



View security key managers

REST API reference

NetApp

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View security key managers

View security key managers

Overview

Retrieves the key manager keys on the give node. The following operations are supported:

- Get

Examples

Retrieving key manager key-id information for a node

The following example shows how to retrieve key-ids present on a node for a key manager.

```

# The API:
GET /api/security/key-
managers/{security_key_manager.uuid}/keys/{node.uuid}/key-ids

# The call:
curl -X GET 'https://<mgmt-ip>/api/security/key-managers/f4f98a48-8a5c-
c548-cd03-c6335f5803a8/keys/00000000-0000-0000-0000-000000000000/key-
ids/000000000000000002000000000005009ad4da8fea2cafe2bed803078b780ebe000000
0000000c01' -H 'accept: application/hal+json'

# The response:
{
  "security_key_manager": {
    "uuid": "f4f98a48-8a5c-c548-cd03-c6335f5803a8"
  },
  "node": {
    "uuid": "00000000-0000-0000-0000-000000000000"
  },
  "key_id":
"000000000000000002000000000005009ad4da8fea2cafe2bed803078b780ebe000000000
0000c01",
  "svm": {
    "name": "cluster-1"
  },
  "key_tag": "vsim1",
  "key_type": "vek",
  "restored": false,
  "key_store": "onboard",
  "key_user": "datavs",
  "key_manager": "onboard",
  "key_store_type": "okm",
  "encryption_algorithm": "XTS-AES-256",
  "_links": {
    "self": {
      "href": "/api/security/key-managers/f4f98a48-8a5c-c548-cd03-
c6335f5803a8/keys/00000000-0000-0000-0000-000000000000/key-
ids/000000000000000002000000000005009ad4da8fea2cafe2bed803078b780ebe000000
0000000c01"
    }
  }
}

```

Retrieving key manager key-id information of a specific key-type for a node

The following example shows how to retrieve key-ids of a specific key-type present on a node for a key manager.

= The API:

```
GET /api/security/key-  
manager/{security_key_manager.uuid}/keys/{node.uuid}/key-ids
```

= The call:

```
curl -X GET "https://+++<mgmt-ip>+++/api/security/key-managers/7c179931-  
044b-11ed-b7cd-005056bbc535/keys/44dac31e-0449-11ed-b7cd-005056bbc535/key-  
ids?key_type=nse_ak&return_records=true&return_timeout=15" -H "accept:  
application/json"+++</mgmt-ip>+++
```

= The response:

```
{  
  "records": [  
    {  
      "key_server": "10.225.89.34:5696",  
      "key_id":  
"0000000000000000002000000000001003d5c5f8c497e8e36aa80566e08749a3d000000000  
000000",  
      "key_type": "nse_ak"  
    },  
    {  
      "key_server": "10.225.89.34:5696",  
      "key_id":  
"000000000000000000200000000000100c2dce9a3a15aeb8480db8d49c17d056c000000000  
000000",  
      "key_type": "nse_ak"  
    }  
  ],  
  "num_records": 2  
}
```

```
[[IDe410cb1597732e6a84c6797c7c01ea85]]
```

= Retrieve key manager configurations

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

```
block]#`/security/key-  
managers/{security_key_manager.uuid}/keys/{node.uuid}/key-ids`#
```

Introduced In: 9.11

Retrieves key manager configurations.

== Required properties

* `security\_key\_manager.uuid` - Key manager UUID.

* `node.uuid` - Node UUID.

== Related ONTAP commands

* `security key-manager key query`

* `security key-manager key query -node <node>`

* `security key-manager key query -node <node> -key-manager <key\_manager>`

== Parameters

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

```
|===
```

```
|Name
```

```
|Type
```

```
|In
```

```
|Required
```

```
|Description
```

```
|key_type
```

```
|string
```

```
|query
```

```
|False
```

```
a|Filter by key_type
```

* Introduced in: 9.12

```
|scope
```

```
|string
```

```
|query
```

```
|False
```

```
a|Filter by scope
```

* Introduced in: 9.14

```
|policy
|string
|query
|False
a|Filter by policy
```

* Introduced in: 9.12

```
|key_store
|string
|query
|False
a|Filter by key_store
```

* Introduced in: 9.12

```
|key_id
|string
|query
|False
a|Filter by key_id
```

* Introduced in: 9.12

```
|svm.name
|string
|query
|False
a|Filter by svm.name
```

* Introduced in: 9.14

```
|svm.uuid
|string
|query
|False
a|Filter by svm.uuid
```

* Introduced in: 9.14

```
|key_manager
```

```
|string
|query
|False
a|Filter by key_manager
```

* Introduced in: 9.12

```
|key_server
|string
|query
|False
a|Filter by key_server
```

* Introduced in: 9.12

```
|restored
|boolean
|query
|False
a|Filter by restored
```

* Introduced in: 9.12

```
|key_user
|string
|query
|False
a|Filter by key_user
```

* Introduced in: 9.12

```
|crn
|string
|query
|False
a|Filter by crn
```

* Introduced in: 9.12

```
|key_store_type
|string
|query
```

```

|False
a|Filter by key_store_type

* Introduced in: 9.12

|encryption_algorithm
|string
|query
|False
a|Filter by encryption_algorithm

* Introduced in: 9.12

|node.name
|string
|query
|False
a|Filter by node.name

* Introduced in: 9.12

|key_tag
|string
|query
|False
a|Filter by key_tag

* Introduced in: 9.12

|security_key_manager.uuid
|string
|path
|True
a|Key manager UUID.

|node.uuid
|string
|path
|True
a|Node UUID.

