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CHAPTER 4

Fabric Extender Commands

This chapter describes the Cisco NX-OS commands used to manage a Cisco Nexus 2000 Series Fabric Extender from a Cisco Nexus 5000 Series switch.

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attach fex

To access the command-line interface (CLI) of a connected Fabric Extender to run diagnostic commands, use the **attach fex** command.

attach fex *chassis_ID*

Syntax Description	<i>chassis_ID</i>	Fabric Extender chassis ID. The chassis ID range is from 100 to 199.
Command Default	None	
Command Modes	EXEC mode	
Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.
Usage Guidelines	Use the attach fex command to access the CLI on a connected Fabric Extender and performing diagnostic commands. We recommend that you use this command only following direction from Cisco technical support personnel.	
Examples	This example shows how to access the CLI of a connected Fabric Extender to run diagnostic commands: switch# attach fex 101	
Related Commands	Command	Description
	show fex	Displays all configured Fabric Extender chassis connected to the switch.

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beacon

To turn on the locator beacon LED of a Fabric Extender, use the **beacon** command. To turn off the locator beacon LED, use the **no** form of this command.

beacon

no beacon

Syntax Description	This command has no arguments or keywords.
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Command Default	None
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Command Modes	Fabric extender configuration mode
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Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.
	4.1(3)N1(1)	This command was deprecated, and the locator-led command was introduced.

Usage Guidelines	Use the beacon command to toggle the locator beacon LED of a Fabric Extender, which allows you to easily identify the machine in a busy data center.
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Examples	This example shows how to turn on the locator beacon LED for a specific Fabric Extender chassis:
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```
switch# configure terminal
switch(config)# fex 101
switch(config-fex)# beacon
```

This example shows how to turn off the locator beacon LED for a specific Fabric Extender chassis:

```
switch# configure terminal
switch(config)# fex 101
switch(config-fex)# no beacon
```

Related Commands	Command	Description
	fex	Creates a Fabric Extender and enters Fabric Extender configuration mode.
	show fex	Displays all configured Fabric Extender chassis connected to the switch.

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description (fex)

To specify a description for a Fabric Extender, use the **description** command. To revert to the default description, use the **no** form of this command.

description *description*

no description

Syntax Description

<i>description</i>	Description of a Fabric Extender. The default is the string FEXxxxx where xxxx is the chassis ID. For example, if the chassis ID is 123, the default description is FEX0123. The maximum length is 20 alphanumeric characters.
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Command Default

None

Command Modes

Fabric extender configuration mode

Command History

Release	Modification
4.0(1a)N2(1)	This command was introduced.

Examples

This example shows how to specify a description for a Fabric Extender:

```
switch# configure terminal
switch(config)# fex 101
switch(config-fex)# description Rack16_FEX101
```

This example shows how to revert to the default description for a Fabric Extender:

```
switch# configure terminal
switch(config)# fex 101
switch(config-fex)# no description
```

Related Commands

Command	Description
fex	Creates a Fabric Extender and enters Fabric Extender configuration mode.
show fex	Displays all configured Fabric Extender chassis connected to the switch.

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fex

To create a Fabric Extender and enter fabric extender configuration mode, use the **fex** command. To delete the Fabric Extender configuration, use the **no** form of this command.

fex *chassis_ID*

no fex *chassis_ID*

Syntax Description	<i>chassis_ID</i> Fabric Extender chassis ID. The chassis ID range is from 100 to 199.	
Command Default	None	
Command Modes	Global configuration mode	
Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.
Usage Guidelines	You can create and configure the Fabric Extender before you connect and associate it to an interface on the parent switch. Once you associate the Fabric Extender to the switch, the configuration you created is transferred over to the Fabric Extender and applied.	
Examples	This example shows how to enter Fabric Extender configuration mode: <pre>switch# configure terminal switch(config)# fex 101 switch(config-fex)#</pre> This example shows how to delete the Fabric Extender configuration: <pre>switch(config-fex)# no fex 101 switch(config)#</pre>	
Related Commands	Command	Description
	beacon	Turns on the locator beacon LED of a Fabric Extender.
	description (fex)	Specifies a description for a Fabric Extender.
	fex associate	Associates a Fabric Extender to an Ethernet or EtherChannel interface.
	pinning max-links	Specifies the number of statically pinned uplinks connected to a Fabric Extender.
	serial	Assigns a serial number to a Fabric Extender.

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Command	Description
show fex	Displays all configured Fabric Extender chassis connected to the switch.
type	Specifies the Fabric Extender card.

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fex associate

To associate a Fabric Extender to a fabric interface, use the **fex associate** command. To disassociate the Fabric Extender, use the **no** form of this command.

fex associate *chassis_ID*

no fex associate [*chassis_ID*]

Syntax Description	<i>chassis_ID</i>	Fabric Extender chassis ID. The chassis ID range is from 100 to 199.
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Command Default	None
------------------------	------

Command Modes	Interface configuration mode
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Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.

Usage Guidelines	Before you can associate an interface on the parent switch to the Fabric Extender, you must first make the interface into a fabric interface by entering the switchport mode fex-fabric command.
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Note

On a Cisco Nexus 5000 Series switch that runs a Cisco NX-OS release 4.2(1)N1(1), the **switchport mode fex-fabric** command is not supported on an Ethernet interface.

Examples	This example shows how to associate the Fabric Extender to an Ethernet interface:
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```
switch# configure terminal
switch(config)# interface ethernet 1/40
switch(config-if)# switchport mode fex-fabric
switch(config-if)# fex associate 101
```

This example shows how to associate the Fabric Extender to an EtherChannel interface:

```
switch# configure terminal
switch(config)# interface port-channel 4
switch(config-if)# switchport mode fex-fabric
switch(config-if)# fex associate 101
```

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Related Commands	Command	Description
	show fex	Displays all configured Fabric Extender chassis connected to the switch.
	switchport mode fex-fabric	Sets the interface to be an uplink port.

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fex pinning redistribute

To redistribute the host interfaces on a Fabric Extender, use the **fex pinning redistribute** command.

fex pinning redistribute *chassis_ID*

Syntax Description	<i>chassis_ID</i>	Fabric Extender chassis ID. The chassis ID range is from 100 to 199.
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Command Default	None
------------------------	------

Command Modes	EXEC mode
----------------------	-----------

Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.

Usage Guidelines	When you provision the Fabric Extender using the statically pinned mode (see the <i>Cisco Nexus 2000 Series Fabric Extender Software Configuration Guide</i>, the host interfaces on the Fabric Extender are pinned to the fabric interfaces in the order that they were initially configured. The next time that you reboot the Fabric Extender, the configured fabric interfaces are pinned to the host interfaces in an ascending order by the port number of the fabric interface. Use the fex pinning redistribute command if you want to configure the same fixed distribution of host interfaces without restarting the Fabric Extender after your initial configuration.
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Caution

This command disrupts all the host interface ports of the Fabric Extender. However, the disruption is shorter than would be the case if you reboot the Fabric Extender.

Examples	This example shows how to redistribute the host interfaces on a Fabric Extender:
-----------------	--

```
switch# fex pinning redistribute 101
switch#
```

Related Commands	Command	Description
	pinning max-links	Defines the number of uplinks on a Fabric Extender.
	show fex	Displays all configured Fabric Extender chassis connected to the switch.
	show interface <i>interface fex-intf</i>	Displays the Fabric Extender ports pinned to a specific switch interface.

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fex queue-limit

To limit the amount of input buffer space (in bytes) allocated to each Fabric Extender port, use the **fex queue-limit** command. To disable the drop threshold and allow a Fabric Extender port to use all available buffer space, use the **no** form of this command.

fex queue-limit

no fex queue-limit

Syntax Description

This command has no arguments or keywords.

Command Default

Fabric Extender queue limit is available in the default configuration and is set on.

Command Modes

System QoS configuration mode

Command History

Release	Modification
4.2(1)N1(1)	This command was introduced.

Usage Guidelines

By default, the drop threshold applies to each Fabric Extender port to limit the amount of buffer being allocated for each port. To restore the default queue limit of each Fabric Extender port, use the **fex queue-limit** command.

