



## CHAPTER 3

# Configuring Fibre Channel Write Acceleration

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This chapter describes the Fibre Channel Write Acceleration (FC-WA) feature, including how to enable the feature on Cisco NX-OS.

This chapter includes the following sections:

- [About Fibre Channel Write Acceleration, page 3-1](#)
- [Default Settings, page 3-3](#)

## About Fibre Channel Write Acceleration

Fibre Channel Write Acceleration minimizes application latency or reduces transactions per second over long distances. For synchronous data replication, Fibre Channel Write Acceleration increases the distance of replication or reduces effective latency to improve performance. To take advantage of this feature, both the initiator and target devices must be directly attached to an SSM.

The Fibre Channel Write Acceleration feature also allows the configuration of the buffer count. You can change the number of 2-KB buffers reserved on the target side DPP for a SCSI flow.

You can estimate the number of buffers to configure using the following formula:

$(\text{Number of concurrent SCSI writes} * \text{size of SCSI writes in bytes}) / \text{FCP data frame size in bytes}$

For example, HDS TrueCopy between HDS 9970s uses 1-KB FCP data frames. You perform an initial synchronization for a 16-LUN TrueCopy group with 15 tracks, or 768-KB per LUN, which requires approximately  $16 * (768 * 1024) / 1024$  or 12248 write buffers.



### Note

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The Fibre Channel write acceleration feature requires the Enterprise Package license installed on both the initiator and target switches.

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### Note

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The initiator and target cannot connect to the same Cisco MDS switch. Fibre Channel write acceleration requires that the initiator and target must each connect to an SSM module installed on different Cisco MDS switches.

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This section includes the following topics:

- [About Fibre Channel Write Acceleration, page 3-1](#)
- [Enabling Fibre Channel Write Acceleration, page 3-2](#)

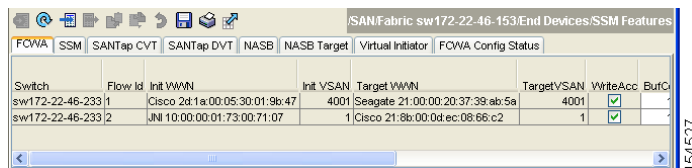
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## Enabling Fibre Channel Write Acceleration

To enable Fibre Channel write acceleration, and optionally modify the number of write acceleration buffers with Fabric Manager, follow these steps:

- Step 1** Expand **End Devices** and then select **SSM Features** from the Physical Attributes pane. You see the Intelligent Storage Services configuration, showing the FCWA tab in the Information pane (see [Figure 3-1](#)).

**Figure 3-1** FCWA Tab

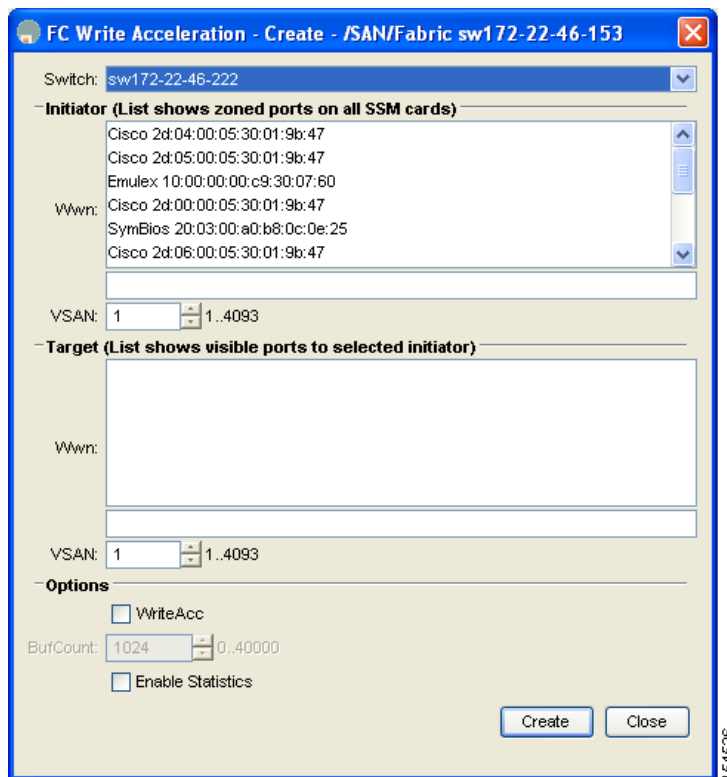


Switch	Flow Id	Init WWN	Init VSAN	Target WWN	Target VSAN	WriteAcc	BufC
sw172-22-46-233	1	Cisco 2d:1a:00:05:30:01:9b:47	4001	Seagate 21:00:00:20:37:39:ab:5a	4001	<input checked="" type="checkbox"/>	
sw172-22-46-233	2	UNI 10:00:00:01:73:00:71:07	1	Cisco 21:8b:00:0d:ec:08:66:c2	1	<input checked="" type="checkbox"/>	

- Step 2** Click **Create Row** in the Information pane to create a SCSI flow or click a row in the FCWA table to modify an existing SCSI flow.

You see the FC Write Acceleration dialog box shown in [Figure 3-2](#).

**Figure 3-2** FC Write Acceleration Dialog Box



Switch: sw172-22-46-222

**Initiator (List shows zoned ports on all SSM cards)**

Cisco 2d:04:00:05:30:01:9b:47  
 Cisco 2d:05:00:05:30:01:9b:47  
 Emulex 10:00:00:00:c9:30:07:60  
 Wwn: Cisco 2d:00:00:05:30:01:9b:47  
 SymBios 20:03:00:a0:b8:0c:0e:25  
 Cisco 2d:06:00:05:30:01:9b:47

VSAN: 1 1..4093

**Target (List shows visible ports to selected initiator)**

Wwn:

VSAN: 1 1..4093

**Options**

WriteAcc  
 BufCount: 1024 0..40000  
 Enable Statistics

Create Close

- Step 3** Select the initiator and target WWNs and VSAN IDs and check the **WriteAcc** check box to enable Fibre Channel write acceleration on this SCSI flow.

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- Step 4** (Optional) Enable SCSI flow statistics on this SCSI flow at this time by checking the **Enable Statistics** check box.
- Step 5** (Optional) Set the BufCount value to the number of 2K buffers used by the SCSI target.
- Step 6** Click **Create** to create this SCSI flow with Fibre Channel write acceleration.
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## Default Settings

Table 3-1 lists the default settings for Fibre Channel write acceleration parameters.

**Table 3-1** *Default Fibre Channel Write Acceleration Parameters*

Parameters	Default
Fibre Channel write acceleration	Disabled
Fibre Channel write acceleration buffers	1024

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