



# Manage HTTP proxy configuration

ONTAP 9.9.1 REST API reference

NetApp  
April 02, 2024

# Table of Contents

- Manage HTTP proxy configuration . . . . . 1
  - Network http-proxy endpoint overview . . . . . 1
  - Retrieve HTTP proxy configurations for all SVMs and cluster IPspaces . . . . . 5
  - Create an HTTP proxy configuration for an SVM or cluster IPspace . . . . . 12
  - Delete HTTP proxy configuration for an SVM or cluster IPspace . . . . . 20
  - Display HTTP proxy server, port, and IPspace information for an SVM or cluster IPspace . . . . . 22
  - Update proxy server, port, username, and password parameters . . . . . 27

# Manage HTTP proxy configuration

## Network http-proxy endpoint overview

### Overview

Configuration of an HTTP proxy for an SVM or a Cluster IPspace.

### Retrieve HTTP proxy information

The HTTP proxy GET operation retrieves all configurations for an SVM or a Cluster IPspace via '/api/cluster'.

### Examples

Retrieving all fields for all HTTP proxy configurations

```
# The API:
/api/network/http-proxy

# The call:
curl -X GET "https://<mgmt-ip>/api/network/http-
proxy?fields=*&return_records=true&return_timeout=15" -H "accept:
application/json"

# The response:
{
  "records": [
    {
      "uuid": "4133a1fc-7228-11e9-b40c-005056bb4f0c",
      "svm": {
        "name": "vs1",
        "uuid": "4133a1fc-7228-11e9-b40c-005056bb4f0c"
      },
      "server": "server1.example.com",
      "port": 3128,
      "authentication_enabled": false
    },
    {
      "uuid": "96219ce3-7214-11e9-828c-005056bb4f0c",
      "svm": {
        "name": "cluster-1",
        "uuid": "96219ce3-7214-11e9-828c-005056bb4f0c"
      },
      "ipspace": {
        "uuid": "7433520f-7214-11e9-828c-005056bb4f0c",
        "name": "Default"
      },
      "server": "1.1.1.",
      "port": 3128,
      "authentication_enabled": true
    }
  ],
  "num_records": 2
}
```

## Retrieving the HTTP proxy configuration for a specific SVM

```

# The API:
/api/network/http-proxy/{uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/network/http-proxy/96219ce3-7214-11e9-828c-005056bb4f0c" -H "accept: application/json"

# The response
{
  "uuid": "96219ce3-7214-11e9-828c-005056bb4f0c",
  "svm": {
    "name": "cluster-1",
    "uuid": "96219ce3-7214-11e9-828c-005056bb4f0c"
  },
  "ipspace": {
    "uuid": "7433520f-7214-11e9-828c-005056bb4f0c",
    "name": "Default"
  },
  "server": "1.1.1.1",
  "port": 3128,
  "authentication_enabled": false
}

```

## Creating an HTTP proxy configuration

You can use the HTTP proxy POST operation to create an HTTP proxy configuration for the specified SVM.

### Examples

#### Creating an HTTP proxy configuration for a particular SVM

```

# The API:
/api/network/http-proxy

# The call:
curl -X POST "https://<mgmt-ip>/api/network/http-proxy" -H "accept: application/json" -H "Content-Type: application/json" -d "{  \"port\": 3128,  \"server\": \"1.1.1.1\",  \"svm\": {    \"name\": \"cluster-1\"  }}"

```

#### Creating an HTTP proxy configuration for a particular IPspace

```
# The API:
/api/network/http-proxy

# The call:
curl -X POST "https://<mgmt-ip>/api/network/http-proxy" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"ipSpace\":
{ \"name\": \"Default\" }, \"port\": 3128, \"server\": \"1.1.1.1\"}"
```

## Creating an HTTP proxy configuration with authentication enabled

```
# The API:
/api/network/http-proxy

# The call:
curl -X POST "https://<mgmt-ip>/api/network/http-proxy" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"ipSpace\":
{ \"name\": \"Default\" }, \"port\": 3128, \"server\": \"1.1.1.1\",
\"authentication_enabled\":true, \"username\":\"test\",
\"password\":\"test\"}"
```

## Update an HTTP proxy configuration for a specified SVM

You can use the HTTP proxy PATCH operation to update the HTTP proxy configuration for the specified SVM.

