



## Support

### ONTAP Automation

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# Table of Contents

Support ..... 1  
EMS ..... 1

# Support

## EMS

### Prepare to manage EMS support services

You can configure Event Management System (EMS) processing for an ONTAP cluster as well as retrieve EMS messages as needed.

#### Overview

There are several example workflows available that illustrate how to use the ONTAP EMS services. Before using the workflows and issuing any of the REST API calls, make sure to review [Prepare to use the workflows](#).

If you use Python, also see the scripy [events.py](#) for examples of how to automate some of the EMS-related activities.

#### ONTAP REST API versus ONTAP CLI commands

For many tasks, using the ONTAP REST API requires fewer calls than the equivalent ONTAP CLI commands. The table below includes a list of API calls and the equivalent the CLI commands needed for each task.

ONTAP REST API	ONTAP CLI
GET /support/ems	event config show
POST /support/ems/destinations	1. event notification destination create 2. event notification create
GET /support/ems/events	event log show
POST /support/ems/filters	1. event filter create -filter-name <filtername> 2. event filter rule add -filter-name <filtername>

#### Related information

- [Python script illustrating EMS](#)
- [ONTAP REST APIs: Automate Notification of High-Severity Events](#)

### List the EMS log events

You can retrieve all event notification messages or only those with specific characteristics.

#### HTTP method and endpoint

This REST API call uses the following method and endpoint.

HTTP method	Path
GET	/api/support/ems/events

## Processing type

Synchronous

### Additional input parameters for the Curl examples

In addition to the parameters common with all REST API calls, the following parameters are also used in the curl examples for this step.

Parameter	Type	Required	Description
fields	Query	No	Used to request specific fields to be included in the response.
max_records	Query	No	Can be used to limit the number of records returned in a single request.
log_message	Query	No	Used to search for a specific text value and only return the matching messages.
message.severity	Query	No	Limit the returned messages to those with a specific severity such as <code>alert</code> .

### Curl example: Return the latest message and the name value

```
curl --request GET \  
--location \  
"https://$FQDN_IP/api/support/ems/events?fields=message.name&max_records=1" \  
\  
--include \  
--header "Accept: */*" \  
--header "Authorization: Basic $BASIC_AUTH"
```

### Curl example: Return a message containing specific text and severity

```
curl --request GET \  
--location \  
"https://$FQDN_IP/api/support/ems/events?log_message=*disk*&message.severity=alert" \  
--include \  
--header "Accept: */*" \  
--header "Authorization: Basic $BASIC_AUTH"
```

## JSON output example

```
{
  "records": [
    {
      "node": {
        "name": "malha-vsimg1",
        "uuid": "da4f9e62-9de3-11ec-976a-005056b369de",
        "_links": {
          "self": {
            "href": "/api/cluster/nodes/da4f9e62-9de3-11ec-976a-005056b369de"
          }
        }
      },
      "index": 4602,
      "time": "2022-03-18T06:37:46-04:00",
      "message": {
        "severity": "alert",
        "name": "raid.autoPart.disabled"
      },
      "log_message": "raid.autoPart.disabled: Disk auto-partitioning is disabled on this system: the system needs a minimum of 4 usable internal hard disks.",
      "_links": {
        "self": {
          "href": "/api/support/ems/events/malha-vsimg1/4602"
        }
      }
    }
  ],
  "num_records": 1,
  "_links": {
    "self": {
      "href": "/api/support/ems/events?log_message=*disk*&message.severity=alert&max_records=1"
    },
    "next": {
      "href": "/api/support/ems/events?start.keytime=2022-03-18T06%3A37%3A46-04%3A00&start.node.name=malha-vsimg1&start.index=4602&log_message=*disk*&message.severity=alert"
    }
  }
}
```

## Get the EMS configuration

You can retrieve the current EMS configuration for an ONTAP cluster. You might do this before updating the configuration or creating a new EMS notification.

### HTTP method and endpoint

This REST API call uses the following method and endpoint.

HTTP method	Path
GET	/api/support/ems

### Processing type

Synchronous

### Curl example

```
curl --request GET \  
--location "https://$FQDN_IP/api/support/ems" \  
--include \  
--header "Accept: */*" \  
--header "Authorization: Basic $BASIC_AUTH"
```

### JSON output example

```
{  
  "proxy_url": "https://proxyserver.mycompany.com",  
  "proxy_user": "proxy_user",  
  "mail_server": "mail@mycompany.com",  
  "_links": {  
    "self": {  
      "href": "/api/resourcelink"  
    }  
  },  
  "pubsub_enabled": "1",  
  "mail_from": "administrator@mycompany.com"  
}
```

## Create an EMS notification

You can use the following workflow to create a new EMS notification destination to receive selected event messages.

### Step 1: Configure the system-wide email settings

You can issue the following API call to configure the system-wide email settings.

### HTTP method and endpoint

This REST API call uses the following method and endpoint.

HTTP method	Path
PATCH	/api/support/ems

### Processing type

Synchronous

### Additional input parameters for the Curl examples

In addition to the parameters common with all REST API calls, the following parameters are also used in the curl examples for this step.

Parameter	Type	Required	Description
mail_from	Query	Yes	Sets the <code>from</code> field in the notification email messages.
mail_server	Query	Yes	Configures the target SMTP mail server.

### Curl example

```
curl --request PATCH \  
--location \  
"https://$FQDN_IP/api/support/ems?mail_from=administrator@mycompany.com&ma  
il_server=mail@mycompany.com" \  
--include \  
--header "Accept: */*" \  
--header "Authorization: Basic $BASIC_AUTH"
```

## Step 2: Define a message filter

You can issue an API call to define a filter rule to match the messages.

### HTTP method and endpoint

This REST API call uses the following method and endpoint.

HTTP method	Path
POST	/api/support/ems/filters

### Processing type

Synchronous

### Additional input parameters for the Curl examples

In addition to the parameters common with all REST API calls, the following parameters are also used in the curl examples for this step.

Parameter	Type	Required	Description
Filter	Body	Yes	Includes the values for the filter configuration.

### Curl example

```
curl --request POST \  
--location "https://$FQDN_IP/api/support/ems/filters" \  
--include \  
--header "Accept: */*" \  
--header "Authorization: Basic $BASIC_AUTH" \  
--data @JSONinput
```

### JSON input example

```
{  
  "name": "test-filter",  
  "rules.type": ["include"],  
  "rules.message_criteria.severities": ["emergency"]  
}
```

### Step 3: Create a message destination

You can issue an API call to create a message destination.

#### HTTP method and endpoint

This REST API call uses the following method and endpoint.

HTTP method	Path
POST	/api/support/ems/destinations

#### Processing type

Synchronous

#### Additional input parameters for the Curl examples

In addition to the parameters common with all REST API calls, the following parameters are also used in the curl examples for this step.

Parameter	Type	Required	Description
Destination configuration	Body	Yes	Includes the values for the event destination.

### Curl example

```
curl --request POST \  
--location "https://$FQDN_IP/api/support/ems/destinations" \  
--include \  
--header "Accept: */*" \  
--header "Authorization: Basic $BASIC_AUTH" \  
--data @JSONinput
```



## JSON input example

```
{  
  "name": "test-destination",  
  "type": "email",  
  "destination": "administrator@mycompany.com",  
  "filters.name": ["important-events"]  
}
```

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