



Manage SAN igroups

ONTAP 9.7 REST API reference

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Manage SAN igroups

Protocols SAN igroups endpoint overview

Overview

An initiator group (igroup) is a collection of Fibre Channel (FC) world wide port names (WWPNs), and/or iSCSI Qualified Names (IQNs), and/or iSCSI EUIs (Extended Unique Identifiers) that identify host initiators.

Initiator groups are used to control which hosts can access specific LUNs. To grant access to a LUN from one or more hosts, create an initiator group containing the host initiator names, then create a LUN map that associates the initiator group with the LUN.

The initiator group REST API allows you to create, update, delete, and discover initiator groups, and add and remove initiators that can access the target and associated LUNs. An initiator can appear in multiple initiator groups. An initiator group can be mapped to multiple LUNs. A specific initiator can be mapped to a specific LUN only once.

All initiators in an initiator group must be from the same operating system. The initiator group's operating system is specified when the initiator group is created.

When an initiator group is created, the `protocol` property is used to restrict member initiators to Fibre Channel (*fcp*), iSCSI (*iscsi*), or both (*mixed*).

Zero or more initiators can be supplied when the initiator group is created. After creation, initiators can be added or removed from the initiator group using the

`/protocols/san/igroups/{igroup.uuid}/initiators` endpoint. See [DELETE /protocols/san/igroups/{igroup.uuid}/initiators/{name}](#) for more details.

An FC WWPN consist of 16 hexadecimal digits grouped as 8 pairs separated by colons. The format for an iSCSI IQN is *iqn.yyyy-mm.reverse_domain_name:any*. The iSCSI EUI format consists of the *eui.* prefix followed by 16 hexadecimal characters.

Examples

Creating an initiator group with no initiators

The example initiator group is for Linux iSCSI initiators only. Note that the `return_records` query parameter is used to obtain the newly created initiator group in the response.

```
# The API:
POST /api/protocols/san/igroups

# The call:
curl -X POST 'https://<mgmt-
ip>/api/protocols/san/igroups?return_records=true' -H 'accept:
application/hal+json' -d '{ "svm": { "name": "svm1" }, "name": "igroup1",
"os_type": "linux", "protocol": "iscsi" }'

# The response:
{
  "num_records": 1,
  "records": [
    {
      "svm": {
        "uuid": "02b0dfff-aa28-11e8-a653-005056bb7072",
        "name": "svm1",
        "_links": {
          "self": {
            "href": "/api/svm/svms/02b0dfff-aa28-11e8-a653-005056bb7072"
          }
        }
      },
      "uuid": "8f249e7d-ab9f-11e8-b8a3-005056bb7072",
      "name": "igroup1",
      "protocol": "iscsi",
      "os_type": "linux",
      "_links": {
        "self": {
          "href": "/api/protocols/san/igroups/8f249e7d-ab9f-11e8-b8a3-
005056bb7072"
        }
      }
    }
  ]
}
```

Creating an initiator group with initiators

The example initiator group is for Windows. FC Protocol and iSCSI initiators are allowed. Note that the `return_records` query parameter is used to obtain the newly created initiator group in the response.

```
# The API:
```

```
POST /api/protocols/san/igroups
```

```
# The call:
```

```
curl -X POST 'https://<mgmt-  
ip>/api/protocols/san/igroups?return_records=true' -H 'accept:  
application/hal+json' -d '{ "svm": { "name": "svm1" }, "name": "igroup2",  
"os_type": "windows", "protocol": "mixed", "initiators": [ { "name":  
"20:01:00:50:56:bb:70:72" }, { "name": "iqn.1991-05.com.ms:host1" } ] }'
```

```
# The response:
```

```
{  
  "num_records": 1,  
  "records": [  
    {  
      "svm": {  
        "uuid": "02b0dfff-aa28-11e8-a653-005056bb7072",  
        "name": "svm1",  
        "_links": {  
          "self": {  
            "href": "/api/svm/svms/02b0dfff-aa28-11e8-a653-005056bb7072"  
          }  
        }  
      },  
      "uuid": "abf9c39d-ab9f-11e8-b8a3-005056bb7072",  
      "name": "igroup2",  
      "protocol": "mixed",  
      "os_type": "windows",  
      "initiators": [  
        {  
          "name": "20:01:00:50:56:bb:70:72",  
          "_links": {  
            "self": {  
              "href": "/api/protocols/san/igroups/abf9c39d-ab9f-11e8-b8a3-  
005056bb7072/initiators/20:01:00:50:56:bb:70:72"  
            }  
          }  
        },  
        {  
          "name": "iqn.1991-05.com.ms:host1",  
          "_links": {  
            "self": {  
              "href": "/api/protocols/san/igroups/abf9c39d-ab9f-11e8-b8a3-  
005056bb7072/initiators/iqn.1991-05.com.ms:host1"  
            }  
          }  
        }  
      ]  
    }  
  ]  
}
```

```

    ],
    "_links": {
      "self": {
        "href": "/api/protocols/san/igroups/abf9c39d-ab9f-11e8-b8a3-
005056bb7072"
      }
    }
  }
]
}

```

Retrieving all initiator groups

```

# The API:
GET /api/protocols/san/igroups

# The call:
curl -X GET 'https://<mgmt-ip>/api/protocols/san/igroups' -H 'accept:
application/hal+json'

# The response:
{
  "records": [
    {
      "svm": {
        "uuid": "02b0dfff-aa28-11e8-a653-005056bb7072",
        "name": "svml",
        "_links": {
          "self": {
            "href": "/api/svm/svms/02b0dfff-aa28-11e8-a653-005056bb7072"
          }
        }
      },
      "uuid": "8f249e7d-ab9f-11e8-b8a3-005056bb7072",
      "name": "igroup1",
      "_links": {
        "self": {
          "href": "/api/protocols/san/igroups/8f249e7d-ab9f-11e8-b8a3-
005056bb7072"
        }
      }
    },
    {
      "svm": {

```

```

    "uuid": "02b0dfff-aa28-11e8-a653-005056bb7072",
    "name": "svm1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/02b0dfff-aa28-11e8-a653-005056bb7072"
      }
    }
  },
  "uuid": "abf9c39d-ab9f-11e8-b8a3-005056bb7072",
  "name": "igroup2",
  "_links": {
    "self": {
      "href": "/api/protocols/san/igroups/abf9c39d-ab9f-11e8-b8a3-005056bb7072"
    }
  }
},
"num_records": 2,
"_links": {
  "self": {
    "href": "/api/protocols/san/igroups"
  }
}
}

