



Manage S3 service users

ONTAP 9.8 REST API reference

NetApp
August 29, 2024

Table of Contents

- Manage S3 service users 1
 - Protocols S3 services svm.uuid users endpoint overview 1
 - Retrieve the SVM configuration for an S3 user 6
 - Create an S3 user configuration 11
 - Delete an S3 user configuration 17
 - Retrieve the S3 user configuration for an SVM 20
 - Update an S3 user configuration 23

Manage S3 service users

Protocols S3 services svm.uuid users endpoint overview

Overview

An S3 user account is created on the S3 server. Buckets that are created for the server are associated with that user (as the owner of the buckets). The creation of the user account involves generating a pair of keys "access" and "secret". These keys are shared with clients (by the administrator out of band) who want to access the S3 server. The access_key is sent in the request and it identifies the user performing the operation. The client or server never send the secret_key over the wire. Only the access_key can be retrieved from a GET operation. The secret_key along with the access_key is returned from a POST operation and from a PATCH operation if the administrator needs to regenerate the keys.

Examples

Retrieving S3 user configurations for a particular SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/users

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users?fields=*&return_records=true" -H "accept: application/hal+json"

# The response:
{
  "records": [
    {
      "svm": {
        "uuid": "db2ec036-8375-11e9-99e1-0050568e3ed9",
        "name": "vs1",
        "_links": {
          "self": {
            "href": "/api/svm/svms/db2ec036-8375-11e9-99e1-0050568e3ed9"
          }
        }
      },
      "name": "user-1",
      "comment": "S3 user",
      "access_key":
      "8OP1Yd5gm53sTNkTNgrsJ0_4iHvw_Ir_9xtDhzGa3m2_a_Yhtv6Bm3Dq_Xv79Stq90Bwa5NrT
      L7UQ2u_0xN0IW_x39cm1h3sn69fN6cf6STA48W05PAxuGED3Ncr7rsn",
      "_links": {
        "self": {
```

```

    "href": "/api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users/user-1"
  }
}
{
  "svm": {
    "uuid": "db2ec036-8375-11e9-99e1-0050568e3ed9",
    "name": "vs1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/db2ec036-8375-11e9-99e1-0050568e3ed9"
      }
    }
  },
  "name": "user-2",
  "comment": "s3-user",
  "access_key":
  "uYo34d4eR8a3is7JDSCY1xrNwL7gFMA338ZEX2mNrgJ34Kb4u98QNhBGT3ghs9GA2bzNdYBSn
  5_rBfjIY4mt36CMFE4d3g0L3Pa_2nXD6g6CAq_D0422LK__pbH6wvy8",
  "_links": {
    "self": {
      "href": "/api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users/user-2"
    }
  }
}
],
"num_records": 2,
"_links": {
  "self": {
    "href": "/api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users?fields=*&return_records=true"
  }
}
}
}

```

Retrieving the user configuration of a specific S3 user

```

# The API:
/api/protocols/s3/services/{svm.uuid}/users/{name}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users/user-1" -H "accept: application/hal+json"

# The response:
{
  "svm": {
    "uuid": "db2ec036-8375-11e9-99e1-0050568e3ed9",
    "name": "vs1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/db2ec036-8375-11e9-99e1-0050568e3ed9"
      }
    }
  },
  "name": "user-1",
  "comment": "s3-user",
  "access_key":
  "uYo34d4eR8a3is7JDSCY1xrNwL7gFMA338ZEX2mNrgJ34Kb4u98QNhBGT3ghs9GA2bzNdYBSn
  5_rBfjIY4mt36CMFE4d3g0L3Pa_2nXD6g6CAq_D0422LK__pbH6wvy8",
  "_links": {
    "self": {
      "href": "/api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users/user-1"
    }
  }
}

```

Creating an S3 user configuration

```

# The API:
/api/protocols/s3/services/{svm.uuid}/users

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users" -H "accept: application/json" -H "Content-Type: application/json" -d '{"name": "user-1"}'

