



## **View security key managers**

ONTAP 9.14.1 REST API reference

NetApp  
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# View security key managers

## Security key-managers security\_key\_manager.uuid keys node.uuid key-ids endpoint overview

### 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":  
"000000000000000002000000000001003d5c5f8c497e8e36aa80566e08749a3d000000000  
000000",  
      "key_type": "nse_ak"  
    },  
    {  
      "key_server": "10.225.89.34:5696",  
      "key_id":  
"00000000000000000200000000000100c2dce9a3a15aeb8480db8d49c17d056c000000000  
000000",  
      "key_type": "nse_ak"  
    }  
  ],  
  "num_records": 2  
}
```

```
[[ID020ca435c835c08187574f7b57db9dea]]
```

= 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_user
```

```
|string
```

```
|query
```

```
|False
```

```
a|Filter by key_user
```

\* Introduced in: 9.12

```
|key_tag
```

```
|string
```

```
|query
```

```
|False
```

```
a|Filter by key_tag
```

\* Introduced in: 9.12

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

\* Introduced in: 9.12

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

\* Introduced in: 9.12

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

\* Introduced in: 9.12

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

\* Introduced in: 9.12

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

\* Introduced in: 9.12

```
|restored
```

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

\* Introduced in: 9.12

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

\* Introduced in: 9.12

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

\* Introduced in: 9.14

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

\* Introduced in: 9.14

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

\* Introduced in: 9.12

```
|key_store  
|string  
|query
```



|False  
a|Filter by key\_store

\* Introduced in: 9.12

|scope  
|string  
|query  
|False  
a|Filter by scope

\* Introduced in: 9.14

|key\_id  
|string  
|query  
|False  
a|Filter by key\_id

\* Introduced in: 9.12

|key\_server  
|string  
|query  
|False  
a|Filter by key\_server

\* 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: 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|

|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":
"0000000000000000000000000000000000000000000000000000000000000000"
,
"key_manager": "keyserver1.local:5696",
"key_server": "keyserver1.com:5698",
"key_store": "onboard",
"key_store_type": "okm",
"key_tag": "key#",
"key_type": "nse_ak",
"key_user": "vs1",
"node": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "node1",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"policy": "IBM_Key_Lore",
"restored": 1,
"scope": "svm",
"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|

```

```
|===
```

```
[#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".

|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
====

[[ID24970b0fe2bf0f285b05db03c628dfc3]]
= 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".
```

```
|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":
"000000000000000002000000000001008963c9213194c59555c1bec8db3603c800000000"
,
  "key_manager": "keyserver1.local:5696",
  "key_server": "keyserver1.com:5698",
  "key_store": "onboard",
  "key_store_type": "okm",
  "key_tag": "key#",
  "key_type": "nse_ak",
  "key_user": "vs1",
  "node": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  }
}
```

```

    },
    "name": "node1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "policy": "IBM_Key_Lore",
  "restored": 1,
  "scope": "svm",
  "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|
```

```
|===
```

```
[#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
=====

[[IDe2d59d1eb79d531fef07fbccf451b9f0]]
= 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: 1
* 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

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

|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]

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "key_id":
"000000000000000002000000000001003aa8ce6a4fea3e466620134bea9510a1000000000
000000",
  "key_server": "keyserver1.com:5698",
  "key_tag": "Authentication-Key-01",
  "node": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "node1",
    "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": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "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.

```
[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

|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_restore_keys]
[.api-collapsible-fifth-title]
security_key_manager_restore_keys

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

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

|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

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

|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

<<<

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