



Manage Ethernet switches

ONTAP 9.9.1 REST API reference

NetApp
April 02, 2024

Table of Contents

- Manage Ethernet switches 1
 - Network Ethernet switches endpoint overview 1
 - Retrieve Ethernet switches attached to a chassis 5
 - Retrieve Ethernet switch details 11
 - Update an Ethernet switch 16

Manage Ethernet switches

Network Ethernet switches endpoint overview

Overview

This API can be used to get information about the ethernet switches used for cluster and/or storage networks. This API support GET and PATCH calls. The GET operation returns a list of discovered switches with status and configuration information. The PATCH can be used to modify state of the switch.

Examples

Retrieving the ethernet switches for a cluster

The following example retrieves the ONTAP switches from the cluster. Note that if the *fields=** parameter is not specified, the fields `snmp.version`, `snmp.credential`, `model`, `sw-version`, `reason`, `version-source`, `monitoring.enable`, `monitoring.subsystem.type` and `monitoring.subsystem.poll_interval` are not returned. Filters can be added on the fields to limit the results.

```
# The API:
GET network/ethernet/switches

# The call:
curl -X GET "https://<mgmt-
ip>/api/network/ethernet/switches?return_records=true" -H "accept:
application/json" -H "Content-Type: application/hal+json"

# The response:
{
  "records": [
    {
      "name": "RTP-CS01-510R11 (FOC22092K12)",
      "address": "172.26.207.77",
      "discovered": true,
      "model": "NX3232C",
      "monitoring": {
        "monitored": true,
        "reason": "None"
      },
      "network": "cluster",
      "serial_number": "Unknown",
      "snmp": {
        "version": "snmpv2c",
        "user": "cshml!"
      },
      "version": "Cisco Nexus Operating System (NX-OS) Software, Version
9.2(3)",
```

```

    "_links": {
      "self": {
        "href": "/api/network/ethernet/switches/RTP-CS01-510R11%28FOC22092K12%29"
      }
    }
  },
  {
    "name": "RTP-CS01-510R12 (FOC22373C3P)",
    "address": "172.26.207.82",
    "discovered": true,
    "model": "NX3232C",
    "monitoring": {
      "monitored": true,
      "reason": "None"
    },
    "network": "cluster",
    "serial_number": "FOC22373C3P",
    "snmp": {
      "version": "snmpv2c",
      "user": "cshml!"
    },
    "version": "Cisco Nexus Operating System (NX-OS) Software, Version 9.2(3)",
    "_links": {
      "self": {
        "href": "/api/network/ethernet/switches/RTP-CS01-510R12%28FOC22373C3P%29"
      }
    }
  },
  {
    "name": "RTP-SS01-510R10 (FOC22170DFR)",
    "address": "172.26.207.65",
    "discovered": true,
    "model": "NX3232C",
    "monitoring": {
      "monitored": true,
      "reason": "None"
    },
    "network": "storage",
    "serial_number": "FOC22170DFR",
    "snmp": {
      "version": "snmpv2c",
      "user": "cshml!"
    },
    "version": "Cisco Nexus Operating System (NX-OS) Software, Version

```

```

9.3(3)",
  "_links": {
    "self": {
      "href": "/api/network/ethernet/switches/RTP-SS01-
510R10%28FOC22170DFR%29"
    }
  }
},
{
  "name": "RTP-SS02-510R10(FOC22131U6T)",
  "address": "172.26.207.66",
  "discovered": true,
  "model": "NX3232C",
  "monitoring": {
    "monitored": true,
    "reason": "None"
  },
  "network": "storage",
  "serial_number": "FOC22131U6T",
  "snmp": {
    "version": "snmpv2c",
    "user": "cshml!"
  },
  "version": "Cisco Nexus Operating System (NX-OS) Software, Version
9.3(3)",
  "_links": {
    "self": {
      "href": "/api/network/ethernet/switches/RTP-SS02-
510R10%28FOC22131U6T%29"
    }
  }
}
],
"num_records": 4,
"_links": {
  "self": {
    "href": "/api/network/ethernet/switches?fields=*&return_records=true"
  }
}
}
}

```

Retrieving an ethernet switch for a cluster

The following example retrieves a single switch by the switchname using the API.

```
# The API:
GET /network/ethernet/switches{name}

# The call:
curl -X GET "https://<mgmt-ip>/api/network/ethernet/switches/RTP-SS02-510R10(FOC22131U6T?return_records=true" -H "accept: application/json" -H "Content-Type: application/hal+json"

# The response:
{
  "name": "RTP-SS02-510R10(FOC22131U6T)",
  "address": "172.26.207.66",
  "discovered": true,
  "model": "NX3232C",
  "monitoring": {
    "monitored": true,
    "reason": "None"
  },
  "network": "storage",
  "serial_number": "FOC22131U6T",
  "snmp": {
    "version": "snmpv2c",
    "user": "cshml!"
  },
  "version": "Cisco Nexus Operating System (NX-OS) Software, Version 9.3(3)",
  "_links": {
    "self": {
      "href": "/api/network/ethernet/switches/RTP-SS02-510R10(FOC22131U6T)"
    }
  }
}
```

Configuring a switch

The following example configures SNMP credential and version on a switch.

```

# The API:
PATCH /network/ethernet/switches{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/network/ethernet/switches/sconqa-
corduroyl-03" -H "accept: application/json" -H "Content-Type:
application/hal+json" -d "{ \"snmp\": { \"version\": \"snmpv2c\",
\"user\": \"cshml!\"} }"

# The response:
{}

```

Retrieve Ethernet switches attached to a chassis

GET /network/ethernet/switches

Introduced In: 9.8

Retrieves the ethernet switches attached to the chassis.

