



# **lun mapping commands**

## **ONTAP 9.3 commands**

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# lun mapping commands

## lun mapping add-reporting-nodes

### Add Reporting Nodes

**Availability:** This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

### Description

This command is used before or after a data mobility event that modifies the owning node of the LUN to add the new optimized nodes to the specified LUN mapping's reporting nodes.

For more information on managing reporting nodes in response to data mobility events, please see the Data ONTAP SAN Administration Guide.



This command is not supported for a Vserver with Infinite Volume.

### Parameters

**-vserver <Vserver Name> - Vserver Name**

Specifies the name of the Vserver containing the LUN.

**{ -path <path> - LUN Path**

Specifies the path of the LUN. Examples of correct LUN paths are `/vol/vol1/lun1` and `/vol/vol1/qtree1/lun1`.

**| -volume <volume name> - Volume Name**

Specifies the volume that contains the LUN.

**[-qtree <qtree name>] - Qtree Name**

Specifies the qtree that contains the LUN.

**-lun <text> - LUN Name }**

Specifies the LUN name.

**-g, -igroup <text> - Igroup Name**

Specifies the igroup the LUN is mapped to.

**{ -local-nodes <>true> - Add Nodes for Current LUN Location**

Add the current LUN owner node and HA partner to the LUN mapping's reporting nodes.

This option should be used after a LUN mobility event to restore optimized access to the LUN.

**| -destination-aggregate <aggregate name> - Add Nodes for Aggregate**

Add the specified aggregate's owner node and HA partner to the LUN mapping's reporting nodes.

This option may be used prior to a LUN mobility event that changes the LUN's containing aggregate.

### | **-destination-volume <volume name> - Add Nodes for Volume }**

Add the specified volume's owner node and HA partner to the LUN mapping's reporting nodes.

This option may be used prior to a LUN mobility event that changes the LUN's containing volume.

### | **-all <true> - Add All Nodes }**

Set the LUN mapping to report on all nodes in preparation for a revert to a previous version of Data ONTAP.

## Examples

```
cluster1::> lun mapping add-reporting-nodes -vserver vs1 -path
/vol/vol1/lun1 -igroup ig1
```

Add the current owner node and HA partner for the LUN mapping of `/vol/vol1/lun1` to igroup `ig1`

```
cluster1::> lun mapping add-reporting-nodes -vserver vs1 -volume vol1 -lun
* -igroup ig1 -destination-aggregate aggr2
```

Add the aggregate owner node and HA partner for aggregate `aggr2` to all LUN mappings in volume `vol1` to igroup `ig1` prior to starting a volume move operation.

## lun mapping create

### Map a LUN to an initiator group

**Availability:** This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

### Description

This command maps a LUN to all of the initiators in an initiator group (igroup). After you map the LUN, the LUN is visible to all initiators in the igroup.

Data ONTAP ensures that there are no LUN map conflicts whether the LUN is offline or online. A LUN map conflict is a mapping that would violate either of the following rules:

- Each LUN can be mapped to an initiator only once. A LUN can be mapped to multiple igroups as long as each igroup has a distinct set of initiators.
- LUN IDs must be unique such that every initiator has a unique ID for each LUN to which it is mapped. If you map a LUN to an igroup, the LUN ID for that mapping cannot be reused by any of the initiators in that igroup.

In order to determine if a LUN ID is valid for a mapping, Data ONTAP checks each initiator in the igroup to make sure that the LUN ID is not used for another mapping that includes that initiator.



Prior to mapping a LUN, you must have at least one iSCSI or FCP LIF provisioned on the LUN's owner node and high-availability partner node.



This command is not supported for a Vserver with Infinite Volume.

## Parameters

### **-vserver <Vserver Name> - Vserver Name**

Specifies the Vserver that contains the LUN you want to map.

### **{ -path <path> - LUN Path**

Specifies the path of the LUN that you want to map. Examples of correct LUN paths are `/vol/vol1/lun1` and `/vol/vol1/qtree1/lun1`.

### **| -volume <volume name> - Volume Name**

Specifies the volume that contains the LUN you want to map.

### **[-qtree <qtree name>] - Qtree Name**

Specifies the qtree that contains the LUN you want to map.

### **-lun <text> - LUN Name }**

Specifies the LUN name that you want to map.

### **-g, -igroup <text> - Igroup Name**

Specifies the igroup that you want to map.

### **[-lun-id <integer>] - LUN ID**

Specifies the LUN ID for the mapping. The LUN ID is specific to the mapping, not to the LUN itself. This is used by the initiators in the igroup as the Logical Unit Number for the initiator when accessing the storage.

### **[-additional-reporting-node <nodename>] - Additional Reporting Node**

Specifies an additional node to populate the `-reporting-nodes` list when creating the LUN mapping. The specified node's high availability partner will be automatically populated as well. Use this parameter when preferred data mobility destinations are known ahead of time and the appropriate paths can be pre-configured.