```

Retrieving all properties of all initiator groups

The `fields` query parameter is used to request all initiator group properties.

```

# The API:
GET /api/protocols/san/igroups

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

# The response:
{
  "records": [
    {
      "svm": {
        "uuid": "02b0dfff-aa28-11e8-a653-005056bb7072",
        "name": "svm1",

```

```

    "_links": {
      "self": {
        "href": "/api/svm/svms/02b0dfff-aa28-11e8-a653-005056bb7072"
      }
    }
  },
  "uuid": "8f249e7d-ab9f-11e8-b8a3-005056bb7072",
  "name": "igroup1",
  "protocol": "iscsi",
  "os_type": "linux",
  "_links": {
    "self": {
      "href": "/api/protocols/san/igroups/8f249e7d-ab9f-11e8-b8a3-005056bb7072"
    }
  }
},
{
  "svm": {
    "uuid": "02b0dfff-aa28-11e8-a653-005056bb7072",
    "name": "svm1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/02b0dfff-aa28-11e8-a653-005056bb7072"
      }
    }
  },
  "uuid": "abf9c39d-ab9f-11e8-b8a3-005056bb7072",
  "name": "igroup2",
  "protocol": "mixed",
  "os_type": "windows",
  "initiators": [
    {
      "name": "20:01:00:50:56:bb:70:72",
      "_links": {
        "self": {
          "href": "/api/protocols/san/igroups/abf9c39d-ab9f-11e8-b8a3-005056bb7072/initiators/20:01:00:50:56:bb:70:72"
        }
      }
    }
  ],
  {
    "name": "iqn.1991-05.com.ms:host1",
    "_links": {
      "self": {
        "href": "/api/protocols/san/igroups/abf9c39d-ab9f-11e8-b8a3-

```



```
005056bb7072/initiators/iqn.1991-05.com.ms:host1"
    }
  }
},
"_links": {
  "self": {
    "href": "/api/protocols/san/igroups/abf9c39d-ab9f-11e8-b8a3-
005056bb7072"
  }
}
},
],
"num_records": 2,
"_links": {
  "self": {
    "href": "/api/protocols/san/igroups?fields=*"
  }
}
}
```

Retrieving all initiator groups for Linux

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

```
# The API:
GET /api/protocols/san/igroups

# The call:
curl -X GET 'https://<mgmt-ip>/api/protocols/san/igroups?os_type=linux' -H
'accept: application/hal+json'

# The response:
{
  "records": [
    {
      "svm": {
        "uuid": "02b0dfff-aa28-11e8-a653-005056bb7072",
        "name": "svm1",
        "_links": {
          "self": {
            "href": "/api/svm/svms/02b0dfff-aa28-11e8-a653-005056bb7072"
          }
        }
      },
      "uuid": "8f249e7d-ab9f-11e8-b8a3-005056bb7072",
      "name": "igroup1",
      "os_type": "linux",
      "_links": {
        "self": {
          "href": "/api/protocols/san/igroups/8f249e7d-ab9f-11e8-b8a3-005056bb7072"
        }
      }
    },
    {
      "num_records": 1,
      "_links": {
        "self": {
          "href": "/api/protocols/san/igroups?os_type=linux"
        }
      }
    }
  ]
}
```

Retrieving a specific initiator group

```

# The API:
GET /api/protocols/san/igroups/{uuid}

# The call:
curl -X GET 'https://<mgmt-ip>/api/protocols/san/igroups/8f249e7d-ab9f-11e8-b8a3-005056bb7072' -H 'accept: application/hal+json'

# The response:
{
  "svm": {
    "uuid": "02b0dfff-aa28-11e8-a653-005056bb7072",
    "name": "svm1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/02b0dfff-aa28-11e8-a653-005056bb7072"
      }
    }
  },
  "uuid": "8f249e7d-ab9f-11e8-b8a3-005056bb7072",
  "name": "igroup1",
  "protocol": "iscsi",
  "os_type": "linux",
  "_links": {
    "self": {
      "href": "/api/protocols/san/igroups/8f249e7d-ab9f-11e8-b8a3-005056bb7072"
    }
  }
}

```

Retrieving LUNs mapped to a specific initiator group

The `fields` parameter is used to specify the desired properties.

```

# The API:
GET /api/protocols/san/igroups

# The call:
curl -X GET 'https://<mgmt-ip>/api/protocols/san/igroups/8f249e7d-ab9f-11e8-b8a3-005056bb7072?fields=lun_maps' -H 'accept: application/hal+json'

# The response:
{

```

```

"svm": {
  "uuid": "02b0dfff-aa28-11e8-a653-005056bb7072",
  "name": "svml",
  "_links": {
    "self": {
      "href": "/api/svm/svms/02b0dfff-aa28-11e8-a653-005056bb7072"
    }
  }
},
"uuid": "8f249e7d-ab9f-11e8-b8a3-005056bb7072",
"name": "igroup1",
"lun_maps": [
  {
    "logical_unit_number": 0,
    "lun": {
      "name": "/vol/vol1/lun1",
      "uuid": "4b33ba57-c4e0-4dbb-bc47-214800d18a71",
      "node": {
        "name": "node1",
        "uuid": "f17182af-223f-4d51-8197-2cb2146d5c4c",
        "_links": {
          "self": {
            "href": "/api/cluster/nodes/f17182af-223f-4d51-8197-2cb2146d5c4c"
          }
        }
      },
      "_links": {
        "self": {
          "href": "/api/storage/luns/4b33ba57-c4e0-4dbb-bc47-214800d18a71"
        }
      }
    }
  }
]
"_links": {
  "self": {
    "href": "/api/protocols/san/igroups/8f249e7d-ab9f-11e8-b8a3-005056bb7072"
  }
}
}

```

Renaming an initiator group

Note that renaming an initiator group must be done in a PATCH request separate from any other modifications.

```
# The API:
PATCH /api/protocols/san/igroups/{uuid}

# The call:
curl -X PATCH 'https://<mgmt-ip>/api/protocols/san/igroups/8f249e7d-ab9f-11e8-b8a3-005056bb7072' -H 'accept: application/hal+json' -d '{ "name": "igroup1_newName" }'
```

Changing the operating system type of an initiator group

```
# The API:
PATCH /api/protocols/san/igroups/{uuid}

# The call:
curl -X PATCH 'https://<mgmt-ip>/api/protocols/san/igroups/8f249e7d-ab9f-11e8-b8a3-005056bb7072' -H 'accept: application/hal+json' -d '{ "os_type": "aix" }'
```

Adding an initiator to an initiator group

```
# The API:
POST /api/protocols/san/igroups/{igroup.uuid}/initiators

# The call:
curl -X POST 'https://<mgmt-ip>/api/protocols/san/igroups/8f249e7d-ab9f-11e8-b8a3-005056bb7072/initiators' -H 'accept: application/hal+json' -d '{ "name": "iqn.1991-05.com.ms:host2" }'
```

