



# Manage iSCSI credentials

## ONTAP 9.10.1 REST API Documentation

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# Manage iSCSI credentials

## Protocols SAN iSCSI credentials endpoint overview

### Overview

An iSCSI credentials object defines authentication credentials to be used between an initiator and ONTAP. It identifies an authentication type, user names, and passwords that must be used to authenticate a specific initiator.

The iSCSI credentials REST API allows you to create, update, delete, and discover iSCSI credentials.

### How iSCSI authentication works

An iSCSI credentials object defines the authentication credentials to be used between an initiator and ONTAP. While establishing an iSCSI connection, the initiator sends a login request to ONTAP to begin an iSCSI session. ONTAP then either permits or denies the login request, or determines that a login is not required.

For an initiator, you can specify an authentication type, user names and passwords, and a whitelist of optional network addresses from which the initiator is allowed to connect.

### iSCSI authentication methods

- Challenge-Handshake Authentication Protocol (CHAP) - The initiator logs in using a CHAP user name and password. There are two types of CHAP user names and passwords:
  - Inbound - ONTAP authenticates the initiator. Inbound settings are required if you are using CHAP authentication.
  - Outbound - These are optional credentials to enable the initiator to authenticate ONTAP. You can use credentials only if inbound credentials are also being used.
- deny - The initiator is denied access to ONTAP.
- none - ONTAP does not require authentication for the initiator. The CHAP inbound/outbound password can be any valid string or an even number of valid hexadecimal digits preceded by '0X' or '0x'.

### Initiator address list

The initiator address list is a way to specify valid IP addresses from which the initiator is allowed to connect. If the list is specified and the source address of an iSCSI connection is not in the list, the connection is rejected. Initiator addresses can be specified in either IPv4 or IPv6 format and in one of two forms:

- Range

```
{
  "start": "192.168.0.0",
  "end": "192.168.0.255"
}
```

- Mask

```
{
  "address": "192.168.0.0",
  "netmask": "24"
}
```

## Initiator "default"

The default iSCSI authentication definition is created when the iSCSI service is created. An iSCSI credentials object with *default* as the initiator name identifies the default authentication for an SVM. The default credentials are used for any initiator that does not have specific iSCSI credentials. The default iSCSI authentication method is *none*, but can be changed to *deny* or *CHAP*. The default credentials object does not support an initiator address list.

## Examples

### Creating iSCSI credentials requiring no authentication

```
# The API:
POST /api/protocols/san/iscsi/credentials

# The call:
curl -X POST 'https://<mgmt-ip>/api/protocols/san/iscsi/credentials' -H
'accept: application/hal+json' -d '{ "svm": { "name": "svm1" },
"initiator": "iqn.1992-08.com.netapp:initiator1", "authentication_type":
"none" }'
```

### Creating iSCSI credentials using CHAP inbound authentication

```
# The API:
POST /api/protocols/san/iscsi/credentials

# The call:
curl -X POST 'https://<mgmt-ip>/api/protocols/san/iscsi/credentials' -H
'accept: application/hal+json' -d '{ "svm": { "name": "svm1" },
"initiator": "iqn.1992-08.com.netapp:initiator2", "authentication_type":
"CHAP", "chap": { "inbound": { "user": "user1", "password": "password1" }
} }'
```

### Retrieving all properties of all iSCSI credentials

The `fields` query parameter is used to request all iSCSI credentials properties.

