

## NAME

stmfadm – SCSI Target Mode Framework Command Line Interface

## SYNOPSIS

```
stmfadm add-hg-member <-g, --group-name group name> group member ...
stmfadm add-tg-member <-g, --group-name group name> group member ...
stmfadm add-view [-n, --lun<logical_unit_number> t(--target-group) <group_name>
    h(--host-group) <group_name>] lu name
stmfadm create-hg group name
stmfadm create-tg group name
stmfadm delete-tg group name
stmfadm delete-hg group name
stmfadm list-hg [-v] [group name ...]
stmfadm list-tg [-v] [group name ...]
stmfadm list-lu [-v] [lu name ...]
stmfadm list-target [-v] [target name ...]
stmfadm list-view <-l lu name > [entry indexname ...]
stmfadm list-state
stmfadm remove-hg-member <-g, --group-name group name> group member ...
stmfadm remove-tg-member <-g, --group-name group name> group member ...
stmfadm remove-view <-l, --lu-name lu name> entry name ...
```

The stmfadm command configures logical units within the stmf framework as described by stmf(7D).

### initiator

A device responsible for issuing SCSI I/O commands to a SCSI target and logical unit.

### target

A device responsible for receiving SCSI I/O commands for a logical unit.

### logical unit

A device within a target responsible for executing SCSI I/O commands.

### logical unit number

The identifier of a logical unit within a target.

### initiator group

An initiator group is a set of one or more initiators that are combined together for the purposes of being applied to a view (see views below). Initiators cannot be a member of

more than one initiator group.

## target group

A target group is a set of one or more SCSI target ports that are combined together for the purposes of being applied to a view (see views below). target ports cannot be a member of more than one target group.

## view

A view defines the association of an initiator group, a target group and a logical unit number with a specified logical unit. Any view entry added to a logical unit must not be in conflict with existing view entries for that logical unit. A view entry is considered to be in conflict when an attempt is made to duplicate the association of any given initiator, target and logical unit number. As an example, logical unit LU\_0 has the following view entry associated with it:

```
Logical Unit: LU_0
  View Entry: 0
    initiator group: HostA
    target group: All targets
    logical unit number: 32
```

If a user attempted to apply the following:

```
stmf add-view -l 31 -i HostA LU_0
```

the operation would return an error with a message indicating that the view entry is in conflict with one or more existing view entries. This conflict arises because the existing view entry, 0, already has mapped LU\_0 to logical unit number 32 for the initiator group HostA.

## SUBCOMMANDS

stmfadm ?

stmfadm add-view

Adds a logical unit view entry to a logical unit lu\_name where lu\_name is the stmf name for the logical unit as displayed by the list-lu subcommand. The add-view subcommand provides the user with a mechanism to implement access control for a logical unit and also provides a means of assigning a logical unit number to a logical unit for a given set of initiators and targets. A logical unit will not be available to any initiators until at least one view is applied. Each view entry gets assigned an entry name which can be used to

reference the entry in the remove-view and list-view subcommands.

`-l, --lun <logical_unit_number>`

`logical_unit_number` is an integer in the range 0-16383 to be assigned to the logical unit for this view entry. If this option is not specified, a logical unit number will be assigned by the stmf framework.

`-t, --target-group <group_name>`

`group_name` is the name of a target group previously created using the stmf create-tg subcommand. If this option is not specified, the logical unit will be available through all targets.

`-h, --host-group <group_name>`

`group_name` is the name of an host group previously created using the stmf create-hg subcommand. If the `-h, --host-group` option is not specified, the logical unit will be available to all initiators that login to the stmf framework.

`stmfadm add-hg-member <-g group_name> group_member ...`

Add a host group member to a host group. `group_name` must be an existing group created using the create-hg subcommand. `group_member` can be specified as `<name_type>=<name_value>` where `<name_type>` can be one of the following:

wwn  
iscsi

and `<name_value>` is the value of the initiator name. As an example, to add a fibre channel initiator port world-wide name 200000e08b909221 to the host group “HostA”, the command would be:

```
stmf add-hg-member -g HostA wwn=200000e08b909221
```

To add an iscsi initiator node member with the name iqn.1986-03.com.sun:01.46f7e262, to “HostA”, the command would be:

```
stmf add-hg-member -g HostA iscsi=iqn.1986-03.com.sun:01.46f7e262
```

Alternately, members can be specified using their SCSI name string identifiers. To add the two initiators above using their SCSI name string indentifiers, the commands would be:

```
stmf add-hg-member -g HostA eui.200000e08b909221
```

```
stmf add-hg-member -g HostA iqn.1986-03.com.sun:01.46f7e262
```

Once entered into the system, all host group member names are stored as SCSI name strings. For more information on the SCSI name string identifier format, please see *ANSI*

*INCITS 408-2005.*

A host group member cannot be a member of more than one host group.

`stmfadm add-tg-member <-g group name> group member ...`

Add a target group member to a target group. `group_name` must be an existing group created using the `create-hg` subcommand. `group_member` can be specified as `<name_type>=<name_value>` where `<name_type>` can be one of the following:

wwn  
iscsi

and `<name_value>` is the value of the target name. As an example, to add a fibre channel target port world-wide name `501000e092376af7` to the target group “TG0”, the command would be:

```
stmf add-tg-member -g TG0 wwn=501000e092376af7
```

To add an iscsi target member with the name `iqn.1986-03.com.sun:target.01.01110`, to “TG0”, the command would be:

```
stmf add-tg-member -g TG0 iscsi=iqn.1986-03.com.sun:target.01.01110
```

Alternately, members can be specified using their SCSI name string identifiers. To add the two targets above using their SCSI name string identifiers, the commands would be:

```
stmf add-tg-member -g TG0 eui.501000e092376af7
```

```
stmf add-tg-member -g TG0 iqn.1986-03.com.sun:target.01.01110
```

Once entered into the system, all target group member names are stored as SCSI name strings. For more information on the SCSI name string identifier format, please see *ANSI INCITS 408-2005*.

