



# **Configuring switch fabrics sharing between the 7-Mode and clustered MetroCluster configuration**

**ONTAP MetroCluster**

NetApp  
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# Configuring switch fabrics sharing between the 7-Mode and clustered MetroCluster configuration

To share switch fabrics between the existing 7-Mode fabric MetroCluster and the new MetroCluster configuration, you must set up specific zoning and other settings that are different than an unshared configuration.

This task must be performed on both switch fabrics, one at a time.

## Disabling one of the switch fabrics

You must disable one of the switch fabrics so you can modify its configuration. After you complete the configuration and reenables the switch fabric, you will repeat the process on the other fabric.

You must have run the `fmc_dc` utility on the existing 7-Mode fabric MetroCluster configuration and resolved any issues prior to beginning the configuration process.

To ensure continued operation of the MetroCluster configuration, you must not disable the second fabric while the first fabric is disabled.

### Steps

1. Disable each of the switches in the fabric:

```
switchCfgPersistentDisable
```

If this command is not available, use the `switchDisable` command.

The following example shows the command issued on FC\_switch\_A\_1:

```
FC_switch_A_1:admin> switchCfgPersistentDisable
```

The following example shows the command issued on FC\_switch\_B\_1:

```
FC_switch_B_1:admin> switchCfgPersistentDisable
```

2. Ensure that the 7-Mode MetroCluster configuration is functioning correctly using the redundant fabric:

- a. Confirm that controller failover is healthy:

```
cf status
```

```
node_A> cf status  
Controller Failover enabled, node_A is up.  
VIA Interconnect is up (link 0 down, link 1 up).
```

b. Confirm that disks are visible:

**storage show disk -p**

```
node_A> storage show disk -p
```

PRIMARY	PORT	SECONDARY	PORT	SHELF	BAY
Brocade-6510-2K0GG:5.126L27	B			1	0
Brocade-6510-2K0GG:5.126L28	B			1	1
Brocade-6510-2K0GG:5.126L29	B			1	2
Brocade-6510-2K0GG:5.126L30	B			1	3
Brocade-6510-2K0GG:5.126L31	B			1	4
.					
.					
.					

c. Confirm that the aggregates are healthy:

**aggr status**

```
node_A> aggr status
```

Aggr State	Status	Options
aggr0 online	raid_dp, aggr mirrored 64-bit	root, nosnap=on

## Deleting TI zoning and configuring IOD settings

You must delete the existing TI zoning and reconfigure in-order-delivery (IOD) settings on the switch fabric.

1. Identify the TI zones that are configured on the fabric:

**zone --show**

The following example shows the zone FCVI\_TI\_FAB\_2.

```
Brocade-6510:admin> zone --show
```

Defined TI zone configuration:  
TI Zone Name: FCVI\_TI\_FAB\_2  
Port List: 1,0; 1,3; 2,0; 2,3  
configured Status: Activated / Failover-Disabled  
Enabled Status: Activated / Failover-Disabled

2. Delete the TI zones:

```
zone --delete zone-name
```

The following example shows the deletion of zone FCVI\_TI\_FAB\_2.

```
Brocade-6510:admin> zone --delete FCVI_TI_FAB_2
```

3. Confirm that the zones have been deleted:

```
zone --show
```

The output should be similar to the following:

```
Brocade-6510:admin> zone --show  
  
Defined TI zone configuration:  
no TI zone configuration defined
```

4. Save the configuration:

```
cfgsave
```

5. Enable in-order-delivery:

```
iodset
```

6. Select Advanced Performance Tuning (APT) policy 1, the Port Based Routing Policy:

```
aptpolicy 1
```

7. Disable Dynamic Load Sharing (DLS):

```
dlsreset
```

8. Verify the IOD settings using the following commands:

```
iodshow
```

```
aptpolicy
```

```
dlsshow
```

The output should be similar to the following:

```
Brocade-6510:admin> iodshow

IOD is set

Brocade-6510:admin> aptpolicy
Current Policy: 1

3 : Default Policy
1: Port Based Routing Policy
2: Device Based Routing Policy (FICON support only)
3: Exchange Based Routing Policy
Brocade-6510:admin> dlsshow

DLS is not set
```

## Ensuring ISLs are in the same port group and configuring zoning

You must make sure that the Inter-Switch Links (ISLs) are in the same port group and configure zoning for the MetroCluster configurations to successfully share the switch fabrics.

