



Manage security-related operations

REST API reference

NetApp
September 12, 2025

Table of Contents

Manage security-related operations	1
Security endpoint overview	1
Overview	1
"onboard_key_manager_configurable_status" object	1
"software_data_encryption" object	1
"fips" object	1
GET Examples	2

Manage security-related operations

Security endpoint overview

Overview

You can use this API for various cluster-wide security-related operations.

"onboard_key_manager_configurable_status" object

Use this API to retrieve details of whether or not the Onboard Key Manager can be configured on the cluster.

– GET /api/security

– GET /api/security?fields=onboard_key_manager_configurable_status

"software_data_encryption" object

Contains software data encryption related information.

The following APIs can be used to enable or disable and obtain default software data at rest encryption values:

– PATCH /api/security -d '{ "software_data_encryption.disabled_by_default" : true }'

– PATCH /api/security -d '{ "software_data_encryption.disabled_by_default" : false }'

– GET /api/security

– GET /api/security?fields=software_data_encryption

A PATCH request on this API using the parameter "software_data_encryption.conversion_enabled" triggers the conversion of all non-encrypted metadata volumes to encrypted metadata volumes and all non-NAE aggregates to NAE aggregates. For the conversion to start, the cluster must have either an Onboard or an external key manager set up and the aggregates should either be empty or have only metadata volumes. No data volumes should be present in any of the aggregates. For MetroCluster configurations, the PATCH request will fail if the cluster is in the switchover state.

The following API can be used to initiate software data encryption conversion.

– PATCH /api/security -d '{ "software_data_encryption.conversion_enabled" : true }'

"fips" object

Contains FIPS mode information.

A PATCH request on this API using the parameter "fips.enabled" switches the system from using the default cryptographic module software implementations to validated ones or vice versa, where applicable. If the value of the parameter is "true" and unapproved algorithms are configured as permitted in relevant subsystems, those algorithms will be disabled in the relevant subsystem configurations. If "false", there will be no implied change to the relevant subsystem configurations.

– GET /api/security

```
&ndash; GET /api/security?fields=fips  
&ndash; PATCH /api/security -d '{ "fips.enabled" : true }'  
&ndash; PATCH /api/security -d '{ "fips.enabled" : false }'
```

GET Examples

Retrieving information about the security configured on the cluster

The following example shows how to retrieve the configuration of the cluster.

```
# The API:  
GET /api/security:  
  
# The call:  
curl -X GET 'https://<mgmt-ip>/api/security?fields=*' -H 'accept:  
application/hal+json'  
  
# The response:  
{  
  "onboard_key_manager_configurable_status": {  
    "supported": false,  
    "message": "Onboard Key Manager cannot be configured on the cluster.  
There are no self-encrypting disks in the cluster, and the following nodes  
do not support volume granular encryption: ntap-vsim2.",  
    "code": 65537300  
  },  
  "fips": {  
    "enabled": false  
  }  
}
```

'''

```
== PATCH Examples  
  
==== Enabling software encryption conversion in the cluster
```

The following example shows how to convert all the aggregates and metadata volumes in the cluster from non-encrypted to encrypted.

= The API:

```
PATCH /api/security
```

```
= The call

curl -X PATCH "https://+++<mgmt_ip>+++/api/security" -d '{
"software_data_encryption.conversion_enabled" : true }'+++</mgmt_ip>+++
```

= The response:

```
{
"job": {
  "uuid": "ebcbd82d-1cd4-11ea-8f75-005056ac4adc",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/ebcbd82d-1cd4-11ea-8f75-
005056ac4adc"
    }
  }
}
```

This will return a job UUID. A subsequent GET for this job should return the details of the job.

= The call

```
curl -X GET "https://+++<mgmt_ip>+++/api/cluster/jobs/ebcbd82d-1cd4-11ea-
8f75-005056ac4adc"+++</mgmt_ip>+++
```

= The response:

```
{
"uuid": "ebcbd82d-1cd4-11ea-8f75-005056ac4adc",
"description": "PATCH /api/security",
"state": "success",
"message": "success",
"code": 0,
"start_time": "2019-12-12T06:45:40-05:00",
"end_time": "2019-12-12T06:45:40-05:00",
"_links": {
  "self": {
    "href": "/api/cluster/jobs/ebcbd82d-1cd4-11ea-8f75-005056ac4adc"
  }
}
```

```
[discrete]
==== Enabling FIPS mode in the cluster
```

The following example shows how to enable FIPS mode in the cluster.