## Examples

```
cluster1::> lun mapping create -vserver vs1 -path /vol/vol1/lun1 -igroup
ig1 -lun-id 8
```

Maps a LUN at `/vol/vol1/lun1` on Vserver `vs1` to the igroup `ig1` with LUN ID 8.

## lun mapping delete

Unmap a LUN from an initiator group

**Availability:** This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

## Description

This command unmaps a LUN from an initiator group. After you use this command, the LUN is not visible to any of the initiators in the initiator group.



This command is not supported for a Vserver with Infinite Volume.

## Parameters

### **-vserver <Vserver Name> - Vserver Name**

Selects the LUN maps for the Vserver that matches the parameter value.

### **{ -path <path> - LUN Path**

Specifies the path of the LUN you want to unmap. Examples of correct LUN paths are `/vol/vol1/lun1` and `/vol/vol1/qtreen1/lun1`.

### **| -volume <volume name> - Volume Name**

Specifies the volume of the LUN you want to unmap.

### **-qtree <qtree name> - Qtree Name**

Specifies the qtree of the LUN you want to unmap.

### **-lun <text> - LUN Name }**

Specifies the name of the LUN you want to unmap.

### **-g, -igroup <text> - Igroup Name**

Specifies the initiator group that you want to unmap the LUN from.

## Examples

```
cluster1::> lun mapping delete -vserver vs1 -path /vol/vol1/lun1 -igroup ig1
```

Unmaps LUN at path `/vol/vol1/lun1` from the initiator group `ig1` on Vserver `vs1`.

## lun mapping remove-reporting-nodes

### Remove Reporting Nodes

**Availability:** This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

## Description

This command is used after a data mobility event to remove reporting nodes that are no longer required for optimized access from the specified LUN mapping.

For more information on managing reporting nodes in response to data mobility events, please see the Data ONTAP SAN Administration Guide.



This command is not supported for a Vserver with Infinite Volume.

## Parameters

### **-vserver <Vserver Name> - Vserver Name**

Specifies the name of the Vserver containing the LUN.

### **{ -path <path> - LUN Path**

Specifies the path of the LUN. Examples of correct LUN paths are `/vol/vol1/lun1` and `/vol/vol1/qtree1/lun1`.

### **| -volume <volume name> - Volume Name**

Specifies the volume that contains the LUN.

### **[-qtree <qtree name>] - Qtree Name**

Specifies the qtree that contains the LUN.

### **-lun <text> - LUN Name }**

Specifies the LUN name.

### **-g, -igroup <text> - Igroup Name**

Specifies the igroup the LUN is mapped to.

### **-remote-nodes <true> - Remove Remote Nodes for LUN Location**

If specified, remove all nodes other than the LUN's owner and HA partner from the LUN mapping's reporting nodes.

## Examples

```
cluster1::> lun mapping remove-reporting-nodes -vserver vs1 -path
/vol/vol1/lun1 -igroup ig1
```

Remove excess remote nodes from the LUN mapping of `/vol/vol1/lun1` to igroup `ig1`

## lun mapping show-initiator

Show the LUN mappings to a specific initiator

**Availability:** This command is available to *cluster* and *Vserver* administrators at the *advanced* privilege level.

## Description

The `lun mapping show-initiator` command lists the LUNs which are mapped to an initiator group which contains a specific initiator.

## Parameters

**{ [-fields <fieldname>,...]**

If you specify the `-fields <fieldname>`, ... parameter, the command output also includes the specified field or fields. You can use `'-fields ?'` to display the fields to specify.

**| [-instance ] }**

If you specify the `-instance` parameter, the command displays detailed information about all fields.

**[-vserver <Vserver Name>] - Vserver Name**

Selects the LUN mappings for the vserver that you specify.

**-initiator <text> - Initiator Name**

Selects the LUN mappings for the initiator that you specify.

**[-lun-id <integer>] - Logical Unit Number**

Selects the LUN mappings with a LUN ID that you specify.

**[-igroup <text>] - Igroup Name**

Selects the LUN mappings for the initiator group that you specify.

**[-path <path>] - LUN Path**

Selects the LUN mappings for the LUN path that you specify.

**[-node <nodename>] - LUN Node**

Selects the LUN mappings for the LUNs which are being hosted on the node that you specify.

**[-reporting-nodes <nodename>,...] - Reporting Nodes**

Selects the LUN mappings for the LUNs which have reporting nodes that you specify.

**[-vserver-uuid <UUID>] - Vserver UUID**

Selects the LUN mappings for the Vserver UUID that you specify.

**[-igroup-uuid <UUID>] - Igroup UUID**

Selects the LUN mappings for the initiator group UUID that you specify.

**[-lun-uuid <UUID>] - LUN UUID**

Selects the LUN mappings for the LUN UUID that you specify.