Adding multiple initiators to an initiator group

Note the use of the `records` property to add multiple initiators to the initiator group in a single API call.

```
# The API:
POST /api/protocols/san/igroups/{igroup.uuid}/initiators
```

```
# The call:
curl -X POST 'https://<mgmt-ip>/api/protocols/san/igroups/8f249e7d-ab9f-11e8-b8a3-005056bb7072/initiators' -H 'accept: application/hal+json' -d '{"records": [ { "name": "iqn.1991-05.com.ms:host3" }, { "name": "iqn.1991-05.com.ms:host4" } ] }'
```

Removing an initiator from an initiator group

```
# The API:
DELETE /api/protocols/san/igroups/{igroup.uuid}/initiators/iqn.1991-05.com.ms:host3
```

```
# The call:
curl -X DELETE 'https://<mgmt-ip>/api/protocols/san/igroups/8f249e7d-ab9f-11e8-b8a3-005056bb7072/initiators/iqn.1991-05.com.ms:host3' -H 'accept: application/hal+json'
```

Removing an initiator from a mapped initiator group

Normally, removing an initiator from an initiator group that is mapped to a LUN is not allowed. The removal can be forced using the `allow_delete_while_mapped` query parameter.

```
# The API:
DELETE /api/protocols/san/igroups/{igroup.uuid}/initiators/iqn.1991-05.com.ms:host4
```

```
# The call:
curl -X DELETE 'https://<mgmt-ip>/api/protocols/san/igroups/8f249e7d-ab9f-11e8-b8a3-005056bb7072/initiators/iqn.1991-05.com.ms:host4?allow_delete_while_mapped=true' -H 'accept: application/hal+json'
```

Deleting an initiator group

```
# The API:
DELETE /api/protocols/san/igroups/{uuid}

# The call:
curl -X DELETE 'https://<mgmt-ip>/api/protocols/san/igroups/abf9c39d-ab9f-11e8-b8a3-005056bb7072' -H 'accept: application/hal+json'
```

Deleting a mapped initiator group

Normally, deleting an initiator group that is mapped to a LUN is not allowed. The deletion can be forced using the `allow_delete_while_mapped` query parameter.

```
# The API:
DELETE /api/protocols/san/igroups/{uuid}

# The call:
curl -X DELETE 'https://<mgmt-ip>/api/protocols/san/igroups/abf9c39d-ab9f-11e8-b8a3-005056bb7072?allow_delete_while_mapped=true' -H 'accept: application/hal+json'
```

Retrieve initiator groups

GET /protocols/san/igroups

Retrieves initiator groups.

Expensive properties

There is an added cost to retrieving values for these properties. They are not included by default in GET results and must be explicitly requested using the `fields` query parameter. See [DOC Requesting specific fields](#) to learn more.

- `lun_maps.*`

Related ONTAP commands

- `lun igroup show`
- `lun mapping show`

Learn more

- [DOC /protocols/san/igroups](#)

Parameters

Name	Type	In	Required	Description
delete_on_unmap	boolean	query	False	Filter by delete_on_unmap
initiators.name	string	query	False	Filter by initiators.name
initiators.igroup.uuid	string	query	False	Filter by initiators.igroup.uuid
protocol	string	query	False	Filter by protocol
name	string	query	False	Filter by name
uuid	string	query	False	Filter by uuid
lun_maps.logical_unit_number	integer	query	False	Filter by lun_maps.logical_unit_number
lun_maps.lun.node.uuid	string	query	False	Filter by lun_maps.lun.node.uuid
lun_maps.lun.node.name	string	query	False	Filter by lun_maps.lun.node.name
lun_maps.lun.uuid	string	query	False	Filter by lun_maps.lun.uuid
lun_maps.lun.name	string	query	False	Filter by lun_maps.lun.name
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
os_type	string	query	False	Filter by os_type
fields	array[string]	query	False	Specify the fields to return.

Name	Type	In	Required	Description
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.
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.
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	Number of records.
records	array[igroup]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "initiators": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "igroup": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
      },
      "name": "iqn.1998-01.com.corp.iscsi:name1"
    },
    "lun_maps": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "logical_unit_number": 0,
      "lun": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        }
      }
    },
  },
}
```

