



Manage authentication keys

ONTAP 9.14.1 REST API reference

NetApp
May 23, 2024

Table of Contents

- Manage authentication keys 1
 - Security key-managers security_key_manager.uuid auth-keys endpoint overview 1

Manage authentication keys

Security key-managers security_key_manager.uuid auth-keys endpoint overview

Overview

Used to create and list authentication keys (NSE-AK).

Example

Creates an authentication key.



an external key manager must be configured on the admin SVM, as the authentication key will be associated with the admin SVM. The following example shows how to create an authentication key.

```
# The API:
POST /api/security/key-managers/{security_key_manager.uuid}/auth-keys

# The call:
curl -X POST 'https://<mgmt-ip>/api/security/key-managers/5fb1701a-d922-11e8-bfe8-005056bb017d/auth-keys?return_timeout=15&return_records=true' -H 'accept: application/hal+json'

# The response:
{
  "num_records": 1,
  "records": [
    {
      "key_id":
      "00000000000000000000200000000000100531d8cdc38437c2627b6b1726dd2675c00000000
      000000",
      "key_tag": "vsim1"
    }
  ]
}
```

Retrieving a list of all of the authentication keys associated with the admin SVM.

The following example shows how to retrieve a list of all of the authentication keys associated with the admin SVM.

```

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

# The call:
curl -X GET 'https://<mgmt-ip>/api/security/key-managers/5fb1701a-d922-11e8-bfe8-005056bb017d/auth-keys?fields=*' -H 'accept: application/hal+json'

# The response:
{
  "num_records": 2,
  "records": [
    {
      "security_key_manager": {
        "uuid": "d36a654d-14b4-11ed-b82e-005056bb8f59"
      },
      "key_id":
"00000000000000000200000000000100052ab79fc51a430dbb16f1c0d2054cfe000000000
0000000",
      "key_tag": "vsim1"
    },
    {
      "security_key_manager": {
        "uuid": "d36a654d-14b4-11ed-b82e-005056bb8f59"
      },
      "key_id":
"000000000000000002000000000001003f32ce2dc55d2764c07da74e722c179b000000000
0000000",
      "key_tag": "vsim1"
    }
  ]
}

```

Retrieving a specific authentication key associated with the admin SVM.

The following example shows how to a specific authentication key associated with the admin SVM and return the key-tag.

```

= The API:

GET /api/security/key-managers/{security_key_manager.uuid}/auth-
keys/{key-id}

```

= The call:

```
curl -X GET 'https://+++<mgmt-ip>+++/api/security/key-managers/5fb1701a-  
d922-11e8-bfe8-005056bb017d/auth-  
keys/0000000000000000020000000000010041a2dda969b0d179db8f1c78d629d0f100000  
00000000000?fields=key_tag' -H 'accept: application/hal+json'+++</mgmt-  
ip>+++
```

= The response:

```
{  
  "security_key_manager": {  
    "uuid": "d36a654d-14b4-11ed-b82e-005056bb8f59"  
  },  
  "key_id":  
  "0000000000000000020000000000010041a2dda969b0d179db8f1c78d629d0f1000000000  
000000",  
  "key_tag": "vsim1"  
}
```

```
[[ID32a2da7d6f8559b2d014deeea5a0e615]]
```

= Retrieve authentication keys associated with the admin SVM

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

Introduced In: 9.12

Retrieves a list of all authentication keys associated with the admin SVM.

== Related ONTAP commands

* `security key-manager key query`

== Required properties

* `security_key_manager.uuid` - UUID of the external key manager.