Passwords are not included in the GET output.

```
# The API:
GET /api/protocols/san/iscsi/credentials

# The call:
curl -X GET 'https://<mgmt-
ip>/api/protocols/san/iscsi/credentials?fields=*' -H 'accept:
application/hal+json'

# The response:
{
  "records": [
    {
      "svm": {
        "uuid": "19d04b8e-94d7-11e8-8370-005056b48fd2",
        "name": "svm1",
        "_links": {
          "self": {
            "href": "/api/svm/svms/19d04b8e-94d7-11e8-8370-005056b48fd2"
          }
        }
      },
      "initiator": "default",
      "authentication_type": "none",
      "_links": {
        "self": {
          "href": "/api/protocols/san/iscsi/credentials/19d04b8e-94d7-11e8-
8370-005056b48fd2/default"
        }
      }
    },
    {
      "svm": {
        "uuid": "19d04b8e-94d7-11e8-8370-005056b48fd2",
        "name": "svm1",
        "_links": {
          "self": {
            "href": "/api/svm/svms/19d04b8e-94d7-11e8-8370-005056b48fd2"
          }
        }
      },
      "initiator": "iqn.1992-08.com.netapp:initiator1",
      "authentication_type": "none",
      "_links": {
        "self": {
```

```
    "href": "/api/protocols/san/iscsi/credentials/19d04b8e-94d7-11e8-8370-005056b48fd2/iqn.1992-08.com.netapp:initiator1"
  }
}
},
{
  "svm": {
    "uuid": "19d04b8e-94d7-11e8-8370-005056b48fd2",
    "name": "svm1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/19d04b8e-94d7-11e8-8370-005056b48fd2"
      }
    }
  },
  "initiator": "iqn.1992-08.com.netapp:initiator2",
  "authentication_type": "chap",
  "chap": {
    "inbound": {
      "user": "user1"
    }
  },
  "_links": {
    "self": {
      "href": "/api/protocols/san/iscsi/credentials/19d04b8e-94d7-11e8-8370-005056b48fd2/iqn.1992-08.com.netapp:initiator2"
    }
  }
},
{
  "svm": {
    "uuid": "25f617cf-94d7-11e8-8370-005056b48fd2",
    "name": "svm2",
    "_links": {
      "self": {
        "href": "/api/svm/svms/25f617cf-94d7-11e8-8370-005056b48fd2"
      }
    }
  },
  "initiator": "default",
  "authentication_type": "none",
  "_links": {
    "self": {
      "href": "/api/protocols/san/iscsi/credentials/25f617cf-94d7-11e8-8370-005056b48fd2/default"
    }
  }
}
```

```

    }
  },
  {
    "svm": {
      "uuid": "25f617cf-94d7-11e8-8370-005056b48fd2",
      "name": "svm2",
      "_links": {
        "self": {
          "href": "/api/svm/svms/25f617cf-94d7-11e8-8370-005056b48fd2"
        }
      }
    },
    "initiator": "iqn.1992-08.com.netapp:initiator2",
    "authentication_type": "none",
    "_links": {
      "self": {
        "href": "/api/protocols/san/iscsi/credentials/25f617cf-94d7-11e8-8370-005056b48fd2/iqn.1992-08.com.netapp:initiator2"
      }
    }
  },
  {
    "svm": {
      "uuid": "25f617cf-94d7-11e8-8370-005056b48fd2",
      "name": "svm2",
      "_links": {
        "self": {
          "href": "/api/svm/svms/25f617cf-94d7-11e8-8370-005056b48fd2"
        }
      }
    },
    "initiator": "iqn.1992-08.com.netapp:initiator3",
    "authentication_type": "deny",
    "_links": {
      "self": {
        "href": "/api/protocols/san/iscsi/credentials/25f617cf-94d7-11e8-8370-005056b48fd2/iqn.1992-08.com.netapp:initiator3"
      }
    }
  }
],
"num_records": 6,
"_links": {
  "self": {
    "href": "/api/protocols/san/iscsi/credentials?fields=*"
  }
}

```

```
}  
}
```

## Retrieving specific iSCSI credentials

```
# The API:  
GET /api/protocols/san/iscsi/credentials/{svm.uuid}/{initiator}  
  
# The call:  
curl -X GET 'https://<mgmt-  
ip>/api/protocols/san/iscsi/credentials/25f617cf-94d7-11e8-8370-  
005056b48fd2/iqn.1992-08.com.netapp:initiator2' -H 'accept:  
application/hal+json'  
  
# The response:  
{  
  "svm": {  
    "uuid": "25f617cf-94d7-11e8-8370-005056b48fd2",  
    "name": "svm2",  
    "_links": {  
      "self": {  
        "href": "/api/svm/svms/25f617cf-94d7-11e8-8370-005056b48fd2"  
      }  
    }  
  },  
  "initiator": "iqn.1992-08.com.netapp:initiator2",  
  "authentication_type": "chap",  
  "chap": {  
    "inbound": {  
      "user": "user1"  
    }  
  },  
  "_links": {  
    "self": {  
      "href": "/api/protocols/san/iscsi/credentials/25f617cf-94d7-11e8-8370-  
005056b48fd2/iqn.1992-08.com.netapp:initiator2"  
    }  
  }  
}
```