### Example

The following example shows how a PATCH operation is used to update an HTTP proxy configuration for a specific SVM:

```
# The API:
/api/network/http-proxy/{uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/network/http-proxy/96219ce3-7214-
11e9-828c-005056bb4f0c" -H "accept: application/json" -H "Content-Type:
application/json" -d "{ \"port\": 3128, \"server\":
\"server2.example.com\"}"
```

## Delete an HTTP proxy configuration for a specified SVM

You can use the HTTP proxy DELETE operation to delete the HTTP proxy configuration for the specified SVM.

## Example

The following example shows how a DELETE operation is used to delete an HTTP proxy configuration for a specific SVM:

```
# The API:
/api/network/http-proxy/{uuid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/network/http-proxy/96219ce3-7214-11e9-828c-005056bb4f0c" -H "accept: application/json"
```

## Retrieve HTTP proxy configurations for all SVMs and cluster IPspaces

GET /network/http-proxy

Introduced In: 9.7

Retrieves the HTTP proxy configurations of all the SVMs and Cluster IPspaces.

### Related ONTAP commands

- `vserver http-proxy show`

### Parameters

Name	Type	In	Required	Description
scope	string	query	False	Filter by scope
authentication_enabled	boolean	query	False	Filter by authentication_enabled <ul style="list-style-type: none"><li>• Introduced in: 9.9</li></ul>
server	string	query	False	Filter by server
uuid	string	query	False	Filter by uuid
port	integer	query	False	Filter by port
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name

Name	Type	In	Required	Description
ipspace.uuid	string	query	False	Filter by ipspace.uuid
ipspace.name	string	query	False	Filter by ipspace.name
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. <ul style="list-style-type: none"> <li>• Default value: 1</li> </ul>
return_timeout	integer	query	False	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. <ul style="list-style-type: none"> <li>• Default value: 1</li> <li>• Max value: 120</li> <li>• Min value: 0</li> </ul>
order_by	array[string]	query	False	Order results by specified fields and optional [asc

## Response

Status: 200, Ok



Name	Type	Description
_links	<a href="#">_links</a>	
num_records	integer	Number of HTTP proxy records
records	array[ <a href="#">network_http_proxy</a> ]	

## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "ipSPACE": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "exchange",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "port": "3128",
    "scope": "svm",
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "uuid": "string"
  }
}
```

## Error

Status: Default, Error

Name	Type	Description
error	error	

### Example error

```
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

### Definitions

## See Definitions

href

Name	Type	Description
href	string	

\_links

Name	Type	Description
next	<a href="#">href</a>	
self	<a href="#">href</a>	

\_links

Name	Type	Description
self	<a href="#">href</a>	

ipSPACE

Applies to both SVM and cluster-scoped objects. Either the UUID or name is supplied on input.

Name	Type	Description
<a href="#">_links</a>	<a href="#">_links</a>	
name	string	IPspace name
uuid	string	IPspace UUID

svm

Name	Type	Description
<a href="#">_links</a>	<a href="#">_links</a>	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

network\_http\_proxy

Name	Type	Description
<a href="#">_links</a>	<a href="#">_links</a>	

Name	Type	Description
authentication_enabled	boolean	Specifies whether or not authentication with the HTTP proxy server is enabled.
ipspace	<a href="#">ipspace</a>	Applies to both SVM and cluster-scoped objects. Either the UUID or name is supplied on input.
password	string	Password to authenticate with the HTTP proxy server when authentication_enabled is set to "true".
port	integer	The port number on which the HTTP proxy service is configured on the proxy server.
scope	string	Set to "svm" for HTTP proxy owned by an SVM. Otherwise, set to "cluster".
server	string	Fully qualified domain name (FQDN) or IP address of the HTTP proxy server.
svm	<a href="#">svm</a>	
username	string	Username to authenticate with the HTTP proxy server when authentication_enabled is set to "true".
uuid	string	The UUID that uniquely identifies the HTTP proxy.