```

    "name": "lun1",
    "node": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "node1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
  },
  "name": "igroup1",
  "os_type": "aix",
  "protocol": "fc",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
}
}

```

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	href	
self	href	

_links

Name	Type	Description
self	href	

igroup

The initiator group in which the initiator is found.

Note that this does not mean that the initiator cannot also be found in other initiator groups.

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

igroup_initiator_no_records

Name	Type	Description
_links	_links	
igroup	igroup	The initiator group in which the initiator is found. Note that this does not mean that the initiator cannot also be found in other initiator groups.

Name	Type	Description
name	string	<p>The FC WWPN, iSCSI IQN, or iSCSI EUI that identifies the host initiator. Valid in POST only and not allowed when the <code>records</code> property is used.</p> <p>An FC WWPN consist of 16 hexadecimal digits grouped as 8 pairs separated by colons. The format for an iSCSI IQN is <i>iqn.yyyy-mm.reverse_domain_name:any</i>. The iSCSI EUI format consists of the <i>eui.</i> prefix followed by 16 hexadecimal characters.</p>

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

lun

The LUN to which the initiator group is mapped.

Name	Type	Description
_links	_links	
name	string	The name of the LUN.
node	node	
uuid	string	The unique identifier of the LUN.

lun_maps

A LUN map with which the initiator group is associated.

Name	Type	Description
_links	_links	
logical_unit_number	integer	The logical unit number assigned to the LUN for initiators in the initiator group.

Name	Type	Description
lun	lun	The LUN to which the initiator group is mapped.

svm

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

igroup

An initiator group (igroup) is a collection of Fibre Channel (FC) world wide port names (WWPN), and/or iSCSI Qualified Names (IQNs), and/or iSCSI EUIs (Extended Unique Identifiers) that identify host initiators.

Initiator groups are used to control which hosts can access specific LUNs. To grant access to a LUN from one or more hosts, create an initiator group containing the hosts' initiator names, then create a LUN map that associates the initiator group with the LUN.

An initiator can appear in multiple initiator groups. An initiator group can be mapped to multiple LUNs. A specific initiator can be mapped to a specific LUN only once.

All initiators in an initiator group must be from the same operating system. The initiator group's operating system is specified when the initiator group is created.

When an initiator group is created, the `protocol` property is used to restrict member initiators to Fibre Channel (*fcp*), iSCSI (*iscsi*), or both (*mixed*).

Zero or more initiators can be supplied when the initiator group is created. After creation, initiators can be added or removed from the initiator group using the `/protocols/san/igroups/{igroup.uuid}/initiators` endpoint. See [DELETE /protocols/san/igroups/{igroup.uuid}/initiators/{name}](#) for more details.

Name	Type	Description
_links	_links	
delete_on_unmap	boolean	An option that causes the initiator group to be deleted when the last LUN map associated with it is deleted. Optional in PATCH only; not available in POST. This property defaults to <i>false</i> when the initiator group is created.

Name	Type	Description
initiators	array[igroup_initiator_no_records]	<p>The initiators that are members of the group. Optional in POST.</p> <p>Zero or more initiators can be supplied when the initiator group is created. After creation, initiators can be added or removed from the initiator group using the <code>/protocols/san/igroups/{igroup.uuid}/initiators</code> endpoint. See DELETE /protocols/san/igroups/{igroup.uuid}/initiators/{name} for more details.</p>
lun_maps	array[lun_maps]	<p>All LUN maps with which the initiator is associated.</p> <p>There is an added cost to retrieving property values for <code>lun_maps</code>. They not populated for either a collection GET or an instance GET unless explicitly requested using the <code>fields</code> query parameter. See DOC Requesting specific fields to learn more.</p>
name	string	<p>The name of the initiator group. Required in POST; optional in PATCH.</p> <p>Note that renaming an initiator group must be done in a PATCH request separate from any other modifications.</p>
os_type	string	<p>The host operating system of the initiator group. All initiators in the group should be hosts of the same operating system. Required in POST; optional in PATCH.</p>

Name	Type	Description
protocol	string	The protocols supported by the initiator group. This restricts the type of initiators that can be added to the initiator group. Optional in POST; if not supplied, this defaults to <i>mixed</i> . The protocol of an initiator group cannot be changed after creation of the group.
svm	svm	
uuid	string	The unique identifier of the initiator group.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

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.

Create an initiator group

POST /protocols/san/igroups

Creates an initiator group.

Required properties

- `svm.uuid` or `svm.name` - Existing SVM in which to create the initiator group.

- `name` - Name of the initiator group.
- `os_type` - Operating system of the initiator group's initiators.

Recommended optional properties

- `initiators.name` - Name(s) of initiator group's initiators. This property can be used to create the initiator group and populate it with initiators in a single request.

Default property values

If not specified in POST, the following default property values are assigned.

- `protocol` - *mixed* - Data protocol of the initiator group's initiators.

Learn more

- [DOC /protocols/san/igroups](#)

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.

Request Body

Name	Type	Description
<code>_links</code>	_links	
<code>delete_on_unmap</code>	boolean	An option that causes the initiator group to be deleted when the last LUN map associated with it is deleted. Optional in PATCH only; not available in POST. This property defaults to <i>false</i> when the initiator group is created.

Name	Type	Description
initiators	array[igroup_initiator_no_records]	<p>The initiators that are members of the group. Optional in POST.</p> <p>Zero or more initiators can be supplied when the initiator group is created. After creation, initiators can be added or removed from the initiator group using the <code>/protocols/san/igroups/{igroup.uuid}/initiators</code> endpoint. See DELETE /protocols/san/igroups/{igroup.uuid}/initiators/{name} for more details.</p>
lun_maps	array[lun_maps]	<p>All LUN maps with which the initiator is associated.</p> <p>There is an added cost to retrieving property values for <code>lun_maps</code>. They not populated for either a collection GET or an instance GET unless explicitly requested using the <code>fields</code> query parameter. See DOC Requesting specific fields to learn more.</p>
name	string	<p>The name of the initiator group. Required in POST; optional in PATCH.</p> <p>Note that renaming an initiator group must be done in a PATCH request separate from any other modifications.</p>
os_type	string	<p>The host operating system of the initiator group. All initiators in the group should be hosts of the same operating system. Required in POST; optional in PATCH.</p>

Name	Type	Description
protocol	string	<p>The protocols supported by the initiator group. This restricts the type of initiators that can be added to the initiator group. Optional in POST; if not supplied, this defaults to <i>mixed</i>.</p> <p>The protocol of an initiator group cannot be changed after creation of the group.</p>
svm	svm	
uuid	string	The unique identifier of the initiator group.

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "initiators": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "igroup": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    },
    "name": "iqn.1998-01.com.corp.iscsi:name1"
  },
  "lun_maps": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "logical_unit_number": 0,
    "lun": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "lun1",
      "node": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "node1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      }
    }
  }
}
```

```

    },
    "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
  }
},
"name": "igroup1",
"os_type": "aix",
"protocol": "fcp",
"svm": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
},
"name": "svm1",
"uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
}

```

Response

Status: 201, Created

Name	Type	Description
_links	_links	
num_records	integer	Number of records.
records	array[igroup]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "initiators": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "igroup": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "uuid": "4ea7a442-86d1-11e0-aelc-123478563412"
      },
      "name": "iqn.1998-01.com.corp.iscsi:name1"
    },
    "lun_maps": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "logical_unit_number": 0,
      "lun": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        }
      }
    },
  },
}
```

