



B Commands

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.
	inherit	(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)#
```

Related Commands

Command	Description
show interface	Displays the interface configuration information.

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

Syntax Description This command has no arguments or keywords.

Command Default None

Command Modes Interface configuration mode

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

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.

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
```

Related Commands	Command	Description
	show interface	Displays configuration information for an interface.

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		
fabricpath	(Optional) Enables BFD authentication for the fabricpath session.	
key-id	Specifies the key ID to use in BFD frames.	
<i>id</i>	Key ID value. The range is from 1 to 255.	
hex-key	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.	
key	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 fabricpath 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)#
```

■ bfd authentication

Related Commands	Command	Description
	feature bfd	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 Default Enabled for fabricpath core ports.
Disabled for non-fabricpath ports.

Command Modes Interface configuration mode

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)# bfd fabricpath
```

Related Commands	Command	Description
	feature bfd	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

Syntax	Description
encap-ce	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.

Command Default	Description
encap-ce	Default mode

Command Modes	Description
encap-ce	Interface configuration mode

Command History	Release	Modification
encap-ce	7.2(0)N1(1)	This command was introduced.

Usage Guidelines	Description
encap-ce	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.

Examples	Description
encap-ce	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
```

Related Commands	Command	Description
encap-ce	bfd fabricpath	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	Parameter	Description
	fabricpath	(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 250 to 999.
	min_rx <i>msec</i>	Specifies the rate at which BFD control packets are expected to be received from BFD neighbors. The range is from 250 to 999.
	multiplier <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	Value
	BFD interval: 250 milliseconds
	min_rx: 250 milliseconds
	multiplier: 3

Command Modes	Mode
	Global configuration mode
	Interface configuration mode

Command History	Release	Modification
	7.0(0)N1(1)	The fabricpath keyword was added.
	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
switch(config)# interface ethernet 3/1
```

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

Related Commands

Command	Description
feature bfd	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	Parameter	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 fabricpath 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
	feature bfd	Enables the BFD feature.