#### error\_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

#### error

Name	Type	Description
arguments	array[ <a href="#">error_arguments</a> ]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

## Create an HTTP proxy configuration for an SVM or cluster IPspace

POST /network/http-proxy

**Introduced In:** 9.7

Creates an HTTP proxy configuration for an SVM or a Cluster IPspace. Important notes:

- IPv6 must be enabled if IPv6 family addresses are specified in the "server" field.
- The server and the port combination specified using the "server" and "port" fields is validated during this operation. The validation will fail in the following scenarios:
  - The HTTP proxy service is not configured on the server.
  - The HTTP proxy service is not running on the specified port.
  - The server is unreachable.

### Required properties

- SVM-scoped HTTP proxy
  - `svm.uuid` or `svm.name` - Existing SVM in which to create the HTTP proxy.
- Cluster-scoped HTTP proxy
  - `ipspace.uuid` or `ipspace.name` - Existing Cluster IPspace in which to create the HTTP proxy.
- `server` - HTTP proxy server FQDN or IP address.
- `port` - HTTP proxy server port.

### Optional properties

- `authentication_enabled` - Specifies if authentication is required for the HTTP proxy server.
- `username` - Username used to authenticate with the HTTP proxy server.
- `password` - Password used to authenticate with the HTTP proxy server.

## Related ONTAP commands

- `vserver http-proxy create`

## Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned.  • Default value:

## Request Body

Name	Type	Description
_links	<a href="#">_links</a>	
authentication_enabled	boolean	Specifies whether or not authentication with the HTTP proxy server is enabled.
ipspace	<a href="#">ipspace</a>	Applies to both SVM and cluster-scoped objects. Either the UUID or name is supplied on input.
password	string	Password to authenticate with the HTTP proxy server when authentication_enabled is set to "true".
port	integer	The port number on which the HTTP proxy service is configured on the proxy server.
scope	string	Set to "svm" for HTTP proxy owned by an SVM. Otherwise, set to "cluster".
server	string	Fully qualified domain name (FQDN) or IP address of the HTTP proxy server.
svm	<a href="#">svm</a>	

Name	Type	Description
username	string	Username to authenticate with the HTTP proxy server when authentication_enabled is set to "true".
uuid	string	The UUID that uniquely identifies the HTTP proxy.

### Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "ipospace": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "exchange",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "port": "3128",
  "scope": "svm",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "uuid": "string"
}
```

### Response



Status: 201, Created

Name	Type	Description
_links	<a href="#">_links</a>	
num_records	integer	Number of HTTP proxy records
records	array[ <a href="#">network_http_proxy</a> ]	

## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "ipSPACE": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "exchange",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "port": "3128",
    "scope": "svm",
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "uuid": "string"
  }
}
```

## Error

Status: Default

## ONTAP Error Response Codes

Error Code	Description
26214473	HTTP proxy configuration is not valid.
26214476	The "IPspace" parameter should not be specified in the SVM context.
26214477	The specified IPspace does not exist.
23724130	Cannot use an IPv6 name server address because there are no IPv6 interfaces.
26214481	Username and password cannot be empty when HTTP proxy authentication is enabled.
26214482	Username and password cannot be specified when HTTP proxy authentication is disabled.

