



## **Cisco Nexus 7000 Series NX-OS FCoE Command Reference**

**First Published:** 2016-11-24

**Last Modified:** 2017-07-12

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# Preface

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- [Preface, on page v](#)

## Preface

This preface describes the audience, organization, and conventions of the Book Title. It also provides information on how to obtain related documentation.

This chapter includes the following topics:

## Audience

This publication is for experienced network administrators who configure and maintain Cisco NX-OS on Cisco Nexus 7000 Series Platform switches.

## Document Conventions



### Note

- As part of our constant endeavor to remodel our documents to meet our customers' requirements, we have modified the manner in which we document configuration tasks. As a result of this, you may find a deviation in the style used to describe these tasks, with the newly included sections of the document following the new format.
- The Guidelines and Limitations section contains general guidelines and limitations that are applicable to all the features, and the feature-specific guidelines and limitations that are applicable only to the corresponding feature.

Command descriptions use the following conventions:

Convention	Description
<b>bold</b>	Bold text indicates the commands and keywords that you enter literally as shown.
<i>Italic</i>	Italic text indicates arguments for which the user supplies the values.

Convention	Description
[x]	Square brackets enclose an optional element (keyword or argument).
[x   y]	Square brackets enclosing keywords or arguments separated by a vertical bar indicate an optional choice.
{x   y}	Braces enclosing keywords or arguments separated by a vertical bar indicate a required choice.
[x {y   z}]	Nested set of square brackets or braces indicate optional or required choices within optional or required elements. Braces and a vertical bar within square brackets indicate a required choice within an optional element.
<i>variable</i>	Indicates a variable for which you supply values, in context where italics cannot be used.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.

Examples use the following conventions:

Convention	Description
<code>screen font</code>	Terminal sessions and information the switch displays are in screen font.
<b>boldface screen font</b>	Information you must enter is in boldface screen font.
<i>italic screen font</i>	Arguments for which you supply values are in italic screen font.
<>	Nonprinting characters, such as passwords, are in angle brackets.
[ ]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

This document uses the following conventions:



**Note**

Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the manual.



**Caution**

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

## Related Documentation

Documentation for Cisco Nexus 7000 Series Switches is available at:

- Configuration Guides

<http://www.cisco.com/c/en/us/support/switches/nexus-7000-series-switches/products-installation-and-configuration-guides-list.html>

- Command Reference Guides

<http://www.cisco.com/c/en/us/support/switches/nexus-7000-series-switches/products-command-reference-list.html>

- Release Notes

<http://www.cisco.com/c/en/us/support/switches/nexus-7000-series-switches/products-release-notes-list.html>

- Install and Upgrade Guides

<http://www.cisco.com/c/en/us/support/switches/nexus-7000-series-switches/products-installation-guides-list.html>

- Licensing Guide

<http://www.cisco.com/c/en/us/support/switches/nexus-7000-series-switches/products-licensing-information-listing.html>

Documentation for Cisco Nexus 7000 Series Switches and Cisco Nexus 2000 Series Fabric Extenders is available at the following URL:

<http://www.cisco.com/c/en/us/support/switches/nexus-2000-series-fabric-extenders/products-installation-and-configuration-guides-list.html>

## Documentation Feedback

## Communications, Services, and Additional Information

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### Cisco Bug Search Tool

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## A Commands

---

- [allocate fcoe-vlan-range, on page 2](#)
- [allocate shared interface ethernet, on page 3](#)

# allocate fcoe-vlan-range

To allocate Fibre Channel over Ethernet (FCoE) VLANs to a virtual device context (VDC), use the **allocate fcoe-vlan-range** command. To remove the shared FCoE VLAN configuration for the VDC, use the **no** form of this command.

**allocate fcoe-vlan-range** *vlan-range* **from** *vdc* *vdc-name...* [*,vdc* *vdc-name*]  
**noallocate fcoe-vlan-range** *vlan-range* **from** *vdc* *vdc-name...* [*,vdc* *vdc-name*]

Syntax Description	Parameter	Description
	<b>vlan-range</b>	FCoE VLAN range. The range is from 1 to 3967.
	<b>from</b>	Specifies which VDCs are going to share ports with the FCoE VDC.
	<b>vdc</b>	(Optional) Specifies the VDC.
	<b>vdc-name</b>	VDC name.

**Command Default** None

**Command Modes** VDC configuration mode

Command History	Release	Modification
	5.2(1)	This command was introduced on the Cisco Nexus 7000 Series Switches.

**Usage Guidelines** Before allocating `fcoe-vlan-range` one has to create a storage vdc first.  
 This command does not require a license.



