



## B Commands

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This chapter describes the Cisco NX-OS interface commands that begin with B.

# bandwidth (interface)

To set the inherited and received bandwidth values for an interface, use the **bandwidth** command. To restore the default values, use the **no** form of this command.

**bandwidth** {*kbps* | **inherit** [*kbps*]}

**no bandwidth** {*kbps* | **inherit** [*kbps*]}

Syntax Description		
	<i>kbps</i>	Informational bandwidth in kilobits per second. Valid values are from 1 to 10000000.
	<b>inherit</b>	(Optional) Specifies that the bandwidth be inherited from the parent interface.

**Command Default** 1000000 kbps

**Command Modes** Interface configuration mode  
Subinterface configuration mode

Command History	Release	Modification
	6.0(2)N1(1)	This command was introduced.

**Usage Guidelines**

The **bandwidth** command sets an informational parameter to communicate only the current bandwidth to the higher-level protocols; you cannot adjust the actual bandwidth of an interface using this command.

The **bandwidth inherit** command controls how a subinterface inherits the bandwidth of its main interface.

The **no bandwidth inherit** command enables all subinterfaces to inherit the default bandwidth of the main interface, regardless of the configured bandwidth. If a bandwidth is not configured on a subinterface, and you use the **bandwidth inherit** command, all subinterfaces will inherit the current bandwidth of the main interface. If you configure a new bandwidth on the main interface, all subinterfaces will use this new value.

If you do not configure a bandwidth on the subinterface and you configure the **bandwidth inherit** command on the main interface, the subinterfaces will inherit the specified bandwidth.

In all cases, if an interface has an explicit bandwidth setting configured, then that interface will use that setting, regardless of whether the bandwidth inheritance setting is in effect.

**Examples** This example shows how to configure the badwidth for a Layer 2 interface:

```
switch(config)# interface ethernet 1/5
switch(config-if)# bandwidth 1000
switch(config-if)#
```

This example shows how to configure subinterfaces to inherit the bandwidth from the parent routed interface:

```
switch(config)# interface ethernet 1/5
switch(config-if)# no switchport
switch(config-if)# bandwidth inherit 30000
switch(config-if)# interface ethernet 1/1.1
switch(config-subif)#
```

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**Related Commands**

Command	Description
<b>show interface</b>	Displays the interface configuration information.

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# beacon (interface)

To turn on the beacon LED for a port of an interface, use the **beacon** command. To turn off the beacon LED for the interface, use the **no** form of this command.

**beacon**

**no beacon**

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

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**Command Default** None

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**Command Modes** Interface configuration mode

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Command History	Release	Modification
	6.0(2)N1(1)	This command was introduced.

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**Usage Guidelines** Use the **beacon** command to toggle the port LED of an interface to easily identify each time a beacon is sent to check for pending packets on the interface.

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**Examples** This example shows how to turn on the locator beacon LED for a specific interface:

```
switch(config)# interface ethernet 2/1
switch(config-if)# beacon
```

This example shows how to turn off the locator beacon LED for a specific interface:

```
switch(config)# interface ethernet 2/1
switch(config-if)# no beacon
```

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Related Commands	Command	Description
	<b>show interface</b>	Displays configuration information for an interface.

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# bfd authentication

To configure SHA-1 authentication for all Bidirectional Forwarding Detection (BFD) sessions on the interface, use the **bfd authentication** command. To disable SHA-1 authentication on the interface, use the **no** form of the command.

```
bfd [fabricpath] authentication keyed-SHA1 key-id id {hex-key hex-key | key ascii-key}
```

```
no bfd [fabricpath] authentication
```

## Syntax Description

<b>fabricpath</b>	(Optional) Enables BFD authentication for the fabricpath session.
<b>key-id</b>	Specifies the key ID to use in BFD frames.
<i>id</i>	Key ID value. The range is from 1 to 255.
<b>hex-key</b>	Specifies the HEX binary SHA1 secret.
<i>hex-key</i>	HEX binary SHA1 secret. A hex-key can be any case-sensitive, alphanumeric string up to 40 characters.
<b>key</b>	Specifies the ASCII SHA1 secret.
<i>ascii-key</i>	SHA1 secret value. An ASCII key can be any case-sensitive, alphanumeric string up to 20 characters.

## Command Default

None

## Command Modes

Interface configuration mode

## Command History

Release	Modification
7.0(0)N1(1)	The <b>fabricpath</b> keyword was added.
6.0(2)N2(1)	This command was introduced.

## Usage Guidelines

Configures SHA-1 authentication for all BFD sessions on the interface. The *ascii\_key* string is a secret key shared among BFD peers. The *id* value, a number between 0 and 255, is assigned to this particular *ascii\_key*. BFD packets specify the key by ID, allowing the use of multiple active keys.

Use the optional **fabricpath** keyword to configure SHA-1 authentication for fabricpath BFD sessions.

## Examples

This example shows how to configure SHA-1 authentication for all BFD sessions on the interface:

```
switch# configure terminal
switch(config)# interface ethernet 3/1
switch(config-if)# bfd authentication keyed-SHA1 key-id 23 key cisco123
switch(config-if)#
```

Related Commands	Command	Description
	<b>feature bfd</b>	Enables the BFD feature.

# bfd fabricpath

To enable a Bidirectional Forwarding Detection (BFD) fabricpath session on a specific interface, use the **bfd fabricpath** command. To disable the setting, use the no form of the command.