# The response:
HTTP/1.1 201 Created
Date: Fri, 31 May 2019 09:34:25 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users/user-1
Content-Length: 244
Content-Type: application/json
{
  "num_records": 1,
  "records": [
    {
      "name": "user-1",
      "access_key":
"8OP1Yd5gm53sTNkTNgrsJ0_4iHvw_Ir_9xtDhzGa3m2_a_Yhtv6Bm3Dq_Xv79Stq90Bwa5NrT
L7UQ2u_0xN0IW_x39cm1h3sn69fN6cf6STA48W05PAxuGED3NcR7rsn",
      "secret_key":
"SSS4oNA7_43yfu_zs938T5nY9xYZccFq_60_Q925h4t535km313qb0bDvdQ2MIK_8ebVf0gnD
06K8qcNBg3t_KcpjHTXA2elshTEjrdMhsM9b47uOdQGw4Mex6yrbPgr"
    }
  ]
}

```

Regenerating keys for a specific S3 user for the specified SVM

```

# The API:
/api/protocols/s3/services/{svm.uuid}/users/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users/user-2?regenerate_keys=true" -H "accept: application/hal+json" -H "Content-Type: application/json" -d "{}"

# The response:
HTTP/1.1 200 OK
Date: Fri, 31 May 2019 09:55:45 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 391
Content-Type: application/hal+json
{
  "num_records": 1,
  "records": [
    {
      "name": "user-2",
      "access_key":
      "hUod3l_sg632PjPlTgdQNKWXI3E_yTra0h96xrpsAPly3Qa_KmYYXq3kIuAJ3CyD4gVOakjj_
      PwVIVjATP1C2t1IQ3KB_9ctS1Ph921b1C17N6Y0PtWfv6AZD__j_C4j",
      "secret_key":
      "3w03fT_7Pv328_dYB8FN4YsD101Hn0i1u_gmqOenYydaNc22c7AIDN46c__T_5y0A3Y69w412
      F13A1bzJSpxH4C0nNAP4N_Ce1_Z_9_d7bA08bs28ccw50ab_4osA3bq",
      "_links": {
        "self": {
          "href": "/api/protocols/s3/services/db2ec036-8375-11e9-99e1-
          0050568e3ed9/users/user-2"
        }
      }
    }
  ]
}

```

Deleting the specified S3 user configuration for a specified SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/users/{name}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/s3/services/03ce5c36-f269-11e8-8852-0050568e5298/users/user-2" -H "accept: application/json"
```

Retrieve the SVM configuration for an S3 user

GET /protocols/s3/services/{svm.uuid}/users

Introduced In: 9.7

Retrieves the S3 user's SVM configuration.

Related ONTAP commands

- `vserver object-store-server user show`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/users](#)

Parameters

Name	Type	In	Required	Description
access_key	string	query	False	Filter by access_key
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
comment	string	query	False	Filter by comment
name	string	query	False	Filter by name
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.

Name	Type	In	Required	Description
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"> • Default value: 1
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"> • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

Status: 200, Ok

Name	Type	Description
_links	collection_links	
num_records	integer	Number of records
records	array[s3_user]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "access_key":
      "Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c
      q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
      "comment": "S3 user",
      "name": "user-1",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```

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	

collection_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

s3_user

This is a container of S3 users.

Name	Type	Description
access_key	string	Specifies the access key for the user.
comment	string	Can contain any additional information about the user being created or modified.
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".

Name	Type	Description
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Create an S3 user configuration

POST /protocols/s3/services/{svm.uuid}/users

Introduced In: 9.7

Creates the S3 user configuration.

Important notes

- Each SVM can have one or more user configurations.
- If user creation is successful, a user access_key and secret_key is returned as part of the response.

Required properties

- `svm.uuid` - Existing SVM in which to create the user configuration.
- `name` - User name that is to be created.

Default property values

- `comment` - ""

Related ONTAP commands

- `vserver object-store-server user create`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/users](#)

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. <ul style="list-style-type: none">• Default value:
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
access_key	string	Specifies the access key for the user.
comment	string	Can contain any additional information about the user being created or modified.
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ";", ":", "@", and "-".
svm	svm	

Example request

```
{
  "access_key":
  "Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c
  q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
  "comment": "S3 user",
  "name": "user-1",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

Status: 201, Created

Name	Type	Description
num_records	integer	Number of records
records	array[s3_service_user_post_respo nse]	

Example response

