



# Manage SSH security configuration

ONTAP 9.13.1 REST API reference

NetApp  
August 29, 2024

# Table of Contents

- Manage SSH security configuration . . . . . 1
  - Security SSH svms svm.uuid endpoint overview . . . . . 1
  - Retrieve the SSH server configuration for an SVM . . . . . 2
  - Update the SSH server configuration for an SVM . . . . . 7

# Manage SSH security configuration

## Security SSH svms svm.uuid endpoint overview

### Overview

This endpoint is used to retrieve or modify the SSH security configuration to an SVM.

The SSH security algorithms include key exchange algorithms, ciphers for payload encryption, MAC algorithms, and the maximum authentication retry attempts allowed before closing the connection. `svm.uuid` corresponds to the UUID of the SVM for which the SSH security setting is being retrieved or modified and it is obtained from the response body of a GET operation performed on the `api/security/ssh/svms` API.

### Examples

#### Updating the SSH security parameters

Specify the algorithms in the body of the PATCH request.

```
# The API:
PATCH "/api/security/ssh/svms/{svm.uuid}"

# The call:
curl -X PATCH "https://<mgmt-ip>/api/security/ssh/svms/02c9e252-41be-11e9-81d5-00a0986138f7" -d '{ "ciphers": [ "aes256_ctr", "aes192_ctr" ],
"key_exchange_algorithms": [ "diffie_hellman_group_exchange_sha256",
"diffie_hellman_group14_sha1" ], "mac_algorithms": [ "hmac_sha2_512_etm",
"umac_128_etm" ], "max_authentication_retry_count": 3 }'
```

#### Retrieving the SSH security configuration of an SVM

```

# The API:
GET "/api/security/ssh/svms/{svm.uuid}"

# The call:
curl -X GET "https://<mgmt-ip>/api/security/ssh/svms/02c9e252-41be-11e9-81d5-00a0986138f7"

# The response:
{
  "ciphers": [
    "aes256_ctr",
    "aes192_ctr"
  ],
  "key_exchange_algorithms": [
    "diffie_hellman_group_exchange_sha256",
    "diffie_hellman_group14_sha1"
  ],
  "mac_algorithms": [
    "hmac_sha2_512_etm",
    "umac_128_etm"
  ],
  "max_authentication_retry_count": 3,
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7",
    "_links": {
      "self": {
        "href": "/api/svm/svms/02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  },
  "_links": {
    "self": {
      "href": "/api/security/ssh/svms/02c9e252-41be-11e9-81d5-00a0986138f7"
    }
  }
}

```

## Retrieve the SSH server configuration for an SVM

GET /security/ssh/svms/{svm.uuid}

**Introduced In:** 9.10

Retrieves the SSH server configuration for the specified SVM.

## Related ONTAP commands

- `security ssh`

## Parameters

Name	Type	In	Required	Description
svm.uuid	string	path	True	SVM 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>	
ciphers	array[string]	Ciphers for encrypting the data.
key_exchange_algorithms	array[string]	Key exchange algorithms.
mac_algorithms	array[string]	MAC algorithms.
max_authentication_retry_count	integer	Maximum authentication retries allowed before closing the connection.
svm	<a href="#">svm</a>	SVM name and UUID for which the SSH server is configured.

## Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "ciphers": [
    "aes256_ctr",
    "aes192_ctr",
    "aes128_ctr"
  ],
  "key_exchange_algorithms": [
    "diffie_hellman_group_exchange_sha256",
    "diffie_hellman_group14_sha1"
  ],
  "mac_algorithms": [
    "hmac_sha1",
    "hmac_sha2_512_etm"
  ],
  "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	<a href="#">href</a>	

svm

SVM name and UUID for which the SSH server is configured.

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



# Update the SSH server configuration for an SVM

PATCH /security/ssh/svms/{svm.uuid}

**Introduced In:** 9.10

Updates the SSH server configuration for the specified SVM.

## Optional parameters

- `ciphers` - Encryption algorithms for the payload
- `key_exchange_algorithms` - SSH key exchange algorithms
- `mac_algorithms` - MAC algorithms
- `max_authentication_retry_count` - Maximum authentication retries allowed before closing the connection

## Related ONTAP commands

- `security ssh`

## Parameters

Name	Type	In	Required	Description
svm.uuid	string	path	True	SVM UUID

## Request Body

Name	Type	Description
<code>_links</code>	<code>_links</code>	
<code>ciphers</code>	array[string]	Ciphers for encrypting the data.
<code>key_exchange_algorithms</code>	array[string]	Key exchange algorithms.
<code>mac_algorithms</code>	array[string]	MAC algorithms.
<code>max_authentication_retry_count</code>	integer	Maximum authentication retries allowed before closing the connection.
<code>svm</code>	<code>svm</code>	SVM name and UUID for which the SSH server is configured.

## Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "ciphers": [
    "aes256_ctr",
    "aes192_ctr",
    "aes128_ctr"
  ],
  "key_exchange_algorithms": [
    "diffie_hellman_group_exchange_sha256",
    "diffie_hellman_group14_sha1"
  ],
  "mac_algorithms": [
    "hmac_sha1",
    "hmac_sha2_512_etm"
  ],
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

## Response

Status: 200, Ok

## Error

Status: Default

## ONTAP Error Response Codes

Error Code	Description
10682372	There must be at least one key exchange algorithm associated with the SSH configuration.
10682373	There must be at least one cipher associated with the SSH configuration.
10682375	Failed to modify SSH key exchange algorithms.
10682378	Failed to modify SSH ciphers.
10682399	Key exchange algorithm not supported in FIPS-enabled mode.
10682400	Failed to modify SSH MAC algorithms.
10682401	MAC algorithm not supported in FIPS-enabled mode.
10682403	There must be at least one MAC algorithm with the SSH configuration.
10682413	Failed to modify maximum authentication retry attempts.
10682418	Cipher not supported in FIPS-enabled mode.

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>	

svm

SVM name and UUID for which the SSH server is configured.

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

svm\_ssh\_server

Name	Type	Description
_links	<a href="#">_links</a>	
ciphers	array[string]	Ciphers for encrypting the data.
key_exchange_algorithms	array[string]	Key exchange algorithms.
mac_algorithms	array[string]	MAC algorithms.
max_authentication_retry_count	integer	Maximum authentication retries allowed before closing the connection.
svm	<a href="#">svm</a>	SVM name and UUID for which the SSH server is configured.

error\_arguments

Name	Type	Description
code	string	Argument code

Name	Type	Description
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.