Name	Type	Description
error	error	

## Example error

```
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

## Definitions

## See Definitions

href

Name	Type	Description
href	string	

\_links

Name	Type	Description
self	<a href="#">href</a>	

ipospace

Applies to both SVM and cluster-scoped objects. Either the UUID or name is supplied on input.

Name	Type	Description
_links	<a href="#">_links</a>	
name	string	IPspace name
uuid	string	IPspace UUID

svm

Name	Type	Description
_links	<a href="#">_links</a>	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

network\_http\_proxy

Name	Type	Description
_links	<a href="#">_links</a>	
authentication_enabled	boolean	Specifies whether or not authentication with the HTTP proxy server is enabled.
ipospace	<a href="#">ipospace</a>	Applies to both SVM and cluster-scoped objects. Either the UUID or name is supplied on input.

Name	Type	Description
password	string	Password to authenticate with the HTTP proxy server when authentication_enabled is set to "true".
port	integer	The port number on which the HTTP proxy service is configured on the proxy server.
scope	string	Set to "svm" for HTTP proxy owned by an SVM. Otherwise, set to "cluster".
server	string	Fully qualified domain name (FQDN) or IP address of the HTTP proxy server.
svm	<a href="#">svm</a>	
username	string	Username to authenticate with the HTTP proxy server when authentication_enabled is set to "true".
uuid	string	The UUID that uniquely identifies the HTTP proxy.

#### \_links

Name	Type	Description
next	<a href="#">href</a>	
self	<a href="#">href</a>	

#### error\_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

#### error

Name	Type	Description
arguments	array[ <a href="#">error_arguments</a> ]	Message arguments

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

## Delete HTTP proxy configuration for an SVM or cluster IPspace

DELETE /network/http-proxy/{uuid}

Introduced In: 9.7

Deletes the HTTP proxy configuration of the specified SVM or Cluster IPspace.

### Related ONTAP commands

- `vserver http-proxy delete`

### Parameters

Name	Type	In	Required	Description
uuid	string	path	True	HTTP proxy UUID

### Response

Status: 200, Ok

### Error

Status: Default

### ONTAP Error Response Codes

Error Code	Description
138281013	The HTTP proxy cannot be deleted while in use by a cloud agent connection.

Name	Type	Description
error	error	

### Example error

```

{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}

```

## Definitions

### See Definitions

#### error\_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

#### error

Name	Type	Description
arguments	array[ <a href="#">error_arguments</a> ]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

# Display HTTP proxy server, port, and IPspace information for an SVM or cluster IPspace

GET /network/http-proxy/{uuid}

Introduced In: 9.7

Displays the HTTP proxy server, port, and IPspace of the specified SVM or Cluster IPspace.

## Related ONTAP commands

- `vserver http-proxy show`

## Parameters

Name	Type	In	Required	Description
uuid	string	path	True	HTTP proxy UUID
fields	array[string]	query	False	Specify the fields to return.

## Response

Status: 200, Ok

Name	Type	Description
<a href="#">_links</a>	<a href="#">_links</a>	
authentication_enabled	boolean	Specifies whether or not authentication with the HTTP proxy server is enabled.
ipspace	<a href="#">ipspace</a>	Applies to both SVM and cluster-scoped objects. Either the UUID or name is supplied on input.
password	string	Password to authenticate with the HTTP proxy server when authentication_enabled is set to "true".
port	integer	The port number on which the HTTP proxy service is configured on the proxy server.



Name	Type	Description
scope	string	Set to "svm" for HTTP proxy owned by an SVM. Otherwise, set to "cluster".
server	string	Fully qualified domain name (FQDN) or IP address of the HTTP proxy server.
svm	svm	
username	string	Username to authenticate with the HTTP proxy server when authentication_enabled is set to "true".
uuid	string	The UUID that uniquely identifies the HTTP proxy.

## Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "ipospace": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "exchange",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "port": "3128",
  "scope": "svm",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "uuid": "string"
}
```