Examples

This example shows how to set the queue limit for the input buffer for each Fabric Extender port:

```
switch(config)# system qos
switch(config-sys-qos)# fex queue-limit
switch(config-sys-qos)#
```

This example shows how to restore the default queue limit for each Fabric Extender port:

```
switch(config)# system qos
switch(config-sys-qos)# no fex queue-limit
switch(config-sys-qos)#
```

Related Commands

Command	Description
show fex	Displays all configured Fabric Extender chassis connected to the switch.

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hardware buffer-threshold

To limit the amount of input hardware buffer usage for each Fabric Extender, use the **hardware buffer-threshold** command. To revert to the default and allow a Fabric Extender to use all available hardware buffer space, use the **no** form of this command.

hardware *fex_card_typ* **buffer-threshold** *buffer-limit*

no hardware *fex_card_typ* **buffer-threshold**

Syntax Description	<i>fex_card_type</i>	Fabric Extender card type. The following Fabric Extender card types are supported: • N2148T—Fabric Extender 48x1G 4x10G SFP+ Module • N2224TP—Fabric Extender 24x1G 2x10G SFP+ Module • N2232P—Fabric Extender 32x10G SFP+ 8x10G SFP+ Module • N2248T—Fabric Extender 48x1G 4x10G SFP+ Module
	<i>buffer-limit</i>	Buffer threshold limit in bytes. The range is from 81920 to 316160.

Command Default	None
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Command Modes	Fabric extender configuration mode
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Command History	Release	Modification
	4.2(1)N2(1)	This command was introduced.

Usage Guidelines	The buffer-threshold keyword sets the consumption level of input buffers before an indication is sent to the egress queue to start observing the tail drop threshold. If the buffer usage is lower than the configured buffer threshold, the tail drop threshold is ignored.
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Supported Cisco Nexus 2000 Series Fabric Extender

The following Cisco Nexus 2000 Series Fabric Extenders are supported on a Cisco Nexus 5000 Series switch that runs a Cisco NX-OS release 4.2(1)N2(1):

- Cisco Nexus 2148T Fabric Extender—It has four 10-Gigabit Ethernet fabric interfaces for its uplink connection to the parent Cisco Nexus 5000 Series switch and 48 1000BASE-T (1-Gigabit) Ethernet host interfaces for its downlink connection to servers or hosts.
- Cisco Nexus N2224TP Fabric Extender—It has two 10-Gigabit Ethernet fabric interfaces with small form-factor pluggable (SFP+) interface adapters for its uplink connection to the parent Cisco Nexus 5000 Series switch and 24 1000BASE-T (1-Gigabit) Ethernet host interfaces for its downlink connection to servers or hosts. It does not support Fibre Channel over Ethernet (FCoE).

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- Cisco Nexus 2232P Fabric Extender—It has eight 10-Gigabit Ethernet fabric interfaces with small form-factor pluggable (SFP+) interface adapters for its uplink connection to the parent Cisco Nexus 5000 Series switch and 32 10-Gigabit Ethernet fabric interfaces with SFP+ interface adapters for its downlink connection to servers or hosts.
- Cisco Nexus 2248T Fabric Extender—It has four 10-Gigabit Ethernet fabric interfaces with SFP+ interface adapters for its uplink connection to the parent Cisco Nexus 5000 Series switch and 48 1000BASE-T (1-Gigabit) Ethernet host interfaces for its downlink connection to servers or hosts.



Note

This command is available only on a Cisco Nexus 2148T Fabric Extender.

Examples

This example shows how to configure the hardware buffer threshold limit on a Cisco Nexus 2148T Fabric Extender:

```
switch(config)# fex 110
switch(config-fex)# hardware N2148T buffer-threshold 163840
switch(config-fex)#
```

This example shows how to remove the hardware buffer threshold configured on a Cisco Nexus 2148T Fabric Extender:

```
switch(config)# fex 110
switch(config-fex)# no hardware N2148T buffer-threshold
switch(config-fex)#
```

Related Commands

Command	Description
fex	Creates a Fabric Extender and enters fabric extender configuration mode.
show fex	Displays all configured Fabric Extender chassis connected to the switch.
show queuing interface	Displays information about interface queuing parameters, including buffer threshold and queue limits.
show running-config fex	Displays the running configuration for Fabric Extenders.

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hardware queue-limit

To control the egress queue tail drop threshold level on a Fabric Extender, use the **hardware queue-limit** command. To disable the drop threshold and allow a Fabric Extender to use all available hardware buffer space, use the **no** form of this command.

hardware *fex_card_typ* **queue-limit** [*queue-limit*]

no hardware *fex_card_typ* **queue-limit**

Syntax Description

<i>fex_card_type</i>	Fabric Extender card type. The following Fabric Extender card types are supported: N2148T—Fabric Extender 48x1G 4x10G SFP+ Module N2224TP—Fabric Extender 24x1G 2x10G SFP+ Module N2232P—Fabric Extender 32x10G SFP+ 8x10G SFP+ Module N2248T—Fabric Extender 48x1G 4x10G SFP+ Module
<i>queue-limit</i>	(Optional) Queue limit in bytes. The range is from 81920 to 652800 for a Cisco Nexus 2148T Fabric Extender and from 2560 to 652800 for all other supported Fabric Extenders.

Command Default

None

Command Modes

Fabric extender configuration mode

Command History

Release	Modification
4.2(1)N2(1)	This command was introduced.

Usage Guidelines

You can use a lower queue limit value on the Fabric Extender to prevent one blocked receiver from affecting traffic being sent to other noncongested receivers ("head-of-line blocking"); however, this will increase burst absorption on the ingress traffic. A higher queue limit value provides better burst absorption and less head-of-line blocking protection.

Supported Cisco Nexus 2000 Series Fabric Extender

The following Cisco Nexus 2000 Series Fabric Extenders are supported on a Cisco Nexus 5000 Series switch that runs a Cisco NX-OS release 4.2(1)N2(1):

- Cisco Nexus 2148T Fabric Extender—It has four 10-Gigabit Ethernet fabric interfaces for its uplink connection to the parent Cisco Nexus 5000 Series switch and 48 1000BASE-T (1-Gigabit) Ethernet host interfaces for its downlink connection to servers or hosts.

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- Cisco Nexus N2224TP Fabric Extender—It has two 10-Gigabit Ethernet fabric interfaces with small form-factor pluggable (SFP+) interface adapters for its uplink connection to the parent Cisco Nexus 5000 Series switch and 24 1000BASE-T (1-Gigabit) Ethernet host interfaces for its downlink connection to servers or hosts. It does not support Fibre Channel over Ethernet (FCoE).
- Cisco Nexus 2232P Fabric Extender—It has eight 10-Gigabit Ethernet fabric interfaces with small form-factor pluggable (SFP+) interface adapters for its uplink connection to the parent Cisco Nexus 5000 Series switch and 32 10-Gigabit Ethernet fabric interfaces with SFP+ interface adapters for its downlink connection to servers or hosts.
- Cisco Nexus 2248T Fabric Extender—It has four 10-Gigabit Ethernet fabric interfaces with SFP+ interface adapters for its uplink connection to the parent Cisco Nexus 5000 Series switch and 48 1000BASE-T (1-Gigabit) Ethernet host interfaces for its downlink connection to servers or hosts.

Examples

This example shows how to configure the hardware buffer queue limit on a Cisco Nexus 2248T Fabric Extender:

```
switch(config)# fex 110
switch(config-fex)# hardware N2248T queue-limit 327680
switch(config-fex)#
```

This example shows how to remove the hardware buffer queue limit configured on a Cisco Nexus 2248T Fabric Extender:

```
switch(config)# fex 110
switch(config-fex)# no hardware N2248T queue-limit
switch(config-fex)#
```

Related Commands

Command	Description
fex	Creates a Fabric Extender and enters fabric extender configuration mode.
show fex	Displays all configured Fabric Extender chassis connected to the switch.
show queuing interface	Displays information about interface queuing parameters, including buffer threshold and queue limits.
show running-config fex	Displays the running configuration for Fabric Extenders.