= The API:

```
PATCH /api/security
```

= The call

```
curl -X PATCH "https://+++<mgmt_ip>+++/api/security" -d '{ "fips.enabled": true }'+++</mgmt_ip>+++
```

= The response:

```
{
  "job": {
    "uuid": "8e7f59ee-a9c4-4faa-9513-bef689bbf2c2",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/8e7f59ee-a9c4-4faa-9513-bef689bbf2c2"
      }
    }
  }
}
```

This will return a job UUID. A subsequent GET for this job UUID should return the details of the job.

= The call

```
curl -X GET "https://+++<mgmt_ip>+++/api/cluster/jobs/8e7f59ee-a9c4-4faa-9513-bef689bbf2c2"+++</mgmt_ip>+++
```

= The response:

```
{
  "uuid": "8e7f59ee-a9c4-4faa-9513-bef689bbf2c2",
  "description": "PATCH /api/security",
  "state": "success",
  "message": "success",
  "code": 0,
  "start_time": "2020-04-28T06:55:40-05:00",
  "end_time": "2020-04-28T06:55:41-05:00",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/8e7f59ee-a9c4-4faa-9513-bef689bbf2c2"
    }
  }
}
```

```
}

'''



[[ID78e64e8c84ee358218b5e166c818cae8]]
= Retrieve information about security configured on the cluster

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#/security`#



*Introduced In:* 9.7

Retrieves information about the security configured on the cluster.

== Parameters

[cols=5*,options=header]
| ===

| Name
| Type
| In
| Required
| Description

| max_records
| integer
| query
| False
a|Limit the number of records returned.

| return_records
| boolean
| query
| False
a|The default is true for GET calls. When set to false, only the number
of records is returned.

* Default value: 1
```

```

|return_timeout
|integer
|query
|False
a|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.

* Default value: 1
* Max value: 120
* Min value: 0

|order_by
|array[string]
|query
|False
a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|fields
|array[string]
|query
|False
a|Specify the fields to return.

|===
== Response

```

Status: 200, Ok

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|
|fips
|link:#fips[fips]

```

a|Cluster-wide Federal Information Processing Standards (FIPS) mode information.

|onboard_key_manager_configurable_status
|link:#onboard_key_manager_configurable_status[onboard_key_manager_configurable_status]
a|Indicates whether the Onboard Key Manager can be configured in the cluster.

|software_data_encryption
|link:#software_data_encryption[software_data_encryption]
a|Cluster-wide software data encryption related information.

|====

.Example response
[%collapsible%closed]
=====

[source, json, subs=+macros]

{

 "_links": {

 "self": {

 "href": "/api/resourcelink"

 }

 },

 "onboard_key_manager_configurable_status": {

 "code": "65537300",

 "message": "No platform support for volume encryption in following nodes - node1, node2."

 }

}

=====

== Error

Status: Default, Error

[cols=3*, options=header]
|====
|Name
|Type
|Description

```

|error
|link:#error[error]
a|
|====

.Example error
[%collapsible%closed]
=====
[source, json, subs=+macros]
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
=====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
=====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*, options=header]
|====
|Name
|Type
|Description

|href
|string

```

```
a|  
  
| ====  
  
[#_links]  
[.api-collapsible-fifth-title]  
_links  
  
[cols=3*,options=header]  
| ====  
| Name  
| Type  
| Description  
  
| self  
| link:#href[href]  
a|
```

```
| ====  
  
[#fips]  
[.api-collapsible-fifth-title]  
fips
```

Cluster-wide Federal Information Processing Standards (FIPS) mode information.

