



## Storage Policies

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## Ethernet and Fibre Channel Adapter Policies

These policies govern the host-side behavior of the adapter, including how the adapter handles traffic. For example, you can use these policies to change default settings for the following:

- Queues
- Interrupt handling
- Performance enhancement
- RSS hash
- Failover in a cluster configuration with two fabric interconnects

**Note**

For Fibre Channel adapter policies, the values displayed by may not match those displayed by applications such as QLogic SANsurfer. For example, the following values may result in an apparent mismatch between SANsurfer and :

- **Max LUNs Per Target**—SANsurfer has a maximum of 256 LUNs and does not display more than that number. supports a higher maximum number of LUNs.
- **Link Down Timeout**—In SANsurfer, you configure the timeout threshold for link down in seconds. In , you configure this value in milliseconds. Therefore, a value of 5500 ms in displays as 5s in SANsurfer.
- **Max Data Field Size**—SANsurfer has allowed values of 512, 1024, and 2048. allows you to set values of any size. Therefore, a value of 900 in displays as 512 in SANsurfer.
- **LUN Queue Depth**—The LUN queue depth setting is available for Windows system FC adapter policies. Queue depth is the number of commands that the HBA can send and receive in a single transmission per LUN. Windows Storport driver sets this to a default value of 20 for physical miniports and to 250 for virtual miniports. This setting adjusts the initial queue depth for all LUNs on the adapter. Valid range for this value is 1 to 254. The default LUN queue depth is 20.
- **IO TimeOut Retry**—When the target device is not responding to an IO request within the specified timeout, the FC adapter will abort the pending command then resend the same IO after the timer expires. The FC adapter valid range for this value is 0 to 59000 milliseconds. The default IO retry timeout is 5 seconds.

### Operating System Specific Adapter Policies

By default, Cisco UCS provides a set of Ethernet adapter policies and Fibre Channel adapter policies. These policies include the recommended settings for each supported server operating system. Operating systems are sensitive to the settings in these policies. Storage vendors typically require non-default adapter settings. You can find the details of these required settings on the support list provided by those vendors.

**Important**

We recommend that you use the values in these policies for the applicable operating system. Do not modify any of the values in the default policies unless directed to do so by Cisco Technical Support.

However, if you are creating an Ethernet adapter policy for a Windows OS (instead of using the default Windows adapter policy), you must use the following formulas to calculate values that work with Windows:

$$\text{Completion Queues} = \text{Transmit Queues} + \text{Receive Queues}$$

$$\text{Interrupt Count} = (\text{Completion Queues} + 2) \text{ rounded up to nearest power of } 2$$

For example, if Transmit Queues = 1 and Receive Queues = 8 then:

$$\text{Completion Queues} = 1 + 8 = 9$$

$$\text{Interrupt Count} = (9 + 2) \text{ rounded up to the nearest power of } 2 = 16$$

## Configuring a Fibre Channel Adapter Policy

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCSC# <b>connect policy-mgr</b>	Enters policy manager mode.
<b>Step 2</b>	UCSC(policy-mgr)# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 3</b>	UCSC(policy-mgr) /org # <b>create fc-policy</b> <i>policy-name</i>	Creates the specified Fibre Channel adapter policy and enters organization Fibre Channel policy mode.
<b>Step 4</b>	UCSC(policy-mgr) /org/fc-policy # <b>set descr</b> <i>description</i>	(Optional) Provides a description for the policy.  <b>Note</b> If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any <b>show</b> command output.
<b>Step 5</b>	UCSC(policy-mgr) /org/fc-policy # <b>set error-recovery</b> { <b>fc-error-recovery</b> { <b>disabled</b>   <b>enabled</b> }   <b>link-down-timeout</b> <i>timeout-msec</i>   <b>port-down-io-retry-count</b> <i>retry-count</i>   <b>port-down-timeout</b> <i>timeout-msec</i> }	(Optional) Configures the Fibre Channel error recovery.
<b>Step 6</b>	UCSC(policy-mgr) /org/fc-policy # <b>set interrupt mode</b> { <b>intx</b>   <b>msi</b>   <b>msi-x</b> }	(Optional) Configures the driver interrupt mode.
<b>Step 7</b>	UCSC(policy-mgr) /org/fc-policy # <b>set port</b> { <b>io-throttle-count</b> <i>throttle-count</i>   <b>max-luns</b> <i>max-num</i> }	(Optional) Configures the Fibre Channel port.
<b>Step 8</b>	UCSC(policy-mgr) /org/fc-policy # <b>set port-f-logi</b> { <b>retries</b> <i>retry-count</i>   <b>timeout</b> <i>timeout-msec</i> }	(Optional) Configures the Fibre Channel port fabric login (FLOGI).
<b>Step 9</b>	UCSC(policy-mgr) /org/fc-policy # <b>set port-p-logi</b> { <b>retries</b> <i>retry-count</i>   <b>timeout</b> <i>timeout-msec</i> }	(Optional) Configures the Fibre Channel port-to-port login (PLOGI).
<b>Step 10</b>	UCSC(policy-mgr) /org/fc-policy # <b>set rcv-queue</b> { <b>count</b> <i>count</i>   <b>ring-size</b> <i>size-num</i> }	(Optional) Configures the Fibre Channel receive queue.