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locator-led fex

To turn on the locator LED of a Fabric Extender, use the **locator-led** command. To turn off the locator LED, use the **no** form of this command.

locator-led fex *chassis_ID*

no locator-led fex *chassis_ID*

Syntax Description	<i>chassis_ID</i>	Fabric Extender chassis ID. The range is from 100 to 199.
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Command Default	None
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Command Modes	EXEC mode
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Command History	Release	Modification
	4.1(3)N1(1)	This command was introduced. Note On a Cisco Nexus 5000 Series switch that runs a Cisco NX-OS release prior to 4.1(3)N1(1), the locator beacon LED was toggled with the beacon command.

Usage Guidelines	Use the locator-led command to toggle the locator LED of a Fabric Extender, which allows you to easily identify the machine in a busy data center.
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Examples	This example shows how to turn on the locator LED for a specific Fabric Extender chassis:
----------	---

```
switch# locator-led fex 100
switch#
```

This example shows how to turn off the locator beacon LED for a specific Fabric Extender chassis:

```
switch# no locator-led fex 100
switch#
```

Related Commands	Command	Description
	show fex	Displays all configured Fabric Extender chassis connected to the switch.
	show locator-led	Displays the status of the locator LED in Fabric Extender modules.

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logging fex

To set the logging alert level for Fabric Extender events, use the **logging fex** command. To reset the logging level, use the **no** form of this command.

logging fex [*severity-level*]

no logging fex [*severity-level*]

Syntax Description

<i>severity-level</i>	(Optional) Number of the desired severity level at which messages should be logged. Messages at or numerically lower than the specified level are logged. Severity levels are as follows: • 0—emergency: System unusable • 1—alert: Immediate action needed • 2—critical: Critical condition—default level • 3—error: Error condition • 4—warning: Warning condition • 5—notification: Normal but significant condition • 6—informational: Informational message only • 7—debugging: Appears during debugging only
-----------------------	---

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
4.0(1a)N2(1)	This command was introduced.

Examples

This example shows how to set the logging alert level for Fabric Extender events:

```
switch(config)# logging fex 4
```

This example shows how to reset the logging level:

```
switch(config)# no logging fex
```

Related Commands

Command	Description
show fex	Displays all configured Fabric Extender chassis connected to the switch.

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pinning max-links

To specify the number of statically pinned uplinks, use the **pinning max-links** command. To reset to the default, use the **no** form of this command.

pinning max-links *uplinks*

no pinning max-links

Syntax Description	<i>uplinks</i>	Number of uplinks. The range is from 1 to 8. The default is 1. This command is applicable only if the Fabric Extender is connected to its parent switch using one or more statically pinned fabric interfaces.
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Command Default	The maximum uplinks is 1.
------------------------	---------------------------

Command Modes	Fabric extender configuration mode
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Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.
	4.2(1)N1(1)	The number of uplinks is extended to 8.

Usage Guidelines	Use the pinning max-links command when you create a number of pinned fabric interface connections to enable the parent switch to determine a distribution of host interfaces. The host interfaces are divided by the number of <i>uplinks</i> and distributed accordingly.
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Caution

Changing the value of *uplinks* is disruptive. All the host interfaces on the Fabric Extender are brought down and back up as the parent switch reassigns its static pinning.

Examples	This example shows how to specify the number of statically pinned uplinks for a Fabric Extender:
-----------------	--

```
switch# configure terminal
switch(config)# fex 101
switch(config-fex)# pinning max-links 4
```

This example shows how to revert to the uplink count to the default for a Fabric Extender:

```
switch# configure terminal
switch(config)# fex 101
switch(config-fex)# no pinning max-links
```

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Related Commands	Command	Description
	fex	Creates a Fabric Extender and enters fabric extender configuration mode.
	fex pinning redistribute	Redistributes the host interfaces on a Fabric Extender.
	show fex	Displays all configured Fabric Extender chassis connected to the switch.

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serial

To assign a serial number to a Fabric Extender, use the **serial** command. To remove the serial number, use the **no** form of this command.

serial *serial_string*

no serial

Syntax Description	<i>serial_string</i>	Serial number string for the Fabric Extender. The string is alphanumeric, case sensitive, and has a maximum length of 20 characters.
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Command Default	None
-----------------	------

Command Modes	Fabric extender configuration mode
---------------	------------------------------------

Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.

Usage Guidelines	The serial number string you define with the serial command must match the serial number of the Fabric Extender. If you configure a serial number and then you use the fex associate command to associate the corresponding chassis ID to the switch, the association will succeed only if the Fabric Extender reports a matching serial number string.
------------------	---



Caution

Configuring a serial number other than that of the given Fabric Extender will force the Fabric Extender offline.

Examples	This example shows how to specify a serial number for a Fabric Extender:
----------	--

```
switch# configure terminal
switch(config)# fex 101
switch(config-fex)# serial Rack16_FEX101
```

This example shows how to remove a serial number from a Fabric Extender:

```
switch# configure terminal
switch(config)# fex 101
switch(config-fex)# no serial
```

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Related Commands	Command	Description
	fex	Creates a Fabric Extender and enters fabric extender configuration mode.
	fex associate	Associates a Fabric Extender to an Ethernet or EtherChannel interface.
	show fex	Displays all configured Fabric Extender chassis connected to the switch.

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show diagnostic result fex

To display the results from the diagnostic tests for a Fabric Extender chassis, use the **show diagnostic result fex** command.

show diagnostic result fex *chassis_ID*

Syntax Description	<i>chassis_ID</i>	Fabric Extender chassis ID. The chassis ID range is from 100 to 199.
Command Default	None	
Command Modes	EXEC mode	
Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.

Examples

This example shows how to display the results from the diagnostic tests for a Fabric Extender:

```
switch# show diagnostic result fex 100
FEX-100: 48x1GE/Supervisor SerialNo   : JAF1237ABSE
Overall Diagnostic Result for FEX-100  : OK

Test results: (. = Pass, F = Fail, U = Untested)
TestPlatform:
0)          SPROM: -----> .
1)          MV88E6095: -----> .
2)          Fan: -----> .
3)          Power Supply: -----> .
4) Temperature Sensor: -----> .

TestForwardingPorts:
Eth   1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Port -----
    .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .

Eth   25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
Port -----
    .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .

TestFabricPorts:
Fabric 1  2  3  4
Port -----
    .  .  .  .

switch#
```

 show diagnostic result fex

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Related Commands	Command	Description
	show fex	Displays all configured Fabric Extender chassis connected to the switch.

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show environment fex

To display the environmental sensor status, use the **show environment fex** command.

show environment fex {**all** | *chassis_ID*} [**temperature** | **power** | **fan**]

Syntax Description		
all		Displays information for all Fabric Extender chassis.
<i>chassis_ID</i>		Fabric Extender chassis ID. The chassis ID range is from 100 to 199.
temperature		(Optional) Displays temperature sensor information.
power		(Optional) Displays power capacity and power distribution information.
fan		(Optional) Displays fan information.

Command Default	None
------------------------	------

Command Modes	EXEC mode
----------------------	-----------

Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.