Related ONTAP commands

- `system switch ethernet show`

Learn more

- [DOC /network/ethernet/switches](#)

Parameters

Name	Type	In	Required	Description
address	string	query	False	Filter by address
discovered	boolean	query	False	Filter by discovered
model	string	query	False	Filter by model
snmp.version	string	query	False	Filter by snmp.version
snmp.user	string	query	False	Filter by snmp.user
version	string	query	False	Filter by version

Name	Type	In	Required	Description
serial_number	string	query	False	Filter by serial_number
network	string	query	False	Filter by network
monitoring.reason	string	query	False	Filter by monitoring.reason
monitoring.enabled	boolean	query	False	Filter by monitoring.enabled
monitoring.monitored	boolean	query	False	Filter by monitoring.monitored
name	string	query	False	Filter by name
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	<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"> • Default value: 1

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"> • 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	collection_links	
num_records	integer	Number of Records
records	array[switch]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "model": "string",
    "monitoring": {
      "reason": "none"
    },
    "name": "string",
    "network": "cluster",
    "serial_number": "string",
    "snmp": {
      "version": "snmpv1"
    },
    "version": "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	

collection_links

Name	Type	Description
next	href	
self	href	

self_link

Name	Type	Description
self	href	

monitoring

Name	Type	Description
enabled	boolean	Enable Health Monitoring.
monitored	boolean	Is Monitored.
reason	string	Reason For Not Monitoring.

snmp

Name	Type	Description
user	string	Community String or SNMPv3 Username.
version	string	SNMP Version.

switch

Ethernet Switch REST API

Name	Type	Description
_links	self_link	
address	string	IP Address.

Name	Type	Description
discovered	boolean	Discovered By ONTAP CDP/LLDP <ul style="list-style-type: none"> • readOnly: 1 • Introduced in: 9.8
model	string	Model Number.
monitoring	monitoring	
name	string	Name.
network	string	Switch Network.
serial_number	string	Serial Number.
snmp	snmp	
version	string	Software Version.

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 Ethernet switch details

GET /network/ethernet/switches/{name}

Introduced In: 9.8

Retrieves the details of an ethernet switch.

Related ONTAP commands

- `system switch ethernet show`

Learn more

- [DOC /network/ethernet/switches](#)

Parameters

Name	Type	In	Required	Description
name	string	path	True	Name
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
_links	self_link	
address	string	IP Address.
discovered	boolean	Discovered By ONTAP CDP/LLDP <ul style="list-style-type: none">• readOnly: 1• Introduced in: 9.8
model	string	Model Number.
monitoring	monitoring	
name	string	Name.
network	string	Switch Network.
serial_number	string	Serial Number.
snmp	snmp	

Name	Type	Description
version	string	Software Version.

Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "model": "string",
  "monitoring": {
    "reason": "none"
  },
  "name": "string",
  "network": "cluster",
  "serial_number": "string",
  "snmp": {
    "version": "snmpv1"
  },
  "version": "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	

self_link

Name	Type	Description
self	href	

monitoring

Name	Type	Description
enabled	boolean	Enable Health Monitoring.
monitored	boolean	Is Monitored.
reason	string	Reason For Not Monitoring.

snmp

Name	Type	Description
user	string	Community String or SNMPv3 Username.
version	string	SNMP Version.

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

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

Update an Ethernet switch

PATCH /network/ethernet/switches/{name}

Introduced In: 9.8

Update Ethernet Switch REST API

Parameters

Name	Type	In	Required	Description
name	string	path	True	Switch Name

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
_links	self_link	
address	string	IP Address.
discovered	boolean	<p>Discovered By ONTAP CDP/LLDP</p> <ul style="list-style-type: none"> • readOnly: 1 • Introduced in: 9.8
model	string	Model Number.
monitoring	monitoring	

Name	Type	Description
name	string	Name.
network	string	Switch Network.
serial_number	string	Serial Number.
snmp	snmp	
version	string	Software Version.

Example request

```

{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "model": "string",
  "monitoring": {
    "reason": "none"
  },
  "name": "string",
  "network": "cluster",
  "serial_number": "string",
  "snmp": {
    "version": "snmpv1"
  },
  "version": "string"
}

```

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

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

self_link

Name	Type	Description
self	href	

monitoring

Name	Type	Description
enabled	boolean	Enable Health Monitoring.
monitored	boolean	Is Monitored.
reason	string	Reason For Not Monitoring.

snmp

Name	Type	Description
user	string	Community String or SNMPv3 Username.
version	string	SNMP Version.

switch

Ethernet Switch REST API

Name	Type	Description
_links	self_link	
address	string	IP Address.
discovered	boolean	Discovered By ONTAP CDP/LLDP <ul style="list-style-type: none">• readOnly: 1• Introduced in: 9.8
model	string	Model Number.

Name	Type	Description
monitoring	monitoring	
name	string	Name.
network	string	Switch Network.
serial_number	string	Serial Number.
snmp	snmp	
version	string	Software Version.

_links

Name	Type	Description
self	href	

job_link

Name	Type	Description
<u>_links</u>	_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

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

Copyright information

Copyright © 2024 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.