View iSCSI sessions

REST API reference

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View iSCSI sessions

Protocols SAN iSCSI sessions endpoint overview

Overview

An iSCSI session is one or more TCP connections that link an iSCSI initiator with an iSCSI target. TCP connections can be added and removed from an iSCSI session by the iSCSI initiator. Across all TCP connections within an iSCSI session, an initiator sees one and the same target. After the connection is established, iSCSI control, data, and status messages are communicated over the session.

The iSCSI sessions REST API provides information about iSCSI initiators that have successfully logged in to ONTAP.

Examples

Retrieving all iSCSI sessions

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

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/san/iscsi/sessions" -H
"Accept: application/hal+json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "a009a9e7-4081-b576-7575-ada21efcaf16",
      "name": "svm1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/a009a9e7-4081-b576-7575-ada21efcaf16"
        }
      }
    },
    "target_portal_group": "iscsi_lif1",
    "tsih": 10,
    "_links": {
      "self": {
        "href": "/api/protocols/san/iscsi/sessions/a009a9e7-4081-b576-
7575-ada21efcaf16/iscsi_lif1/10"
      }
    }
  },
```

```
  {
    "svm": {
      "uuid": "b009a9e7-4081-b576-7575-ada21efcaf16",
      "name": "svm2",
      "_links": {
        "self": {
          "href": "/api/svm/svms/b009a9e7-4081-b576-7575-ada21efcaf16"
        }
      }
    },
    "target_portal_group": "iscsi_lif2",
    "tsih": 11,
    "_links": {
      "self": {
        "href": "/api/protocols/san/iscsi/sessions/b009a9e7-4081-b576-
7575-ada21efcaf16/iscsi_lif2/11"
      }
    }
  }
],
"num_records": 2,
"_links": {
  "self": {
    "href": "/api/protocols/san/iscsi/sessions"
  }
}
}
```

Retrieving all of the iSCSI sessions under the target portal group *iscsi_lif1*

The `tpgroup` query parameter is used to perform the query.

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

# The call:
curl -X GET "https://<mgmt-
ip>/api/protocols/san/iscsi/sessions?tpgroup=iscsi_lif1" -H "Accept:
application/hal+json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "a009a9e7-4081-b576-7575-ada21efcaf16",
      "name": "svm1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/a009a9e7-4081-b576-7575-ada21efcaf16"
        }
      }
    },
    "target_portal_group": "iscsi_lif1",
    "tsih": 10,
    "_links": {
      "self": {
        "href": "/api/protocols/san/iscsi/sessions/a009a9e7-4081-b576-
7575-ada21efcaf16/iscsi_lif1/10"
      }
    }
  }
],
"num_records": 1,
"_links": {
  "self": {
    "href": "/api/protocols/san/iscsi/sessions"
  }
}
}
```

Retrieving an iSCSI session

```
# The API:
GET
```

```
/api/protocols/san/iscsi/sessions/{svm.uuid}/{target_portal_group}/{tsih}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/san/iscsi/sessions/a009a9e7-
4081-b576-7575-ada21efcaf16/iscsi_lif1/10" -H "Accept:
application/hal+json"

# The response:
{
"svm": {
  "uuid": "a009a9e7-4081-b576-7575-ada21efcaf16",
  "name": "svm1",
  "_links": {
    "self": {
      "href": "/api/svm/svms/a009a9e7-4081-b576-7575-ada21efcaf16"
    }
  }
},
"target_portal_group": "iscsi_lif1",
"tsih": 10,
"initiator": {
  "name": "iqn.1994-05.com.example:string",
  "comment": "Example information about this initiator"
},
"isid": "61:62:63:64:65:00",
"target_portal_group_tag": 1027,
"connections": [
  {
    "cid": 1,
    "authentication_type": "chap",
    "initiator_address": {
      "address": "10.224.123.85",
      "port": 43827
    },
    "interface": {
      "name": "iscsi_lif1",
      "uuid": "c15439b4-dbb4-11e8-90ac-005056bba882",
      "ip": {
        "address": "192.168.0.1",
        "port": 3260
      },
      "_links": {
        "self": {
          "href": "/api/network/ip/interfaces/c15439b4-dbb4-11e8-90ac-
005056bba882"
        }
```

```
      }
    }
  }
],
"igroups": [
  {
    "uuid": "af7838cd-f993-4faf-90b7-5524787ae1e8",
    "name": "igroup1",
    "_links": {
      "self": {
        "href": "/api/protocols/san/igroups/af7838cd-f993-4faf-90b7-
5524787ae1e8"
      }
    }
  },
  {
    "uuid": "bf7838cd-f993-4faf-90b7-5524787ae1e8",
    "name": "igroup2",
    "_links": {
      "self": {
        "href": "/api/protocols/san/igroups/bf7838cd-f993-4faf-90b7-
5524787ae1e8"
      }
    }
  }
],
"_links": {
  "self": {
    "href": "/api/protocols/san/iscsi/sessions/a009a9e7-4081-b576-7575-
ada21efcaf16/iscsi_lif1/10"
  }
}
}
```

Retrieve iSCSI sessions

GET `/protocols/san/iscsi/sessions`

Introduced In: 9.6

Retrieves iSCSI sessions.