### Steps

1. If the ISLs are not in the same port group, move one of the ISL ports to the same port group as the other one.

You can use any available port except 32 through 45, which are used by the new MetroCluster configuration. The recommended ISL ports are 46 and 47.

2. Follow the steps in the Configuring zoning on a Brocade FC switch section to enable trunking and the QoS zone.

#### [Configuring zoning on Brocade FC switches](#)

The port numbers when sharing fabrics are different than those shown in the section. When sharing, use ports 46 and 47 for the ISL ports. If you moved your ISL ports, you need to use the procedure in the Configuring the E-ports (ISL ports) on a Brocade FC switch section to configure the ports.

#### [Configuring the E-ports \(ISL ports\) on a Brocade FC switch](#)

3. Follow the steps in the Configuring the non-E ports on the Brocade switch section to configure the non-E ports.

#### [Configuring the non-E ports on the Brocade switch](#)

4. Do not delete the zones or zone sets that already exist in the backend switches (for the 7-Mode fabric MetroCluster) except the Traffic Isolation (TI) zones in Step 3.
5. Follow the steps in the Configuring the E-ports (ISL ports) on a Brocade FC switch section to add the

zones required by the new MetroCluster to the existing zone sets.

### Configuring the E-ports (ISL ports) on a Brocade FC switch

The following example shows the commands and system output for creating the zones:

```
Brocade-6510-2K0GG:admin> zonecreate "QOSH2_FCVI_1", "2,32; 2,35; 1,32;
1,35"

Brocade-6510-2K0GG:admin> zonecreate "STOR_A_2_47", "2,33; 2,34; 2,36;
2,37; 1,33; 1,34; 1,36; 1,37; 1,47"

Brocade-6510-2K0GG:admin> zonecreate "STOR_B_2_47", "2,33; 2,34; 2,36;
2,37; 1,33; 1,34; 1,36; 1,37; 2,47"

Brocade-6510-2K0GG:admin> cfgadd config_1_FAB2, "QOSH2_FCVI_1;
STOR_A_2_47; STOR_B_2_47"

Brocade-6510-2K0GG:admin> cfgenable "config_1_FAB2"
You are about to enable a new zoning configuration.
This action will replace the old zoning configuration with the
current configuration selected. If the update includes changes
to one or more traffic isolation zones, the update may result in
localized disruption to traffic on ports associated with
the traffic isolation zone changes
Do you want to enable 'config_1_FAB2' configuration (yes, y, no, n):
[no] yes

Brocade-6510-2K0GG:admin> cfsave
You are about to save the Defined zoning configuration. This
action will only save the changes on Defined configuration.
Do you want to save the Defined zoning configuration only? (yes, y, no,
n): [no] yes
Nothing changed: nothing to save, returning ...
Brocade-6510-2K0GG:admin>
```

## Reenabling the switch fabric and verify operation

You must enable the FC switch fabric and ensure that the switches and devices are operating correctly.

### Steps

1. Enable the switches:

```
switchCfgPersistentEnable
```

If this command is not available, the switch should be in the enabled state after the `fastBoot` command is issued.

The following example shows the command issued on `FC_switch_A_1`:

```
FC_switch_A_1:admin> switchCfgPersistentEnable
```

The following example shows the command issued on `FC_switch_B_1`:

```
FC_switch_B_1:admin> switchCfgPersistentEnable
```

2. Verify that the switches are online and all devices are properly logged in:

**`switchShow`**

The following example shows the command issued on `FC_switch_A_1`:

```
FC_switch_A_1:admin> switchShow
```

The following example shows the command issued on `FC_switch_B_1`:

```
FC_switch_B_1:admin> switchShow
```

3. Run the `fmc_dc utility` to ensure that the 7-Mode fabric MetroCluster is functioning correctly.

You can ignore errors related to Traffic Isolation (TI) zoning and trunking.

4. Repeat the tasks for the second switch fabric.



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