## Updating the authentication type of iSCSI credentials

```
# The API:
PATCH /api/protocols/san/iscsi/credentials/{svm.uuid}/{initiator}

# The call:
curl -X PATCH 'https://<mgmt-
ip>/api/protocols/san/iscsi/credentials/25f617cf-94d7-11e8-8370-
005056b48fd2/iqn.1992-08.com.netapp:initiator2' -H 'accept:
application/hal+json' -d '{ "authentication_type": "chap", "chap": {
"inbound": { "user": "user1", "password": "password1" } } }'
```

## Updating the initiator address list of iSCSI credentials

```
# The API:
PATCH /api/protocols/san/iscsi/credentials/{svm.uuid}/{initiator}

# The call:
curl -X PATCH 'https://<mgmt-
ip>/api/protocols/san/iscsi/credentials/25f617cf-94d7-11e8-8370-
005056b48fd2/iqn.1992-08.com.netapp:initiator2' -H 'accept:
application/hal+json' -d '{ "initiator_address": { "ranges": [ { "start":
"192.168.0.0", "end": "192.168.255.255" } ] } }'
```

## Deleting iSCSI credentials

```
# The API:
DELETE /api/protocols/san/iscsi/credentials/{svm.uuid}/{initiator}

# The call:
curl -X DELETE 'https://<mgmt-
ip>/api/protocols/san/iscsi/credentials/25f617cf-94d7-11e8-8370-
005056b48fd2/iqn.1992-08.com.netapp:initiator2' -H 'accept:
application/hal+json'
```

## Retrieve iSCSI credentials

GET /protocols/san/iscsi/credentials

Introduced In: 9.6

Retrieves iSCSI credentials.

## Related ONTAP commands

- `vserver iscsi security show`

## Learn more

- [DOC /protocols/san/iscsi/credentials](#)

## Parameters

| Name                            | Type   | In    | Required | Description                               |
|---------------------------------|--------|-------|----------|---|
| authentication_type             | string | query | False    | Filter by authentication_type             |
| chap.outbound.user              | string | query | False    | Filter by chap.outbound.user              |
| chap.inbound.user               | string | query | False    | Filter by chap.inbound.user               |
| svm.uuid                        | string | query | False    | Filter by svm.uuid                        |
| svm.name                        | string | query | False    | Filter by svm.name                        |
| initiator_address.masks.address | string | query | False    | Filter by initiator_address.masks.address |
| initiator_address.masks.family  | string | query | False    | Filter by initiator_address.masks.family  |
| initiator_address.masks.netmask | string | query | False    | Filter by initiator_address.masks.netmask |
| initiator_address.ranges.start  | string | query | False    | Filter by initiator_address.ranges.start  |
| initiator_address.ranges.family | string | query | False    | Filter by initiator_address.ranges.family |

| Name                         | Type          | In    | Required | Description   |
|------------------------------|---------------|-------|----------|---|
| initiator_address_ranges.end | string        | query | False    | Filter by initiator_address_ranges.end  |
| initiator                    | string        | query | False    | Filter by initiator   |
| 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 records. |
| records     | array[ <a href="#">iscsi_credentials</a> ] |                    |

## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "authentication_type": "chap",
    "initiator": "iqn.1998-01.com.corp.iscsi:namel",
    "initiator_address": {
      "masks": {
        "address": "10.10.10.7",
        "family": "ipv4",
        "netmask": "24"
      },
      "ranges": {
        "end": "10.10.10.7",
        "family": "ipv4",
        "start": "10.10.10.7"
      }
    },
    "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 |
|------|----------------------|-------------|
| next | <a href="#">href</a> |             |
| self | <a href="#">href</a> |             |

\_links

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

inbound

Inbound CHAP credentials.