## Error

Status: Default, Error

Name	Type	Description
error	error	

## Example error

```
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

## Definitions

## See Definitions

href

Name	Type	Description
href	string	

\_links

Name	Type	Description
self	<a href="#">href</a>	

ipospace

Applies to both SVM and cluster-scoped objects. Either the UUID or name is supplied on input.

Name	Type	Description
_links	<a href="#">_links</a>	
name	string	IPspace name
uuid	string	IPspace UUID

svm

Name	Type	Description
_links	<a href="#">_links</a>	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

error\_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[ <a href="#">error_arguments</a> ]	Message arguments

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

## Update proxy server, port, username, and password parameters

PATCH /network/http-proxy/{uuid}

**Introduced In:** 9.7

Updates the proxy server, port, username, and password parameters. Important notes:

- IPv6 must be enabled if IPv6 family addresses are specified in the "server" field.
- The server and the port combination specified using the "server" and "port" fields is validated during this operation. The validation will fail in the following scenarios:
  - The HTTP proxy service is not configured on the server.
  - The HTTP proxy service is not running on the specified port.
  - The server is unreachable.

### Related ONTAP commands

- `vserver http-proxy modify`

### Parameters

Name	Type	In	Required	Description
uuid	string	path	True	HTTP proxy UUID

### Request Body

Name	Type	Description
<a href="#">_links</a>	<a href="#">_links</a>	
authentication_enabled	boolean	Specifies whether or not authentication with the HTTP proxy server is enabled.

Name	Type	Description
ipspace	ipspace	Applies to both SVM and cluster-scoped objects. Either the UUID or name is supplied on input.
password	string	Password to authenticate with the HTTP proxy server when authentication_enabled is set to "true".
port	integer	The port number on which the HTTP proxy service is configured on the proxy server.
scope	string	Set to "svm" for HTTP proxy owned by an SVM. Otherwise, set to "cluster".
server	string	Fully qualified domain name (FQDN) or IP address of the HTTP proxy server.
svm	svm	
username	string	Username to authenticate with the HTTP proxy server when authentication_enabled is set to "true".
uuid	string	The UUID that uniquely identifies the HTTP proxy.

## Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "ipospace": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "exchange",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "port": "3128",
  "scope": "svm",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "uuid": "string"
}
```

## Response

Status: 200, Ok

## Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
26214473	The HTTP proxy configuration is not valid.
23724130	Cannot use an IPv6 name server address because there are no IPv6 interfaces.
26214481	Username and password cannot be empty when HTTP proxy authentication is enabled.
26214482	Username and password cannot be specified when HTTP proxy authentication is disabled.

Name	Type	Description
error	error	

### Example error

```

{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}

```

### Definitions



## See Definitions

href

Name	Type	Description
href	string	

\_links

Name	Type	Description
self	<a href="#">href</a>	

ipospace

Applies to both SVM and cluster-scoped objects. Either the UUID or name is supplied on input.

Name	Type	Description
_links	<a href="#">_links</a>	
name	string	IPspace name
uuid	string	IPspace UUID

svm

Name	Type	Description
_links	<a href="#">_links</a>	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

network\_http\_proxy

Name	Type	Description
_links	<a href="#">_links</a>	
authentication_enabled	boolean	Specifies whether or not authentication with the HTTP proxy server is enabled.
ipospace	<a href="#">ipospace</a>	Applies to both SVM and cluster-scoped objects. Either the UUID or name is supplied on input.

Name	Type	Description
password	string	Password to authenticate with the HTTP proxy server when authentication_enabled is set to "true".
port	integer	The port number on which the HTTP proxy service is configured on the proxy server.
scope	string	Set to "svm" for HTTP proxy owned by an SVM. Otherwise, set to "cluster".
server	string	Fully qualified domain name (FQDN) or IP address of the HTTP proxy server.
svm	<a href="#">svm</a>	
username	string	Username to authenticate with the HTTP proxy server when authentication_enabled is set to "true".
uuid	string	The UUID that uniquely identifies the HTTP proxy.

#### error\_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

#### error

Name	Type	Description
arguments	array[ <a href="#">error_arguments</a> ]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

## Copyright information

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

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

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

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

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

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

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

## Trademark information

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