**Note** Before allocating `fcoe-vlan-range` one has to create a storage vdc first.

## Examples

This example shows how to allocate FCoE VLANs to a VDC:

```
switch# configure terminal
switch(config)# vdc 2
switch(config-vdc)# allocate fcoe-vlan-range 100-200 from vdc switch
switch(config-vdc)#
```

This example shows how to remove the shared FCoE VLAN configuration for a VDC:

```
switch(config-vdc)# no allocate fcoe-vlan-range 100-200 from vdc switch
```

Related Commands	Command	Description
	<b>allocate interface</b>	Allocates interfaces to a VDC for sharing ports.
	<b>show vdc fcoe-vlan-range</b>	Displays the FCoE VLAN range on the VDC.

# allocate shared interface ethernet

To allocate interfaces to a virtual device context (VDC) for sharing ports, use the **allocate shared interface ethernet** command. To disallow the VDC to share interfaces, use the **no** form of this command.

**allocate shared interface ethernet** *slot/chassis number*  
**noallocate shared interface ethernet** *slot/chassis number*

## Syntax Description

<i>slot/chassisnumber</i>	Slot or chassis number. The range is from 1 to 253.
---------------------------	---

## Command Default

None

## Command Modes

VDC configuration mode

## Command History

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 Series Switches.

## Usage Guidelines

This command does not require a license.

## Examples

This example shows how to allocate interfaces to a VDC for sharing ports:

```
switch# configure terminal
switch(config)# vdc 2
switch(config-vdc)# allocate shared interface ethernet 7/5
switch(config-vdc)#
```

This example shows how to disallow a VDC to share interfaces:

```
switch(config-vdc)# no allocate shared interface ethernet 7/5
switch(config-vdc)#
```

## Related Commands

Command	Description
<b>allocate fcoe-vlan-range</b>	Allocates FCoE VLANs to a VDC.
<b>show vdc shared membership</b>	Displays the shared interfaces on a VDC.

allocate shared interface ethernet



## B Commands

---

- [bind interface, on page 6](#)

# bind interface

To bind the virtual Fibre Channel (VFC) interface to the physical or logical interface, use the **bind interface** command. To unbind the VFC interface, use the **no** form of this command.

**bind interface** {**ethernet** *slot/port number* | **ethernet-port-channel** **port-channel** *port-channel number*}

**nobind interface** {**ethernet** *slot/port number* | **ethernet-port-channel** **port-channel** *port-channel number*}

## Syntax Description

<b>ethernet</b>	Specifies the Ethernet interface.
<i>slot/portnumber</i>	Slot and port number. The range is from 1 to 253.
<b>ethernet-port-channel</b>	Specifies the Ethernet port channel interface.
<b>port-channel</b>	Specifies the port channel interface.
<i>port-channel number</i>	Port channel number. The range is from 1 to 4096.

## Command Default

None.

## Command Modes

Interface configuration mode.

## Command History

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 and MDS 9500 Switches.

## Usage Guidelines

None.

## Examples

This example shows how to bind a VFC interface to an Ethernet interface:

```
switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# interface vfc 4
switch(config-if)# bind interface ethernet 1/4
switch(config-if)#
```

This example shows how to bind a VFC interface to a port channel interface:

```
switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# interface vfc 4
switch(config-if)# bind interface port-channel 1
switch(config-if)#
```

## Related Commands

Command	Description
<b>interface vfc</b>	Creates a VFC interface.



## D Commands

---

- [disable-fka](#), on page 8

# disable-fka

To disable the verification of Fibre Channel over Ethernet (FCoE) Initialization Protocol (FIP) keepalive (FKA) messages, use the **disable-fka** command. To enable FKA messages, use the **no** form of this command.

**disable-fka**  
**no disable-fka**

**Syntax Description** This command has no arguments or keywords.

**Command Default** Enabled

**Command Modes** Virtual Fibre Channel interface configuration mode

Release	Modification
NX-OS 6.2(8)	This command was introduced.

**Usage Guidelines** Before you use this command, you must enable Fibre Channel over Ethernet (FCoE).

**Examples** This example shows how to disable the verification of FKA messages:

```
switch# configure terminal
switch(config)# interface vfc 3
switch(config-if)# disable-fka
switch(config-if)#
```

This example shows how to enable the verification of FKA messages:

```
switch# configure terminal
switch(config)# interface vfc 3
switch(config-if)# no disable-fka
switch(config-if)#
```

Related Commands	Command	Description
	<b>fcoe fka-adv-period</b>	Configures the time interval in which FIP keepalive (FKA) messages are transmitted to the MAC address of the ENode.
	<b>show fcoe-npv issu-impact</b>	Displays FCoE NPV configuration information.
	<b>switchport (virtual Fibre Channel interface)</b>	Configures a switch port parameter on a virtual Fibre Channel interface.