Examples This example shows how to display the environmental sensor status for a Fabric Extender:

```
switch# show environment fex 100
```

```
Temperature Fex 100:
```

Module	Sensor	MajorThresh (Celsius)	MinorThres (Celsius)	CurTemp (Celsius)	Status
1	Outlet-1	85	75	50	ok
1	Inlet-1	100	90	37	ok

```
Fan Fex: 100:
```

Fan	Model	Hw	Status
Chassis	N2K-C2148-FAN	--	ok
PS-1	N5K-PAC-200W	--	ok
PS-2	--	--	absent

```
Power Supply Fex 100:
```

```
Voltage: 12 Volts
```

PS	Model	Power (Watts)	Power (Amp)	Status
1	N5K-PAC-200W	0.00	0.00	ok

```
show environment fex
```

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```

2  --          --          --          --

Mod Model                Power      Power      Power      Power      Status
  Requested Requested  Allocated Allocated
  (Watts)   (Amp)      (Watts)   (Amp)
-----
1   N5K-C5110T-BF-1GE    24.00     2.00      24.00     2.00      powered-up

Power Usage Summary:
-----
Power Supply redundancy mode:                redundant

Total Power Capacity                        0.00 W

Power reserved for Supervisor(s)            24.00 W
Power currently used by Modules              0.00 W

Total Power Available                        -24.00 W
-----

switch#
```

Related Commands

Command	Description
show fex	Displays all configured Fabric Extender chassis connected to the switch.

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show fex

To display information about a specific Fabric Extender or all attached chassis, use the **show fex** command.

show fex [*chassis_ID*] [**detail**]

Syntax Description	<i>chassis_ID</i>	(Optional) Fabric Extender chassis ID. The chassis ID range is from 100 to 199.
	detail	(Optional) Displays a detailed listing.

Command Default None

Command Modes EXEC mode

Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.

Examples

This example shows how to display information about all attached Fabric Extender chassis:

```
switch# show fex
FEX          FEX          FEX          FEX
Number      Description    State      Model          Serial
-----
100          FEX0100                Online    N5K-C5110T-BF-1GE  JAF1237ABSE
101          FEX0101                Online    N2K-C2248TP-1GE   JAF11223333
102          FEX0102                Online    N5K-C5110T-BF-1GE  JAF1241BLHQ
105          FEX0105                Online    N2K-C2232P-10GE    JAF1331AKBM
switch#
```

This example shows how to display information about a specific Fabric Extender chassis:

```
switch# show fex 101
FEX: 101 Description: FEX0101    state: Online
    FEX version: 4.2(1)N1(1) [Switch version: 4.2(1)N1(1)]
    Extender Model: N2K-C2248TP-1GE,  Extender Serial: JAF11223333
    Part No: 73-12748-01
    pinning-mode: static    Max-links: 1
    Fabric port for control traffic: Eth3/5
    Fabric interface state:
        Po5 - Interface Up. State: Active
        Eth3/5 - Interface Up. State: Active
        Eth3/6 - Interface Up. State: Active
switch#
```

This example shows how to display the detailed information about all attached Fabric Extender chassis:

```
switch# show fex detail
FEX: 100 Description: FEX0100    state: Online
    FEX version: 4.2(1)N1(1) [Switch version: 4.2(1)N1(1)]
```

■ show fex

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```

FEX Interim version: 4.2(1)N1(0.309)
Switch Interim version: 4.2(1)N1(0.309)
Extender Model: N5K-C5110T-BF-1GE, Extender Serial: JAF1237ABSE
Part No: 73-12009-02
Card Id: 70, Mac Addr: 00:0d:ec:b1:13:02, Num Macs: 64
Module Sw Gen: 12594 [Switch Sw Gen: 21]
post level: complete
pinning-mode: static      Max-links: 1
Fabric port for control traffic: Eth3/3
Fabric interface state:
  Po12 - Interface Up. State: Active
  Eth3/3 - Interface Up. State: Active
  Eth3/4 - Interface Up. State: Active
Fex Port      State  Fabric Port  Primary Fabric
  Eth100/1/1   Up      Po12         Po12
  Eth100/1/2   Up      Po12         Po12
  Eth100/1/3   Up      Po12         Po12
  Eth100/1/4   Up      Po12         Po12
  Eth100/1/5   Up      Po12         Po12
  Eth100/1/6   Up      Po12         Po12
  Eth100/1/7   Up      Po12         Po12
  Eth100/1/8   Up      Po12         Po12
  Eth100/1/9   Up      Po12         Po12
  Eth100/1/10  Up      Po12         Po12
  Eth100/1/11  Up      Po12         Po12
  Eth100/1/12  Up      Po12         Po12
  Eth100/1/13  Up      Po12         Po12
  Eth100/1/14  Up      Po12         Po12
  Eth100/1/15  Up      Po12         Po12
  Eth100/1/16  Up      Po12         Po12
  Eth100/1/17  Up      Po12         Po12
  Eth100/1/18  Up      Po12         Po12
  Eth100/1/19  Up      Po12         Po12
  Eth100/1/20  Up      Po12         Po12
  Eth100/1/21  Up      Po12         Po12
  Eth100/1/22  Up      Po12         Po12
  Eth100/1/23  Up      Po12         Po12
--More--
switch#

```

Related Commands

Command	Description
fex	Creates a Fabric Extender and enters fabric extender configuration mode.

[Send comments to nx5000-docfeedback@cisco.com](mailto:nx5000-docfeedback@cisco.com)

show fex detail

To display detailed information about a specific Fabric Extender or all attached chassis, use the **show fex detail** command.

show fex detail

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

Command Default	None
------------------------	------

Command Modes	EXEC mode
----------------------	-----------

Command History	Release	Modification
	4.2(1)N1(1)	This command was introduced.

Examples	This example shows how to display detailed information about all attached Fabric Extender chassis:
-----------------	--

```
switch# show fex detail
FEX: 100 Description: FEX0100    state: Online
  FEX version: 4.2(1)N1(1) [Switch version: 4.2(1)N1(1)]
  FEX Interim version: 4.2(1)N1(0.326)
  Switch Interim version: 4.2(1)N1(0.326)
  Extender Model: N5K-C5110T-BF-1GE,  Extender Serial: JAF1237ABSE
  Part No: 73-12009-02
  Card Id: 70, Mac Addr: 00:0d:ec:b1:13:02, Num Macs: 64
  Module Sw Gen: 12594  [Switch Sw Gen: 21]
  post level: complete
  pinning-mode: static    Max-links: 1
  Fabric port for control traffic: Eth3/4
  Fabric interface state:
    Po12 - Interface Up. State: Active
    Eth3/3 - Interface Up. State: Active
    Eth3/4 - Interface Up. State: Active
  Fex Port      State  Fabric Port  Primary Fabric
    Eth100/1/1   Up      Po12         Po12
    Eth100/1/2   Up      Po12         Po12
    Eth100/1/3   Up      Po12         Po12
    Eth100/1/4   Up      Po12         Po12
    Eth100/1/5   Up      Po12         Po12
    Eth100/1/6   Up      Po12         Po12
    Eth100/1/7   Up      Po12         Po12
    Eth100/1/8   Up      Po12         Po12
    Eth100/1/9   Up      Po12         Po12
    Eth100/1/10  Up      Po12         Po12
    Eth100/1/11  Up      Po12         Po12
    Eth100/1/12  Up      Po12         Po12
    Eth100/1/13  Up      Po12         Po12
    Eth100/1/14  Up      Po12         Po12
    Eth100/1/15  Up      Po12         Po12
    Eth100/1/16  Up      Po12         Po12
```

■ show fex detail

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Eth100/1/17	Up	Po12	Po12
Eth100/1/18	Up	Po12	Po12
Eth100/1/19	Up	Po12	Po12
Eth100/1/20	Up	Po12	Po12
Eth100/1/21	Up	Po12	Po12
Eth100/1/22	Up	Po12	Po12
Eth100/1/23	Up	Po12	Po12
Eth100/1/24	Up	Po12	Po12
Eth100/1/25	Up	Po12	Po12
Eth100/1/26	Up	Po12	Po12
Eth100/1/27	Up	Po12	Po12
Eth100/1/28	Up	Po12	Po12
Eth100/1/29	Up	Po12	Po12
Eth100/1/30	Up	Po12	Po12
Eth100/1/31	Up	Po12	Po12
Eth100/1/32	Up	Po12	Po12
Eth100/1/33	Down	Po12	Po12
Eth100/1/34	Down	Po12	Po12
Eth100/1/35	Down	Po12	Po12
Eth100/1/36	Down	Po12	Po12
Eth100/1/37	Down	Po12	Po12
Eth100/1/38	Down	Po12	Po12
Eth100/1/39	Down	Po12	Po12
Eth100/1/40	Up	Po12	Po12
Eth100/1/41	Up	Po12	Po12
Eth100/1/42	Up	Po12	Po12
Eth100/1/43	Up	Po12	Po12
Eth100/1/44	Up	Po12	Po12
Eth100/1/45	Up	Po12	Po12
Eth100/1/46	Up	Po12	Po12
Eth100/1/47	Up	Po12	Po12
Eth100/1/48	Up	Po12	Po12