```

    "name": "lun1",
    "node": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "node1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
  },
  "name": "igroup1",
  "os_type": "aix",
  "protocol": "fcp",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
}
}

```

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
2621462	The supplied SVM does not exist.
2621706	The specified <code>svm.uuid</code> and <code>svm.name</code> 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.
5373958	An invalid initiator group name was supplied.

Error Code	Description
5373966	An initiator group cannot be created in an SVM that is configured for NVMe.
5373969	A supplied initiator name looks like an iSCSI IQN initiator, but the portions after the prefix are missing.
5373971	A supplied initiator name looks like an iSCSI IQN initiator, but the date portion is invalid.
5373972	A supplied initiator name looks like an iSCSI IQN initiator, but the naming authority portion is invalid.
5373977	A supplied initiator name looks like an iSCSI EUI initiator, but the length is invalid.
5373978	A supplied initiator name looks like an iSCSI EUI initiator, but the format is invalid.
5373992	A supplied initiator name was too long to be valid.
5373993	A supplied initiator name did not match any valid format.
5374023	An initiator group with the same name already exists.
5374038	An invalid Fibre Channel WWPN was supplied.
5374039	An invalid iSCSI initiator name was supplied.
5374732	An initiator is already in another initiator group with a conflicting operating system type.

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	href	

igroup

The initiator group in which the initiator is found.

Note that this does not mean that the initiator cannot also be found in other initiator groups.

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

igroup_initiator_no_records

Name	Type	Description
_links	_links	
igroup	igroup	The initiator group in which the initiator is found. Note that this does not mean that the initiator cannot also be found in other initiator groups.

Name	Type	Description
name	string	<p>The FC WWPN, iSCSI IQN, or iSCSI EUI that identifies the host initiator. Valid in POST only and not allowed when the <code>records</code> property is used.</p> <p>An FC WWPN consist of 16 hexadecimal digits grouped as 8 pairs separated by colons. The format for an iSCSI IQN is <i>iqn.yyyy-mm.reverse_domain_name:any</i>. The iSCSI EUI format consists of the <i>eui.</i> prefix followed by 16 hexadecimal characters.</p>

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

lun

The LUN to which the initiator group is mapped.

Name	Type	Description
_links	_links	
name	string	The name of the LUN.
node	node	
uuid	string	The unique identifier of the LUN.

lun_maps

A LUN map with which the initiator group is associated.

Name	Type	Description
_links	_links	
logical_unit_number	integer	The logical unit number assigned to the LUN for initiators in the initiator group.

Name	Type	Description
lun	lun	The LUN to which the initiator group is mapped.

svm

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

igroup

An initiator group (igroup) is a collection of Fibre Channel (FC) world wide port names (WWPN), and/or iSCSI Qualified Names (IQNs), and/or iSCSI EUIs (Extended Unique Identifiers) that identify host initiators.

Initiator groups are used to control which hosts can access specific LUNs. To grant access to a LUN from one or more hosts, create an initiator group containing the hosts' initiator names, then create a LUN map that associates the initiator group with the LUN.

An initiator can appear in multiple initiator groups. An initiator group can be mapped to multiple LUNs. A specific initiator can be mapped to a specific LUN only once.

All initiators in an initiator group must be from the same operating system. The initiator group's operating system is specified when the initiator group is created.

When an initiator group is created, the `protocol` property is used to restrict member initiators to Fibre Channel (*fc*), iSCSI (*iscsi*), or both (*mixed*).

Zero or more initiators can be supplied when the initiator group is created. After creation, initiators can be added or removed from the initiator group using the `/protocols/san/igroups/{igroup.uuid}/initiators` endpoint. See [DELETE /protocols/san/igroups/{igroup.uuid}/initiators/{name}](#) for more details.

Name	Type	Description
_links	_links	
delete_on_unmap	boolean	An option that causes the initiator group to be deleted when the last LUN map associated with it is deleted. Optional in PATCH only; not available in POST. This property defaults to <i>false</i> when the initiator group is created.

Name	Type	Description
initiators	array[igroup_initiator_no_records]	<p>The initiators that are members of the group. Optional in POST.</p> <p>Zero or more initiators can be supplied when the initiator group is created. After creation, initiators can be added or removed from the initiator group using the <code>/protocols/san/igroups/{igroup.uuid}/initiators</code> endpoint. See DELETE /protocols/san/igroups/{igroup.uuid}/initiators/{name} for more details.</p>
lun_maps	array[lun_maps]	<p>All LUN maps with which the initiator is associated.</p> <p>There is an added cost to retrieving property values for <code>lun_maps</code>. They not populated for either a collection GET or an instance GET unless explicitly requested using the <code>fields</code> query parameter. See DOC Requesting specific fields to learn more.</p>
name	string	<p>The name of the initiator group. Required in POST; optional in PATCH.</p> <p>Note that renaming an initiator group must be done in a PATCH request separate from any other modifications.</p>
os_type	string	<p>The host operating system of the initiator group. All initiators in the group should be hosts of the same operating system. Required in POST; optional in PATCH.</p>

Name	Type	Description
protocol	string	The protocols supported by the initiator group. This restricts the type of initiators that can be added to the initiator group. Optional in POST; if not supplied, this defaults to <i>mixed</i> . The protocol of an initiator group cannot be changed after creation of the group.
svm	svm	
uuid	string	The unique identifier of the initiator group.

_links

Name	Type	Description
next	href	
self	href	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

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 initiators of an initiator group

GET /protocols/san/igroups/{igroup.uuid}/initiators

Retrieves initiators of an initiator group.

Related ONTAP commands

- `lun igroup show`

Learn more

- [DOC /protocols/san/igroups](#)

Parameters

Name	Type	In	Required	Description
igroup.uuid	string	path	True	The unique identifier of the initiator group.
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.
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.
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	Number of records.
records	array[igroup_initiator]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "igroup": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    },
    "name": "iqn.1998-01.com.corp.iscsi:name1",
    "records": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "igroup": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
      },
      "name": "iqn.1998-01.com.corp.iscsi:name1"
    }
  }
}
```

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
5374852	The initiator group specified in the URI does not exist.

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	href	
self	href	

_links

Name	Type	Description
self	href	

igroup

The initiator group in which the initiator is found.

Note that this does not mean that the initiator cannot also be found in other initiator groups.

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

records

Name	Type	Description
_links	_links	
igroup	igroup	The initiator group in which the initiator is found. Note that this does not mean that the initiator cannot also be found in other initiator groups.

Name	Type	Description
name	string	<p>The FC WWPN, iSCSI IQN, or iSCSI EUI that identifies the host initiator. Valid in POST only and not allowed when the <code>records</code> property is used.</p> <p>An FC WWPN consist of 16 hexadecimal digits grouped as 8 pairs separated by colons. The format for an iSCSI IQN is <i>iqn.yyyy-mm.reverse_domain_name.any</i>. The iSCSI EUI format consists of the <i>eui.</i> prefix followed by 16 hexadecimal characters.</p>

igroup_initiator

Name	Type	Description
_links	_links	
igroup	igroup	<p>The initiator group in which the initiator is found.</p> <p>Note that this does not mean that the initiator cannot also be found in other initiator groups.</p>
name	string	<p>The FC WWPN, iSCSI IQN, or iSCSI EUI that identifies the host initiator. Valid in POST only and not allowed when the <code>records</code> property is used.</p> <p>An FC WWPN consist of 16 hexadecimal digits grouped as 8 pairs separated by colons. The format for an iSCSI IQN is <i>iqn.yyyy-mm.reverse_domain_name.any</i>. The iSCSI EUI format consists of the <i>eui.</i> prefix followed by 16 hexadecimal characters.</p>

Name	Type	Description
records	array[records]	An array of initiators specified to add multiple initiators to an initiator group in a single API call. Valid in POST only and not allowed when the <code>name</code> property is used.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

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.

Add initiators to an initiator group

POST `/protocols/san/igroups/{igroup.uuid}/initiators`

Adds one or more initiators to an initiator group.

