Enabling FC/FCoE Switch Mode

This chapter contains the following sections:

To enable FC/FCoE switch mode on Cisco Nexus 9000 series switches, you must configure **feature-set fcoe**.

Note For more information about enabling NPV mode on Cisco Nexus 9000 series switches, see the relevant version of *Cisco Nexus 9000 Series NX-OS FC-NPV and FCoE-NPV Configuration Guide* on cisco.com.

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Guidelines and Limitations for FC Switch Mode

- Beginning with Release 10.1(1), FC switch mode is supported on Cisco Nexus 93360YC-FX2.
- Beginning with Release 10.2(2), FC switch mode is supported on Cisco Nexus C9336C-FX2-E.
- FC/FCoE configuration does not support rollback. If FC/FCoE configurations are present, use the best-effort option. All other configurations will be successful, however, error message will be displayed for the FC/FCoE configuration.

Enabling FC/FCoE

You can enable FC/FCoE on the switch; however, enabling FCoE on VLAN 1 is not supported.

Note Alternatively, you can use the **FC set up script** included in the **Cisco NX-OS Setup Utility** to enable FC/FCoE. For more information, see the relevant version of *Cisco Nexus 9000 Series NX-OS Fundamentals Configuration Guide* on cisco.com.

Note All the Fibre Channel features of the Cisco Nexus device are packaged in the FC Plugin. When you enable FC/FCoE, the switch software checks for the SAN_ENTERPRISE_PKG license. If it finds the license, the software loads the plugin. The package FC_PORT_ACTIVATION_PKG is required to enable FC port license.

After the FC Plugin is loaded, the following occurs:

- All Fibre Channel and FCoE-related CLI are available

SUMMARY STEPS

1. switch# **configure terminal**
2. switch(config)# **install feature-set fcoe**
3. switch(config)# **feature-set fcoe**

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	switch# **configure terminal**	Enters global configuration mode.
Step 2	switch(config)# **install feature-set fcoe**	Installs feature set FCoE.
Step 3	switch(config)# **feature-set fcoe**	Enables the FC/FCoE capability.

Example

This example shows how to enable FC/FCoE on the switch:

```
switch# configure terminal
switch(config)# install feature-set fcoe
switch(config)# feature-set fcoe
```

Disabling FC/FCoE

After you disable FC/FCoE, all FC/FCoE commands are removed from the CLI and the FC/FCoE configuration is deleted.

Note The command **no feature-set fcoe** is not allowed if there are FC ports on the switch. If there are FC ports on the switch, you must convert them to Ethernet ports before issuing this command. On Cisco Nexus C93180YC-FX, C9336C-FX2-E, and C93360YC-FX2 switches, you must reload the switch after disabling feature-set fcoe.

SUMMARY STEPS

1. switch# **configure terminal**
2. switch(config)# **no feature-set fcoe**
3. switch(config)# **no install feature-set fcoe**

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	switch# **configure terminal**	Enters global configuration mode.
Step 2	switch(config)# **no feature-set fcoe**	Disables the FC/FCoE capability.
Step 3	switch(config)# **no install feature-set fcoe**	Uninstalls feature set FCoE.

Example

This example shows how to disable FC/FCoE on the switch:

```
switch# configure terminal
switch(config)# no feature-set fcoe
switch(config)# no install feature-set fcoe
```

Disabling LAN Traffic on an FCoE Link

You can disable LAN traffic on an FCoE link.

DCBX allows the switch to send a LAN Logical Link Status (LLS) message to a directly connected CNA. Enter the **shutdown lan** command to send an LLS-Down message to the CNA. This command causes all VLANs on the interface that are not enabled for FCoE to be brought down. If a VLAN on the interface is enabled for FCoE, it continues to carry SAN traffic without any interruption.

SUMMARY STEPS

1. switch# **configure terminal**
2. switch(config)# **interface ethernet** *slot*/*port*
3. switch(config-if)# **shutdown lan**

4. (Optional) switch(config-if)# **no shutdown lan**

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	switch# **configure terminal**	Enters global configuration mode.
Step 2	switch(config)# **interface ethernet** *slot*/*port*	Specifies an interface to configure, and enters interface configuration mode.
Step 3	switch(config-if)# **shutdown lan**	Shuts down Ethernet traffic on the interface. If the interface is part of an FCoE VLAN, the shutdown has no impact on the FCoE traffic.
Step 4	(Optional) switch(config-if)# **no shutdown lan**	Reenables Ethernet traffic on the interface.

Configuring the FC-Map

Note We recommend using the "Mapping a VSAN to a VLAN" method for preserving fabric isolation and leaving the FC-MAP default.

You can prevent data corruption due to cross-fabric talk by configuring an FC-Map that identifies the Fibre Channel fabric for this Cisco Nexus device. When the FC-Map is configured, the switch discards the MAC addresses that are not part of the current fabric.

SUMMARY STEPS

1. switch# **configure terminal**
2. switch(config)# **fcoe fcmap** *fabric-map*
3. (Optional) switch(config)# **no fcoe fcmap** *fabric-map*

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	switch# **configure terminal**	Enters global configuration mode.
Step 2	switch(config)# **fcoe fcmap** *fabric-map*	Configures the global FC-Map. The default value is 0E.FC.00. The range is from 0E.FC.00 to 0E.FC.FF.
Step 3	(Optional) switch(config)# **no fcoe fcmap** *fabric-map*	Resets the global FC-Map to the default value of 0E.FC.00.

Example

This example shows how to configure the global FC-Map:

```
switch# configure terminal
switch(config)# fcoe fcmap 0x0efc2a
```

Configuring the Fabric Priority

The Cisco Nexus device advertises its priority. The priority is used by the CNAs in the fabric to determine the best switch to connect to.

SUMMARY STEPS

1. switch# **configure terminal**
2. switch(config)# **fcoe fcf-priority** *fabric-priority*
3. (Optional) switch(config)# **no fcoe fcf-priority** *fabric-priority*

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	switch# **configure terminal**	Enters global configuration mode.
Step 2	switch(config)# **fcoe fcf-priority** *fabric-priority*	Configures the global fabric priority. The default value is 128. The range is from 0 (higher) to 255 (lower).
Step 3	(Optional) switch(config)# **no fcoe fcf-priority** *fabric-priority*	Resets the global fabric priority to the default value of 128.

Example

This example shows how to configure the global fabric priority:

```
switch# configure terminal
switch(config)# fcoe fcf-priority 42
```

Setting the Advertisement Interval

You can configure the interval for Fibre Channel fabric advertisement on the switch.

SUMMARY STEPS

1. switch# **configure terminal**

2. switch(config)# **fcoe fka-adv-period** *interval*
3. (Optional) switch(config)# **no fcoe fka-adv-period** *interval*

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	switch# **configure terminal**	Enters global configuration mode.
Step 2	switch(config)# **fcoe fka-adv-period** *interval*	Configures the advertisement interval for the fabric. The default value is 8 seconds. The range is from 4 to 60 seconds.
Step 3	(Optional) switch(config)# **no fcoe fka-adv-period** *interval*	Resets the advertisement interval for the fabric to its default value of 8 seconds.

Example

This example shows how to configure the advertisement interval for the fabric:

```
switch# configure terminal
switch(config)# fcoe fka-adv-period 42
```