A target group member cannot be a member of more than one target group.

`stmfadm create-hg group name`

Create an initiator group with the name `group name`. `group name` is a string of **ascii-printableunicode** characters with a maximum length of 255. The `group name` must be unique within the stmf system.

`stmfadm create-tg group name`

Create a target group with the name group name. group name is a string of ~~ascii printable characters~~unicode characters with a maximum length of 255. The group name must be unique within the stmf system.

stmfadm delete-hg group name

Delete a target group that is no longer needed.

stmfadm delete-tg group name

Delete a host group that is no longer needed.

stmfadm list-hg

Lists information for the host group in the system referenced by host group name. If host group name is not specified, all host groups in the system will be listed. If the -v option is specified, all members within the host group are displayed.

stmfadm list-target [-v]

Lists information for the target port in the system referenced by target name. If target name is not specified, all target ports in the system will be listed. If the -v option is specified, additional information about the target along with SCSI session information for logged in initiators will be displayed.

stmfadm list-tg [-v]

Lists information for the target group in the system referenced by target group name. If target group name is not specified, all target groups in the system will be listed. If the -v option is specified, all members within the target group are displayed.

stmfadm list-lu lu name [-v]

Lists information for the logical unit in the system referenced by lu\_name. If lu\_name is not specified, all logical units in the system will be listed. If the -v option is specified, additional information about the logical unit will be displayed.

stmfadm list-view

Lists the view entry for the logical unit referenced by lu-nameentry name. If entry name is not specified, all view entries for the specified logical unit will be listed.

stmfadm list-state

Lists the operational and configuration state of stmf.

`stmfdm remove-hg-member <-g group_name> group_member`

Removes a host group member from a host group. `group_name` must be an existing group created using the `create-tg` subcommand. `group_member` can be specified as `<name_type>=<name_value>` where `<name_type>` can be one of the following:

wwn  
iscsi

and `<name_value>` is the value of the initiator name. As an example, to remove the fibre channel initiator port world-wide name 200000e08b909221 from the host group “HostA”, the command would be:

```
stmf remove-tg-member -g HostA wwn=200000e08b909221
```

To remove the iscsi initiator node member with the name `iqn.1986-03.com.sun:01.46f7e262`, from “HostA”, the command would be:

```
stmf remove-tg-member -g HostA iscsi=iqn.1986-03.com.sun:01.46f7e262
```

Alternately, members can be specified using their SCSI name string identifiers. To remove the two initiators above using their SCSI name string identifiers, the commands would be:

```
stmf remove-tg-member -g HostA eui.200000e08b909221
```

```
stmf remove-tg-member -g HostA iqn.1986-03.com.sun:01.46f7e262
```

Once entered into the system, all host group member names are stored as SCSI name strings. For more information on the SCSI name string identifier format, please see *ANSI INCITS 408-2005*.

`stmfdm remove-tg-member <-g group_name> group_member`

Removes a target group member from a target group. `group_name` must be an existing group created using the `create-tg` subcommand. `group_member` can be specified as `<name_type>=<name_value>` where `<name_type>` can be one of the following:

wwn  
iscsi

and `<name_value>` is the value of the target name. As an example, to remove the fibre channel target port world-wide name 501000e092376af7 from the target group “TG0”, the command would be:

```
stmf remove-tg-member -g TG0 wwn=501000e092376af7
```

To remove the iscsi target member with the name `iqn.1986-03.com.sun:target.01.01110`, from “TG0”, the command would be:

```
stmf remove-tg-member -g TG0 iscsi=iqn.1986-03.com.sun:target.01.01110
```

Alternately, members can be specified using their SCSI name string identifiers. To remove the two targets above using their SCSI name string identifiers, the commands would be:

```
stmf remove-tg-member -g TG0 eui.501000e092376af7
```

```
stmf remove-tg-member -g TG0 iqn.1986-03.com.sun:target.01.01110
```

Once entered into the system, all target group member names are stored as SCSI name strings. For more information on the SCSI name string identifier format, please see *ANSI INCITS 408-2005*.

```
stmf remove-view <-l lu_name> entry_name
```

Removes one or more a logical unit view entries from a logical unit.

## EXAMPLES

### Example 1 Creating a host group with two initiator ports

The following commands use the create-hg and add-hg-member subcommands to create a host group and add two initiator ports to that host group

```
# stmfadm create-hg host-group-a
```

```
# stmfadm add-hg-member -g host-group-a wwn.210105b0000d92d0
```

### Example 2 Adding a view entry to a logical unit

The following command uses the add-view subcommand to allow access from host-group-a to a logical unit

```
# stmfadm add-view -h host-group-a 6000AE40C5000000000046FC4FEA001C
```

### Example 3 List a view entry

The following command uses the list-view subcommand to list all view entries for the specified logical unit

# stmfadm list-view -l 6000AE40C5000000000046FC4FEA001C

View Entry: 0

Host group : host-group-a

Target group : All

LUN : 0

EXIT STATUS

0 Operation was successful

>0 An error occurred.