Logs:

```

04/16/2010 05:05:23.441707: Module register received
04/16/2010 05:05:23.442886: Registration response sent
04/16/2010 05:05:23.551846: Module Online Sequence
04/16/2010 05:05:56.520856: Module Online
04/16/2010 05:29:38.526605: Deleting route to FEX
04/16/2010 05:29:38.536055: Module disconnected
04/16/2010 05:29:38.537686: Offlining Module
04/16/2010 05:29:38.538260: Module Offline Sequence
04/16/2010 05:29:53.646254: Module Offline
04/16/2010 05:29:54.178401: Deleting route to FEX
04/16/2010 05:29:54.184092: Module disconnected
04/16/2010 05:29:54.186230: Offlining Module
04/16/2010 05:31:13.784346: Module register received
04/16/2010 05:31:13.785410: Registration response sent
04/16/2010 05:31:15.676906: Module Online Sequence
04/16/2010 05:31:50.492714: Module Online
04/16/2010 05:32:18.388033: Deleting route to FEX
04/16/2010 05:32:18.393579: Module disconnected
04/16/2010 05:32:18.394845: Offlining Module
04/16/2010 05:32:18.395412: Module Offline Sequence
04/16/2010 05:32:30.336790: Module Offline
04/16/2010 05:32:30.683558: Deleting route to FEX
04/16/2010 05:32:30.690042: Module disconnected
04/16/2010 05:32:30.692101: Offlining Module
04/16/2010 05:33:42.781911: Module register received
04/16/2010 05:33:42.783432: Registration response sent
04/16/2010 05:33:52.542824: Module Online Sequence
04/16/2010 05:34:33.483417: Module Online
<---output truncated--->
switch#

```

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Related Commands	Command	Description
	fex	Creates a Fabric Extender and enters fabric extender configuration mode.
	show fex	Displays all configured Fabric Extender chassis connected to the switch.

Send comments to nx5000-docfeedback@cisco.com

show fex transceiver

To display information about the transceiver connecting a Fabric Extender to the Cisco Nexus 5000 Series switch, use the **show fex transceiver** command.

show fex *chassis_ID* transceiver [calibration | detail]

Syntax Description	<i>chassis_ID</i>	Fabric Extender chassis ID. The chassis ID range is from 100 to 199.
	calibration	(Optional) Displays detailed calibration information about the transceiver.
	detail	(Optional) Displays detailed diagnostic information about the transceiver.

Command Default None

Command Modes EXEC mode

Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.

Examples This example shows how to display information about the transceiver that connects a Fabric Extender to the Cisco Nexus 5000 Series switch:

```
switch# show fex 101 transceiver
```

```
Fex Uplink: 1
Fabric Port: Ethernet3/5
  sfp is present
  name is CISCO-AVAGO
  part number is SFBR-7700SDZ
  revision is B4
  serial number is AGD113921ZR
  nominal bitrate is 10300 Mbits/sec
  Link length supported for 50/125mm fiber is 82 m(s)
  Link length supported for 62.5/125mm fiber is 26 m(s)
  cisco id is --
  cisco extended id number is 4
```

```
Fex Uplink: 2
Fabric Port: Ethernet3/6
  sfp is present
  name is CISCO-AVAGO
  part number is SFBR-7700SDZ
  revision is B4
  serial number is AGD113422LS
  nominal bitrate is 10300 Mbits/sec
  Link length supported for 50/125mm fiber is 82 m(s)
  Link length supported for 62.5/125mm fiber is 26 m(s)
  cisco id is --
  cisco extended id number is 4
```

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```
Fex Uplink: 3
Fabric Port: --
    sfp is present
    name is CISCO-AVAGO
    part number is SFBR-7700SDZ
    revision is B4
    serial number is AGD11392258
    nominal bitrate is 10300 Mbits/sec
    Link length supported for 50/125mm fiber is 82 m(s)
    Link length supported for 62.5/125mm fiber is 26 m(s)
--More--
switch#
```

Related Commands

Command	Description
fex	Creates a Fabric Extender and enters fabric extender configuration mode.

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show fex version

To display the version information about a Fabric Extender, use the **show fex version** command.

show fex chassis_ID version

Syntax Description	<i>chassis_ID</i>	Fabric Extender chassis ID. The chassis ID range is from 100 to 199.
--------------------	-------------------	--

Command Default	None
-----------------	------

Command Modes	EXEC mode
---------------	-----------

Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.

Examples

This example shows how to display the version information about a Fabric Extender:

```
switch# show fex 101 version
Software
  Bootloader version:      0.2
  System boot mode:       primary
  System image version:    4.2(1)N1(1) [build 4.2(1)N1(0.309)]

Hardware
  Module:                  Fabric Extender 48x1GE + 4x10G Module
  CPU:                     Motorola, e300c4
  Serial number:           JAF11223333
  Bootflash:               locked

Kernel uptime is 0 day(s), 3 hour(s), 53 minutes(s), 43 second(s)

Last reset at Wed Mar 31 06:28:41 2010
  Reason: Kernel Reboot
  Service: Reload new image
switch#
```

Related Commands	Command	Description
	fex	Creates a Fabric Extender and enters fabric extender configuration mode.

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show interface fex-fabric

To display all Fabric Extender fabric interfaces, use the **show interface fex-fabric** command.

show interface fex-fabric

Syntax Description This command has no arguments or keywords.

Command Default None

Command Modes EXEC mode

Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.

Examples This example shows how to display all Fabric Extender fabric interfaces:

```
switch# show interface fex-fabric
Fabric      Fabric      Fex      FEX
Fex  Port      Port State      Uplink      Model      Serial
-----
105   Eth1/5      Active    5      N2K-C2232P-10GE  JAF1331AKBM
105   Eth1/6      Active    6      N2K-C2232P-10GE  JAF1331AKBM
105   Eth1/7      Active    8      N2K-C2232P-10GE  JAF1331AKBM
105   Eth1/8      Active    7      N2K-C2232P-10GE  JAF1331AKBM
102   Eth1/17     Active    1      N5K-C5110T-BF-1GE JAF1241BLHQ
102   Eth1/18     Configured 0
102   Eth1/19     Active    3      N5K-C5110T-BF-1GE JAF1241BLHQ
102   Eth1/20     Active    4      N5K-C5110T-BF-1GE JAF1241BLHQ
100   Eth3/3      Active    1      N5K-C5110T-BF-1GE JAF1237ABSE
100   Eth3/4      Active    2      N5K-C5110T-BF-1GE JAF1237ABSE
101   Eth3/5      Active    1      N2K-C2248TP-1GE  JAF11223333
101   Eth3/6      Active    2      N2K-C2248TP-1GE  JAF11223333
switch#
```

Related Commands	Command	Description
	show fex	Displays all configured Fabric Extender chassis connected to the switch.

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show interface fex-intf

To display the host interfaces pinned to a fabric interface, use the **show interface fex-intf** command.

show interface *interface* **fex-intf**

Syntax Description	<i>interface</i> Ethernet or EtherChannel interface.	
Command Default	None	
Command Modes	EXEC mode	
Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.
Examples	This example shows how to display the host interfaces pinned to an Ethernet fabric interface on the parent switch: switch# show interface ethernet 1/1 fex-intf	
	This example shows how to display the host interfaces pinned to an EtherChannel fabric interface on the parent switch: switch# show interface port-channel 1 fex-intf	
Related Commands	Command	Description
	show fex	Displays all configured Fabric Extender chassis connected to the switch.

[Send comments to nx5000-docfeedback@cisco.com](mailto:nx5000-docfeedback@cisco.com)

show interface transceiver fex-fabric

To display information about all transceivers connected to fabric interfaces, use the **show interface transceiver fex-fabric** command.

show interface transceiver fex-fabric [**calibration** | **detail**]

Syntax Description	calibration	(Optional) Displays detailed calibration information about the transceiver.
	detail	(Optional) Displays detailed diagnostic information about the transceiver.

Command Default	None
------------------------	------

Command Modes	EXEC mode
----------------------	-----------

Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.

Examples This example shows how to display information about all transceivers that connect to fabric interfaces:

```
switch# show interface transceiver fex-fabric
Ethernet1/5
  sfp is present
  name is CISCO-MOLEX INC
  part number is 74752-9025
  revision is A
  serial number is MOC12302468
  nominal bitrate is 12000 Mbits/sec
  Link length supported for 50/125mm fiber is 0 m(s)
  Link length supported for 62.5/125mm fiber is 0 m(s)
  cisco id is --
  cisco extended id number is 4

Ethernet1/6
  sfp is present
  name is CISCO-MOLEX INC
  part number is 74752-9025
  revision is A
  serial number is MOC12260214
  nominal bitrate is 12000 Mbits/sec
  Link length supported for 50/125mm fiber is 0 m(s)
  Link length supported for 62.5/125mm fiber is 0 m(s)
  cisco id is --
  cisco extended id number is 4

Ethernet1/7
  sfp is present
  name is CISCO-MOLEX INC
  part number is 74752-9025
  revision is A
  serial number is MOC12301888
```

■ **show interface transceiver fex-fabric**

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```
nominal bitrate is 12000 Mbits/sec
Link length supported for 50/125mm fiber is 0 m(s)
Link length supported for 62.5/125mm fiber is 0 m(s)
cisco id is --
cisco extended id number is 4

Ethernet1/8
    sfp is present
    name is CISCO-MOLEX INC
--More--
switch#
```

Related Commands

Command	Description
show fex	Displays all configured Fabric Extender chassis connected to the switch.

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show inventory fex

To display the physical inventory of a Fabric Extender, such as the name, description, and volume ID, use the **show inventory fex** command.

show inventory fex *chassis_ID*

Syntax Description	<i>chassis_ID</i>	Fabric Extender chassis ID. The chassis ID range is from 100 to 199.
--------------------	-------------------	--

Command Default	None
-----------------	------

Command Modes	EXEC mode
---------------	-----------

Command History	Release	Modification
	4.2(1)N1(1)	This command was introduced.

Examples

This example shows how to display the physical inventory of a specific Fabric Extender chassis:

```
switch# show inventory fex 100
NAME: "FEX 100 CHASSIS", DESCR: "N5K-C5110T-BF-1GE CHASSIS"
PID: N5K-C5110T-BF-1GE , VID: V01 , SN: JAF1237ABSE

NAME: "FEX 100 Module 1", DESCR: "Fabric Extender Module: 48x1GE, 4X10GE Supervisor"
PID: N5K-C5110T-BF-1GE , VID: V00 , SN: JAF1237ABSE

NAME: "FEX 100 Fan 1", DESCR: "Fabric Extender Fan module"
PID: N2K-C2148-FAN , VID: N/A , SN: N/A

NAME: "FEX 100 Power Supply 1", DESCR: "Fabric Extender AC power supply"
PID: N5K-PAC-200W , VID: 00V0, SN: PAC12473L17

switch#
```

Related Commands	Command	Description
	show fex	Displays all configured Fabric Extender chassis connected to the switch.

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show locator-led

To display the status of the locator LED in a Fabric Extender, use the **show locator-led** command.

show locator-led status

Syntax Description	status	Displays the status of the locator LED in a Fabric Extender module.
--------------------	--------	---

Command Default	None
-----------------	------

Command Modes	EXEC mode
---------------	-----------

Command History	Release	Modification
	4.2(1)N1(1)	This command was introduced.

Usage Guidelines	Use the locator-led command to toggle the locator LED of a Fabric Extender.
------------------	--

Examples	This example shows how to display the modules that have the locator LED set to off or on:
----------	---

```
switch# show locator-led status
Component          Locator LED Status
-----
FEX 100            off
FEX 101            off
FEX 102            off
FEX 103            off
FEX 105            off
switch#
```

Related Commands	Command	Description
	locator-led	Turns on the locator LED of a Fabric Extender chassis.
	show fex	Displays all configured Fabric Extender chassis connected to the switch.

[Send comments to nx5000-docfeedback@cisco.com](mailto:nx5000-docfeedback@cisco.com)

show module fex

To display the module information for a Fabric Extender, use the **show module fex** command.

show module fex [**all** | *chassis_ID*]

Syntax Description	<i>chassis_ID</i>	Fabric Extender chassis ID. The chassis ID range is from 100 to 199.
	all	Displays information about all Fabric Extender modules.

Command Default	None
-----------------	------

Command Modes	EXEC mode
---------------	-----------

Command History	Release	Modification
	4.2(1)N1(1)	This command was introduced.

Examples

This example shows how to display the module information of Fabric Extenders:

```
switch# show module fex all
FEX Mod Ports Card Type                               Model                               Status.
-----
100 1    48    Fabric Extender 48x1GE Module                       N5K-C5110T-BF-1GE  present
101 1    48    Fabric Extender 48x1GE + 4x10G Mod N2K-C2248TP-1GE    present
102 1    48    Fabric Extender 48x1GE Module                       N5K-C5110T-BF-1GE  present
105 1    32    Fabric Extender 32x10GE + 8x10G Mo N2K-C2232P-10GE    present

FEX Mod Sw                Hw                World-Wide-Name(s) (WWN)
-----
100 1    4.2(1)N1(1)          0.0              --
101 1    4.2(1)N1(1)          0.103           --
102 1    4.2(1)N1(1)          0.2              --
105 1    4.2(1)N1(1)          1.0              --

FEX Mod  MAC-Address(es)                               Serial-Num
-----
100 1    000d.ecb1.1300 to 000d.ecb1.132f                       JAF1237ABSE
101 1    0022.bdd1.3cc0 to 0022.bdd1.3cef                       JAF11223333
102 1    000d.ecb1.25c0 to 000d.ecb1.25ef                       JAF1241BLHQ
105 1    000d.ecca.6f40 to 000d.ecca.6f5f                       JAF1331AKBM
switch#
```

This commands shows how to display the module information for a specific Fabric Extender:

```
switch# show module fex 100
FEX Mod Ports Card Type                               Model                               Status.
-----
100 1    48    Fabric Extender 48x1GE Module                       N5K-C5110T-BF-1GE  present

FEX Mod Sw                Hw                World-Wide-Name(s) (WWN)
-----
```

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```

100 1    4.2(1)N1(1)    0.0    --

FEX Mod  MAC-Address(es)                Serial-Num
--- ---  -
100 1    000d.ecb1.1300 to 000d.ecb1.132f  JAF1237ABSE
switch#

```

Related Commands

Command	Description
show fex	Displays all configured Fabric Extender chassis connected to the switch.

[Send comments to nx5000-docfeedback@cisco.com](mailto:nx5000-docfeedback@cisco.com)

show queuing interface

To display the queuing information of interfaces, use the **show queuing interface** command.

show queuing interface [**ethernet** *slot-chassis-no/port-slot-no/port-no*]

Syntax Description	ethernet	(Optional) Specifies that queuing information be displayed for an Ethernet interface or a Fabric Extender.
	<i>slot-chassis-no</i>	Slot number of the Ethernet interface or chassis ID of the Fabric Extender. The range is from 1 to 255.
	<i>port-slot-no</i>	Port number of the Ethernet interface or the remote slot ID of the Fabric Extender. The range is from 1 to 128.
	<i>port-no</i>	Port number of the Fabric Extender. The range is from 1 to 48.

Command Default	Displays the queuing information for all interfaces.
-----------------	--

Command Modes	EXEC mode
---------------	-----------

Command History	Release	Modification
	4.1(3)N1(1)	This command was introduced.

Examples This example shows how to display the queuing information, including the buffer threshold and queue limit values, of a specified interface on a switch that runs Cisco NX-OS 4.2(1)N2(1):

```
switch# show queuing interface eth101/1/1
Ethernet101/1/1 queuing information:
  Input buffer allocation:
  Qos-group: 0 3 4 (shared)
  frh: 3
  drop-type: drop
  cos: 0 2 3 4 6 7
  xon      xoff      buffer-size
  -----+-----+-----
  11520    21760    44800

  Qos-group: 2
  frh: 2
  drop-type: no-drop
  cos: 1 5
  xon      xoff      buffer-size
  -----+-----+-----
  12800    23040    46080

  Queueing:
  queue    qos-group    cos                priority  bandwidth mtu
  -----+-----+-----+-----+-----+-----
  3         0 3 4        0 2 3 4 6         WRR       99       9280
  2         2          1 5              WRR       1       9280
```

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```

Buffer threshold: 163840 bytes
Queue limit: 327680 bytes

Queue Statistics:
queue  rx
-----+-----
3      38557
2       0

Port Statistics:
tx queue drop
-----
26374

Priority-flow-control enabled: no
Flow-control status:
cos      qos-group  rx pause  tx pause  masked rx pause
-----+-----+-----+-----+-----
0         0      xon      xon      xon
1         2      xon      xon      xon
2         3      xon      xon      xon
3         0      xon      xon      xon
4         3      xon      xon      xon
5         2      xon      xon      xon
6         0      xon      xon      xon
7        n/a      xon      xon      xon
switch#

```

Table 4-1 describes the significant fields shown in the display.

