



# **Manage TOTP profiles**

## **REST API reference**

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# Manage TOTP profiles

## Security login totps endpoint overview

### Overview

This API configures the TOTP(Time based OTP) profile for user accounts for secure shell (SSH) access.

Prerequisites: You must configure TOTP as a secondary authentication method in /security/accounts when creating users. You must have a TOTP application that you can use to get TOTP keys. You are only allowed to create a TOTP profile for yourself, not for others. Admin cannot create TOTP profiles for any users.

### Examples

#### Creating a TOTP profile for cluster-scoped user accounts

Specify the user account name and comment in the body of the POST request. The owner.uuid or owner.name are not required for a cluster-scoped user account.

```
# The API:
POST "/api/security/login/totps"

# The call:
curl -k https://<mgmt-ip>/api/security/login/totps --request POST --data
'{ "account": { "name": "pubuser2" }, "comment": "Cserver-Creation" }'

# The response:
{
  "num_records": 1,
  "records": [
    {
      "owner": {
        "uuid": "b009a9e7-4081-b576-7575-ada21efcaf16",
        "name": "Default",
        "_links": {
          "self": {
            "href": "/api/svm/svms/b009a9e7-4081-b576-7575-ada21efcaf16"
          }
        }
      },
      "account": {
        "name": "pubuser2"
      },
      "secret_key": "DRY5CAJGTQCL5TV4D3UAMYXJFM",
      "install_url":
        "https://www.google.com/chart?chs=200x200&chld=M&#124;0&cht=qr&chl=otpauth
        ://totp/root@node1%3Fsecret%3DDRY5CAJGTQCL5TV4D3UAMYXJFM%26issuer%3Dnode1"
    }
  ]
}
```

```

"verification_code": "946090",
"emergency_codes": [
  "54200192",
  "10418385",
  "52726505",
  "41704451",
  "20744310"
],
"_links": {
  "self": {
    "href": "/api/security/login/totps/b009a9e7-4081-b576-7575-ada21efcaf16/pubuser2"
  }
}
]
}

```

### Creating a TOTP profile for SVM-scoped user accounts

For an SVM-scoped account, specify either the SVM name as the owner.name or the SVM UUID as the owner.uuid along with other parameters for the user account. These parameters indicate the SVM that contains the user account for the TOTP profile being created and can be obtained from the response body of the GET request performed on the API `/api/svm/svms`.

```

# The API:
POST "/api/security/login/totps"

# The call:
curl -k https://<mgmt-ip>/api/security/login/totps --request POST --data
'{ "account": { "name": "pubuser4" }, "comment": "Vserver-
Creation", "owner.name": "vs0" }'

# The response:
{
  "num_records": 1,
  "records": [
    {
      "owner": {
        "uuid": "b019a9e7-4081-b576-7575-ada21efcaf16",
        "name": "vs0",
        "_links": {
          "self": {
            "href": "/api/svm/svms/b019a9e7-4081-b576-7575-ada21efcaf16"
          }
        }
      }
    }
  ]
}

```

```

},
"account": {
  "name": "pubuser4"
},
"secret_key": "DRY5CAJGTQCL5TV4D3UAMYXJFM",
"install_url":
"https://www.google.com/chart?chs=200x200&chld=M&#124;0&cht=qr&chl=otpauth
://totp/root@node1%3Fsecret%3DDRY5CAJGTQCL5TV4D3UAMYXJFM%26issuer%3Dnode1"
,
"verification_code": "946090",
"emergency_codes": [
  "54200192",
  "10418385",
  "52726505",
  "41704451",
  "20744310"
],
"_links": {
  "self": {
    "href": "/api/security/login/totps/b019a9e7-4081-b576-7575-
ada21efcaf16/pubuser4"
  }
}
]
}

```

### Retrieving the configured TOTP profile for user accounts

Retrieves the TOTP profiles associated with the user accounts or a filtered list (for a specific user account name, a specific SVM and so on).

```

# The API:
GET "/api/security/login/totps"

# The call to retrieve TOTP profiles associated with TOTP configured user
accounts in the cluster:
curl -k https://<mgmt-ip>/api/security/login/totps

# the response:
{
  "records": [
    {
      "owner": {
        "uuid": "b009a9e7-4081-b576-7575-ada21efcaf16",
        "name": "Default",
        "_links": {
          "self": {
            "href": "/api/svm/svms/b009a9e7-4081-b576-7575-ada21efcaf16"
          }
        }
      },
      "account": {
        "name": "pubuser2",
        "_links": {
          "self": {
            "href": "/api/security/accounts/b009a9e7-4081-b576-7575-ada21efcaf16/pubuser2"
          }
        }
      },
      "_links": {
        "self": {
          "href": "/api/security/login/totps/b009a9e7-4081-b576-7575-ada21efcaf16/pubuser2"
        }
      }
    }
  ],
  "num_records": 1,
  "_links": {
    "self": {
      "href": "/api/security/login/totps"
    }
  }
}

```

# Retrieve TOTP profiles

GET /security/login/totps

**Introduced In:** 9.13

Retrieves the TOTP profiles configured for user accounts.