Required properties

- `name` or `records.name` - Initiator name(s) to add to the initiator group.

Related ONTAP commands

- `lun igroup add`

Learn more

- [DOC /protocols/san/igroups](#)

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned.
igroup.uuid	string	path	True	The unique identifier of the initiator group.

Request Body

Name	Type	Description
_links	_links	
igroup	igroup	The initiator group in which the initiator is found. Note that this does not mean that the initiator cannot also be found in other initiator groups.
name	string	The FC WWPN, iSCSI IQN, or iSCSI EUI that identifies the host initiator. Valid in POST only and not allowed when the <code>records</code> property is used. An FC WWPN consist of 16 hexadecimal digits grouped as 8 pairs separated by colons. The format for an iSCSI IQN is <i>iqn.yyyy-mm.reverse_domain_name:any</i> . The iSCSI EUI format consists of the <i>eui.</i> prefix followed by 16 hexadecimal characters.
records	array[records]	An array of initiators specified to add multiple initiators to an initiator group in a single API call. Valid in POST only and not allowed when the <code>name</code> property is used.

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "igroup": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
  },
  "name": "iqn.1998-01.com.corp.iscsi:name1",
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "igroup": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    },
    "name": "iqn.1998-01.com.corp.iscsi:name1"
  }
}
```

Response

Status: 201, Created

Name	Type	Description
_links	_links	

Name	Type	Description
num_records	integer	Number of records.
records	array[igroup_initiator]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "igroup": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    },
    "name": "iqn.1998-01.com.corp.iscsi:name1",
    "records": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "igroup": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
      },
      "name": "iqn.1998-01.com.corp.iscsi:name1"
    }
  }
}
```

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
1254193	Adding an initiator would cause the initiator to be mapped to the same LUN more than once.
1254324	Adding an initiator would cause the initiator to have the same logical unit identifier for multiple LUN maps.
5373969	A supplied initiator name looks like an iSCSI IQN initiator, but the portions after the prefix are missing.
5373971	A supplied initiator name looks like an iSCSI IQN initiator, but the date portion is invalid.
5373972	A supplied initiator name looks like an iSCSI IQN initiator, but the naming authority portion is invalid.
5373977	A supplied initiator name looks like an iSCSI EUI initiator, but the length is invalid.
5373978	A supplied initiator name looks like an iSCSI EUI initiator, but the format is invalid.
5373992	A supplied initiator name was too long to be valid.
5373993	A supplied initiator name did not match any valid format.
5374033	Initiators must be supplied.
5374035	A supplied initiator is already in the initiator group.
5374038	An invalid Fibre Channel WWPN was supplied.
5374039	An invalid iSCSI initiator name was supplied.
5374734	An initiator is already in another initiator group with a conflicting operating system type.
5374852	The initiator group specified in the URI does not exist.
5374853	You can add initiators to an initiator group using the <code>records</code> property, or the <code>name</code> property, but you cannot use both in the same request.
5374854	Only <code>records</code> property elements should be populated with the <code>name</code> property values.

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	href	

igroup

The initiator group in which the initiator is found.

Note that this does not mean that the initiator cannot also be found in other initiator groups.

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

records

Name	Type	Description
_links	_links	
igroup	igroup	The initiator group in which the initiator is found. Note that this does not mean that the initiator cannot also be found in other initiator groups.

Name	Type	Description
name	string	<p>The FC WWPN, iSCSI IQN, or iSCSI EUI that identifies the host initiator. Valid in POST only and not allowed when the <code>records</code> property is used.</p> <p>An FC WWPN consist of 16 hexadecimal digits grouped as 8 pairs separated by colons. The format for an iSCSI IQN is <i>iqn.yyyy-mm.reverse_domain_name.any</i>. The iSCSI EUI format consists of the <i>eui.</i> prefix followed by 16 hexadecimal characters.</p>

igroup_initiator

Name	Type	Description
_links	_links	
igroup	igroup	<p>The initiator group in which the initiator is found.</p> <p>Note that this does not mean that the initiator cannot also be found in other initiator groups.</p>
name	string	<p>The FC WWPN, iSCSI IQN, or iSCSI EUI that identifies the host initiator. Valid in POST only and not allowed when the <code>records</code> property is used.</p> <p>An FC WWPN consist of 16 hexadecimal digits grouped as 8 pairs separated by colons. The format for an iSCSI IQN is <i>iqn.yyyy-mm.reverse_domain_name.any</i>. The iSCSI EUI format consists of the <i>eui.</i> prefix followed by 16 hexadecimal characters.</p>

Name	Type	Description
records	array[records]	An array of initiators specified to add multiple initiators to an initiator group in a single API call. Valid in POST only and not allowed when the <code>name</code> property is used.

`_links`

Name	Type	Description
next	href	
self	href	

`error_arguments`

Name	Type	Description
code	string	Argument code
message	string	Message argument

`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.

Delete an initiator from an initiator group

DELETE `/protocols/san/igroups/{igroup.uuid}/initiators/{name}`

Deletes an initiator from an initiator group.

Related ONTAP commands

- `lun igroup remove`

Learn more

- [DOC /protocols/san/igroups](#)

Parameters

Name	Type	In	Required	Description
igroup.uuid	string	path	True	The unique identifier of the initiator group.
name	string	path	True	The initiator name.
allow_delete_while_mapped	boolean	query	False	<p>Allows deletion of an initiator from of a mapped initiator group.</p> <p>Deleting an initiator from a mapped initiator group makes the LUNs to which the initiator group is mapped no longer available to the initiator. This might cause a disruption in the availability of data.</p> <p>This parameter should be used with caution.</p> <ul style="list-style-type: none">• Default value:

Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
1254213	The initiator group is mapped to one or more LUNs and <code>allow_delete_while_mapped</code> has not been specified.
5374034	The initiator is not a member of the group.
5374852	The initiator group specified in the URI does not exist.

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[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve an initiator

```
GET /protocols/san/igroups/{igroup.uuid}/initiators/{name}
```

Retrieves an initiator of an initiator group.