```

```

|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: 15
* 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|

|num_records
|integer
a|Number of records

|records
|array[link:#key_manager_keys[key_manager_keys]]
a|

|===

.Example response
[%collapsible%closed]
=====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      }
    }
  ]
}
```

```

    },
    "crn": "CRN=v1:bluemix:public:containers-kubernetes",
    "encryption_algorithm": "XTS-AES-256",
    "key_id":
"000000000000000000002000000000001008963c9213194c59555c1bec8db3603c800000000"
,
    "key_manager": "keyserver1.local:5696",
    "key_server": "keyserver1.com:5698",
    "key_store": "string",
    "key_store_type": "string",
    "key_tag": "key#",
    "key_type": "string",
    "key_user": "vs1",
    "node": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "node1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "policy": "IBM_Key_Lore",
    "restored": 1,
    "scope": "string",
    "security_key_manager": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563434"
    },
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    }
  }
]
}
=====

```

```
== Error
```

Status: Default

ONTAP Error Response Codes

```
|===  
| Error Code | Description  
  
| 65537125  
| The provided key manager UUID is not the UUID of a keymanager.  
|===
```

Also see the table of common errors in the [xref:{relative_path}getting_started_with_the_ontap_rest_api.html#Response_body\[Response body\]](#) overview section of this documentation.

```
[cols=3*,options=header]  
|===  
|Name  
|Type  
|Description  
  
|error  
|link:#returned_error[returned_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

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

```

```

|===

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

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

|self
|link:#href[href]
a|

|===

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

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

|self
|link:#href[href]
a|

|===

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

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

```

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

```
|name
|string
a|
```

```
|uuid
|string
a|
```

```
|===
```

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

Security key manager object reference.

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

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

```
|uuid
|string
a|Key manager UUID
```

```
|===
```

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

SVM, applies only to SVM-scoped objects.

```

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

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

|name
|string
a|The name of the SVM. This field cannot be specified in a PATCH method.

|uuid
|string
a|The unique identifier of the SVM. This field cannot be specified in a
PATCH method.

|===

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

Displays the keys stored in a key manager.

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

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

|crn
|string
a|Cloud resource name.

```

```
|encryption_algorithm
|string
a|Encryption algorithm for the key

|key_id
|string
a|Key identifier.

|key_manager
|string
a|Key manager key server managing the key. Indicates the external key
server when external key manager is configured.

|key_server
|string
a|External key server for key management.

|key_store
|string
a|Security key manager configured for the given key manager UUID. Key
manager keystore value can be onboard or external.

|key_store_type
|string
a|Security key manager keystore type. Keystore type can be onboard,
external, or supported cloud key manager.

|key_tag
|string
a|Additional information associated with the key.

|key_type
|string
a|Encryption Key type.

|key_user
|string
a|SVM associated with the key.
```

```

|node
|link:#node[node]
a|

|policy
|string
a|Key store policy.

|restored
|boolean
a|Indicates whether the key is present locally on the node.

|scope
|string
a|Set to "svm" for interfaces owned by an SVM. Otherwise, set to
"cluster".

|security_key_manager
|link:#security_key_manager[security_key_manager]
a|Security key manager object reference.

|svm
|link:#svm[svm]
a|SVM, applies only to SVM-scoped objects.

|===

[#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

|===

[#returned_error]
[.api-collapsible-fifth-title]
returned_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
=====

```

```

[[ID4276d9bd98ffe8ec1cb6a40a7666855e]]
= Retrieve key management key information for specified keys

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/security/key-
managers/{security_key_manager.uuid}/keys/{node.uuid}/key-ids/{key_id}`#

*Introduced In:* 9.11

Retrieves the key management keys information for the specified key_id.

== Related ONTAP commands

* `security key-manager key query -key-id <key_id>`
* `security key-manager key query -key-id <key_id> -node <node>`
* `security key-manager key query -key-id <key_id> -node <node> -key
-manager <key_manager>`

== Parameters

[cols=5*,options=header]
|===
|Name
|Type
|In
|Required
|Description

|security_key_manager.uuid
|string
|path
|True
a|Key manager UUID.

|node.uuid
|string
|path
|True
a|Node UUID.

|key_id
|string

```

```

|path
|True
a|Key identifier.

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

|===

== Response

```

Status: 200, Ok

```

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

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

|crn
|string
a|Cloud resource name.

|encryption_algorithm
|string
a|Encryption algorithm for the key

|key_id
|string
a|Key identifier.

|key_manager
|string
a|Key manager key server managing the key. Indicates the external key
server when external key manager is configured.