	Command or Action	Purpose
<b>Step 11</b>	UCSC(policy-mgr)/org/fc-policy # <b>set scsi-io</b> { <b>count</b> <i>count</i>   <b>ring-size</b> <i>size-num</i> }	(Optional) Configures the Fibre Channel SCSI I/O.
<b>Step 12</b>	UCSC(policy-mgr)/org/fc-policy # <b>set trans-queue ring-size</b> <i>size-num</i> }	(Optional) Configures the Fibre Channel transmit queue.
<b>Step 13</b>	UCSC(policy-mgr)/org/fc-policy # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example configures a Fibre Channel adapter policy and commits the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr)# scope org /
UCSC(policy-mgr) /org* # create fc-policy FcPolicy42
UCSC(policy-mgr) /org/fc-policy* # set descr "This is a Fibre Channel adapter policy example."
UCSC(policy-mgr) /org/fc-policy* # set error-recovery error-detect-timeout 2500
UCSC(policy-mgr) /org/fc-policy* # set port max-luns 4
UCSC(policy-mgr) /org/fc-policy* # set port-f-logi retries 250
UCSC(policy-mgr) /org/fc-policy* # set port-p-logi timeout 5000
UCSC(policy-mgr) /org/fc-policy* # set recv-queue count 1
UCSC(policy-mgr) /org/fc-policy* # set scsi-io ring-size 256
UCSC(policy-mgr) /org/fc-policy* # set trans-queue ring-size 256
UCSC(policy-mgr) /org/fc-policy* # commit-buffer
UCSC(policy-mgr) /org/fc-policy #
```

## Deleting a Fibre Channel Adapter Policy

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCSC# <b>connect policy-mgr</b>	Enters policy manager mode.
<b>Step 2</b>	UCSC(policy-mgr)# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 3</b>	UCSC(policy-mgr)/org # <b>delete fc-policy</b> <i>policy-name</i>	Deletes the specified Fibre Channel adapter policy.
<b>Step 4</b>	UCSC(policy-mgr)/org # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example deletes the Fibre Channel adapter policy named FcPolicy42 and commits the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr)# scope org /
UCSC(policy-mgr) /org # delete fc-policy FcPolicy42
UCSC(policy-mgr) /org* # commit-buffer
UCSC(policy-mgr) /org #
```

## About the LAN and SAN Connectivity Policies

Connectivity policies determine the connections and the network communication resources between the server and the LAN or SAN on the network. These policies use pools to assign MAC addresses, WWNs, and WWPNS to servers and to identify the vNICs and vHBAs that the servers use to communicate with the network.



### Note

We do not recommend that you use static IDs in connectivity policies, because these policies are included in service profiles and service profile templates and can be used to configure multiple servers.

## Privileges Required for LAN and SAN Connectivity Policies

Connectivity policies enable users without network or storage privileges to create and modify service profiles and service profile templates with network and storage connections. However, users must have the appropriate network and storage privileges to create connectivity policies.

### Privileges Required to Create Connectivity Policies

Connectivity policies require the same privileges as other network and storage configurations. For example, you must have at least one of the following privileges to create connectivity policies:

- admin—Can create LAN and SAN connectivity policies
- ls-server—Can create LAN and SAN connectivity policies
- ls-network—Can create LAN connectivity policies
- ls-storage—Can create SAN connectivity policies

### Privileges Required to Add Connectivity Policies to Service Profiles

After the connectivity policies have been created, a user with ls-compute privileges can include them in a service profile or service profile template. However, a user with only ls-compute privileges cannot create connectivity policies.