== Parameters

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

```
|===
```

```
|Name
|Type
|In
|Required
|Description

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

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

|security_key_manager.uuid
|string
|path
|True
a|External key manager UUID

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

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

|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

|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

|order_by

|array[string]

|query

|False

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

|===

== 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_auth_key[key_manager_auth_key]]
a|

|===

.Example response
[%collapsible%closed]
=====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "key_id":
"000000000000000000002000000000001003aa8ce6a4fea3e466620134bea9510a1000000000
000000",
    "key_tag": "Authentication-Key-01",
    "passphrase": "AuthenticationKey_01"
  }
}
=====

== Error

```

Status: Default

ONTAP Error Response Codes

```

|===
| Error Code | Description
| 65536828

```



```

| External key management is not enabled for the SVM.

| 65536856
| No key servers found for the SVM.

| 65536896
| External key management is not configured on the partner site.

| 65538800
| External KMIP DKMIP keymanager not configured on administrative Vserver.

| 65538801
| Internal error while accessing keymanager database.

| 65538802
| The UUID provided is not associated with the administrator SVM key
manager.
|===

```

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|

|===

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

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

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

|key_id
|string
a|Key identifier.

|key_tag
|string
a|Optional parameter to define key-tag for the authentication key, length
0-32 characters.

```

```
|passphrase
|string
a|Authentication passphrase, length 20-32 characters. May contain the '='
character.
```

```
|===
```

```
[#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
====

[[ID08e3ab10936545c562e5926986db7a8c]]
= Create an authentication key

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

*Introduced In:* 9.12

Creates an authentication key.

== Related ONTAP commands

* `security key-manager key create`

== Required properties

* `security_key_manager.uuid` - UUID of the external key manager.

== Parameters

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

```

```

|Name
|Type
|In
|Required
|Description

|security_key_manager.uuid
|string
|path
|True
a|External key manager UUID

|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:#self_link[self_link]
a|

|key_id
|string
a|Key identifier.

|key_tag
|string
a|Optional parameter to define key-tag for the authentication key, length
0-32 characters.

```

```
|passphrase
|string
a|Authentication passphrase, length 20-32 characters. May contain the '='
character.
```

```
|===
```

```
.Example request
```

```
[%collapsible%closed]
```

```
====
```

```
[source,json,subs=+macros]
```

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "key_id":
"000000000000000002000000000001003aa8ce6a4fea3e466620134bea9510a1000000000
0000000",
  "key_tag": "Authentication-Key-01",
  "passphrase": "AuthenticationKey_01"
}
```

```
====
```

```
== Response
```

Status: 201, Created

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

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|_links
```

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

```
a|
```

```
|num_records
```

```
|integer
```

```
a|Number of records
```

```

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

|===

.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "key_id":
"000000000000000002000000000001003aa8ce6a4fea3e466620134bea9510a1000000000
000000",
    "key_tag": "Authentication-Key-01",
    "passphrase": "AuthenticationKey_01"
  }
}
}
====

=== Headers

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

```



```
//start row
|Location
|Useful for tracking the resource location
|string
//end row
//end table
|===

== Error
```

Status: Default

ONTAP Error Response Codes

```
|===
| Error Code | Description

| 65536048
| The maximum number of authentication keys are already configured.

| 65536053
| Invalid passphrase length; passphrase must be 20-32 ASCII-range
characters.

| 65536056
| The key tag value provided contains invalid characters.

| 65536056
| The key-tag option cannot contain any spaces, tabs or new lines.

| 65536076
| Failed to push authentication key to any registered key servers.

| 65536160
| Unable to determine the current number of configured authentication
keys.

| 65536264
| Failed to create authentication key.

| 65536265
| Failed to create a key-id for the authentication key.

| 65536828
| External key management is not enabled for the SVM.
```

```
| 65536856
| No key servers found for the SVM.

| 65536872
| Error cleaning up key database after key creation error.

| 65536896
| External key management is not configured on the partner site.

| 65538800
| External KMIP DKMIP keymanager not configured on administrative Vserver.

| 65538801
| Internal error while accessing keymanager database.

| 65538802
| The UUID provided is not associated with the administrator SVM key
manager.

| 66060289
| Failed to store authentication key on key server.

| 66060304
| Invalid key length.
|===
```

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|

```

```

|===

```

```

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

```

```

[cols=3*,options=header]

```

```

|===
|Name

```

```

|Type
|Description

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

|===

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

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

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

|key_id
|string
a|Key identifier.

|key_tag
|string
a|Optional parameter to define key-tag for the authentication key, length
0-32 characters.

|passphrase
|string
a|Authentication passphrase, length 20-32 characters. May contain the '='
character.

|===

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