```

```

|key_server
|string
a|External key server for key management.

|key_store
|string
a|Security key manager configured for the given key manager UUID. Key
manager keystore value can be onboard or external.

|key_store_type
|string
a|Security key manager keystore type. Keystore type can be onboard,
external, or supported cloud key manager.

|key_tag
|string
a|Additional information associated with the key.

|key_type
|string
a|Encryption Key type.

|key_user
|string
a|SVM associated with the key.

|node
|link:#node[node]
a|

|policy
|string
a|Key store policy.

|restored
|boolean
a|Indicates whether the key is present locally on the node.

```

```
|scope
|string
a|Set to "svm" for interfaces owned by an SVM. Otherwise, set to
"cluster".
```

```
|security_key_manager
|link:#security_key_manager[security_key_manager]
a|Security key manager object reference.
```

```
|svm
|link:#svm[svm]
a|SVM, applies only to SVM-scoped objects.
```

```
|===
```

.Example response

[%collapsible%closed]

=====

[source,json,subs=+macros]

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "crn": "CRN=v1:bluemix:public:containers-kubernetes",
  "encryption_algorithm": "XTS-AES-256",
  "key_id":
"000000000000000000002000000000001008963c9213194c59555c1bec8db3603c800000000"
,
  "key_manager": "keyserver1.local:5696",
  "key_server": "keyserver1.com:5698",
  "key_store": "string",
  "key_store_type": "string",
  "key_tag": "key#",
  "key_type": "string",
  "key_user": "vs1",
  "node": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  }
}
```

```

    }
  },
  "name": "node1",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"policy": "IBM_Key_Lore",
"restored": 1,
"scope": "string",
"security_key_manager": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563434"
},
"svm": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "svm1",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
}
}
====

== Error

```

Status: Default, Error

```

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

|error
|link:#returned_error[returned_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|

|===

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

```

```

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

|self
|link:#href[href]
a|

|===

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

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

|self
|link:#href[href]
a|

|===

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

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

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

|name
|string
a|

```

```
|uuid
|string
a|
```

```
|===
```

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

Security key manager object reference.

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

```
|===
```

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

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

```
|uuid
|string
a|Key manager UUID
```

```
|===
```

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

SVM, applies only to SVM-scoped objects.

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

```
|===
```

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

```
|_links
```

```

|link:#_links[_links]
a|

|name
|string
a|The name of the SVM. This field cannot be specified in a PATCH method.

|uuid
|string
a|The unique identifier of the SVM. This field cannot be specified in a
PATCH method.

|===

[#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

|===

[#returned_error]
[.api-collapsible-fifth-title]
returned_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
====

[[IDc1456a43ce045bf368bf6c7672f688a1]]
= Retrieve and restore unrestored keys

[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/security/key-managers/{security_key_manager.uuid}/restore`#

*Introduced In:* 9.13

Retrieves and restores any current unrestored keys (associated with the
storage controller) from the specified key management server.

== Required properties

* `security_key_manager.uuid` - UUID of the key management server.
The UUID of the external key manager can be retrieved using [GET
/api/security/key-managers`].

```

== Related ONTAP commands

* `security key-manager external restore`

== Parameters

[cols=5*,options=header]

|==

|Name

|Type

|In

|Required

|Description

|security_key_manager.uuid

|string

|path

|True

a|Key manager UUID.

|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: 0

* Max value: 120

* Min value: 0

|return_records

|boolean

|query

|False

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

* Default value:

|===

== Request Body

[cols=3*,options=header]

|===

|Name

|Type

|Description

|key_id

|string

a|Key identifier.

|key_server

|string

a|External key server for key management.

|key_tag

|string

a|Additional information associated with the key.

|node

|link:#node[node]

a|

|===

.Example request

[%collapsible%closed]

====

[source,json,subs=+macros]

{

 "key_id":

"000000000000000002000000000001003aa8ce6a4fea3e466620134bea9510a1000000000000000",

 "key_server": "keyserver1.com:5698",

 "key_tag": "Authentication-Key-01",

 "node": {

```
"uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
}
}
====

== Response
```

Status: 202, Accepted

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

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

|===

.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "job": {
    "uuid": "string"
  }
}
====

== Response
```

Status: 201, Created

```
== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
```

Error Code	Description
65536083	Internal error. Failed to restore the authentication key.
65536843	The key management server is not configured for the SVM.
65536855	Internal error. Failed to restore the volume encryption key.
65538500	This command only restores keys from primary key servers.

===

Also see the table of common errors in the [xref:{relative_path}getting_started_with_the_ontap_rest_api.html#Response_body\[Response body\] overview](#) section of this documentation.

== 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

```

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

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

|uuid
|string
a|

|===

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

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

|key_id
|string
a|Key identifier.

|key_server
|string
a|External key server for key management.

|key_tag
|string
a|Additional information associated with the key.

|node
|link:#node[node]
a|

|===

```

```

[#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

|===

[#returned_error]
[.api-collapsible-fifth-title]
returned_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*

```

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