## F Commands

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- [feature-set fcoe](#), on page 10
- [fcoe fcmmap](#), on page 11
- [fcoe fcf-priority](#), on page 12
- [fcoe fka-adv-period](#), on page 13
- [fcoe vsan](#), on page 14
- [fcoe veloopback](#), on page 16

## feature-set fcoe

To enable the Fibre Channel over Ethernet (FCoE) feature set, use the **feature-set fcoe** command. To disable this feature, use the **no** form of this command.

**feature-set fcoe**  
**no feature-set fcoe**

**Syntax Description** This command has no arguments or keywords.

**Command Default** Disabled.

**Command Modes** Global configuration mode.

network-adminvdc-admin

### Command History

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 and MDS 9500 Series Switches.

### Usage Guidelines

Use the feature-set fcoe command to enable all the features for FCoE. You must first use the install feature-set fcoe command to install FCoE support.



**Note** The feature-set fcoe command is automatically installed and enabled when a FCoE line card is inserted.

The no feature-set fcoe command might take some time to complete if the size of the configuration is very large because the command must clean up all of the configuration associated with the FCoE feature set.

### Examples

This example shows how to disable the FCoE feature set on the Cisco Nexus 7000 and MDS 9000 Series switches:

```
switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# no feature-set fcoe
switch(config)#
```

### Related Commands

Command	Description
<b>install feature-set fcoe</b>	Installs the FCoE support.

# fcoe fcmmap

To configure the Fibre Channel over Ethernet (FCoE) MAC address prefix (FC-Map) used to associate the FCoE node (ENode), use the **fcoe fcmmap** command. To restore the default global FC-Map value of 0xefc00, use the **no** form of this command.

**fcoe fcmmap** *value*  
**no fcoe fcmmap** *value*

<b>Syntax Description</b>	<i>value</i> FC-Map value. The range is from 0EFC00 to 0EFCFF, and the default is 0xefc00.
---------------------------	--

<b>Command Default</b>	0EFC00.
------------------------	---------

<b>Command Modes</b>	Global configuration mode.
----------------------	----------------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.2(1)	This command was introduced on the Cisco Nexus 7000 and MDS 9500 Series Switches.

**Usage Guidelines** Before you use this command, you must enable FCoE on the switch by using the **feature fcoe** or the feature-set fcoe command.

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

## Examples

This example shows how to configure the FC-Map value on the switch:

```
switch# configure terminal
switch(config)# fcoe fcmmap 0xefc10
switch(config)#
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>fcoe fcf-priority</b>	Configures the FCoE Initialization Protocol (FIP) priority value.
	<b>fcoe fka-adv-period</b>	Configures the time interval at which FIP keepalive (FKA) messages are transmitted to the MAC address of the ENode.
	<b>feature fcoe</b>	Enables FCoE on the switch.
	<b>show fcoe</b>	Displays the FCoE parameters, such as an FC-Map, default FCF priority value, and FKA advertisement period.
	<b>feature-set fcoe</b>	Enables all the features necessary for FCoE on the switch.

## fcoe fcf-priority

To configure the Fibre Channel over Ethernet (FCoE) Initialization Protocol (FIP) priority value advertised by the Fibre Channel Forwarder (FCF) to FCoE nodes (ENodes), use the **fcoe fcf-priority** command. To revert to the default FCF priority value, use the **no** form of this command.

**fcoe fcf-priority** *value*

**no fcoe fcf-priority** *value*

### Syntax Description

<i>value</i>	FCF priority value. The range is from 0 to 255.
--------------	---

### Command Default

128.

### Command Modes

Global configuration mode.

### Command History

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 MDS 9500 Series Switches.

### Usage Guidelines

Before you use this command, you must enable FCoE on the switch by using the **feature fcoe** command.

The switch advertises its priority. The priority is used by the converged network adapters (CNAs) in the fabric to determine the best switch to connect to.

### Examples

This example shows how to configure the FCF priority on the switch:

```
switch# configure terminal
switch(config)# fcoe fcf-priority 50
switch(config)#
```

### Related Commands

Command	Description
<b>fcoe fcmmap</b>	Configures the FCoE MAC address prefix (FC-Map) value.
<b>fcoe fka-adv-period</b>	Configures the time interval at which FIP keepalive (FKA) messages are transmitted to the MAC address of the ENode.
<b>feature fcoe</b>	Enables FCoE on the switch.
<b>show fcoe</b>	Displays the FCoE parameters, such as an FC-Map, default FCF priority value, and FKA advertisement period.
<b>feature-set fcoe</b>	Enables all the features necessary for FCoE on the switch.

# fcoe fka-adv-period

To configure the time interval at which Fabric Initialization Protocol (FIP) keepalive (FKA) messages are transmitted to the MAC address of the Fibre Channel over Ethernet (FCoE) node (ENode), use the **fcoe fka-adv-period** command. To return to the default settings, use the **no** form of this command.