| Name     | Type   | Description  |
|----------|--------|--|
| password | string | The inbound CHAP password. Write-only; optional in POST and PATCH. |
| user     | string | The inbound CHAP user name. Optional in POST and PATCH.            |

outbound

Output CHAP credentials.

| Name     | Type   | Description   |
|----------|--------|---|
| password | string | The outbound CHAP password. Write-only; optional in POST and PATCH. |
| user     | string | The outbound CHAP user name. Optional in POST and PATCH.            |

chap

Challenge-Handshake Authentication Protocol (CHAP) credentials.

| Name     | Type                     | Description               |
|----------|--------------------------|---------------------------|
| inbound  | <a href="#">inbound</a>  | Inbound CHAP credentials. |
| outbound | <a href="#">outbound</a> | Output CHAP credentials.  |

ip\_info

IP information

| Name    | Type   | Description   |
|---------|--------|---|
| address | string | IPv4 or IPv6 address  |
| family  | string | IPv4 or IPv6  |
| netmask | string | Input as netmask length (16) or IPv4 mask (255.255.0.0). For IPv6, the default value is 64 with a valid range of 1 to 127. Output is always netmask length. |

ip\_address\_range

IP address range

| Name   | Type   | Description          |
|--------|--------|----------------------|
| end    | string | IPv4 or IPv6 address |
| family | string | IPv4 or IPv6         |
| start  | string | IPv4 or IPv6 address |

initiator\_address

Initiator address ranges.

| Name   | Type                                      | Description |
|--------|---|-------------|
| masks  | array[ <a href="#">ip_info</a> ]          |             |
| ranges | array[ <a href="#">ip_address_range</a> ] |             |

svm

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



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

#### iscsi\_credentials

| Name                   | Type                              | Description  |
|------------------------|-----------------------------------|--|
| <a href="#">_links</a> | <a href="#">_links</a>            |  |
| authentication_type    | string                            | The iSCSI authentication type. Required in POST and optional in PATCH. |
| chap                   | <a href="#">chap</a>              | Challenge-Handshake Authentication Protocol (CHAP) credentials.        |
| initiator              | string                            | The iSCSI initiator to which the credentials apply. Required in POST.  |
| initiator_address      | <a href="#">initiator_address</a> | Initiator address ranges.  |
| svm                    | <a href="#">svm</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                           |
| code      | string                                   | Error code                                  |
| message   | string                                   | Error message                               |
| target    | string                                   | The target parameter that caused the error. |

# Create iSCSI credentials

POST /protocols/san/iscsi/credentials

**Introduced In:** 9.6

Creates iSCSI credentials.

## Required properties

- `svm.uuid` or `svm.name` - Existing SVM in which to create the iSCSI credentials.
- `initiator` - Initiator for which the iSCSI credentials are to be created.
- `authentication_type` - Type of authentication to use for the credentials.

## Recommended optional properties

- `chap.inbound.user` - In-bound CHAP authentication user name.
- `chap.inbound.password` - In-bound CHAP authentication password.
- `chap.outbound.user` - Out-bound CHAP authentication user name.
- `chap.outbound.password` - Out-bound CHAP authentication password.

## Related ONTAP commands

- `vserver iscsi security create`

## Learn more

- [DOC /protocols/san/iscsi/credentials](#)

## Parameters

| Name                        | Type    | In    | Required | Description   |
|-----------------------------|---------|-------|----------|---|
| <code>return_records</code> | boolean | query | False    | The default is false. If set to true, the records are returned.<br><ul style="list-style-type: none"><li>• Default value:</li></ul> |

## Request Body

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

| Name                | Type                              | Description  |
|---------------------|-----------------------------------|--|
| authentication_type | string                            | The iSCSI authentication type. Required in POST and optional in PATCH. |
| chap                | <a href="#">chap</a>              | Challenge-Handshake Authentication Protocol (CHAP) credentials.        |
| initiator           | string                            | The iSCSI initiator to which the credentials apply. Required in POST.  |
| initiator_address   | <a href="#">initiator_address</a> | Initiator address ranges.  |
| svm                 | <a href="#">svm</a>               |  |

## Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "authentication_type": "chap",
  "initiator": "iqn.1998-01.com.corp.iscsi:name1",
  "initiator_address": {
    "masks": {
      "address": "10.10.10.7",
      "family": "ipv4",
      "netmask": "24"
    },
    "ranges": {
      "end": "10.10.10.7",
      "family": "ipv4",
      "start": "10.10.10.7"
    }
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "name": "svm1",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
}
```

## Response

Status: 201, Created

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

## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "authentication_type": "chap",
    "initiator": "iqn.1998-01.com.corp.iscsi:namel",
    "initiator_address": {
      "masks": {
        "address": "10.10.10.7",
        "family": "ipv4",
        "netmask": "24"
      },
      "ranges": {
        "end": "10.10.10.7",
        "family": "ipv4",
        "start": "10.10.10.7"
      }
    },
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    }
  }
}
```

## Error

Status: Default

### ONTAP Error Response Codes

| Error Code | Description   |
|------------|---|
| 2621462    | An SVM with the specified UUID does not exist.  |
| 2621706    | Both the SVM UUID and SVM name were supplied, but they do not refer to the same SVM.  |
| 2621707    | No SVM was specified. Either <code>svm.name</code> or <code>svm.uuid</code> must be supplied.   |
| 5373969    | A non-empty qualifier is required after the prefix. An example of a valid IQN is <i>iqn.1995-08.com.example:string</i> .                            |
| 5373970    | The IQN prefix is invalid. The correct IQN prefix is <i>iqn</i> . An example of a valid IQN is <i>iqn.1995-08.com.example:string</i> .              |
| 5373971    | The date field is invalid. A valid date field is <i>yyyy-mm</i> . An example of a valid IQN is <i>iqn.1995-08.com.example:string</i> .              |
| 5373972    | The naming authority and string fields can contain only the characters <i>a-z</i> , <i>0-9</i> , <i>.</i> , <i>:</i> , and <i>-</i> .               |
| 5373977    | The EUI-64 identifier field must be exactly 16 hexadecimal digits.  |
| 5373978    | The EUI formatted initiator name supplied is invalid. A valid EUI format is <i>eui.XXXXXXXXXXXXXXXXXX</i> , where X is a hexadecimal digit.         |
| 5373997    | The initiator name supplied is invalid. The valid initiator name formats are <i>iqn.1995-08.com.example:string</i> or <i>eui.0123456789abcdef</i> . |
| 5374078    | The iSCSI service does not exist.   |
| 5374142    | An iSCSI security credential already exists for the specified initiator.  |
| 5374145    | The iSCSI security password must contain an even number of valid hex digits.  |
| 5374147    | The CHAP inbound and outbound passwords must be different.  |
| 5374149    | The inbound user and password properties are required for CHAP authentication.  |
| 5374150    | Outbound CHAP authentication requires an outbound password.   |

| Error Code | Description  |
|------------|--|
| 5374855    | The value for property <code>initiator_address.ranges.start</code> is greater than the value for property <code>initiator_address.ranges.end</code> .                                  |
| 5374856    | The value for property <code>initiator_address.ranges.start</code> does not belong to the same IP address family as the value for property <code>initiator_address.ranges.end</code> . |
| 5374900    | Setting the CHAP authentication properties are not supported with authentication types <i>none</i> or <i>deny</i> .  |

| 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 |
|------|----------------------|-------------|
| self | <a href="#">href</a> |             |

inbound

Inbound CHAP credentials.

| Name     | Type   | Description  |
|----------|--------|--|
| password | string | The inbound CHAP password. Write-only; optional in POST and PATCH. |
| user     | string | The inbound CHAP user name. Optional in POST and PATCH.            |

outbound

Output CHAP credentials.

| Name     | Type   | Description   |
|----------|--------|---|
| password | string | The outbound CHAP password. Write-only; optional in POST and PATCH. |
| user     | string | The outbound CHAP user name. Optional in POST and PATCH.            |

chap

Challenge-Handshake Authentication Protocol (CHAP) credentials.