Related ONTAP commands

- `lun igroup show`

Learn more

- [DOC /protocols/san/igroups](#)

Parameters

Name	Type	In	Required	Description
igroup.uuid	string	path	True	The unique identifier of the initiator group.
name	string	path	True	Initiator name

Name	Type	In	Required	Description
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
_links	_links	
igroup	igroup	<p>The initiator group in which the initiator is found.</p> <p>Note that this does not mean that the initiator cannot also be found in other initiator groups.</p>
name	string	<p>The FC WWPN, iSCSI IQN, or iSCSI EUI that identifies the host initiator. Valid in POST only and not allowed when the <code>records</code> property is used.</p> <p>An FC WWPN consist of 16 hexadecimal digits grouped as 8 pairs separated by colons. The format for an iSCSI IQN is <code>iqn.yyyy-mm.reverse_domain_name:any</code>. The iSCSI EUI format consists of the <code>eui.</code> prefix followed by 16 hexadecimal characters.</p>
records	array[records]	<p>An array of initiators specified to add multiple initiators to an initiator group in a single API call. Valid in POST only and not allowed when the <code>name</code> property is used.</p>

Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "igroup": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
  },
  "name": "iqn.1998-01.com.corp.iscsi:name1",
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "igroup": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    },
    "name": "iqn.1998-01.com.corp.iscsi:name1"
  }
}
```

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
4	The initiator is not a member of the initiator group.

Error Code	Description
5374852	The initiator group specified in the URI does not exist.

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	href	

igroup

The initiator group in which the initiator is found.

Note that this does not mean that the initiator cannot also be found in other initiator groups.

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

records

Name	Type	Description
_links	_links	
igroup	igroup	The initiator group in which the initiator is found. Note that this does not mean that the initiator cannot also be found in other initiator groups.

Name	Type	Description
name	string	<p>The FC WWPN, iSCSI IQN, or iSCSI EUI that identifies the host initiator. Valid in POST only and not allowed when the <code>records</code> property is used.</p> <p>An FC WWPN consist of 16 hexadecimal digits grouped as 8 pairs separated by colons. The format for an iSCSI IQN is <i>iqn.yyyy-mm.reverse_domain_name.any</i>. The iSCSI EUI format consists of the <i>eui.</i> prefix followed by 16 hexadecimal characters.</p>

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

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.

Delete an initiator group

```
DELETE /protocols/san/igroups/{uuid}
```

Deletes an initiator group.

Related ONTAP commands

- `lun igroup delete`

Learn more

- [DOC /protocols/san/igroups](#)

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	The unique identifier of the initiator group.
allow_delete_while_mapped	boolean	query	False	<p>Allows deletion of a mapped initiator group.</p> <p>Deleting a mapped initiator group makes the LUNs to which the initiator group is mapped no longer available. This might cause a disruption in the availability of data.</p> <p>This parameter should be used with caution.</p> <ul style="list-style-type: none">• Default value:

Response

Status: 200, Ok

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
1254213	The initiator group is mapped to one or more LUNs and <code>allow_delete_while_mapped</code> has not been specified.
5374852	The initiator group does not exist.

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[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve an initiator group

GET /protocols/san/igroups/{uuid}

Retrieves an initiator group.

Expensive properties

There is an added cost to retrieving values for these properties. They are not included by default in GET results and must be explicitly requested using the `fields` query parameter. See [DOC Requesting specific fields](#) to learn more.

- `lun_maps.*`

Related ONTAP commands

- `lun igroup show`
- `lun mapping show`

Learn more

- [DOC /protocols/san/igroups](#)

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	The unique identifier of the initiator group.
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
<code>_links</code>	_links	
<code>delete_on_unmap</code>	boolean	An option that causes the initiator group to be deleted when the last LUN map associated with it is deleted. Optional in PATCH only; not available in POST. This property defaults to <i>false</i> when the initiator group is created.

Name	Type	Description
initiators	array[igroup_initiator_no_records]	<p>The initiators that are members of the group. Optional in POST.</p> <p>Zero or more initiators can be supplied when the initiator group is created. After creation, initiators can be added or removed from the initiator group using the <code>/protocols/san/igroups/{igroup.uuid}/initiators</code> endpoint. See DELETE /protocols/san/igroups/{igroup.uuid}/initiators/{name} for more details.</p>
lun_maps	array[lun_maps]	<p>All LUN maps with which the initiator is associated.</p> <p>There is an added cost to retrieving property values for <code>lun_maps</code>. They not populated for either a collection GET or an instance GET unless explicitly requested using the <code>fields</code> query parameter. See DOC Requesting specific fields to learn more.</p>
name	string	<p>The name of the initiator group. Required in POST; optional in PATCH.</p> <p>Note that renaming an initiator group must be done in a PATCH request separate from any other modifications.</p>
os_type	string	<p>The host operating system of the initiator group. All initiators in the group should be hosts of the same operating system. Required in POST; optional in PATCH.</p>

Name	Type	Description
protocol	string	<p>The protocols supported by the initiator group. This restricts the type of initiators that can be added to the initiator group. Optional in POST; if not supplied, this defaults to <i>mixed</i>.</p> <p>The protocol of an initiator group cannot be changed after creation of the group.</p>
svm	svm	
uuid	string	The unique identifier of the initiator group.

Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "initiators": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "igroup": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    },
    "name": "iqn.1998-01.com.corp.iscsi:name1"
  },
  "lun_maps": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "logical_unit_number": 0,
    "lun": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "lun1",
      "node": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "node1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      }
    }
  }
}
```

```

    },
    "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
  }
},
"name": "igroup1",
"os_type": "aix",
"protocol": "fcp",
"svm": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
},
"name": "svm1",
"uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
}

```

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
5374852	The initiator group does not exist.

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	href	

igroup

The initiator group in which the initiator is found.

Note that this does not mean that the initiator cannot also be found in other initiator groups.

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

igroup_initiator_no_records

Name	Type	Description
_links	_links	
igroup	igroup	The initiator group in which the initiator is found. Note that this does not mean that the initiator cannot also be found in other initiator groups.

Name	Type	Description
name	string	<p>The FC WWPN, iSCSI IQN, or iSCSI EUI that identifies the host initiator. Valid in POST only and not allowed when the <code>records</code> property is used.</p> <p>An FC WWPN consist of 16 hexadecimal digits grouped as 8 pairs separated by colons. The format for an iSCSI IQN is <i>iqn.yyyy-mm.reverse_domain_name:any</i>. The iSCSI EUI format consists of the <i>eui.</i> prefix followed by 16 hexadecimal characters.</p>

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

lun

The LUN to which the initiator group is mapped.

Name	Type	Description
_links	_links	
name	string	The name of the LUN.
node	node	
uuid	string	The unique identifier of the LUN.

lun_maps

A LUN map with which the initiator group is associated.

Name	Type	Description
_links	_links	
logical_unit_number	integer	The logical unit number assigned to the LUN for initiators in the initiator group.

Name	Type	Description
lun	lun	The LUN to which the initiator group is mapped.

svm

Name	Type	Description
_links	_links	
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[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update an initiator group

PATCH /protocols/san/igroups/{uuid}

Updates an initiator group.