## Related ONTAP commands

- `security login totp show`

## Learn more

- [DOC /security/login/totps](#)
- [DOC /security/accounts](#)

## Parameters

Name	Type	In	Required	Description
enabled	boolean	query	False	Filter by enabled
sha_fingerprint	string	query	False	Filter by sha_fingerprint
comment	string	query	False	Filter by comment
owner.uuid	string	query	False	Filter by owner.uuid
owner.name	string	query	False	Filter by owner.name
account.name	string	query	False	Filter by account.name
scope	string	query	False	Filter by scope
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.  • 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.  • 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	<a href="#">_links</a>	
num_records	integer	Number of records.
records	array[ <a href="#">totp</a> ]	



## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "account": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "joe.smith"
      },
      "comment": "string",
      "enabled": "",
      "owner": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "scope": "string",
      "sha_fingerprint": "string"
    }
  ]
}
```

## Error

Status: Default, Error

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

\_links

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

account\_reference

Name	Type	Description
_links	<a href="#">_links</a>	
name	string	User account

owner

Owner name and UUID that uniquely identifies the TOTP profile.

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

totp

TOTP profile for the user account used to access SSH.

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

Name	Type	Description
comment	string	Optional comment for the TOTP profile.
enabled	boolean	Status of the TOTP profile.
owner	<a href="#">owner</a>	Owner name and UUID that uniquely identifies the TOTP profile.
scope	string	Scope of the entity. Set to "cluster" for cluster owned objects and to "svm" for SVM owned objects.
sha_fingerprint	string	SHA fingerprint for the TOTP secret key.

#### 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 a TOTP profile

POST /security/login/totps

**Introduced In:** 9.13

Creates a TOTP profile for a user account.

## Required properties

- `owner.uuid` - Account owner UUID.
- `account.name` - Account user name.

## Related ONTAP commands

- `security login totp create`

## Learn more

- [DOC /security/login/totps](#)
- [DOC /security/accounts](#)

## 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
account	<a href="#">account_reference</a>	
comment	string	Optional comment for the TOTP profile.
owner	<a href="#">owner</a>	Owner name and UUID that uniquely identifies the TOTP profile.
scope	string	Scope of the entity. Set to "cluster" for cluster owned objects and to "svm" for SVM owned objects.
sha_fingerprint	string	SHA fingerprint for the TOTP secret key.

## Example request

```
{
  "account": {
    "name": "joe.smith"
  },
  "comment": "string",
  "enabled": "",
  "owner": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "scope": "string",
  "sha_fingerprint": "string"
}
```

## Response

Status: 201, Created

Name	Type	Description
num_records	integer	Number of records.
records	array[ <a href="#">totp_post</a> ]	

## Example response

```
{
  "num_records": 1,
  "records": [
    {
      "account": {
        "name": "joe.smith"
      },
      "comment": "string",
      "emergency_codes": "17503785",
      "enabled": 1,
      "install_url": "string",
      "owner": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "scope": "string",
      "secret_key": "string",
      "sha_fingerprint": "string",
      "verification_code": "string"
    }
  ]
}
```

## Headers

Name	Description	Type
Location	Useful for tracking the resource location	string

## Error

Status: Default

## ONTAP Error Response Codes

Error Code	Description
144834561	TOTP is not configured for the user.

## Definitions

## See Definitions

href

Name	Type	Description
href	string	

\_links

account\_reference

Name	Type	Description
_links	<a href="#">_links</a>	
name	string	User account

owner

Owner name and UUID that uniquely identifies the TOTP profile.

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

totp

TOTP profile for the user account used to access SSH.

Name	Type	Description
account	<a href="#">account_reference</a>	
comment	string	Optional comment for the TOTP profile.
owner	<a href="#">owner</a>	Owner name and UUID that uniquely identifies the TOTP profile.
scope	string	Scope of the entity. Set to "cluster" for cluster owned objects and to "svm" for SVM owned objects.
sha_fingerprint	string	SHA fingerprint for the TOTP secret key.



totp\_post

Response object of the TOTP profile creation.

Name	Type	Description
account	<a href="#">account_reference</a>	
comment	string	Optional comment for the TOTP profile.
emergency_codes	array[string]	TOTP profile emergency codes for a user. These codes are for emergency use when a user cannot access 2FA codes through other means.
install_url	string	TOTP profile installation URL for a user.
owner	<a href="#">owner</a>	Owner name and UUID that uniquely identifies the TOTP profile.
scope	string	Scope of the entity. Set to "cluster" for cluster owned objects and to "svm" for SVM owned objects.
secret_key	string	TOTP profile secret key for a user.
sha_fingerprint	string	SHA fingerprint for the TOTP secret key.
verification_code	string	TOTP profile verification code for a user.

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.

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