| Name     | Type                     | Description               |
|----------|--------------------------|---------------------------|
| inbound  | <a href="#">inbound</a>  | Inbound CHAP credentials. |
| outbound | <a href="#">outbound</a> | Output CHAP credentials.  |

ip\_info



## IP information

| Name    | Type   | Description   |
|---------|--------|---|
| address | string | IPv4 or IPv6 address  |
| family  | string | IPv4 or IPv6  |
| netmask | string | Input as netmask length (16) or IPv4 mask (255.255.0.0). For IPv6, the default value is 64 with a valid range of 1 to 127. Output is always netmask length. |

## ip\_address\_range

### IP address range

| Name   | Type   | Description          |
|--------|--------|----------------------|
| end    | string | IPv4 or IPv6 address |
| family | string | IPv4 or IPv6         |
| start  | string | IPv4 or IPv6 address |

## initiator\_address

### Initiator address ranges.

| Name   | Type                    | Description |
|--------|-------------------------|-------------|
| masks  | array[ip_info]          |             |
| ranges | array[ip_address_range] |             |

## 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. |

## iscsi\_credentials

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

| Name                | Type                              | Description  |
|---------------------|-----------------------------------|--|
| authentication_type | string                            | The iSCSI authentication type. Required in POST and optional in PATCH. |
| chap                | <a href="#">chap</a>              | Challenge-Handshake Authentication Protocol (CHAP) credentials.        |
| initiator           | string                            | The iSCSI initiator to which the credentials apply. Required in POST.  |
| initiator_address   | <a href="#">initiator_address</a> | Initiator address ranges.  |
| svm                 | <a href="#">svm</a>               |  |

#### \_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                           |
| code      | string                                   | Error code                                  |
| message   | string                                   | Error message                               |
| target    | string                                   | The target parameter that caused the error. |

# Delete iSCSI credentials

```
DELETE /protocols/san/iscsi/credentials/{svm.uuid}/{initiator}
```

**Introduced In:** 9.6

Deletes specified iSCSI credentials.

## Related ONTAP commands

- `vserver iscsi security delete`

## Learn more

- [DOC /protocols/san/iscsi/credentials](#)

## Parameters

| Name      | Type   | In   | Required | Description                                    |
|-----------|--------|------|----------|--|
| svm.uuid  | string | path | True     | The unique identifier of an SVM.               |
| initiator | string | path | True     | The iSCSI initiator of the credentials object. |

## Response

```
Status: 200, Ok
```

## Error

```
Status: Default
```

## ONTAP Error Response Codes

| Error Code | Description   |
|------------|---|
| 2621462    | An SVM with the specified UUID does not exist.  |
| 2621706    | Both the SVM UUID and SVM name were supplied, but they do not refer to the same SVM.          |
| 2621707    | No SVM was specified. Either <code>svm.name</code> or <code>svm.uuid</code> must be supplied. |
| 5374148    | The default security credential cannot be deleted for an SVM.                                 |

| Error Code | Description  |
|------------|--|
| 5374895    | The iSCSI security credential does not exist on the specified 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

### 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. |

## Retrieve specific iSCSI credentials

GET /protocols/san/iscsi/credentials/{svm.uuid}/{initiator}

**Introduced In:** 9.6

Retrieves specified iSCSI credentials.

### Related ONTAP commands

- `vserver iscsi security show`

### Learn more

- [DOC /protocols/san/iscsi/credentials](#)

### Parameters

| Name     | Type   | In   | Required | Description                      |
|----------|--------|------|----------|----------------------------------|
| svm.uuid | string | path | True     | The unique identifier of an SVM. |

| Name      | Type          | In    | Required | Description                                    |
|-----------|---------------|-------|----------|--|
| initiator | string        | path  | True     | The iSCSI initiator of the credentials object. |
| 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_type    | string                            | The iSCSI authentication type. Required in POST and optional in PATCH. |
| chap                   | <a href="#">chap</a>              | Challenge-Handshake Authentication Protocol (CHAP) credentials.        |
| initiator              | string                            | The iSCSI initiator to which the credentials apply. Required in POST.  |
| initiator_address      | <a href="#">initiator_address</a> | Initiator address ranges.  |
| svm                    | <a href="#">svm</a>               |  |

## Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "authentication_type": "chap",
  "initiator": "iqn.1998-01.com.corp.iscsi:name1",
  "initiator_address": {
    "masks": {
      "address": "10.10.10.7",
      "family": "ipv4",
      "netmask": "24"
    },
    "ranges": {
      "end": "10.10.10.7",
      "family": "ipv4",
      "start": "10.10.10.7"
    }
  },
  "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> |             |

inbound

Inbound CHAP credentials.

| Name     | Type   | Description  |
|----------|--------|--|
| password | string | The inbound CHAP password. Write-only; optional in POST and PATCH. |
| user     | string | The inbound CHAP user name. Optional in POST and PATCH.            |

outbound

Output CHAP credentials.

| Name     | Type   | Description   |
|----------|--------|---|
| password | string | The outbound CHAP password. Write-only; optional in POST and PATCH. |
| user     | string | The outbound CHAP user name. Optional in POST and PATCH.            |

chap

Challenge-Handshake Authentication Protocol (CHAP) credentials.

| Name     | Type                     | Description               |
|----------|--------------------------|---------------------------|
| inbound  | <a href="#">inbound</a>  | Inbound CHAP credentials. |
| outbound | <a href="#">outbound</a> | Output CHAP credentials.  |

ip\_info

## IP information

| Name    | Type   | Description   |
|---------|--------|---|
| address | string | IPv4 or IPv6 address  |
| family  | string | IPv4 or IPv6  |
| netmask | string | Input as netmask length (16) or IPv4 mask (255.255.0.0). For IPv6, the default value is 64 with a valid range of 1 to 127. Output is always netmask length. |

## ip\_address\_range

### IP address range

| Name   | Type   | Description          |
|--------|--------|----------------------|
| end    | string | IPv4 or IPv6 address |
| family | string | IPv4 or IPv6         |
| start  | string | IPv4 or IPv6 address |

## initiator\_address

### Initiator address ranges.

| Name   | Type                                      | Description |
|--------|---|-------------|
| masks  | array[ <a href="#">ip_info</a> ]          |             |
| ranges | array[ <a href="#">ip_address_range</a> ] |             |

## 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. |

## 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 iSCSI credentials

PATCH /protocols/san/iscsi/credentials/{svm.uuid}/{initiator}

**Introduced In:** 9.6

Updates specified iSCSI credentials.

### Related ONTAP commands

- `vserver iscsi security add-initiator-address-ranges`
- `vserver iscsi security default`
- `vserver iscsi security modify`
- `vserver iscsi security remove-initiator-address-ranges`

### Learn more

- [DOC /protocols/san/iscsi/credentials](#)

### Parameters

| Name     | Type   | In   | Required | Description                      |
|----------|--------|------|----------|----------------------------------|
| svm.uuid | string | path | True     | The unique identifier of an SVM. |

| Name                       | Type    | In    | Required | Description   |
|----------------------------|---------|-------|----------|---|
| initiator                  | string  | path  | True     | The iSCSI initiator of the credentials object.  |
| add_initiator_addresses    | boolean | query | False    | If <i>true</i> , the initiator addresses in the body merge into the existing addresses in the iSCSI security object rather than replace the existing addresses.<br><br>• Default value:       |
| remove_initiator_addresses | boolean | query | False    | If <i>true</i> , the initiator addresses in the body are removed from the existing addresses in the iSCSI security object rather than replace the existing addresses.<br><br>• Default value: |

## Request Body

| Name                | Type                              | Description  |
|---------------------|-----------------------------------|--|
| _links              | <a href="#">_links</a>            |  |
| authentication_type | string                            | The iSCSI authentication type. Required in POST and optional in PATCH. |
| chap                | <a href="#">chap</a>              | Challenge-Handshake Authentication Protocol (CHAP) credentials.        |
| initiator           | string                            | The iSCSI initiator to which the credentials apply. Required in POST.  |
| initiator_address   | <a href="#">initiator_address</a> | Initiator address ranges.  |
| svm                 | <a href="#">svm</a>               |  |

## Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "authentication_type": "chap",
  "initiator": "iqn.1998-01.com.corp.iscsi:name1",
  "initiator_address": {
    "masks": {
      "address": "10.10.10.7",
      "family": "ipv4",
      "netmask": "24"
    },
    "ranges": {
      "end": "10.10.10.7",
      "family": "ipv4",
      "start": "10.10.10.7"
    }
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "name": "svm1",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
}
```

## Response

Status: 200, Ok

## Error

Status: Default

| Error Code | Description  |
|------------|--|
| 2621462    | An SVM with the specified UUID does not exist.   |
| 2621706    | Both the SVM UUID and SVM name were supplied, but they do not refer to the same SVM.   |
| 2621707    | No SVM was specified. Either <code>svm.name</code> or <code>svm.uuid</code> must be supplied.  |
| 5374145    | The iSCSI security password must contain an even number of valid hex digits.   |
| 5374147    | The CHAP inbound and outbound passwords must be different.   |
| 5374149    | The inbound user and password properties are required for CHAP authentication.   |
| 5374150    | Outbound CHAP authentication requires an outbound password.  |
| 5374155    | The functionality is not supported for the default security credential.  |
| 5374855    | The value for property <code>initiator_address.ranges.start</code> is greater than the value for property <code>initiator_address.ranges.end</code> .                                  |
| 5374856    | The value for property <code>initiator_address.ranges.start</code> does not belong to the same IP address family as the value for property <code>initiator_address.ranges.end</code> . |
| 5374895    | The iSCSI security credential does not exist on the specified SVM.   |
| 5374900    | Setting the CHAP authentication properties are not supported with authentication types <code>none</code> or <code>deny</code> .  |

| 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 |
|------|----------------------|-------------|
| self | <a href="#">href</a> |             |

inbound

Inbound CHAP credentials.

| Name     | Type   | Description  |
|----------|--------|--|
| password | string | The inbound CHAP password. Write-only; optional in POST and PATCH. |
| user     | string | The inbound CHAP user name. Optional in POST and PATCH.            |

outbound

Output CHAP credentials.

| Name     | Type   | Description   |
|----------|--------|---|
| password | string | The outbound CHAP password. Write-only; optional in POST and PATCH. |
| user     | string | The outbound CHAP user name. Optional in POST and PATCH.            |

chap

Challenge-Handshake Authentication Protocol (CHAP) credentials.

| Name     | Type                     | Description               |
|----------|--------------------------|---------------------------|
| inbound  | <a href="#">inbound</a>  | Inbound CHAP credentials. |
| outbound | <a href="#">outbound</a> | Output CHAP credentials.  |

ip\_info



## IP information

| Name    | Type   | Description   |
|---------|--------|---|
| address | string | IPv4 or IPv6 address  |
| family  | string | IPv4 or IPv6  |
| netmask | string | Input as netmask length (16) or IPv4 mask (255.255.0.0). For IPv6, the default value is 64 with a valid range of 1 to 127. Output is always netmask length. |

## ip\_address\_range

### IP address range

| Name   | Type   | Description          |
|--------|--------|----------------------|
| end    | string | IPv4 or IPv6 address |
| family | string | IPv4 or IPv6         |
| start  | string | IPv4 or IPv6 address |

## initiator\_address

### Initiator address ranges.

| Name   | Type                    | Description |
|--------|-------------------------|-------------|
| masks  | array[ip_info]          |             |
| ranges | array[ip_address_range] |             |

## 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. |

## iscsi\_credentials

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

| Name                | Type                              | Description  |
|---------------------|-----------------------------------|--|
| authentication_type | string                            | The iSCSI authentication type. Required in POST and optional in PATCH. |
| chap                | <a href="#">chap</a>              | Challenge-Handshake Authentication Protocol (CHAP) credentials.        |
| initiator           | string                            | The iSCSI initiator to which the credentials apply. Required in POST.  |
| initiator_address   | <a href="#">initiator_address</a> | Initiator address ranges.  |
| svm                 | <a href="#">svm</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                           |
| code      | string                                   | Error code                                  |
| message   | string                                   | Error message                               |
| target    | string                                   | The target parameter that caused the error. |

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