Related ONTAP commands

- `vserver iscsi connection show`
- `vserver iscsi session parameter show`

- `vserver iscsi session show`

Learn more

- DOC /protocols/san/iscsi/sessions

Parameters

Name	Type	In	Required	Description
target_portal_group_tag	integer	query	False	Filter by target_portal_group_tag
initiator.alias	string	query	False	Filter by initiator.alias
initiator.name	string	query	False	Filter by initiator.name
initiator.comment	string	query	False	Filter by initiator.comment • Introduced in: 9.9
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
isid	string	query	False	Filter by isid
connections.interface.name	string	query	False	Filter by connections.interface.name
connections.interface.uuid	string	query	False	Filter by connections.interface.uuid
connections.interface.ip.address	string	query	False	Filter by connections.interface.ip.address

Name	Type	In	Required	Description
connections.interface.ip.port	integer	query	False	Filter by connections.interface.ip.port • Max value: 65536 • Min value: 1
connections.cid	integer	query	False	Filter by connections.cid
connections.authentication_type	string	query	False	Filter by connections.authentication_type
connections.initiator_address.port	integer	query	False	Filter by connections.initiator_address.port
connections.initiator_address.address	string	query	False	Filter by connections.initiator_address.address
igroups.uuid	string	query	False	Filter by igroups.uuid
igroups.name	string	query	False	Filter by igroups.name • maxLength: 96 • minLength: 1
target_portal_group	string	query	False	Filter by target_portal_group
tsih	integer	query	False	Filter by tsih
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. • Max value: 120 • Min value: 0 • Default value: 1
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	The number of records in the response.
records	array[iscsi_session]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "connections": [
        {
          "_links": {
            "next": {
              "href": "/api/resourcelink"
            },
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "authentication_type": "string",
          "cid": 0,
          "initiator_address": {
            "address": "10.10.10.7",
            "port": 55432
          },
          "interface": {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
            },
            "ip": {
              "address": "10.10.10.7",
              "port": 3260
            },
            "name": "lif1",
```

```
            "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
          }
        }
      ],
      "igroups": [
        {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "igroup1",
          "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
        }
      ],
      "initiator": {
        "alias": "initiator_alias1",
        "comment": "This is an iSCSI initiator for host 5",
        "name": "iqn.1992-01.example.com:string"
      },
      "isid": "61:62:63:64:65:00",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "target_portal_group": "tpgroup1",
      "target_portal_group_tag": 0,
      "tsih": 0
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	returned_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	href	
self	href	

_links

Name	Type	Description
self	href	

initiator_address

The TCP socket information for the initiator end of the connection. This is useful for network packet debugging.

Name	Type	Description
address	string	The TCP IPv4 or IPv6 address of the initiator end of the iSCSI connection.
port	integer	The TCP port number of the initiator end of the iSCSI connection.

ip

The IP information. ONTAP only supports port 3260.

Name	Type	Description
address	string	IPv4 or IPv6 address
port	integer	The TCP port number of the iSCSI access endpoint.

interface

The network interface information for the target end of the connection.

Name	Type	Description
_links	_links	
ip	ip	The IP information. ONTAP only supports port 3260. • readOnly: 1 • Introduced in: 9.6
name	string	The name of the interface.
uuid	string	The UUID that uniquely identifies the interface.

iscsi_connection

An active iSCSI connection.

Name	Type	Description
_links	_links	
authentication_type	string	The iSCSI authentication type used to establish the connection.
cid	integer	The identifier of the connection within the session.
initiator_address	initiator_address	The TCP socket information for the initiator end of the connection. This is useful for network packet debugging.
interface	interface	The network interface information for the target end of the connection.

igroups

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

initiator

The initiator that created the session.

Name	Type	Description
alias	string	The initiator alias.
comment	string	A comment available for use by the administrator. This is modifiable from the initiator REST endpoint directly. See PATCH /protocols/san/igroups/{igroup.uuid}/initiators/{name} .
name	string	The world wide unique name of the initiator.

svm

SVM, applies only to SVM-scoped objects.