```
fcoe fka-adv-period value
no fcoe fka-adv-period value
```

<b>Syntax Description</b>	<i>value</i> FKA advertisement period (in seconds). The range is from 4 to 60 seconds.
---------------------------	--

<b>Command Default</b>	8 seconds.
------------------------	------------

<b>Command Modes</b>	Global configuration mode.
----------------------	----------------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.2(1)	This command was introduced on the Cisco Nexus 7000 MDS 9500 Series Switches.

**Usage Guidelines** Before you use this command, you must enable FCoE on the switch by using the **feature fcoe** command.

**Examples** This example shows how to configure the FKA advertisement period for the switch to 5 seconds:

```
switch# configure terminal
switch(config)# fcoe fka-adv-period 5
switch(config)#
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>fcoe fcf-priority</b>	Configures the FCoE Initialization Protocol (FIP) priority value.
	<b>fcoe fcmmap</b>	Configures the FCoE MAC address prefix (FC-Map) used to associate the FCoE node (ENode).
	<b>feature fcoe</b>	Enables FCoE on the switch.
	<b>show fcoe</b>	Displays the FCoE parameters, such as an FC-Map, default FCF priority value, and FKA advertisement period.
	<b>show fcoe database</b>	Displays the FCoE database information.
	<b>feature-set fcoe</b>	Enable all the features necessary for FCoE on the switch.

## fcoe vsan

To map a virtual SAN (VSAN) to a VLAN that carries Fibre Channel over Ethernet (FCoE) traffic, use the **fcoe vsan** command. To remove the mapping, use the **no** form of this command.

```
fcoe vsan [vsan-id]
no fcoe vsan [vsan-id]
```

### Syntax Description

<i>vsan-id</i>	(Optional) VSAN ID. The range is from 1 to 4094.
----------------	--

### Command Default

VLANID=VSANID.

### Command Modes

VLAN configuration mode.

### Command History

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 MDS 9500 Series Switches.

### Usage Guidelines

Before you map an FCoE VLAN to the VSAN, make sure that you create a VSAN using the **vsan** command in the VLAN database configuration mode.

You should use an FCoE VLAN only for FCoE. Do not use the default VLAN, VLAN1, as an FCoE VLAN. FCoE is not supported on private VLANs.

When you map an FCoE VLAN to a VSAN, ensure that the VSAN is not mapped to any other FCoE VLAN. If you map a FCoE VLAN to a VSAN that is already mapped to another FCoE VLAN, the following error appears:

```
vlan 30:another FCOE VLAN mapping exists using the requested VSAN
```

If you do not specify a VSAN number, a mapping is created from the FCoE VLAN in use to the VSAN with the same number.

### Examples

This example shows how to map an FCoE VLAN to a VSAN:

```
switch# configure terminal
switch(config)# vlan 30
switch(config-vlan)# fcoe vsan 2
switch(config-vlan)#
```

### Related Commands

Command	Description
<b>show vsan</b>	Displays the configuration information of VSANs.
<b>show vlan fcoe</b>	Displays the FCoE VLAN-to-VSAN mappings.
<b>show vsan membership</b>	Displays the VSAN membership information.
<b>vsan</b>	Configures the VSAN information or membership.

Command	Description
vsan database	Enters the VSAN database mode.

# fcoe veloopback

To disable the VFID check for all VE ports, use the **fcoe veloopback** command. To return to the default settings, use the **no** form of this command.

**fcoe veloopback**  
**no fcoe veloopback**

**Syntax Description** This command has no keywords or arguments.

**Command Default** None.

**Command Modes** Configuration mode.

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 and MDS 9500 Series Switches.

**Usage Guidelines** Before you map the FCoE VLAN to the VSAN, make sure that you create a VSAN using the **vsan** command in the VLAN database configuration mode.

You should use an FCoE VLAN only for FCoE. Do not use the default VLAN, VLAN1, as an FCoE VLAN. FCoE is not supported on private VLANs.

When you map an FCoE VLAN to a VSAN, ensure that the VSAN is not mapped to any other FCoE VLAN. If you map an FCoE VLAN to a VSAN that is already mapped to another FCoE VLAN, the following error appears:

```
vlan 30:another FCOE VLAN mapping exists using the requested VSAN
```

If you do not specify a VSAN number, a mapping is created from the FCoE VLAN in use to the VSAN with the same number.

## Examples

This example shows how to enable VE loopback for a Cisco Nexus 7000 Series switch:

```
switch# switchto vdc fcoe type storage
fcoe# configure terminal
fcoe(config)# fcoe veloopback
```

This example shows how to enable VE loopback for a Cisco MDS 9500 switch:

```
switch# configure terminal
switch(config)# fcoe veloopback
```

## Related Commands

Command	Description
<b>show vsan</b>	Displays the configuration information of VSANs.
<b>show vlan fcoe</b>	Displays the FCoE VLAN to VSAN mappings.
<b>show vsan membership</b>	Displays VSAN membership information.