## Examples

The following example displays the LUN mappings for initiator `20:10:0a:50:00:01:01:01` in Vserver `vs1`.



```

cluster1::> lun mapping show-initiator -vserver vs1 -initiator
20:10:0a:50:00:01:01:01
Vserver Initiator LUN ID Path IGroup
-----
vs1      20:10:0a:50:00:01:01:01
          0 /vol/igroup_1_1_vol/lun1      igroup_1
          2 /vol/igroup_1_1_vol/lun3      igroup_1
          3 /vol/igroup_1_2_vol/lun1      igroup_1
          5 /vol/igroup_1_2_vol/lun3      igroup_1
          6 /vol/igroup_1_3_vol/lun1      igroup_1
          8 /vol/igroup_1_3_vol/lun3      igroup_1
          9 /vol/igroup_1_4_vol/lun1      igroup_1
         11 /vol/igroup_1_4_vol/lun3      igroup_1
         12 /vol/igroup_2_1_vol/lun1      igroup_2
         14 /vol/igroup_2_1_vol/lun3      igroup_2
         15 /vol/igroup_2_2_vol/lun1      igroup_2
         17 /vol/igroup_2_2_vol/lun3      igroup_2
         18 /vol/igroup_2_3_vol/lun1      igroup_2
         20 /vol/igroup_2_3_vol/lun3      igroup_2
         21 /vol/igroup_2_4_vol/lun1      igroup_2
         23 /vol/igroup_2_4_vol/lun3      igroup_2
16 entries were displayed.

```

## lun mapping show

Lists the mappings between LUNs and initiator groups.

**Availability:** This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

### Description

This command lists the mappings between LUNs and initiator groups.

### Parameters

{ [-fields <fieldname>,...]

If you specify the `-fields <fieldname>`, ... parameter, the command output also includes the specified field or fields. You can use `'-fields ?'` to display the fields to specify.

| [-instance ] }

If you specify the `-instance` parameter, the command displays detailed information about all fields.

[-vserver <Vserver Name>] - Vserver Name

Selects the LUN maps for the Vserver that matches the parameter value.

**{ [-path <path>] - LUN Path**

Selects the LUN maps for the LUN with the path that matches the parameter value. Examples of correct LUN paths are `/vol/vol1/lun1` and `/vol/vol1/qtreen1/lun1`.

**| [-volume <volume name>] - Volume Name**

Selects the LUN maps for the volumes that match the parameter value.

**[-qtree <qtree name>] - Qtree Name**

Selects the LUN maps for the queue trees that match the parameter value.

**[-lun <text>] - LUN Name }**

Selects the LUN maps for the LUNs with a name that matches the parameter value.

**[-g, -igroup <text>] - Igroup Name**

Selects the LUN maps for the igroup that matches the parameter value.

**[-ostype {solaris|windows|hpux|aix|linux|netware|vmware|openvms|xen|hyper\_v}] - Igroup OS Type**

Selects the LUN maps for the initiator groups with the OS type that matches the parameter value. The possible OS types are:

- `solaris` - the LUN stores Solaris raw disk in a single-slice partition.
- `windows` - the LUN stores a raw disk type in a single-partition Windows disk using the Master Boot Record (MBR) partitioning style.
- `hpux` - the LUN stores HP-UX data.
- `linux` - the LUN stores a Linux raw disk without a partition table.
- `netware` - the LUN stores NetWare data.
- `vmware` - the LUN stores VMware data.
- `openvms` - the LUN stores Open-VMS data.
- `xen` - the LUN stores Xen data.
- `hyper_v` - the LUN stores Windows Server 2008 or Windows Server 2012 Hyper-V data.

**[-protocol <protocol\_enum>] - Igroup Protocol Type**

Selects the LUN maps for initiator groups with a protocol that matches the parameter value. Possible values include FCP, iSCSI, or mixed.

**[-lun-id <integer>] - LUN ID**

Selects the LUN maps with a LUN ID that matches the parameter value.

**[-portset <text>] - Portset Binding Igroup**

Selects the LUN maps for initiator groups bound to the portset that matches the parameter value.

**[-alua {true|false}] - ALUA**

Selects the LUN maps with ALUA settings that match the parameter value.

**[-n, -initiators <text>,...] - Initiators**

Selects the LUN maps for initiator groups containing the initiators that match the parameter value.

**[-node <nodename>] - LUN Node**

Selects the LUN maps for nodes that match the parameter value.

**[-reporting-nodes <nodename>,...] - Reporting Nodes**

Selects the LUN maps that match the parameter value.

## Examples

```
cluster1::> lun mapping show
Vserver      Path                                     Igroup   LUN ID
Protocol
-----
vs1          /vol/vol1/lun1                         igroup1   10
mixed
vs1          /vol/vol1/lun1                         igroup2   4
mixed
vs1          /vol/vol5/lun1                         igroup3   6
mixed
vs1          /vol/vol5/lun2                         igroup3   1
mixed
4 entries were displayed.
```

The example above lists all of the mappings between LUNs and initiator groups and the LUN ID for each mapping.

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