## Creating a SAN Connectivity Policy

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCSC# <b>connect policy-mgr</b>	Enters policy manager mode.
<b>Step 2</b>	UCSC(policy-mgr) # <b>scope org org-name</b>	Enter organization mode for the specified organization. To enter the root organization mode, enter / as the <i>org-name</i> .

	Command or Action	Purpose
<b>Step 3</b>	UCSC(policy-mgr) /org # <b>create san-connectivity-policy</b> <i>policy-name</i>	Creates the specified SAN connectivity policy, and enters organization network control policy mode.  This name can be between 1 and 16 alphanumeric characters. You cannot use spaces or any special characters other than - (hyphen), _ (underscore), : (colon), and . (period) and you cannot change this name after the object has been saved.
<b>Step 4</b>	UCSC(policy-mgr) /org/san-connectivity-policy # <b>descr</b> <i>policy-name</i>	(Optional) Adds a description to the policy. We recommend that you include information about where and how the policy should be used.  Enter up to 256 characters. you can use any characters or spaces except ' (accent mark), \ (backslash), ^ (carat), " (double quote), = (equal sign), > (greater than), < (less than), or ' (single quote).
<b>Step 5</b>	UCSC(policy-mgr) /org/service-profile # <b>set identity</b> { <b>dynamic-uuid</b> { <i>uuid</i>   <b>derived</b> }   <b>dynamic-wwnn</b> { <i>wwnn</i>   <b>derived</b> }   <b>uuid-pool</b> <i>pool-name</i>   <b>wwnn-pool</b> <i>pool-name</i> }	Specifies how the server acquires a UUID or WWNN. You can do one of the following: <ul style="list-style-type: none"> <li>• Create a unique UUID in the form <i>nnnnnnnnn-nnnnn-nnnnn-nnnnnnnnnnnnn</i></li> <li>• Derive the UUID from the one burned into the hardware at manufacture</li> <li>• Use a UUID pool</li> <li>• Create a unique WWNN in the form <i>hh : hh : hh : hh : hh : hh : hh : hh</i></li> <li>• Derive the WWNN from one burned into the hardware at manufacture</li> <li>• Use a WWNN pool</li> </ul>
<b>Step 6</b>	UCSC(policy-mgr) /org/san-connectivity-policy # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example shows how to create a SAN connectivity policy named SanConnect242 and commit the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) /org* # create san-connectivity-policy SanConnect242
UCSC(policy-mgr) /org/san-connectivity-policy* # set descr "SAN connectivity policy"
UCSC(policy-mgr) /org/san-connectivity-policy* # set identity wwnn-pool SanPool7
UCSC(policy-mgr) /org/san-connectivity-policy* # commit-buffer
UCSC(policy-mgr) /org/san-connectivity-policy #
```

### What to Do Next

Add one or more vHBAs and/or initiator groups to this SAN connectivity policy.

## Creating a vHBA for a SAN Connectivity Policy

If you are continuing from [Creating a SAN Connectivity Policy](#), on page 5, begin this procedure at Step 3

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCSC# <b>connect policy-mgr</b>	Enters policy manager mode.
<b>Step 2</b>	UCSC(policy-mgr) # <b>scope org org-name</b>	Enters organization mode for the specified organization. To enter the root organization mode, enter / as the <i>org-name</i> .
<b>Step 3</b>	UCSC(policy-mgr) /org # <b>scope san-connectivity-policy policy-name</b>	Enters SAN connectivity policy mode for the specified SAN connectivity policy.
<b>Step 4</b>	UCSC(policy-mgr) /org/san-connectivity-policy # <b>create vhma vhma-name [fabric {a   b}] [fc-if fc-if-name]</b>	Creates a vHBA for the specified SAN connectivity policy and enters vHBA mode.  This name can be between 1 and 16 alphanumeric characters. You cannot use spaces or any special characters other than - (hyphen), _ (underscore), : (colon), and . (period), and you cannot change this name after the object has been saved.
<b>Step 5</b>	UCSC(policy-mgr) /org/san-connectivity-policy/vhma # <b>set adapter-policy policy-name</b>	Specifies the adapter policy to use for the vHBA.