Command	Description
vsan	Configures the VSAN information or membership.
vsan database	Enters the VSAN database mode.





# I Commands

---

- [install feature-set fcoe, on page 20](#)
- [interface vfc, on page 21](#)
- [interface vfc-port-channel, on page 23](#)

# install feature-set fcoe

To install the Fibre Channel over Ethernet (FCoE) feature set, use the **install feature-set fcoe** command. To disable this feature, use the **no** form of this command.

**install feature-set fcoe**  
**no install feature-set fcoe**

**Syntax Description** This command has no arguments or keywords.

**Command Default** None.

**Command Modes** EXEC mode.

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 and MDS 9500 Series Switches.

**Usage Guidelines** None.



**Note** The feature-set fcoe command is automatically installed and enabled when a FCoE line card is inserted.

## Examples

This example shows how to set the install FCoE feature set to its default value:

```
switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# no install feature-set fcoe
feature set is enabled(0x40aa0012)
switch(config)#
```

Command	Description
<b>feature-set fcoe</b>	Enables the FCoE feature and all related features.

# interface vfc

To configure a virtual Fibre Channel (VFC) interface, use the **interface vfc** command. To return to the default settings, use the **no** form of this command.

```
interface vfc vfc-id {bind interface ethernet slot/port | shutdown | switchport mode E/F}
nointerface vfc vfc-id {bind interface ethernet slot/port | shutdown | switchport mode E/F}
interface vfc slot/port {shutdown | switchport mode E/F}
nointerface vfc slot/port {shutdown | switchport mode E/F}
```

## Syntax Description

<i>vfc-id</i>	Virtual interface ID. The range is from 1 to 8192.
<b>bind interface ethernet</b>	Specifies that the VFC interface be bound to a specified Ethernet interface.
<i>slot/port</i>	Ethernet interface slot number and port number. The slot number is from 1 to 255, and the port number is from 1 to 128.
<b>shutdown</b>	Specifies that the interface state be changed to administrative down.
<b>force</b>	(Optional) Specifies that the interface state be forcefully changed to administrative down.
<b>switchport</b>	Specifies the switch port parameters.
<b>mode</b>	Specifies the port mode of the VFC interface.
<b>E</b>	Specifies the E mode.
<b>F</b>	Specifies the F mode.

## Command Default

Disabled.

## Command Modes

Configuration mode.

## Command History

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 and MDS 9500 Series Switches.

## Usage Guidelines

You can specify a range of interfaces by entering a command with the following example format:

```
interface vfc 1 - 3 , vfc 5 - 7
```

Use the no shutdown command to enable the interface.

The interface vfc slot/port command is used to create a VFC implicitly bound for a particular Ethernet interface x/y.

## Examples

This example shows how to enter interface configuration mode for VFC interface 3:

```
switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# interface vfc 3
switch(config-if)#
```

This example shows how to create a VFC (VFC 1/3) which will be implicitly bound to the Ethernet interface 1/3:

```
switch# configure terminal
switch(config)# interface vfc 1/3
switch(config-if)#
```

This example shows how to create a VFC (vfc-po 3) bound to the Ethernet port channel 3:

```
switch# configure terminal
switch(config)# interface vfc-port-channel 3
```

#### Related Commands

Command	Description
<b>show interface</b>	Displays an interface configuration for a specified interface.
<b>shutdown</b>	Disables and enables an interface.

# interface vfc-port-channel

To create a virtual Fibre Channel (VFC) implicitly bound to a port channel interface, use the **interface vfc-port-channel** command. To return to the default settings, use the **no** form of this command.

```
interface vfc-port-channel interface-id
no interface vfc-port-channel interface-id
```

<b>Syntax Description</b>	<i>interface-id</i> Virtual interface ID. The range is from 257 to 4096.
---------------------------	--

**Command Default** None.

**Command Modes** Configuration mode.

network-admin vdc-admin

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.2(1)	This command was introduced on the Cisco Nexus 7000 and MDS 9500 Series Switches.

