



Configuring FCoE

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Configuring FCoE

This chapter describes how to configure Fibre Channel over Ethernet (FCoE) on a Cisco Nexus 5000 Series Switch, Cisco Nexus 7000 Series Switch, and Cisco 9000 Family MDS switch.

About FCoE

Cisco Nexus 5000 Series Switch, Cisco Nexus 7000 Series Switch, and Cisco MDS 9000 family switches support Fibre Channel over Ethernet (FCoE), which allows Fibre Channel and Ethernet traffic to be carried on the same physical Ethernet connection between the switch and the servers. FCoE requires the underlying Ethernet to be full duplex and to provide lossless behavior for Fibre Channel traffic.

The FCoE Initialization Protocol (FIP) allows the switch to discover and initialize FCoE-capable entities that are connected to an Ethernet LAN.

Guidelines and Limitations

When configuring FCoE, note the following guidelines and limitations:

- FCoE is supported on 10-Gigabit Ethernet interfaces.
- FCoE is not supported on private VLANs.
- DPVM supports MAC-based device mapping for FCoE devices. DPVM does not support pWWN mapping for FCoE devices.

Configuring FCoE

Enabling FCoE

Fibre Channel over Ethernet (FCoE) provides a method of transporting Fibre Channel traffic over a physical Ethernet connection. By default, each Ethernet interface attempts to enable FCoE by advertising that it has

FCoE to the adapter. If the FCoE negotiation fails, you can configure the Cisco Nexus 5000 Series switch to disable FCoE for this interface.



Note In Cisco Nexus 5000 Series switches, FCoE is supported on all 10-Gigabit Ethernet interfaces.

To enable or disable FCoE features on a switch using Device Manager, follow these steps:

Procedure

Step 1 Launch Device Manager from the Cisco Nexus 5000 Series switch.

Note Use the Control tab to enable FCoE on a Cisco Nexus 5000 Series switch.

Step 2 Choose **Admin > Feature Control**.

You see the Feature Control dialog box.

Note You cannot enable FCoE using Device Manager on Cisco Nexus 7000 series and Cisco MDS 900 family switches. Cisco Nexus 7000 series and Cisco MDS 9000 Family switches uses a feature set to display FCoE information.

Step 3 In the dialog box, in the table, click the **fcoe_mgr** row, and then click the **Action** cell in the **fcoe_mgr** row. From the drop-down list, choose **enable** to enable the FCoE feature in the switch.

Note You can also disable the FCoE feature in the switch. To do so, from the drop-down list in the Action column, choose **disable**.

Step 4 Click **Apply**.

Note If the Cisco Nexus 5000 Series switch is running a Cisco NX-OS release prior to Release 4.2(1), you must do the following after you enable or disable FCoE on the switch:

- a) In the confirmation dialog box that appears, click **Yes** to enable the FCoE feature in the switch.
- b) Reboot the switch before you use the FCoE feature.

Configuring FCoE Using DCNM for SAN

From Cisco NX-OS Release 5.2, FCoE is supported on MDS and Cisco Nexus 7000 switches. To enable or disable FCoE, Cisco MDS 9000 Family and Cisco Nexus 7000 switches uses feature set MIBs.

To configure FCoE on a switch, follow these steps:

Procedure

Step 1 In the Physical Attributes pane, choose **Switches > FC Services > FCoE**.

The Config tab displays the FCoE parameters for each Cisco Nexus 5000 Series, Cisco Nexus 7000 Series, and Cisco MDS 9000 Family switches. Use the VLAN-VSAN mapping tab to create mappings. [Table 1: FCoE Parameters](#), on page 3 lists the FCoE parameters for a switch.

For more information on configuring Cisco Nexus 5000 Series and Nexus 7000 Series switches, see the Cisco Nexus 5000 Series and Nexus 7000 Series Configuration Guides.

Table 1: FCoE Parameters

Parameter	Description
Feature Set	Enables or disables the FCoE feature set on Cisco MDS 9000 Family or Nexus 7000 Series switches.
Control	Enables or disables FCoE on Cisco Nexus 5000 Series switches.
Config	Displays the FCoE configuration information on the switch. For example, FC Map and FCF Priority.
VLAN-VSAN Mapping	Displays the VSAN and VLAN IDs with their operational status.

- Step 2** Double-click the relevant FCoE parameter for a switch, and modify the value of the parameter.
- Step 3** In the Information pane toolbar, click the **Apply Changes** icon to save the changes.