```
[cols=3*,options=header]
```

```
| ====  
| Name  
| Type  
| Description
```

```
| enabled  
| boolean
```

a| Indicates whether or not the software FIPS mode is enabled on the cluster. Our FIPS compliance involves configuring the use of only approved algorithms in applicable contexts (for example TLS), as well as the use of formally validated cryptographic module software implementations, where applicable. The US government documents concerning FIPS 140-2 outline the relevant security policies in detail.

```
| ====  
  
|
```

```
[#onboard_key_manager_configurable_status]
[.api-collapsible-fifth-title]
onboard_key_manager_configurable_status
```

Indicates whether the Onboard Key Manager can be configured in the cluster.

```
[cols=3*,options=header]
```

```
|====
```

```
| Name
```

```
| Type
```

```
| Description
```

```
| code
```

```
| integer
```

a|Code corresponding to the status message. Returns a 0 if the Onboard Key Manager can be configured in the cluster.

```
| message
```

```
| string
```

a|Reason that Onboard Key Manager cannot be configured in the cluster.

```
| supported
```

```
| boolean
```

a|Set to true if the Onboard Key Manager can be configured in the cluster.

```
|====
```

```
[#software_data_encryption]
```

```
[.api-collapsible-fifth-title]
```

```
software_data_encryption
```

Cluster-wide software data encryption related information.

```
[cols=3*,options=header]
```

```
|====
```

```
| Name
```

```
| Type
```

```
| Description
```

```
|conversion_enabled
|boolean
a|Indicates whether or not software encryption conversion is enabled on
the cluster. A PATCH request initiates the conversion of all non-encrypted
metadata volumes in the cluster to encrypted metadata volumes and all non-
NAE aggregates to NAE aggregates. For the PATCH request to start, the
cluster must have either an Onboard or an external key manager set up and
the aggregates should either be empty or have only metadata volumes. No
data volumes should be present in any of the aggregates in the cluster.
For MetroCluster configurations, a PATCH request enables conversion on all
the aggregates and metadata volumes of both local and remote clusters and
is not allowed when the MetroCluster is in switchover state.
```

```
|disabled_by_default
|boolean
a|Indicates whether or not default software data at rest encryption is
disabled on the cluster.
```

```
|====
```

```
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments
```

```
[cols=3*, options=header]
```

```
|====
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|code
```

```
|string
```

```
a|Argument code
```

```
|message
```

```
|string
```

```
a|Message argument
```

```
|====
```

```

[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
| Name
| Type
| Description

| arguments
| array[link:#error_arguments[error_arguments]]
a|Message arguments

| code
| string
a|Error code

| message
| string
a|Error message

| target
| string
a|The target parameter that caused the error.

|===
//end collapsible .Definitions block
=====

[[IDd779f8b4d1bbbc77b6e5c06934eccde8]]
= Update the software FIPS mode or enable conversion of non-encrypted
metadata volumes non-NAE aggregates

[.api-doc-operation .api-doc-operation-patch]#PATCH# [.api-doc-code-
block]#/security`#
*Introduced In:* 9.8

```

Updates the software FIPS mode or enables conversion of non-encrypted metadata volumes to encrypted metadata volumes and non-NAE aggregates to NAE aggregates.

== Parameters

[cols=5*, options=header]

|====

| Name

| Type

| In

| Required

| Description

| return_records

| boolean

| query

| False

a|The default is false. If set to true, the records are returned.

* Default value:

| return_timeout

| integer

| query

| False

a|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: 120

* Min value: 0

|====

== Request Body

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|fips
|link:#fips[fips]
a|Cluster-wide Federal Information Processing Standards (FIPS) mode
information.

|software_data_encryption
|link:#software_data_encryption[software_data_encryption]
a|Cluster-wide software data encryption related information.

|===
== Response
```

Status: 202, Accepted

```
[cols=3*,options=header]
| ====
| Name
| Type
| Description

| job
| link:#job_link[job_link]
a| a

| ====

.Example response
[%collapsible%closed]
=====

[source, json, subs=+macros]
{
  "job": {
    "uuid": "string"
  }
}
=====

== Error
```