```

```

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

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

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

|===

[#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
=====
```

```
[[IDde1a688d66c73d2987237df7f15c039f]]
= Delete an authentication key
```

```
[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/security/key-managers/{security_key_manager.uuid}/auth-
keys/{key_id}`#
```

```
*Introduced In:* 9.12
```

```
Deletes an authentication key.
```

```
== Related ONTAP commands
```

```
* `security key-manager key delete`
```

== Required properties

* `security_key_manager.uuid` - UUID of the external key manager.
* `key_id` - Key ID of the authentication key to be deleted.

== Parameters

[cols=5*,options=header]

|===

|Name

|Type

|In

|Required

|Description

|security_key_manager.uuid

|string

|path

|True

a|External key manager UUID

|key_id

|string

|path

|True

a|Key ID of the authentication key to be deleted.

|===

== Response

Status: 200, Ok

== Error

Status: Default

ONTAP Error Response Codes

|===

| Error Code | Description

```

| 65536828
| External key management is not enabled for the SVM.

| 65536859
| Authentication key-Id provided for deletion is in use.

| 65536860
| Key-id provided for deletion is not an authentication key.

| 65538800
| External KMIP DKMIP keymanager not configured on administrative Vserver.

| 65538801
| Internal error while accessing keymanager database.

| 65538802
| The UUID provided is not associated with the administrator SVM key
manager.

| 66060296
| Failed to delete key from an external key server.
|===

```

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

====

[#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
=====

[[IDa3f188c26074229a44b43cb405526fb3]]
= List all authentication keys associated with the admin SVM

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

*Introduced In:* 9.12

Retrieves the authentication key identified by the 'key_id' and associated
with the admin SVM.

== Related ONTAP commands

```

```
* `security key-manager key query`
```

```
== Required properties
```

```
* `security_key_manager.uuid` - UUID of the external key manager.
```

```
* `key_id` - Key ID of the authentication key to be retrieved.
```

```
== Parameters
```

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

```
|===
```

```
|Name
```

```
|Type
```

```
|In
```

```
|Required
```

```
|Description
```

```
|key_tag
```

```
|string
```

```
|query
```

```
|False
```

```
a|Filter by key_tag
```

```
|security_key_manager.uuid
```

```
|string
```

```
|path
```

```
|True
```

```
a|External key manager UUID
```

```
|key_id
```

```
|string
```

```
|path
```

```
|True
```

```
a|Key ID of the authentication key to be retrieved.
```

```
|fields
```

```
|array[string]
```

```
|query
```

```
|False
```

```
a|Specify the fields to return.
```

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

```
|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
```

```
|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
```

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

```
|===
```

```
== Response
```

Status: 200, Ok

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

```
|===
```

```
|Name
|Type
|Description

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

|key_id
|string
a|Key identifier.

|key_tag
|string
a|Optional parameter to define key-tag for the authentication key, length
0-32 characters.

|passphrase
|string
a|Authentication passphrase, length 20-32 characters. May contain the '='
character.

|===

.Example response
[%collapsible%closed]
=====
[source,json,subs=+macros]
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "key_id":
"00000000000000000200000000001003aa8ce6a4fea3e466620134bea9510a100000000
000000",
  "key_tag": "Authentication-Key-01",
  "passphrase": "AuthenticationKey_01"
}
=====

== Error
```

ONTAP Error Response Codes

|===

| Error Code | Description

| 65536828

| External key management is not enabled for the SVM.

| 65536856

| No key servers found for the SVM.

| 65536896

| External key management is not configured on the partner site.

| 65538800

| External KMIP DKMIP keymanager not configured on administrative Vserver.

| 65538801

| Internal error while accessing keymanager database.

| 65538802

| The UUID provided is not associated with the administrator SVM key manager.

|===

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|

|===

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

[cols=3*,options=header]

```

```

|===
|Name
|Type
|Description

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

|===

[#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*
```

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