -0500",
    "volume": {
      " links": {
        "self": {
         "href": "/api/resourcelink"
        }
      },
      "name": "volume1",
     "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
   }
  },
  "state": "ok",
  "summary": {
   "code": "string",
   "message": "string"
  "timestamp": "2016-03-10 17:35:16 -0500"
},
"config-replication": {
  "state": "ok",
 "summary": {
   "code": "string",
   "message": "string"
  "timestamp": "2016-03-14 18:35:16 -0400"
},
"connection": {
  "details": {
    "cluster": {
     " links": {
        "self": {
         "href": "/api/resourcelink"
       }
      },
      "name": "cluster1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "connections": {
      "destination address": "string",
      "partner": {
        "node": {
          " links": {
            "self": {
```

```
"href": "/api/resourcelink"
           }
          },
          "name": "node1",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        },
       "type": "ha"
      } ,
      "port": "string",
     "result": "ok",
      "source address": "string",
     "state": "disconnected"
    },
    "node": {
      " links": {
        "self": {
         "href": "/api/resourcelink"
       }
      },
      "name": "node1",
     "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
   }
  },
  "state": "ok",
  "summary": {
   "code": "string",
   "message": "string"
  },
  "timestamp": "2016-03-10 17:35:16 -0500"
},
"interface": {
  "state": "ok",
 "summary": {
   "code": "string",
   "message": "string"
  },
 "timestamp": "2016-03-10 17:35:16 -0500"
},
"node": {
  "details": {
    "aggregate": {
     " links": {
       "self": {
         "href": "/api/resourcelink"
       }
      },
```

```
"name": "aggr1",
   "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
 },
 "checks": {
    "additional info": {
     "code": "string",
     "message": "string"
   } ,
   "name": "mirrror status",
   "result": "ok"
  },
 "cluster": {
    " links": {
     "self": {
       "href": "/api/resourcelink"
     }
   },
    "name": "cluster1",
   "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
 },
 "node": {
   " links": {
     "self": {
       "href": "/api/resourcelink"
     }
   },
   "name": "node1",
   "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
 },
 "timestamp": "2016-03-10 17:35:16 -0500",
 "volume": {
    " links": {
     "self": {
       "href": "/api/resourcelink"
     }
   },
    "name": "volume1",
   "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
 }
},
"state": "ok",
"summary": {
"code": "string",
"message": "string"
},
"timestamp": "2016-03-10 17:35:16 -0500"
```

```
} ,
"volume": {
 "details": {
   "aggregate": {
     " links": {
       "self": {
         "href": "/api/resourcelink"
       }
     },
     "name": "aggr1",
     "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
   },
   "checks": {
     "additional info": {
       "code": "string",
       "message": "string"
     } ,
     "name": "mirrror status",
     "result": "ok"
   },
   "cluster": {
     " links": {
       "self": {
         "href": "/api/resourcelink"
       }
     },
     "name": "cluster1",
     "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
   },
   "node": {
      " links": {
       "self": {
         "href": "/api/resourcelink"
     },
      "name": "node1",
     "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
   "timestamp": "2016-03-10 17:35:16 -0500",
   "volume": {
      " links": {
       "self": {
         "href": "/api/resourcelink"
       }
      },
      "name": "volume1",
```

```
"uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"