<b>Step 6</b>	UCSC(policy-mgr) /org/san-connectivity-policy/vhma # <b>set identity {dynamic-wwpn {wwpn   derived}   wwn-pool wwn-pool-name}</b>	Specifies the WWPN for the vHBA.  You can set the storage identity using one of the following options: <ul style="list-style-type: none"> <li>• Create a unique WWPN in the form <i>hh:hh:hh:hh:hh:hh:hh:hh</i>.  You can specify a WWPN in the range from 20:00:00:00:00:00:00:00 to 20:FF:FF:FF:FF:FF:FF:FF or from 50:00:00:00:00:00:00:00 to 5F:FF:FF:FF:FF:FF:FF:FF.</li> <li>• If you want the WWPN to be compatible with Cisco MDS Fibre Channel switches, use the WWPN template <b>20:00:00:25:B5:XX:XX:XX</b>.</li> <li>• Derive the WWPN from one burned into the hardware at manufacture.</li> <li>• Assign a WWPN from a WWN pool.</li> </ul>

	Command or Action	Purpose
<b>Step 7</b>	UCSC(policy-mgr) /org/san-connectivity-policy/vhba # <b>set max-field-size</b> <i>size-num</i>	Specifies the maximum size of the Fibre Channel frame payload (in bytes) that the vHBA supports.  Enter an integer between 256 and 2112. The default is 2048.
<b>Step 8</b>	UCSC(policy-mgr) /org/san-connectivity-policy/vhba # <b>set order</b> { <i>order-num</i>   <b>unspecified</b> }	Specifies the PCI scan order for the vHBA.
<b>Step 9</b>	UCSC(policy-mgr) /org/san-connectivity-policy/vhba # <b>set pers-bind</b> { <b>disabled</b>   <b>enabled</b> }	Disables or enables persistent binding to Fibre Channel targets.
<b>Step 10</b>	UCSC(policy-mgr) /org/san-connectivity-policy/vhba # <b>set pin-group</b> <i>group-name</i>	Specifies the SAN pin group to use for the vHBA.
<b>Step 11</b>	UCSC(policy-mgr) /org/san-connectivity-policy/vhba # <b>set qos-policy</b> <i>policy-name</i>	Specifies the QoS policy to use for the vHBA.
<b>Step 12</b>	UCSC(policy-mgr) /org/san-connectivity-policy/vhba # <b>set stats-policy</b> <i>policy-name</i>	Specifies the statistics threshold policy to use for the vHBA.
<b>Step 13</b>	UCSC(policy-mgr) /org/san-connectivity-policy/vhba # <b>set template-name</b> <i>policy-name</i>	Specifies the vHBA template to use for the vHBA. If you choose to use a vHBA template for the vHBA, you must still complete all of the configuration not included in the vHBA template, including Steps 4, 7, and 8.
<b>Step 14</b>	UCSC(policy-mgr) /org/san-connectivity-policy/vhba # <b>set vcon</b> { <b>1</b>   <b>2</b>   <b>3</b>   <b>4</b>   <b>any</b> }	Assigns the vHBA to one or all virtual network interface connections.
<b>Step 15</b>	UCSC(policy-mgr) /org/san-connectivity-policy/vhba # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example shows how to configure a vHBA for a SAN connectivity policy named SanConnect242 and commit the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) /org* # scope san-connectivity-policy SanConnect242
UCSC(policy-mgr) /org/san-connectivity-policy* # create vhba vhba3 fabric a
UCSC(policy-mgr) /org/san-connectivity-policy/vhba* # set adapter-policy AdaptPol2
UCSC(policy-mgr) /org/san-connectivity-policy/vhba* # set identity wwpn-pool SanPool7
UCSC(policy-mgr) /org/san-connectivity-policy/vhba* # set max-field-size 2112
UCSC(policy-mgr) /org/san-connectivity-policy/vhba* # set order 0
UCSC(policy-mgr) /org/san-connectivity-policy/vhba* # set pers-bind enabled
UCSC(policy-mgr) /org/san-connectivity-policy/vhba* # set pin-group FcPinGroup12
UCSC(policy-mgr) /org/san-connectivity-policy/vhba* # set qos-policy QosPol5
UCSC(policy-mgr) /org/san-connectivity-policy/vhba* # set stats-policy StatsPol2
UCSC(policy-mgr) /org/san-connectivity-policy/vhba* # set template-name SanConnPol3
```



```
UCSC(policy-mgr) /org/san-connectivity-policy/vhba* # set vcon any
UCSC(policy-mgr) /org/san-connectivity-policy/vhba* # commit-buffer
UCSC(policy-mgr) /org/san-connectivity-policy/vhba #
```

### What to Do Next

If desired, add another vHBA or an initiator group to the SAN connectivity policy. If not, include the policy in a service profile or service profile template.