```
{
  "records": [
    {
      "_links": {
        "next": {
          "href": "/api/resourcelink"
        },
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "access_key":
        "Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c
        q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
      "name": "user-1",
      "secret_key":
        "A20_tDhC_cux2C2BmtL45bXB_a_Q65c_96FsAcOdo14Az8V31jBKDTc0uCL62Bh559gPB8
        s9rrn0868QrF38_1dsV2u1_9H2tSf3qQ5xp9NT259C6z_GiZQ883Qn63X1"
    }
  ]
}
```

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
92405773	Object store server is not present for specified SVM. Create a object store server and retry the operation.
92405787	The specified user name contains invalid characters. Valid characters for a user name are 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".
92405788	User names must have between 1 and 64 characters.
92405791	Failed to create access-key and secret-key.
92405817	S3 users can be created only on data SVM.

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	href	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

s3_user

This is a container of S3 users.

Name	Type	Description
access_key	string	Specifies the access key for the user.
comment	string	Can contain any additional information about the user being created or modified.
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".
svm	svm	

collection_links

Name	Type	Description
next	href	

Name	Type	Description
self	href	

s3_service_user_post_response

Name	Type	Description
_links	collection_links	
access_key	string	Specifies the access key for the user.
name	string	The name of the user.
secret_key	string	Specifies the secret key for the user.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete an S3 user configuration

DELETE /protocols/s3/services/{svm.uuid}/users/{name}

Introduced In: 9.7

Deletes the S3 user configuration of an SVM.

Related ONTAP commands

- `vserver object-store-server user delete`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/users](#)

Parameters

Name	Type	In	Required	Description
name	string	path	True	User name
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 200, Ok
```

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

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve the S3 user configuration for an SVM

GET /protocols/s3/services/{svm.uuid}/users/{name}

Introduced In: 9.7

Retrieves the S3 user configuration of an SVM.

Related ONTAP commands

- `vserver object-store-server user show`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/users](#)

Parameters

Name	Type	In	Required	Description
name	string	path	True	User name
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
access_key	string	Specifies the access key for the user.
comment	string	Can contain any additional information about the user being created or modified.
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ":", "@", and "-".

Name	Type	Description
svm	svm	

Example response

```
{
  "access_key":
  "Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c
  q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
  "comment": "S3 user",
  "name": "user-1",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

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	href	

svm

Name	Type	Description
_links	_links	
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[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update an S3 user configuration

PATCH /protocols/s3/services/{svm.uuid}/users/{name}

Introduced In: 9.7

Updates the S3 user configuration of an SVM.

Important notes

- User `access_key` and `secret_key` pair can be regenerated using the PATCH operation.
- User `access_key` and `secret_key` is returned in a PATCH operation if the "regenerate_keys" field is specified as true.

Recommended optional properties

- `regenerate_keys` - Specifies if `secret_key` and `access_key` need to be regenerated.
- `comment` - Any information related to the S3 user.

Related ONTAP commands

- `vserver object-store-server user show`
- `vserver object-store-server user regenerate-keys`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/users](#)

Parameters

Name	Type	In	Required	Description
<code>name</code>	string	path	True	User name
<code>regenerate_keys</code>	boolean	query	False	Specifies whether or not to regenerate the user keys. <ul style="list-style-type: none">• Default value:
<code>svm.uuid</code>	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
<code>access_key</code>	string	Specifies the access key for the user.

Name	Type	Description
comment	string	Can contain any additional information about the user being created or modified.
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ";", ":", "@", and "-".
svm	svm	

Example request

```
{
  "access_key":
  "Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c
  q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
  "comment": "S3 user",
  "name": "user-1",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

Status: 200, Ok

Name	Type	Description
num_records	integer	Number of records
records	array[s3_service_user_post_respo nse]	

Example response

```
{
  "records": [
    {
      "_links": {
        "next": {
          "href": "/api/resourcelink"
        },
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "access_key":
      "Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c
      q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
      "name": "user-1",
      "secret_key":
      "A20_tDhC_cux2C2BmtL45bXB_a_Q65c_96FsAcOdo14Az8V31jBKDTc0uCL62Bh559gPB8
      s9rrn0868QrF38_1dsV2u1_9H2tSf3qQ5xp9NT259C6z_GiZQ883Qn63X1"
    }
  ]
}
```

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
92405792	Failed to regenerate access-key and secret-key for user.

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	href	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

s3_user

This is a container of S3 users.

Name	Type	Description
access_key	string	Specifies the access key for the user.
comment	string	Can contain any additional information about the user being created or modified.
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".
svm	svm	

collection_links

Name	Type	Description
next	href	

Name	Type	Description
self	href	

s3_service_user_post_response

Name	Type	Description
_links	collection_links	
access_key	string	Specifies the access key for the user.
name	string	The name of the user.
secret_key	string	Specifies the secret key for the user.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	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.