**Usage Guidelines** None.

**Examples** This example shows how to create a virtual FC interface:

```
switch# configure terminal
switch(config)# interface vfc-port-channel 300
switch(config)#
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>switchport</b>	Configures the switch port parameters.

■ interface vfc-port-channel





## L Commands

---

- [license fcoe module, on page 26](#)

## license fcoe module

To modify the license feature for the Fibre Channel over Ethernet (FCoE) module, use the **license fcoe module** command. To return to the default setting, use the **no** form of this command.

**license fcoe module** *module-number*

**no license fcoe module** *module-number*

### Syntax Description

<i>module-number</i>	Module number. The range is from 0 to 21474836471.
----------------------	--

### Command Default

None

### Command Modes

Configuration mode

### Command History

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 Series Switches.

### Usage Guidelines

None.

### Examples

This example shows how to modify the license for the FCoE module:

```
switch# configure terminal
switch(config)# license fcoe module 1
ERROR: fcoe_mgr: LC not present (err_id 0x42070032)
switch(config)#
```

### Related Commands

Command	Description
<b>switchport</b>	Configures the switch-port parameters.



## S Commands

---

- [switchport trunk allowed vsan, on page 28](#)
- [spanning-tree fcoe, on page 29](#)

## switchport trunk allowed vsan

To allow a virtual SAN list for a virtual Fibre Channel (VFC) interface, use the **switchport trunk allowed vsan** command. To return to the default setting, use the **no** form of this command.

**switchport trunk allowed vsan** *vsan-id*  
**no switchport trunk allowed vsan** *vsan-id*

### Syntax Description

<i>vsan-id</i>	VSAN ID. The range is from 1 to 4093.
----------------	---------------------------------------

### Command Default

None.

### Command Modes

Interface configuration mode.

### Command History

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 and MDS 9500 Series Switches.

### Usage Guidelines

None.

### Examples

This example shows how to allow a VSAN list for a VFC interface:

```
switch# configure terminal
switch(config)# interface vfc 1
switch(config-if)# switchport trunk allowed vsan 1
switch(config-if)#
This example shows how to add VSAN 100 to the allowed list:
switch(config-if)# switchport trunk allowed vsan add 100
switch(config-if)#
```

### Related Commands

Command	Description
<b>switchport</b>	Configures the switch port parameters.

# spanning-tree fcoe

To enable the Spanning Tree Protocol (STP) for FCoE VLAN, use the **spanning-tree fcoe command**. To disable the STP for FCoE VLAN, use the **no** form of the command.

**spanning-tree fcoe**  
**no spanning-tree fcoe**

## Syntax Description

This command has no arguments or keywords.

## Command Default

Enabled

## Command Modes

Global configuration mode

## Command History

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 Series Switches.

## Usage Guidelines

The STP Lite feature, which is automatically enabled, runs on both FCoE shared and dedicated links in the FCoE VLANs and ensures rapid convergence across the network by sending an agreement BPDU whenever it receives a proposal BPDU. If you want to disable this feature for troubleshooting purposes, enter the **no spanning-tree fcoe** command.

This command is only available on F-Series Modules when FCoE is enabled.

We recommend that you configure the interface on the peer side of the FCoE link as an STP-type edge port. Ensure that the peer interface is not configured as an STP-type network port.



**Note** This feature runs only in FCoE VLANs.

## Examples

This example shows how to enable the STP for FCoE VLANs:

```
switch# configure terminal
switch(config)# spanning-tree fcoe
switch(config)#
```

This example shows how to disable the STP lite in the FCoE VLANs if you need to do troubleshooting:

```
switch# configure terminal
switch(config)# no spanning-tree fcoe
switch(config)#
```

## Related Commands

Command	Description
<b>show spanning-tree summary</b>	Displays the summary of port states information.





## Show Commands

---

- [show fcoe](#), on page 32
- [show fcoe database](#), on page 33
- [show feature-set fcoe](#), on page 34
- [show interface vfc-port-channel](#), on page 35
- [show vdc fcoe-vlan-range](#), on page 36
- [show vdc shared membership](#), on page 37
- [show vsan](#), on page 38
- [show vlan fcoe](#), on page 40
- [show interface vfc](#), on page 41

# show fcoe

To display the status of Fibre Channel over Ethernet (FCoE) parameters on the switch, use the **show fcoe** command.

**show fcoe**

**Syntax Description** This command has no keywords or arguments.

**Command Default** None.

**Command Modes** EXEC mode.

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 and MDS 9500 Series Switches.

**Usage Guidelines** None

**Examples** This example shows how to display the FCoE status:

```
switch# show fcoe
Global FCF details
FCF-MAC is 00:0d:ec:a3:9d:80
FC-MAP is 0e:fc:00
FCF Priority is 128
FKA Advertisement period for FCF is 8 seconds
```

Command	Description
<b>fcoe fcf-priority</b>	Configures the FCoE Initialization Protocol (FIP) priority value.
<b>fcoe fcmmap</b>	Configures the FCoE MAC Address Prefix (FC MAP) used to associate the FCoE node (ENode).
<b>fcoe fka-adv-period</b>	Configures the time interval at which FIP keepalive (FKA) messages are transmitted to the MAC address of the ENode.
<b>show fcoe database</b>	Displays the FCoE database information.



# show fcoe database

To display the content of the Fibre Channel over Ethernet (FCoE) database, use the **show fcoe database** command.

**show fcoe database**

**Syntax Description** This command has no arguments or keywords.

**Command Default** None.

**Command Modes** Interface configuration mode.

Command History	Release	Modification
	5.2(1)	This command was introduced on the Cisco Nexus 7000 and MDS 9500 Series Switches.

**Usage Guidelines** None

**Examples** This example shows how to display the FCoE database:

```
switch# show fcoe database
-----
INTERFACE FCID PORT NAME MAC ADDRESS
-----
vfc3 0x490100 21:00:00:1b:32:0a:e7:b8 00:c0:dd:0e:5f:76Enter configuration commands, one
```

Related Commands	Command	Description
	fcoe vsan	Maps a FCoE VLAN to a VSAN.

# show feature-set fcoe

To display information about the Fibre Channel over Ethernet (FCoE) feature set, use the **show feature-set fcoe** command.

**show feature-set fcoe**

**Syntax Description** This command has no arguments or keywords.

**Command Default** None.

**Command Modes** EXEC mode.

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 and MDS 9500 Series Switches.

**Usage Guidelines** None.

**Examples** This example shows how to display information about the FCoE feature set:

```
switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# show feature-set fcoe
Feature Set Name      ID      State
-----
fcoe                  1      enabled
switch#
```

Command	Description
<b>install feature-set fcoe</b>	Installs FCoE support.
<b>feature-set fcoe</b>	Enables the FCoE feature and all related features.

# show interface vfc-port-channel

To displays information about the virtual Fibre Channel (VFC) interfaces bound to port channel interfaces, use the **show interface vfc-port-channel** command.

**show interface vfc-port-channel** *int-number*

## Syntax Description

<i>int-number</i>	Interface number. The range is from 1 to 4096. The range is from 1 to 4095.
-------------------	---

## Command Default

Default switchport mode for this interface is E.

## Command Modes

Interface configuration mode.

## Command History

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 and MDS 9500 Series Switches.

## Usage Guidelines

None

## Examples

This example shows how to display information about the VFC interfaces bound to port channel interfaces:

```
switch# configure terminal
switch(config-if)# show interface vfc-port-channel 2
switch(config-if)#
```

## Related Commands

Command	Description
<b>fcoe vsan</b>	Maps a FCoE VLAN to a VSAN.

# show vdc fcoe-vlan-range

To display the Fibre Channel over Ethernet (FCoE) VLAN range on a virtual device context (VDC), use the **show vdc fcoe-vlan-range** command.

**show vdc fcoe-vlan-range**

**Syntax Description** This command has no arguments or keywords.

**Command Default** None

**Command Modes** Any command mode

Command History	Release	Modification
	5.2(1)	This command was introduced.

**Usage Guidelines** This command does not require a license.

**Examples** This example shows how to display the FCoE VLAN range on the current VDC:

```
switch# show vdc fcoe-vlan-range
Storage VDC: 2
switch#
```

Related Commands	Command	Description
	<b>show vdc shared membership</b>	Displays the shared interfaces on a VDC.

# show vdc shared membership

To display the shared interfaces on a virtual device context (VDC), use the **show vdc shared membership** command.

**show vdc shared membership**

**Syntax Description** This command has no arguments or keywords.

**Command Default** None

**Command Modes** Any command mode

Command History	Release	Modification
	5.2(1)	This command was introduced on the Cisco Nexus 7000 Series Switches.

**Usage Guidelines** This command does not require a license.



**Note** FCoE operates ONLY on F Series cards, so allocate interfaces only on that card to shared (You can also reference the VDC Config Guide for them to see which ports have to go to a VDC together, so can allocated to FCoE VLAN and shared).

## Examples

This example shows how to display the shared interfaces on the VDC:

```
switch# configure terminal
switch(config)# show vdc shared membership
vdc_id: 1 vdc_name: switch interfaces:
vdc_id: 2 vdc_name: fcoe interfaces:
vdc_id: 3 vdc_name: vdc1 interfaces:
switch#
```

Related Commands	Command	Description
	<b>show vdc membership</b>	Displays the VDC interface membership information.

# show vsan

To display information about a configured virtual SAN (VSAN), use the **show vsan** command.

**show vsan** [*vsan-id*] [**membership**]

Syntax Description	
<i>vsan-id</i>	(Optional) Information for the specified VSAN ID. The range is from 1 to 4094.
<b>membership</b>	(Optional) Displays the membership information.

**Command Default** None.

**Command Modes** EXEC mode.

Command History	Release	Modification
	5.2(1)	This command was introduced on the Cisco Nexus 7000 Series Switches.
	4.0(1)	This command was introduced on the Cisco MDS 9000 MDS 9000 Series Switches.

**Usage Guidelines** When you enter the **show vsan membership interface** command, interface information appears for interfaces that are configured in this VSAN.

The interface range must be in ascending order and nonoverlapping. You can specify a range using a hyphen and several interfaces using commas.

The interface range format for a Fibre Channel interface range is:

fcslot/port - port, fcslot/port, fcslot/port:

For example:

```
show int vfc2/1 - 3 , vfc2/4 , vfc3/2
```

## Examples

This example shows how to display the configured VSAN information:

```
switch# show vsan 1
vsan 1 information
  name:VSAN0001 state:active
  interoperability mode:default
  loadbalancing:src-id/dst-id/oxid
  operational state:up
switch#
```

This example shows how to display the membership information for the VSAN:

```
switch# show vsan 2 membership
vsan 2 interfaces
vfc 4
switch#
```

**Related Commands**

Command	Description
<b>vsan</b>	Configures a VSAN.

# show vlan fcoe

To display information about the Fibre Channel over Ethernet (FCoE) VLAN to virtual SAN (VSAN) mappings, use the **show vlan fcoe** command.

**show vlan fcoe**

**Syntax Description** This command has no arguments or keywords.

**Command Default** None.

**Command Modes** EXEC mode.

network-adminvdc-admin

## Command History

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 and MDS 9500 Series Switches.

## Usage Guidelines

None. FCoE only works on F Series modules in the N7K.

## Examples

This example shows how to display the FCoE VLAN-to-VSAN mappings on the switch:

```
switch# show vlan fcoe

VLAN      VSAN      Status
-----
331       331       Operational
332       332       Operational
333       333       Operational
334       334       Operational
335       335       Non-operational
336       336       Operational
337       337       Operational
switch#
```

## Related Commands

Command	Description
<b>fcoe vsan</b>	Maps a FCoE VLAN to a VSAN.



# show interface vfc

To display the configuration information of virtual Fibre Channel (VFC) interfaces, use the **show interface vfc** command.

**show interface vfc** *vfc-id*

<b>Syntax Description</b>	<i>vfc-id</i> Virtual Fibre Channel interface ID. The range is from 1 to 8192.				
<b>Command Default</b>	None.				
<b>Command Modes</b>	EXEC mode.				
<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>5.2(1)</td> <td>This command was introduced on the Cisco Nexus 7000 and MDS 9500 Series Switches.</td> </tr> </tbody> </table>	Release	Modification	5.2(1)	This command was introduced on the Cisco Nexus 7000 and MDS 9500 Series Switches.
Release	Modification				
5.2(1)	This command was introduced on the Cisco Nexus 7000 and MDS 9500 Series Switches.				
<b>Usage Guidelines</b>	None				

## Examples

This example shows how to display the configuration information for a specified VFC interface:

```
switch# show interface vfc 3
vfc3 is up
Bound interface is Ethernet1/37
Hardware is Virtual Fibre Channel
Port WWN is 20:02:00:0d:ec:6d:95:3f
Admin port mode is F, trunk mode is on
snmp link state traps are enabled
Port mode is F, FCID is 0x490100
Port vsan is 931
1 minute input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
1 minute output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
0 frames input, 0 bytes
0 discards, 0 errors
0 frames output, 0 bytes
0 discards, 0 errors
Interface last changed at Thu May 21 04:44:42 2009
```

<b>Related Commands</b>	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><b>interface vfc</b></td> <td>Configures a virtual Fibre Channel interface.</td> </tr> </tbody> </table>	Command	Description	<b>interface vfc</b>	Configures a virtual Fibre Channel interface.
Command	Description				
<b>interface vfc</b>	Configures a virtual Fibre Channel interface.				

```
show interface vfc
```



## V Commands

---

- [vsan database, on page 44](#)

## vsan database

To enter virtual SAN (VSAN) database mode to configure the VSAN information and membership, use the **vsan database** command.

**vsan database**

**Syntax Description** This command has no arguments or keywords.

**Command Default** None.

**Command Modes** Global configuration mode.

Release	Modification
5.2(1)	This command was introduced on the Cisco Nexus 7000 Series Switches.
4.0(1)	This command was introduced on the Cisco MDS 9000 Series Switches.

**Usage Guidelines** To exit from the VSAN database configuration mode, use the **exit** command.

**Examples** This example shows how to enter the VSAN database configuration mode:

```
switch# configure terminal
switch(config)# vsan database
switch(config-vsan-db)# exit
switch(config)#
```

Command	Description
<b>show vsan</b>	Displays the configuration information of VSANs.
<b>show vlan fcoe</b>	Displays the FCoE VLAN-to-VSAN mappings.
<b>show vsan membership</b>	Displays VSAN membership information.
<b>vsan</b>	Configures the VSAN information or membership.