## Creating an Initiator Group for a SAN Connectivity Policy

If you are continuing from [Creating a SAN Connectivity Policy, on page 5](#), begin this procedure at Step 3.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCSC# <b>connect policy-mgr</b>	Enters policy manager mode.
<b>Step 2</b>	UCSC(policy-mgr) # <b>scope org org-name</b>	Enters organization mode for the specified organization. To enter the root organization mode, enter / as the <i>org-name</i> .
<b>Step 3</b>	UCSC(policy-mgr) /org # <b>scope san-connectivity-policy policy-name</b>	Enters SAN connectivity policy mode for the specified SAN connectivity policy.
<b>Step 4</b>	UCSC(policy-mgr) /org/san-connectivity-policy # <b>create initiator-group group-name fc</b>	Creates the specified initiator group for Fibre Channel zoning and enters initiator group mode.  This name can be between 1 and 16 alphanumeric characters. You cannot use spaces or any special characters other than - (hyphen), _

	Command or Action	Purpose
		(underscore), : (colon), and .(period), and you cannot change this name after the object has been saved.
<b>Step 5</b>	UCSC(policy-mgr) /org/san-connectivity-policy/initiator-group # <b>create initiator</b> <i>vhba-name</i>	Creates the specified vHBA initiator in the initiator group.  If desired, repeat this step to add a second vHBA initiator to the group.
<b>Step 6</b>	UCSC(policy-mgr) /org/san-connectivity-policy/initiator-group # <b>set storage-connection-policy</b> <i>policy-name</i>	Associates the specified storage connection policy with the SAN connectivity policy.

	Command or Action	Purpose
		<p><b>Note</b> This step assumes that you want to associate an existing storage connection policy to associate with the SAN connectivity policy. If you do, continue with Step 10. If you want to create a local storage definition for this policy instead, continue with Step 6.</p>
<b>Step 7</b>	<pre>UCSC(policy-mgr) /org/san-connectivity-policy/initiator-group/storage-connection-def # <b>create storage-target</b> <i>wwpn</i></pre>	Creates a storage target endpoint with the specified WWPN, and enters storage target mode.
<b>Step 8</b>	<pre>UCSC(policy-mgr) /org/san-connectivity-policy/initiator-group/storage-connection-def/storage-target # <b>set target-path</b> {<i>a</i>   <i>b</i>}</pre>	Specifies which fabric interconnect is used for communications with the target endpoint.
<b>Step 9</b>	<pre>UCSC(policy-mgr) /org/san-connectivity-policy/initiator-group/storage-connection-def/storage-target # <b>set target-vsan</b> <i>vsan</i></pre>	Specifies which VSAN is used for communications

	Command or Action	Purpose
		with the target endpoint.
<b>Step 10</b>	UCSC(policy-mgr)/org/san-connectivity-policy/initiator-group # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example shows how to configure an initiator group named `initGroupZone1` with two initiators for a SAN connectivity policy named `SanConnect242`, configure a local storage connection policy definition named `scPolicyZone1`, and commit the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr)# scope org /
UCSC(policy-mgr) /org* # scope san-connectivity-policy SanConnect242
UCSC(policy-mgr) /org/san-connectivity-policy # create initiator-group initGroupZone1 fc
UCSC(policy-mgr) /org/san-connectivity-policy/initiator-group* # set zoning-type sist
UCSC(policy-mgr) /org/san-connectivity-policy/initiator-group* # create initiator vhma1
UCSC(policy-mgr) /org/san-connectivity-policy/initiator-group* # create initiator vhma2
UCSC(policy-mgr) /org/san-connectivity-policy/initiator-group* # create storage-connection-def
  scPolicyZone1
UCSC(policy-mgr) /org/san-connectivity-policy/initiator-group/storage-connection-def* #
  create storage-target
  20:10:20:30:40:50:60:70
UCSC(policy-mgr)
/org/san-connectivity-policy/initiator-group/storage-connection-def/storage-target* # set
target-path a
UCSC(policy-mgr)
/org/san-connectivity-policy/initiator-group/storage-connection-def/storage-target* # set
target-vsan default
UCSC(policy-mgr) /org/san-connectivity-policy/initiator-group* # commit-buffer
UCSC(policy-mgr) /org/san-connectivity-policy/initiator-group #
```

### What to Do Next

If desired, add another initiator group or a vHBA to the SAN connectivity policy. If not, include the policy in a service profile or service profile template.

## Deleting a vHBA from a SAN Connectivity Policy

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCSC# <b>connect policy-mgr</b>	Enters policy manager mode.
<b>Step 2</b>	UCSC(policy-mgr) # <b>scope org org-name</b>	Enters organization mode for the specified organization. To enter the root organization mode, enter / as the <i>org-name</i> .
<b>Step 3</b>	UCSC(policy-mgr) /org # <b>scope san-connectivity-policy policy-name</b>	Enters SAN connectivity policy mode for the specified SAN connectivity policy.

	Command or Action	Purpose
<b>Step 4</b>	UCSC(policy-mgr) /org/san-connectivity-policy # <b>delete vHBA</b> <i>vhba-name</i>	Deletes the specified vHBA from the SAN connectivity policy.
<b>Step 5</b>	UCSC(policy-mgr) /org/san-connectivity-policy # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example shows how to delete a vHBA named vHBA3 from a SAN connectivity policy named SanConnect242 and commit the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) /org # scope san-connectivity-policy SanConnect242
UCSC(policy-mgr) /org/san-connectivity-policy # delete vHBA vHBA3
UCSC(policy-mgr) /org/san-connectivity-policy* # commit-buffer
UCSC(policy-mgr) /org/san-connectivity-policy #
```