Configuring FCoE Using Device Manager

To configure FCoE on a switch using Device Manager, follow these steps:

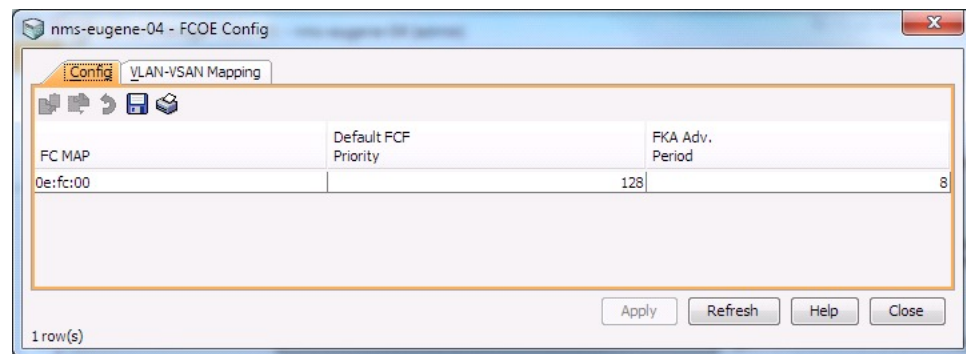
Procedure

- Step 1** Launch Device Manager from the Cisco Nexus 5000 Series switch.
- Step 2** Choose **FCoE > Config**.

You see the FCoE Config dialog box shown in [Figure 1: FCoE Config Dialog Box, on page 3](#).

The Config tab displays the FCoE parameters, such as FC Map, default FCF priority value, and FKA advertisement period, for each Cisco Nexus 5000 Series switch that runs Cisco NX-OS Release 4.1(3) or later releases. [Table 1: FCoE Parameters, on page 3](#) lists the FCoE parameters for a switch.

Figure 1: FCoE Config Dialog Box



- Step 3** Double-click the relevant FCoE parameter for a switch, and modify the value of the parameter.

Step 4 Click **Apply** to save the changes.

Field Descriptions for FCoE

Feature Set

Field	Description
Status	Display only. Displays the FCoE status on the switch.
Command	Display only. Displays the feature set command.
Last Command	Display only. Displays the last feature set command executed on the switch.
Result	Display only. Displays the result of the last feature set command executed on the switch.

Control

Field	Description
Status	Display only. Displays the FCoE status on the switch.
Command	Display only. Displays the feature set command.
Last Command	Display only. Displays the last feature set command executed on the switch.
Result	Display only. Displays the result of the last feature set command executed on the switch.

Config

Field	Description
FC Map	The FCoE Mac Address Prefix used to associate the FCoE Node (ENode).
Default FCF Priority	The default FCoE Initialization Protocol (FIP) priority value advertised by the Fibre Channel Forwarder (FCF) to ENodes.
FKA Adv. Period	The time interval at which FIP Keepalive (FKA) messages are transmitted to the MAC address of the ENode.

VSAN-VLAN Mapping

Field	Description
VSAN Id	The ID of the VSAN.
VLAN Id	The ID of the VLAN.

Field	Description
Oper State	Shows the operational state of this VLAN-VSAN association entry.

Additional References

For additional information related to implementing FCoE, see the following section:

Related Document

Related Topic	Document Title
Cisco MDS 9000 Family Command Reference	Cisco MDS 9000 Family Command Reference

Standards

Standard	Title
No new or modified standards are supported by this feature, and support for existing standards has not been modified by this feature.	–

MIBs

MIB	MIBs Link
No new or modified MIBs are supported by this feature, and support for existing MIBs has not been modified by this feature.	To locate and download MIBs, go to the following URL: http://www.cisco.com/en/US/products/ps5989/prod_technical_reference_list.html

RFCs

RFC	Title
No new or modified RFCs are supported by this feature, and support for existing RFCs has not been modified.	–

Feature History for FCoE

Table 2: Feature History for FCoE , on page 6 lists the release history for this feature. Only features that were introduced or modified in 5.0(1a) or a later release appear in the table.

Table 2: Feature History for FCoE

Feature Name	Releases	Feature Information
Configuring FCoE	5.2(1)	<p>Added information about discovering Cisco Nexus 7000 and Cisco MDS 9000 Family switches using the FCoE wizard. FICON tape acceleration over FCIP efficiently utilizes the tape device by decreasing idle time.</p> <p>The following sections provide information about this feature:</p>