**bfd fabricpath**

**no bfd fabricpath**

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

**Command Modes** Enabled for fabricpath core ports.  
Disabled for non-fabricpath core ports.

Command History	Release	Modification
	7.0(0)N1(1)	This command was introduced.

**Usage Guidelines** If the command is disabled, all sessions matching the address family on the interface will be put into admit down state. The session will be maintained and client requests for the session on the interface will be accepted.

**Examples** This example shows how to enable a BFD fabricpath for an interface:

```
switch# configure terminal
switch(config)# interface ethernet 3/1
switch(config-if)# fabricpath isis bfd
```

Related Commands	Command	Description
	<b>feature bfd</b>	Enables the BFD feature.

# bfd fabricpath encap-ce

To select the encapsulation mode for L2BFD frames on a per-session basis, use the **[no] bfd fabricpath encap-ce** command.

**bfd fabricpath encap-ce**

**[no] bfd fabricpath encap-ce**

<b>Syntax Description</b>	<b>encap-ce</b>	To select the encapsulation mode for L2BFD frames on a per-session basis. On enabling, a L2BFD frame is sent out with Ethernet encapsulation and by default it is sent with fabricpath encapsulation. The encapsulation mode cannot be changed once the session has been initiated.
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<b>Command Default</b>	Default mode
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<b>Command Modes</b>	Interface configuration mode
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	7.2(0)N1(1)	This command was introduced.

<b>Usage Guidelines</b>	This command is mandatory for interoperability with Cisco Nexus 7000 Series switch and is optional for interoperability with other Cisco Nexus 5000 Series and Cisco Nexus 6000 Series switches.
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**Examples** This example shows how to enable a BFD fabricpath encapsulation for an interface:

```
switch# configure terminal
switch(config)# interface int-if
switch(config-if)# bfd fabricpath encap-ce
switch(config-if)# fabricpath isis bfd
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>bfd fabricpath</b>	To enable a Bidirectional Forwarding Detection (BFD) fabricpath session on a specific interface.

# bfd interval

To configure Bidirectional Forwarding Detection (BFD) session parameters, use the **bfd interval** command. To return to the default setting, use the **no** form of the command.

```
bfd [fabricpath] interval mintx min_rx msec multiplier value
```

```
no bfd [fabricpath] interval
```

Syntax Description		
<b>fabricpath</b>	(Optional) Configures BFD session parameters for the fabricpath session.	
<i>mintx</i>	Rate at which BFD control packets are sent to BFD neighbors. The configurable range is from 50 to 999.	
<b>min_rx</b> <i>msec</i>	Specifies the rate at which BFD control packets are expected to be received from BFD neighbors. The range is from 50 to 999.	
<b>multiplier</b> <i>value</i>	Specifies the number of consecutive BFD control packets that must be missed from a BFD neighbor before BFD declares that the neighbor is unavailable and the BFD neighbor is informed of the failure. The range is from 3 to 50.	

Command Default	
BFD interval: 50 milliseconds	
min_rx: 50 milliseconds	
multiplier: 3	

Command Modes	
Global configuration mode	
Interface configuration mode	

Command History	Release	Modification
	7.0(0)N1(1)	The <b>fabricpath</b> keyword was added. The minimum configurable range for BFD interval was changed to 50 from 250 milliseconds.
	6.0(2)N2(1)	This command was introduced.

**Usage Guidelines** BFD session parameters configured at the interface level take precedence over the globally configured BFD session parameters.

Use the optional **fabricpath** keyword to configure the global parameters for fabricpath BFD sessions.



### Note

The **bfd fabricpath interval** command cannot be enabled on a non-fabricpath port.

**Examples** This example shows how to set the BFD session parameters for an interface:

```
switch# configure terminal
```

## bfd interval

```
switch(config)# interface ethernet 3/1
switch(config-if)# bfd fabricpath interval 50 min_rx 20 multiplier 3
```

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**Related Commands**

Command	Description
<b>feature bfd</b>	Enables the BFD feature.

# bfd slow-timer

To configure the Bidirectional Forwarding Detection (BFD) slow timer value, use the **bfd slow-timer** command. To return to the default setting, use the **no** form of this command.

**bfd** [**fabricpath**] **slow-timer** *milliseconds*

**no bfd** [**fabricpath**] **slow-timer**

Syntax Description	fabricpath	(Optional) Configures the slow timer in milliseconds, used in the echo function for the fabricpath session.
	<i>milliseconds</i>	BFD slow timer value, in milliseconds. The range is from 1000 to 30000.

**Command Default** 2000 milliseconds

**Command Modes** Interface configuration mode

Command History	Release	Modification
	7.0(0)N1(1)	The <b>fabricpath</b> keyword was added.
	6.0(2)N2(1)	This command was introduced.

**Usage Guidelines** Configures the slow timer used in the echo function.

This value determines how fast BFD starts up a new session and at what speed the asynchronous sessions use for BFD control packets when the echo function is enabled. The slow-timer value is used as the new control packet interval, while the echo packets use the configured BFD intervals. The echo packets are used for link failure detection, while the control packets at the slower rate maintain the BFD session.

**Examples** This example shows how to configure the BFD slow timer value to 14,000 milliseconds for fabricpath sessions on an interface:

```
switch# configure terminal
switch(config)# interface ethernet 2/1
switch(config-if)# bfd fabricpath slow-timer 14000
switch(config-if)#
```

Related Commands	Command	Description
	<b>feature bfd</b>	Enables the BFD feature.