Table 4-1 *show queuing interface Field Descriptions*

Field	Description
Ethernet ...	Ethernet interface information.
qoS-group	Information about QoS groups configured on the switch.
sched-type	Type of schedule.
WRR	Weighted round robin(WRR). Queue eight for scheduling.
Priority	Priority of the queue.
q-size	Queue size.
drop-type	Queue drop type can be either drop or no-drop.
MTU	Maximum transmit unit (MTU) for the queue.
Xon	Transmission on at this threshold.
Xoff	Transmission off at this threshold.
Buffer threshold	Buffer threshold value for an interface.
Queue limit	Queue limit value for an interface.

Related Commands

Command	Description
hardware buffer-threshold	Configures the hardware buffer threshold.

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Command	Description
hardware queue-limit	Configures the hardware queue limit.
show fex	Displays all configured Fabric Extender chassis connected to the switch.

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show running-config fex

To display the running configuration for Fabric Extenders (FEXs), use the **show running-config fex** command.

show running-config fex [all]

Syntax Description	all (Optional) Displays FEX information including default settings.				
Command Default	None				
Command Modes	EXEC mode				
Command History	<table> <tr> <th>Release</th><th>Modification</th></tr> <tr> <td>4.2(1)N2(1)</td><td>This command was introduced.</td></tr> </table>	Release	Modification	4.2(1)N2(1)	This command was introduced.
Release	Modification				
4.2(1)N2(1)	This command was introduced.				

Examples This example shows how to display information on the running FEX configuration, including the buffer threshold value and queue limit:

```
switch# show running-config fex

!Command: show running-config fex
!Time: Mon Jul 19 07:56:21 2010

version 4.2(1)N2(1)
feature fex

fex 100
  pinning max-links 1
  description "RedwoodFex100"
fex 101
  pinning max-links 1
  description "FEX0101"
fex 150
  pinning max-links 1
  description "PortolaFex150"
fex 151
  pinning max-links 1
  description "PortolaFex151"
fex 160
  pinning max-links 1
  description "FEX0160"
fex 198
  hardware N2232P queue-limit 50000
  pinning max-links 1
  description "WoodsideFex198"
fex 199
  hardware N2232P queue-limit 20000
  no hardware N2248T queue-limit
  hardware N2148T buffer-threshold 163840
```

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```
pinning max-links 1
description "WoodsideFex199"

interface port-channel100
  fex associate 100

interface port-channel150
--More--
switch#
```

Related Commands

Command	Description
hardware buffer-threshold	Configures the hardware buffer threshold.
hardware queue-limit	Configures the hardware queue limit.
show fex	Displays all configured Fabric Extender chassis connected to the switch.

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show sprom fex

To display information about the SPROM, use the **show sprom fex** command.

show sprom fex {**all** | *chassis_ID* {**all** | **backplane** | **powersupply** *module_no*}}

Syntax Description		
	<i>chassis_ID</i>	Fabric Extender chassis ID. The chassis ID range is from 100 to 199.
	all	Displays all SPROM content for a specific Fabric Extender.
	backplane	Displays the backplane SPROM content for a specific Fabric Extender.
	powersupply	Displays the power supply SPROM content for a specific Fabric Extender.
	<i>module_no</i>	Power supply module number for a specific Fabric Extender. The range is from 1 to 2.

Command Default	None
------------------------	------

Command Modes	EXEC mode
----------------------	-----------

Command History	Release	Modification
	4.2(1)N1(1)	This command was introduced.

Examples This example shows how to display all SPROM content for a specific Fabric Extender:

```
switch# show sprom fex 100 all
DISPLAY FEX 100 SUP sprom contents
Common block:
Block Signature : 0xabab
Block Version   : 3
Block Length    : 160
Block Checksum  : 0x18c9
EEPROM Size     : 65535
Block Count     : 3
FRU Major Type  : 0x6003
FRU Minor Type  : 0x0
OEM String      : Cisco Systems, Inc.
Product Number  : N5K-C5110T-BF-1GE
Serial Number   : JAF1237ABSE
Part Number     : 73-12009-02
Part Revision   : 00
Mfg Deviation   : 0
H/W Version     : 0.0
Mfg Bits        : 0
Engineer Use    : 0
snmpOID         : 9.12.3.1.9.72.5.0
Power Consump   : -200
RMA Code        : 0-0-0-0
CLEI Code       : 000000000000
VID             : V00
Supervisor Module specific block:
```

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```

Block Signature : 0x6002
Block Version   : 2
Block Length    : 103
Block Checksum  : 0x2648
Feature Bits    : 0x0
HW Changes Bits : 0x2
Card Index      : 11011
MAC Addresses   : 00-00-00-00-00-00
Number of MACs  : 0
Number of EPLD  : 0
Port Type-Num   : 2-52
Sensor #1       : 85,75
Sensor #2       : 100,90
Sensor #3       : 100,90
Sensor #4       : 100,90
Sensor #5       : 100,90
Sensor #6       : 100,90
Sensor #7       : 100,90
Sensor #8       : 100,90
Max Connector Power: 1000
Cooling Requirement: 300
Ambient Temperature: 40

DISPLAY FEX 100 backplane sprom contents:
Common block:
Block Signature : 0xabab
Block Version   : 3
Block Length    : 160
Block Checksum  : 0x195d
EEPROM Size     : 65535
Block Count     : 5
FRU Major Type  : 0x6001
FRU Minor Type  : 0x0
OEM String      : Cisco Systems, Inc.
Product Number  : N5K-C5110T-BF-1GE
Serial Number   : JAF1237ABSE
Part Number     : 73-12009-02
Part Revision   : 00
Mfg Deviation   : 0
H/W Version     : 0.0
Mfg Bits        : 0
Engineer Use    : 0
snmpOID         : 9.12.3.1.3.719.0.0
Power Consump   : -800
RMA Code        : 0-0-0-0
CLEI Code       : 00000000
VID             : V01
Chassis specific block:
Block Signature : 0x6001
Block Version   : 3
Block Length    : 39
Block Checksum  : 0x28a
Feature Bits    : 0x0
HW Changes Bits : 0x2
Stackmib OID    : 0
MAC Addresses   : 00-0d-ec-b1-13-00
Number of MACs  : 64
OEM Enterprise  : 0
OEM MIB Offset  : 0
MAX Connector Power: 0
WWN software-module specific block:
Block Signature : 0x6005
Block Version   : 1
Block Length    : 0

```

■ show sprom fex

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```

Block Checksum : 0x66
wwn usage bits:
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00
License software-module specific block:
Block Signature : 0x6006
Block Version : 1
Block Length : 16
Block Checksum : 0x77
lic usage bits:
00 00 00 00 00 00 00 00