Status: Default

ONTAP Error Response Codes	
====	====
Error Code	Description
52428830	Cannot enable FIPS-compliant mode because the configured minimum security strength for certificates is not compatible.
52559974	Cannot enable FIPS-compliant mode because a certificate that is not FIPS-compliant is in use.
196608081	Cannot start software encryption conversion while there are data volumes in the cluster.

```
| 196608082
| The operation is not valid when the MetroCluster is in switchover mode.
| ===

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
=====

[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
| ===
| Name
| Type
| Description

| href
| string
a

| ===

[#_links]
[.api-collapsible-fifth-title]
_links
[#fips]
[.api-collapsible-fifth-title]
fips

Cluster-wide Federal Information Processing Standards (FIPS) mode
information.

[cols=3*,options=header]
| ===
| Name
| Type
| Description

| enabled
```

```
|boolean
a|Indicates whether or not the software FIPS mode is enabled on the
cluster. Our FIPS compliance involves configuring the use of only approved
algorithms in applicable contexts (for example TLS), as well as the use of
formally validated cryptographic module software implementations, where
applicable. The US government documents concerning FIPS 140-2 outline the
relevant security policies in detail.
```

```
|====
```

```
[#onboard_key_manager_configurable_status]
[.api-collapsible-fifth-title]
onboard_key_manager_configurable_status
```

Indicates whether the Onboard Key Manager can be configured in the cluster.

```
[cols=3*,options=header]
```

```
|====
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|code
```

```
|integer
```

a|Code corresponding to the status message. Returns a 0 if the Onboard Key Manager can be configured in the cluster.

```
|message
```

```
|string
```

a|Reason that Onboard Key Manager cannot be configured in the cluster.

```
|supported
```

```
|boolean
```

a|Set to true if the Onboard Key Manager can be configured in the cluster.

```
|====
```

```
[#software_data_encryption]
[.api-collapsible-fifth-title]
```

software_data_encryption

Cluster-wide software data encryption related information.

[cols=3*,options=header]

|====

| Name

| Type

| Description

| conversion_enabled

| boolean

a| Indicates whether or not software encryption conversion is enabled on the cluster. A PATCH request initiates the conversion of all non-encrypted metadata volumes in the cluster to encrypted metadata volumes and all non-NAE aggregates to NAE aggregates. For the PATCH request to start, the cluster must have either an Onboard or an external key manager set up and the aggregates should either be empty or have only metadata volumes. No data volumes should be present in any of the aggregates in the cluster. For MetroCluster configurations, a PATCH request enables conversion on all the aggregates and metadata volumes of both local and remote clusters and is not allowed when the MetroCluster is in switchover state.

| disabled_by_default

| boolean

a| Indicates whether or not default software data at rest encryption is disabled on the cluster.

|====

[#security_config]

[.api-collapsible-fifth-title]

security_config

[cols=3*,options=header]

|====

| Name

| Type

| Description

| fips

| link:#fips[fips]

a| Cluster-wide Federal Information Processing Standards (FIPS) mode

information.

```
|software_data_encryption
|link:#software_data_encryption[software_data_encryption]
a|Cluster-wide software data encryption related information.
```

|====

```
[#job_link]
```

```
[.api-collapsible-fifth-title]
```

```
job_link
```

```
[cols=3*,options=header]
```

|====

```
|Name
```

```
|Type
```

```
|Description
```

```
|uuid
```

```
|string
```

a|The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

|====

```
[#error_arguments]
```

```
[.api-collapsible-fifth-title]
```

```
error_arguments
```

```
[cols=3*,options=header]
```

|====

```
|Name
```

```
|Type
```

```
|Description
```

```
|code
```

```
|string
```

a|Argument code

```
|message
```

```
|string
```

```
a|Message argument

| ===

[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
| ===
| Name
| Type
| Description

| arguments
| array[link:#error_arguments[error_arguments]]
a|Message arguments

| code
| string
a|Error code

| message
| string
a|Error message

| target
| string
a|The target parameter that caused the error.

| ===

//end collapsible .Definitions block
=====

:leveloffset: -1
```

:leveloffset: -1

<<<

Copyright information

Copyright © 2025 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 link:<http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.