



# Manage SSH security configuration

ONTAP 9.15.1 REST API reference

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# Manage SSH security configuration

## Security SSH svms svm.uuid endpoint overview

### Overview

This endpoint is used to retrieve or modify the SSH security configuration of a data 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",
"ecdh_sha2_nistp256" ], "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",
    "ecdh_sha2_nistp256"
  ],
  "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 data 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
_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.

## Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "ciphers": [
    "aes256_ctr",
    "aes192_ctr",
    "aes128_ctr"
  ],
  "key_exchange_algorithms": [
    "diffie_hellman_group_exchange_sha256",
    "ecdh_sha2_nistp256"
  ],
  "mac_algorithms": [
    "hmac_sha2_512",
    "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	<a href="#">returned_error</a>	

## 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. This field cannot be specified in a PATCH method.
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

error\_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned\_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 data 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",
    "ecdh_sha2_nistp256"
  ],
  "mac_algorithms": [
    "hmac_sha2_512",
    "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.
10682420	To modify the SSH configuration of the admin SVM, use the /api/security/ssh REST API.

Also see the table of common errors in the [Response body](#) overview section of this documentation.

Name	Type	Description
error	<a href="#">returned_error</a>	

### 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. This field cannot be specified in a PATCH method.
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

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
message	string	Message argument

returned\_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.

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