## Deleting an Initiator Group from a SAN Connectivity Policy

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCSC# <b>connect policy-mgr</b>	Enters policy manager mode.
<b>Step 2</b>	UCSC(policy-mgr) # <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, enter, / as the <i>org-name</i> .
<b>Step 3</b>	UCSC(policy-mgr) /org # <b>scope</b> <b>san-connectivity-policy</b> <i>policy-name</i>	Enters SAN connectivity policy mode for the specified SAN connectivity policy.
<b>Step 4</b>	UCSC(policy-mgr) /org/san-connectivity-policy # <b>delete</b> <b>initiator-group</b> <i>group-name</i>	Deletes the specified initiator group from the SAN connectivity policy.
<b>Step 5</b>	UCSC(policy-mgr) /org/san-connectivity-policy # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example shows how to delete an initiator group named initGroup3 from a SAN connectivity policy named SanConnect242 and commit the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) /org # scope san-connectivity-policy SanConnect242
UCSC(policy-mgr) /org/san-connectivity-policy # delete initiator-group initGroup3
UCSC(policy-mgr) /org/san-connectivity-policy* # commit-buffer
UCSC(policy-mgr) /org/san-connectivity-policy #
```

# Storage Connection Policy

The storage connection policy contains a collection of target storage ports on storage array that you use to configure fibre channel zoning.

From Cisco UCS Central you can create a storage connection policy in an organization.

## Creating a Storage Connection Policy

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCSC# <b>connect policy-mgr</b>	Enters policy manager mode.
<b>Step 2</b>	UCSC(policy-mgr)# <b>scope org org-name</b>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 3</b>	UCSC(policy-mgr) /org # <b>create storage-connection-policy profile-name</b>	Creates the specified storage connection policy and enters organization storage connection policy mode.
<b>Step 4</b>	UCSC(policy-mgr) /org/storage-connection-policy # <b>set zoning type {none   simt   sist}</b>	Select the zoning type. This can be one of the following: <ul style="list-style-type: none"> <li>• None—FC zoning is not configured.</li> <li>• Single Initiator Multiple Targets—The system automatically creates one zone for each vHBA. We recommend that you configure this type of zoning if you expect the number of zones to reach or exceed the maximum supported.</li> <li>• Single Initiator Single Target—The system automatically creates one zone for each vHBA and storage port pair. Each zone has two members. We recommend that you configure this type of zoning unless you expect the number of zones to exceed the maximum supported. This is the default.</li> </ul>
<b>Step 5</b>	UCSC(policy-mgr) /org/storage-connection-policy # <b>create storage-target WWPN_ID</b>	Creates a target on the selected WWPN.
<b>Step 6</b>	UCSC(policy-mgr) /org/storage-connection-policy/storage-target # <b>set target-path {a   b}</b>	Sets the target fabric interconnect. By default, fabric interconnect A is used for communications with the target endpoint.

	<b>Command or Action</b>	<b>Purpose</b>
<b>Step 7</b>	UCSC(policy-mgr) /org/storage-connection-policy/storage-target # <b>set target-vsan</b> <i>VSAN_name</i>	Select the VSAN associated with the FI Port and the target endpoint.
<b>Step 8</b>	UCSC(policy-mgr) /org/storage-connection-policy # <b>commit-buffer</b>	Commits the transaction to the system configuration.

