



## Logical Interfaces

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PortChannels allow for the aggregation of multiple Fibre Channels or FCIP links into a single, high-speed, fault tolerant Fibre Channel or FCIP ISL (Inter-Switch Link). An ISL with multiple Fibre Channels or FCIP links has the same configuration options as a single-link Fibre Channel or FCIP ISL. This chapter focuses on the procedures associated with building, modifying, and reducing a PortChannel. It includes the following sections:

- [Configuring a PortChannel, page 4-2](#)
  - [Adding a New Member to a PortChannel, page 4-4](#)
  - [Removing a Member from a PortChannel, page 4-5](#)
  - [Modifying the VSAN Allowed List, page 4-6](#)

# Creating a PortChannel

There are two basic methods to create a PortChannel: using the Fabric Manager wizard or entering commands through the CLI (command-line interface). This procedure shows how to create a PortChannel using the CLI.

This procedure uses the following resources:

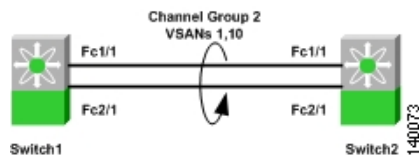
### Switch 1:

Channel Group 2  
Interfaces: fc1/1 and fc2/1

### Switch 2:

Channel Group 2  
Interfaces: fc1/1 and fc2/1  
Allowed VSANs: 1,10

**Figure 4-1** Topology



### Tip

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- The same channel group number should be used on both ends of a PortChannel. Having the same number helps in troubleshooting and identifying the corresponding channel group on the other switch.
- A PortChannel, like all other interfaces, can have a description. Use the description field to specify exactly where the PortChannel goes.

PortChannels can use any port on the switch and connect to any other port on a switch.

Set the initial VSAN allowed list prior to bringing up the PortChannel. This action prevents any VSANs from merging when you bring up the PortChannel the first time.

To create a PortChannel through the CLI, follow these steps:

### Step 1

```
switch1# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch1(config)# interface fc1/1, fc2/1
switch1(config-if)# channel-group 2
fc1/1 fc2/1 added to port-channel 2 and disabled
please do the same operation on the switch at the other end of the port-channel,
then do "no shutdown" at both ends to bring them up
switch1(config-if)# switchport description "To switch2 PortChannel2"
```

**Step 2** Enable trunking (TE) and set the VSAN allowed list on switch 1.

```
switchport trunk mode on
switchport trunk allowed vsan 1
switchport trunk allowed vsan add 10
```

**Step 3**

```
config terminal
```

```
interface fc1/1, fc2/1
channel-group 2
```

```
switchport description "To switch1 PortChannel2"
```

**Step 4**

**Step 5**

a.

b.

**Step 6**

```
port-channel 2 is trunking
  Port description is To switch2 PortChannel2
  Hardware is Fibre Channel
  Port WWN is 24:02:00:0c:85:e9:d2:c0
  Admin port mode is E, trunk mode is on
  Port mode is TE
  Port vsan is 1
  Speed is 4 Gbps
  Trunk vsans (admin allowed and active) (1,10)
  Trunk vsans (up) (1,10)
  Trunk vsans (isolated) ()
  Trunk vsans (initializing) ()
  5 minutes input rate 64 bits/sec, 8 bytes/sec, 0 frames/sec
  5 minutes output rate 56 bits/sec, 7 bytes/sec, 0 frames/sec
  78296342 frames input, 72311141128 bytes
    0 discards, 0 errors
    0 CRC, 0 unknown class
    0 too long, 0 too short
  56299070 frames output, 26061293700 bytes
    0 discards, 0 errors
```

```
0 input OLS, 2 LRR, 0 NOS, 0 loop inits
4 output OLS, 2 LRR, 0 NOS, 0 loop inits
Member[1] : fc1/1
Member[2] : fc2/1
iSCSI authentication: None
```

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## Adding a New Member to a PortChannel

New Interfaces: fc3/1

Channel Group 2

Existing Interfaces: fc1/1 and fc2/1

New Interface: fc3/1

To add a member to an existing PortChannel, follow these steps:

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**Step 1** To add the new member to switch 1, use the **force**

```
int fc3/1
    channel-group 2 force

no shut

force

conf t
    int fc3/1
        channel-group 2 force

no shut

show interface port-channel 2
```

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## Removing a Member from a PortChannel



Tip

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`quiesce`

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**Switch 1:**

**Switch 2:**

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On switch 1, quiesce the interfaces to be removed.

```
quiesce interface fc3/1
```

1. quiesce the interfaces on both switches.
2. shutdown the interfaces administratively.

```
Do you want to continue? (y/n) [n] y
```

```
fc3/1: quiesced
```

```
Please quiesce the corresponding interfaces on the other switch and then shut down them administratively.
```

Step 2

Step 3

a.

b.

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## Modifying the VSAN Allowed List

To add VSAN 17 to PortChannel 2, enter these commands:

```
switchport trunk allowed vsan add 17
```

```
config terminal  
  int port-channel 2  
    no switchport trunk allowed vsan add 17
```