Related ONTAP commands

- `lun igroup modify`
- `lun igroup rename`

Learn more

- [DOC /protocols/san/igroups](#)

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	The unique identifier of the initiator group.

Request Body

Name	Type	Description
_links	_links	
delete_on_unmap	boolean	An option that causes the initiator group to be deleted when the last LUN map associated with it is deleted. Optional in PATCH only; not available in POST. This property defaults to <i>false</i> when the initiator group is created.
initiators	array[igroup_initiator_no_records]	<p>The initiators that are members of the group. Optional in POST.</p> <p>Zero or more initiators can be supplied when the initiator group is created. After creation, initiators can be added or removed from the initiator group using the <code>/protocols/san/igroups/{igroup.uuid}/initiators</code> endpoint. See DELETE /protocols/san/igroups/{igroup.uuid}/initiators/{name} for more details.</p>
lun_maps	array[lun_maps]	<p>All LUN maps with which the initiator is associated.</p> <p>There is an added cost to retrieving property values for <code>lun_maps</code>. They not populated for either a collection GET or an instance GET unless explicitly requested using the <code>fields</code> query parameter. See DOC Requesting specific fields to learn more.</p>

Name	Type	Description
name	string	<p>The name of the initiator group. Required in POST; optional in PATCH.</p> <p>Note that renaming an initiator group must be done in a PATCH request separate from any other modifications.</p>
os_type	string	<p>The host operating system of the initiator group. All initiators in the group should be hosts of the same operating system. Required in POST; optional in PATCH.</p>
protocol	string	<p>The protocols supported by the initiator group. This restricts the type of initiators that can be added to the initiator group. Optional in POST; if not supplied, this defaults to <i>mixed</i>.</p> <p>The protocol of an initiator group cannot be changed after creation of the group.</p>
svm	svm	
uuid	string	<p>The unique identifier of the initiator group.</p>

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "initiators": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "igroup": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    },
    "name": "iqn.1998-01.com.corp.iscsi:name1"
  },
  "lun_maps": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "logical_unit_number": 0,
    "lun": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "lun1",
      "node": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "node1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      }
    }
  }
}
```

```

    },
    "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
  }
},
"name": "igroup1",
"os_type": "aix",
"protocol": "fcp",
"svm": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
},
"name": "svm1",
"uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
}

```

Response

Status: 200, Ok

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
5373958	An invalid initiator group name was supplied for a rename operation.
5374023	A rename operation failed because an initiator group with the same name already exists.
5374733	An initiator is already in another initiator group with a conflicting operating system type.
5374852	The initiator group does not exist.
5374868	The initiator group was partially modified before an error was encountered while renaming the initiator group.

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	href	

igroup

The initiator group in which the initiator is found.

Note that this does not mean that the initiator cannot also be found in other initiator groups.

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

igroup_initiator_no_records

Name	Type	Description
_links	_links	
igroup	igroup	The initiator group in which the initiator is found. Note that this does not mean that the initiator cannot also be found in other initiator groups.

Name	Type	Description
name	string	<p>The FC WWPN, iSCSI IQN, or iSCSI EUI that identifies the host initiator. Valid in POST only and not allowed when the <code>records</code> property is used.</p> <p>An FC WWPN consist of 16 hexadecimal digits grouped as 8 pairs separated by colons. The format for an iSCSI IQN is <i>iqn.yyyy-mm.reverse_domain_name:any</i>. The iSCSI EUI format consists of the <i>eui.</i> prefix followed by 16 hexadecimal characters.</p>

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

lun

The LUN to which the initiator group is mapped.

Name	Type	Description
_links	_links	
name	string	The name of the LUN.
node	node	
uuid	string	The unique identifier of the LUN.

lun_maps

A LUN map with which the initiator group is associated.

Name	Type	Description
_links	_links	
logical_unit_number	integer	The logical unit number assigned to the LUN for initiators in the initiator group.

Name	Type	Description
lun	lun	The LUN to which the initiator group is mapped.

svm

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

igroup

An initiator group (igroup) is a collection of Fibre Channel (FC) world wide port names (WWPN), and/or iSCSI Qualified Names (IQNs), and/or iSCSI EUIs (Extended Unique Identifiers) that identify host initiators.

Initiator groups are used to control which hosts can access specific LUNs. To grant access to a LUN from one or more hosts, create an initiator group containing the hosts' initiator names, then create a LUN map that associates the initiator group with the LUN.

An initiator can appear in multiple initiator groups. An initiator group can be mapped to multiple LUNs. A specific initiator can be mapped to a specific LUN only once.

All initiators in an initiator group must be from the same operating system. The initiator group's operating system is specified when the initiator group is created.

When an initiator group is created, the `protocol` property is used to restrict member initiators to Fibre Channel (*fcp*), iSCSI (*iscsi*), or both (*mixed*).

Zero or more initiators can be supplied when the initiator group is created. After creation, initiators can be added or removed from the initiator group using the `/protocols/san/igroups/{igroup.uuid}/initiators` endpoint. See [DELETE /protocols/san/igroups/{igroup.uuid}/initiators/{name}](#) for more details.

Name	Type	Description
_links	_links	
delete_on_unmap	boolean	An option that causes the initiator group to be deleted when the last LUN map associated with it is deleted. Optional in PATCH only; not available in POST. This property defaults to <i>false</i> when the initiator group is created.

Name	Type	Description
initiators	array[igroup_initiator_no_records]	<p>The initiators that are members of the group. Optional in POST.</p> <p>Zero or more initiators can be supplied when the initiator group is created. After creation, initiators can be added or removed from the initiator group using the <code>/protocols/san/igroups/{igroup.uuid}/initiators</code> endpoint. See DELETE /protocols/san/igroups/{igroup.uuid}/initiators/{name} for more details.</p>
lun_maps	array[lun_maps]	<p>All LUN maps with which the initiator is associated.</p> <p>There is an added cost to retrieving property values for <code>lun_maps</code>. They not populated for either a collection GET or an instance GET unless explicitly requested using the <code>fields</code> query parameter. See DOC Requesting specific fields to learn more.</p>
name	string	<p>The name of the initiator group. Required in POST; optional in PATCH.</p> <p>Note that renaming an initiator group must be done in a PATCH request separate from any other modifications.</p>
os_type	string	<p>The host operating system of the initiator group. All initiators in the group should be hosts of the same operating system. Required in POST; optional in PATCH.</p>

Name	Type	Description
protocol	string	The protocols supported by the initiator group. This restricts the type of initiators that can be added to the initiator group. Optional in POST; if not supplied, this defaults to <i>mixed</i> . The protocol of an initiator group cannot be changed after creation of the group.
svm	svm	
uuid	string	The unique identifier of the initiator group.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

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.

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