Name	Type	Description
_links	_links	
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.

iscsi_session

An iSCSI session is one or more TCP connections that link an iSCSI initiator with an iSCSI target. TCP connections can be added and removed from an iSCSI session by the iSCSI initiator. Across all TCP connections within an iSCSI session, an initiator sees one and the same target. After the connection is established, iSCSI control, data, and status messages are communicated over the session.

Name	Type	Description
_links	_links	
connections	array[iscsi_connection]	The iSCSI connections that make up the iSCSI session.
igroups	array[igroups]	The initiator groups in which the initiator is a member.
initiator	initiator	The initiator that created the session.

Name	Type	Description
isid	string	The initiator portion of the session identifier specified by the initiator during login.
svm	svm	SVM, applies only to SVM-scoped objects.
target_portal_group	string	The target portal group to which the session belongs.
target_portal_group_tag	integer	The target portal group tag of the session.
tsih	integer	The target session identifier handle (TSIH) of the session.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_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 an iSCSI session

GET `/protocols/san/iscsi/sessions/{svm.uuid}/{tpgroup}/{tsih}`

Introduced In: 9.6

Retrieves an iSCSI session.

Related ONTAP commands

- `vserver iscsi connection show`
- `vserver iscsi session parameter show`
- `vserver iscsi session show`

Learn more

- DOC /protocols/san/iscsi/sessions

Parameters

Name	Type	In	Required	Description
svm.uuid	string	path	True	The unique identifier of the SVM of the iSCSI session.
tpgroup	string	path	True	The target portal group of the iSCSI session.
tsih	integer	path	True	The target session identifying handle.
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
connections	array[iscsi_connection]	The iSCSI connections that make up the iSCSI session.
igroups	array[igroups]	The initiator groups in which the initiator is a member.
initiator	initiator	The initiator that created the session.

Name	Type	Description
isid	string	The initiator portion of the session identifier specified by the initiator during login.
svm	svm	SVM, applies only to SVM-scoped objects.
target_portal_group	string	The target portal group to which the session belongs.
target_portal_group_tag	integer	The target portal group tag of the session.
tsih	integer	The target session identifier handle (TSIH) of the session.

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "connections": [
    {
      "_links": {
        "next": {
          "href": "/api/resourcelink"
        },
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "authentication_type": "string",
      "cid": 0,
      "initiator_address": {
        "address": "10.10.10.7",
        "port": 55432
      },
      "interface": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "ip": {
          "address": "10.10.10.7",
          "port": 3260
        },
        "name": "lif1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      }
    }
  ],
  "igroups": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
```

```
      "name": "igroup1",
      "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    }
  ],
  "initiator": {
    "alias": "initiator_alias1",
    "comment": "This is an iSCSI initiator for host 5",
    "name": "iqn.1992-01.example.com:string"
  },
  "isid": "61:62:63:64:65:00",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "target_portal_group": "tpgroup1",
  "target_portal_group_tag": 0,
  "tsih": 0
}
```


Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
2621462	An SVM with the specified UUID does not exist.

Also see the table of common errors in the Response body overview section of this documentation.

Name	Type	Description
error	returned_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	

_links

Name	Type	Description
next	href	
self	href	

initiator_address

The TCP socket information for the initiator end of the connection. This is useful for network packet debugging.

Name	Type	Description
address	string	The TCP IPv4 or IPv6 address of the initiator end of the iSCSI connection.
port	integer	The TCP port number of the initiator end of the iSCSI connection.

ip

The IP information. ONTAP only supports port 3260.

Name	Type	Description
address	string	IPv4 or IPv6 address
port	integer	The TCP port number of the iSCSI access endpoint.

interface

The network interface information for the target end of the connection.

Name	Type	Description
_links	_links	
ip	ip	The IP information. ONTAP only supports port 3260. • readOnly: 1 • Introduced in: 9.6
name	string	The name of the interface.
uuid	string	The UUID that uniquely identifies the interface.

iscsi_connection

An active iSCSI connection.

Name	Type	Description
_links	_links	
authentication_type	string	The iSCSI authentication type used to establish the connection.
cid	integer	The identifier of the connection within the session.
initiator_address	initiator_address	The TCP socket information for the initiator end of the connection. This is useful for network packet debugging.
interface	interface	The network interface information for the target end of the connection.

igroups

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

initiator

The initiator that created the session.

Name	Type	Description
alias	string	The initiator alias.
comment	string	A comment available for use by the administrator. This is modifiable from the initiator REST endpoint directly. See PATCH /protocols/san/igroups/{igroup.uuid}/initiators/{name} .
name	string	The world wide unique name of the initiator.

svm

SVM, applies only to SVM-scoped objects.

Name	Type	Description
_links	_links	
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[error_arguments]	Message arguments
code	string	Error code
message	string	Error message

Name	Type	Description
target	string	The target parameter that caused the error.

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