DISPLAY FEX 100 power-supply 1 sprom contents:
Common block:
Block Signature : 0xabab
Block Version : 3
Block Length : 124
Block Checksum : 0x15fc
EEPROM Size : 124
Block Count : 1
FRU Major Type : 0xab01
FRU Minor Type : 0x1
OEM String : Cisco Systems, Inc.
Product Number : N5K-PAC-200W
Serial Number : PAC12473L17
Part Number : 341-0335-01
Part Revision : 01
CLEI Code : COUPADSBA
VID : 00V0
snmpOID : 0.0.0.0.0.0.0.0
H/W Version : 0.1
Current : 1667
RMA Code : 0-0-0-0
switch#

```


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This command shows how to display the power supply SPROM contents for a specific Fabric Extender:

```
switch# show sprom fex 100 powersupply 1
DISPLAY FEX 100 power-supply 1 sprom contents:
Common block:
  Block Signature : 0xabab
  Block Version   : 3
  Block Length    : 124
  Block Checksum  : 0x15fc
  EEPROM Size     : 124
  Block Count     : 1
  FRU Major Type  : 0xab01
  FRU Minor Type  : 0x1
  OEM String      : Cisco Systems, Inc.
  Product Number  : N5K-PAC-200W
  Serial Number   : PAC12473L17
  Part Number     : 341-0335-01
  Part Revision   : 01
  CLEI Code       : COUPADSBAA
  VID             : 00V0
  snmpOID         : 0.0.0.0.0.0.0.0
  H/W Version     : 0.1
  Current         : 1667
  RMA Code        : 0-0-0-0
switch#
```

Related Commands

Command	Description
show fex	Displays all configured Fabric Extender chassis connected to the switch.

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show system reset-reason fex

To display the reason for the last reset of the Fabric Extender, use the **show system reset-reason fex** command.

show system reset-reason fex *chassis_ID*

Syntax Description	<i>chassis_ID</i>	Fabric Extender chassis ID. The chassis ID range is from 100 to 199.
--------------------	-------------------	--

Command Default	None
-----------------	------

Command Modes	EXEC mode
---------------	-----------

Command History	Release	Modification
	4.2(1)N1(1)	This command was introduced.

Examples This example shows how to display the last reset reason for a specific Fabric Extender:

```
switch# show system reset-reason fex 100
----- reset reason for FEX 100 -----

1) At 430815 usecs after Fri Apr 16 04:27:04 2010
   Reset Reason: Reset Requested by CLI command reload (9)
   Service (Additional Info): Reload requested by supervisor
   Image Version: 4.2(1)N1(1)

2) At 505550 usecs after Fri Apr 16 03:39:50 2010
   Reset Reason: Reset due to upgrade (88)
   Service (Additional Info): Reset due to upgrade
   Image Version: 4.2(1u)N1(1u)

3) At 607267 usecs after Fri Apr 16 02:50:10 2010
   Reset Reason: Reset due to upgrade (88)
   Service (Additional Info): Reset due to upgrade
   Image Version: 4.2(1)N1(1)

4) At 857790 usecs after Fri Apr 16 02:00:22 2010
   Reset Reason: Reset due to upgrade (88)
   Service (Additional Info): Reset due to upgrade
   Image Version: 4.2(1u)N1(1u)

switch#
```

Related Commands	Command	Description
	show fex	Displays all configured Fabric Extender chassis connected to the switch.

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show version fex

To display the software version information about a Fabric Extender, use the **show version fex** command.

show version fex *chassis_ID*

Syntax Description	<i>chassis_ID</i>	Fabric Extender chassis ID. The chassis ID range is from 100 to 199.
--------------------	-------------------	--

Command Default	None
-----------------	------

Command Modes	EXEC mode
---------------	-----------

Command History	Release	Modification
	4.2(1)N1(1)	This command was introduced.

Examples

This example shows how to display the software version of a Fabric Extender:

```
switch# show version fex 100
Software
  Bootloader version:      1.12
  System boot mode:       primary
  System image version:    4.2(1)N2(1) [build 4.2(1)N2(1)]

Hardware
  Module:                  Fabric Extender 48x1GE Module
  CPU:                     Motorola, e300c1
  Serial number:           JAF1302ABDP
  Bootflash:               locked

Kernel uptime is 0 day(s), 9 hour(s), 9 minutes(s), 16 second(s)

Last reset at Fri Jul 02 04:27:04 2010
  Reason: Reset Requested by CLI command reload
  Service: Reload requested by supervisor
switch#
```

Related Commands	Command	Description
	show fex	Displays all configured Fabric Extender chassis connected to the switch.

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switchport mode fex-fabric

To set the interface type to be an uplink port for a Fabric Extender, use the **switchport mode fex-fabric** command.

switchport mode fex-fabric

no switchport mode fex-fabric

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

Command Default	None
------------------------	------

Command Modes	Interface configuration mode
----------------------	------------------------------

Command History	Release	Modification
	4.0(1a)N2(1)	This command was introduced.

Examples	This example shows how to set an Ethernet interface to be an uplink port for a Fabric Extender:
-----------------	---

```
switch# configure terminal
switch(config)# interface ethernet 1/40
switch(config-if)# switchport mode fex-fabric
```

This example shows how to set an EtherChannel interface to be an uplink port for a Fabric Extender:

```
switch# configure terminal
switch(config)# interface port-channel 4
switch(config-if)# switchport mode fex-fabric
```

Related Commands	Command	Description
	fex associate	Associates a Fabric Extender to an Ethernet or EtherChannel interface.
	show fex	Displays all configured Fabric Extender chassis connected to the switch.

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type

To set the Fabric Extender card type to a specific card, use the **type** command. To revert to the default FEX card, use the **no** form of this command.

type *fex_card_type*

no type

Syntax Description	<i>fex_card_type</i>	Fabric Extender card type. The following Fabric Extender card types are supported: • N2148T—Fabric Extender 48x1G 4x10G SFP+ Module • N2224TP—Fabric Extender 24x1G 2x10G SFP+ Module • N2232P—Fabric Extender 32x10G SFP+ 8x10G SFP+ Module • N2248T—Fabric Extender 48x1G 4x10G SFP+ Module
--------------------	----------------------	--

Command Default	None
-----------------	------

Command Modes	Fabric extender configuration mode
---------------	------------------------------------

Command History	Release	Modification
	4.2(1)N1(1)	This command was introduced.

Usage Guidelines	The following Cisco Nexus 2000 Series Fabric Extenders are supported on a Cisco Nexus 5000 Series switch that runs a Cisco NX-OS release 4.2(1)N2(1): • Cisco Nexus 2148T Fabric Extender—It has four 10-Gigabit Ethernet fabric interfaces for its uplink connection to the parent Cisco Nexus 5000 Series switch and 48 1000BASE-T (1-Gigabit) Ethernet host interfaces for its downlink connection to servers or hosts. • Cisco Nexus N2224TP Fabric Extender—It has two 10-Gigabit Ethernet fabric interfaces with small form-factor pluggable (SFP+) interface adapters for its uplink connection to the parent Cisco Nexus 5000 Series switch and 24 1000BASE-T (1-Gigabit) Ethernet host interfaces for its downlink connection to servers or hosts. It does not support Fibre Channel over Ethernet (FCoE). • Cisco Nexus 2232P Fabric Extender—It has eight 10-Gigabit Ethernet fabric interfaces with small form-factor pluggable (SFP+) interface adapters for its uplink connection to the parent Cisco Nexus 5000 Series switch and 32 10-Gigabit Ethernet fabric interfaces with SFP+ interface adapters for its downlink connection to servers or hosts. • Cisco Nexus 2248T Fabric Extender—It has four 10-Gigabit Ethernet fabric interfaces with SFP+ interface adapters for its uplink connection to the parent Cisco Nexus 5000 Series switch and 48 1000BASE-T (1-Gigabit) Ethernet host interfaces for its downlink connection to servers or hosts.
------------------	---

■ type

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Examples

This example shows how to configure the Fabric Extender card:

```
switch(config)# fex 100
switch(config-fex)# type N2148T
switch(config-fex)#
```

Related Commands

Command	Description
fex	Creates a Fabric Extender and enters fabric extender configuration mode.
show fex	Displays all configured Fabric Extender chassis connected to the switch.