},

"state": "ok",

"summary": {
    "code": "string",
    "message": "string"
},

"timestamp": "2016-03-10 17:35:16 -0500"
}
```

# **Error**

```
Status: Default
```

# **ONTAP Error Response Codes**

Error Code	Description
2425734	An internal error occurred. Wait a few minutes, and try the operation again. For further assistance, contact technical support.
2426405	MetroCluster is not configured in cluster "cluster". Run "metrocluster show" to verify both the local and the remote clusters are configured as MetroCluster, and then try the command again.
2432856	MetroCluster diagnostics result is not available. Use the REST API GET method on "/api/cluster/metrocluster/operations?type=check&field s=*" for more information.

Also see the table of common errors in the Response body overview section of this documentation.

# **Definitions**

#### **See Definitions**

href

Name	Туре	Description
href	string	

\_links

Name	Туре	Description
self	href	

aggregate

# Aggregate

Name	Туре	Description
_links	_links	
name	string	
uuid	string	

additional\_info

Additional information or recovery steps to take on this component.

Name	Туре	Description
code	string	Argument code
message	string	Message argument

metrocluster\_diag\_check

Generic object which can be used for various components which holds details of the checks of a component.

Name	Туре	Description
additional_info	additional_info	Additional information or recovery steps to take on this component.
name	string	Name of type of diagnostic operation run for the component.
result	string	Result of the diagnostic operation on this component.

## cluster

Name	Туре	Description
_links	_links	
name	string	
uuid	string	

# node

Name	Туре	Description
_links	_links	
name	string	
uuid	string	

## volume

Name	Туре	Description
_links	_links	
name	string	The name of the volume. This field cannot be specified in a POST or PATCH method.
uuid	string	Unique identifier for the volume. This corresponds to the instance- uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move.  • example: 028baa66-41bd- 11e9-81d5-00a0986138f7  • Introduced in: 9.6  • x-nullable: true

# metrocluster\_diag\_details

Name	Туре	Description
aggregate	aggregate	Aggregate
checks	array[metrocluster_diag_check]	Collection of MetroCluster checks done for component.
cluster	cluster	
node	node	

Name	Туре	Description
timestamp	string	Time check was done.
volume	volume	

# summary

Additional information or recovery steps to take.

Name	Туре	Description
code	string	Argument code
message	string	Message argument

# aggregate

Name	Туре	Description
details	array[metrocluster_diag_details]	Display details of the MetroCluster check for aggregates.
state	string	Status of diagnostic operation for this component.
summary	summary	Additional information or recovery steps to take.
timestamp	string	Time of the most recent diagnostic operation for this component

# cluster

Name	Туре	Description
details	array[metrocluster_diag_details]	Display details of the MetroCluster check for clusters.
state	string	Status of diagnostic operation for this component.
summary	summary	Additional information or recovery steps to take.

Name	Туре	Description
timestamp		Time of the most recent diagnostic operation for this component

# config-replication

Name	Туре	Description
state	string	Status of diagnostic operation for this component.
summary	summary	Additional information or recovery steps to take.
timestamp	string	Time of the most recent diagnostic operation for this component

# partner

Name	Туре	Description
node	node	
type	string	

# metrocluster\_diag\_connection

Name	Туре	Description
destination_address	string	
partner	partner	
port	string	
result	string	Result of the diagnostic operation on this component.
source_address	string	
state	string	

# $metrocluster\_diag\_connection\_details$

Name	Туре	Description
cluster	cluster	
connections	array[metrocluster_diag_connection]	

Name	Туре	Description
node	node	

## connection

Name	Туре	Description
details	array[metrocluster_diag_connection_details]	Display details of the MetroCluster check for connections.
state	string	Status of diagnostic operation for this component.
summary	summary	Additional information or recovery steps to take.
timestamp	string	Time of the most recent diagnostic operation for this component

# interface

Name	Туре	Description
state	string	Status of diagnostic operation for this component.
summary	summary	Additional information or recovery steps to take.
timestamp	string	Time of the most recent diagnostic operation for this component

## node

Name	Туре	Description
details	array[metrocluster_diag_details]	Displays details of the MetroCluster check for nodes.
state	string	Status of diagnostic operation for this component.
summary	summary	Additional information or recovery steps to take.

Name	Туре	Description
timestamp	string	Time of the most recent diagnostic operation for this component

#### volume

Name	Туре	Description
details	array[metrocluster_diag_details]	Display details of the MetroCluster check for volumes.
state	string	Status of diagnostic operation for this component.
summary	summary	Additional information or recovery steps to take.
timestamp	string	Time of the most recent diagnostic operation for this component

# Start MetroCluster diagnostics or set up a periodic diagnostic schedule

POST /cluster/metrocluster/diagnostics

Introduced In: 9.8

Start a MetroCluster diagnostic operation or set up a schedule for the diagnostics to be run periodically.

#### **Parameters**

Name	Туре	In	Required	Description
schedule	integer	query	False	Shows the minutes of every hour when a job runs. Setting this parameter schedules the periodic job to be run to perform MetroCluster diagnostic.

Name	Туре	In	Required	Description
return_timeout	integer	query	False	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.  • Default value: 1  • Max value: 0

# Response

Status: 202, Accepted

Name	Туре	Description
job	job_link	

# **Example response**

#### Headers

Name	Description	Туре
Location	Useful for tracking the resource location	string

# Response

```
Status: 201, Created
```

# **Error**

```
Status: Default
```

# **ONTAP Error Response Codes**

Error Code	Description
2425734	An internal error occurred. Wait a few minutes, and try the operation again. For further assistance, contact technical support.
2427132	MetroCluster is not configured on this cluster.
2432833	Operation is already running.
2432852	MetroCluster diagnostics start
2432853	MetroCluster diagnostics job scheduled
2432854	MetroCluster diagnostics complete

Error Code	Description
2432855	MetroCluster diagnostics operation failed. Use the REST API GET method on "/api/cluster/metrocluster/operations?type=check&field s=*" for more information.

Also see the table of common errors in the Response body overview section of this documentation.

# **Definitions**

# **See Definitions**

Name	Туре	Description
href	string	
_links		
Name	Туре	Description
self	href	
ob_link		
	Туре	Description
Name	-710-0	
Name _links	_links	

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